



International  
Organization for  
Standardization

Snap-shot of the  
**ISO 11783-11 online data base**

| <b>DD Entity</b>                   | <b>0 - Data Dictionary Version</b>  |
|------------------------------------|---|
| Definition                         | This DDE is used to specify which version of the Data Dictionary is being used. |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.                      |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | not defined - not defined   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-01-20  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                     |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.         |

| <b>DD Entity</b>                   | <b>1 - Setpoint Volume Per Area Application Rate</b>                       |
|------------------------------------|--|
| Definition                         | Setpoint Application Rate specified as volume per area                     |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit                   |
| Resolution                         | 0,01   |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 0000-00-00   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>2 - Actual Volume Per Area Application Rate</b>                         |
| Definition                         | Actual Application Rate specified as volume per area                       |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit                   |
| Resolution                         | 0,01   |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
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| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>3 - Default Volume Per Area Application Rate</b>                        |
| Definition                         | Default Application Rate specified as volume per area                      |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit                   |
| Resolution                         | 0,01   |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>4 - Minimum Volume Per Area Application Rate</b>                        |
| Definition                         | Minimum Application Rate specified as volume per area                      |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit                   |
| Resolution                         | 0,01   |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>5 - Maximum Volume Per Area Application Rate</b>                        |
| Definition                         | Maximum Application Rate specified as volume per area                      |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit                   |
| Resolution                         | 0,01   |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

| <b>DD Entity</b>                   | <b>6 - Setpoint Mass Per Area Application Rate</b>                      |
|------------------------------------|---|
| Definition                         | Setpoint Application Rate specified as mass per area                    |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>7 - Actual Mass Per Area Application Rate</b>                           |
|------------------------------------|--|
| Definition                         | Actual Application Rate specified as mass per area                         |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                     |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>8 - Default Mass Per Area Application Rate</b>                          |
| Definition                         | Default Application Rate specified as mass per area                        |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                     |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>9 - Minimum Mass Per Area Application Rate</b>                          |
| Definition                         | Minimum Application Rate specified as mass per area                        |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                     |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>10 - Maximum Mass Per Area Application Rate</b>                         |
| Definition                         | Maximum Application Rate specified as mass per area                        |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                     |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>11 - Setpoint Count Per Area Application Rate</b>                    |
| Definition                         | Setpoint Application Rate specified as count per area                   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>12 - Actual Count Per Area Application Rate</b>                      |
|------------------------------------|---|
| Definition                         | Actual Application Rate specified as count per area                     |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>13 - Default Count Per Area Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Default Application Rate specified as count per area                    |
| Comment                            | use when missing Position data or outside any Treatment Zone            |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |



| <b>DD Entity</b>                   | <b>14 - Minimum Count Per Area Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Minimum Application Rate specified as count per area                    |
| Comment                            | supplied by device as physical minimum                                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>15 - Maximum Count Per Area Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Maximum Application Rate specified as count per area                    |
| Comment                            | supplied by device as physical maximum                                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>16 - Setpoint Spacing Application Rate</b>  |
|------------------------------------|--|
| Definition                         | Setpoint Application Rate specified as distance: e.g. seed spacing of a precision seeder |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                  |

| <b>DD Entity</b>                   | <b>17 - Actual Spacing Application Rate</b>  |
|------------------------------------|--|
| Definition                         | Actual Application Rate specified as distance: e.g. seed spacing of a precision seeder |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                |

| <b>DD Entity</b>                   | <b>18 - Default Spacing Application Rate</b>  |
|------------------------------------|---|
| Definition                         | Default Application Rate specified as distance: e.g. seed spacing of a precision seeder |
| Comment                            | use when missing Position data or outside any Treatment Zone                            |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                 |

| <b>DD Entity</b>                   | <b>19 - Minimum Spacing Application Rate</b>  |
|------------------------------------|---|
| Definition                         | Minimum Application Rate specified as distance: e.g. seed spacing of a precision seeder |
| Comment                            | supplied by device as physical minimum  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                 |

| DD Entity                          | 20 - Maximum Spacing Application Rate   |
|------------------------------------|---|
| Definition                         | Maximum Application Rate specified as distance: e.g. seed spacing of a precision seeder |
| Comment                            | supplied by device as physical maximum  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                 |

| DD Entity                          | 21 - Setpoint Volume Per Volume Application Rate                        |
|------------------------------------|---|
| Definition                         | Setpoint Application Rate specified as volume per volume                |
| Comment                            |   |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>3</sup> - Capacity per capacity unit            |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>22 - Actual Volume Per Volume Application Rate</b>                      |
| Definition                         | Actual Application Rate specified as volume per volume                     |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>3</sup> - Capacity per capacity unit               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>23 - Default Volume Per Volume Application Rate</b>                     |
| Definition                         | Default Application Rate specified as volume per volume                    |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>3</sup> - Capacity per capacity unit               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
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| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>24 - Minimum Volume Per Volume Application Rate</b>                     |
| Definition                         | Minimum Application Rate specified as volume per volume                    |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>3</sup> - Capacity per capacity unit               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>25 - Maximum Volume Per Volume Application Rate</b>                     |
| Definition                         | Maximum Application Rate specified as volume per volume                    |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>3</sup> - Capacity per capacity unit               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
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| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>26 - Setpoint Mass Per Mass Application Rate</b>                     |
| Definition                         | Setpoint Application Rate specified as mass per mass                    |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | mg/kg - Mass per mass unit  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>27 - Actual Mass Per Mass Application Rate</b>                       |
| Definition                         | Actual Application Rate specified as mass per mass                      |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | mg/kg - Mass per mass unit  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>28 - Default Mass Per Mass Application Rate</b>                         |
| Definition                         | Default Application Rate specified as mass per mass                        |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/kg - Mass per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>29 - Minimum Mass Per Mass Application Rate</b>                         |
| Definition                         | Minimum Application Rate specified as mass per mass                        |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/kg - Mass per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>30 - MaximumMass Per Mass Application Rate</b>                          |
| Definition                         | Maximum Application Rate specified as mass per mass                        |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/kg - Mass per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>31 - Setpoint Volume Per Mass Application Rate</b>                   |
| Definition                         | Setpoint Application Rate specified as volume per mass                  |
| Comment                            |   |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit                            |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| DD Entity                          | 32 - Actual Volume Per Mass Application Rate                                    |
|------------------------------------|---|
| Definition                         | Actual Application Rate specified as volume per mass                            |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>9 - Forage harvester |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit                                    |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                     |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2009-02-05  |
| Status Comments                    | Added device class 9 - Forage Harvester   |

| DD Entity                          | 33 - Default Volume Per Mass Application Rate                              |
|------------------------------------|--|
| Definition                         | Default Application Rate specified as volume per mass                      |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit                               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>34 - Minimum Volume Per Mass Application Rate</b>                       |
| Definition                         | Minimum Application Rate specified as volume per mass                      |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit                               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>35 - Maximum Volume Per Mass Application Rate</b>                       |
| Definition                         | Maximum Application Rate specified as volume per mass                      |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit                               |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>36 - Setpoint Volume Per Time Application Rate</b>                      |
| Definition                         | Setpoint Application Rate specified as volume per time                     |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>37 - Actual Volume Per Time Application Rate</b>                        |
| Definition                         | Actual Application Rate specified as volume per time                       |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>38 - Default Volume Per Time Application Rate</b>                       |
| Definition                         | Default Application Rate specified as volume per time                      |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>39 - Minimum Volume Per Time Application Rate</b>                       |
| Definition                         | Minimum Application Rate specified as volume per time                      |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>40 - Maximum Volume Per Time Application Rate</b>                       |
| Definition                         | Maximum Application Rate specified as volume per time                      |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>41 - Setpoint Mass Per Time Application Rate</b>                        |
| Definition                         | Setpoint Application Rate specified as mass per time                       |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>42 - Actual Mass Per Time Application Rate</b>                          |
| Definition                         | Actual Application Rate specified as mass per time                         |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>43 - Default Mass Per Time Application Rate</b>                         |
| Definition                         | Default Application Rate specified as mass per time                        |
| Comment                            | use when missing Position data or outside any Treatment Zone               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>44 - Minimum Mass Per Time Application Rate</b>                         |
| Definition                         | Minimum Application Rate specified as mass per time                        |
| Comment                            | supplied by device as physical minimum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>45 - Maximum Mass Per Time Application Rate</b>                         |
| Definition                         | Maximum Application Rate specified as mass per time                        |
| Comment                            | supplied by device as physical maximum                                     |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>46 - Setpoint Count Per Time Application Rate</b>                    |
| Definition                         | Setpoint Application Rate specified as count per time                   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>47 - Actual Count Per Time Application Rate</b>                      |
| Definition                         | Actual Application Rate specified as count per time                     |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>48 - Default Count Per Time Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Default Application Rate specified as count per time                    |
| Comment                            | use when missing Position data or outside any Treatment Zone            |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer                                 |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>49 - Minimum Count Per Time Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Minimum Application Rate specified as count per time                    |
| Comment                            | supplied by device as physical minimum                                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>50 - Maximum Count Per Time Application Rate</b>                     |
|------------------------------------|---|
| Definition                         | Maximum Application Rate specified as count per time                    |
| Comment                            | supplied by device as physical maximum                                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>51 - Setpoint Tillage Depth</b>   |
|------------------------------------|--|
| Definition                         | Setpoint Tillage Depth of Device Element below soil surface, value increases with depth. In case of a negative value the system will indicate the distance above the ground. |
| Comment                            |  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>8 - Root Harvester  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-06-16   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>52 - Actual Tillage Depth</b>   |
|------------------------------------|--|
| Definition                         | Actual Tillage Depth of Device Element below soil surface, value increases with depth. In case of a negative value the system will indicate the distance above the ground. |
| Comment                            |  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-06-16   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>53 - Default Tillage Depth</b>   |
|------------------------------------|---|
| Definition                         | Default Tillage Depth of Device Element below soil surface, value increases with depth. In case of a negative value the system will indicate the distance above the ground. |
| Comment                            | Use when missing Position data or outside any Treatment Zone  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>8 - Root Harvester                                      |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-06-16  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>54 - Minimum Tillage Depth</b>   |
|------------------------------------|---|
| Definition                         | Minimum Tillage Depth of Device Element below soil surface, value increases with depth. In case of a negative value the system will indicate the distance above the ground. |
| Comment                            | Supplied by device as physical minimum  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>8 - Root Harvester   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-06-16  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>55 - Maximum Tillage Depth</b>   |
|------------------------------------|---|
| Definition                         | Maximum Tillage Depth of Device Element below soil surface, value increases with depth. In case of a negative value the system will indicate the distance above the ground. |
| Comment                            | Supplied by device as physical maximum  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>8 - Root Harvester   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-06-16  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>56 - Setpoint Seeding Depth</b>  |
|------------------------------------|---|
| Definition                         | Setpoint Seeding Depth of Device Element below soil surface, value increases with depth |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                 |

| <b>DD Entity</b>                   | <b>57 - Actual Seeding Depth</b>  |
|------------------------------------|---|
| Definition                         | Actual Seeding Depth of Device Element below soil surface, value increases with depth |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.               |

| <b>DD Entity</b>                   | <b>58 - Default Seeding Depth</b>  |
|------------------------------------|--|
| Definition                         | Default Seeding Depth of Device Element below soil surface, value increases with depth |
| Comment                            | use when missing Position data or outside any Treatment Zone                           |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                |

| <b>DD Entity</b>                   | <b>59 - Minimum Seeding Depth</b>  |
|------------------------------------|--|
| Definition                         | Minimum Seeding Depth of Device Element below soil surface, value increases with depth |
| Comment                            | supplied by device as physical minimum   |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                |

| <b>DD Entity</b>                   | <b>60 - Maximum Seeding Depth</b>  |
|------------------------------------|--|
| Definition                         | Maximum Seeding Depth of Device Element below soil surface, value increases with depth |
| Comment                            | supplied by device as physical maximum   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                |

| <b>DD Entity</b>                   | <b>61 - Setpoint Working Height</b>  |
|------------------------------------|--|
| Definition                         | Setpoint Working Height of Device Element above crop or soil   |
| Comment                            |  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |



| <b>DD Entity</b>                   | <b>62 - Actual Working Height</b>  |
|------------------------------------|--|
| Definition                         | Actual Working Height of Device Element above crop or soil   |
| Comment                            | This is the height above the effective control surface. For sprayers this is the height above the crop canopy and for fertilizer spreaders, harvesters, etc it is the height above the ground. |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    | Added comment for clarification.   |

| <b>DD Entity</b>                   | <b>63 - Default Working Height</b>  |
|------------------------------------|---|
| Definition                         | Default Working Height of Device Element above crop or soil                                 |
| Comment                            | use when missing Position data or outside any Treatment Zone                                |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                     |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>64 - Minimum Working Height</b>  |
| Definition                         | Minimum Working Height of Device Element above crop or soil                                 |
| Comment                            | supplied by device as physical minimum  |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                     |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>65 - Maximum Working Height</b>  |
| Definition                         | Maximum Working Height of Device Element above crop or soil                                 |
| Comment                            | supplied by device as physical maximum  |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                     |

| DD Entity                          | 66 - Setpoint Working Width  |
|------------------------------------|--|
| Definition                         | Setpoint Working Width of Device Element   |
| Comment                            |  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| DD Entity                          | 67 - Actual Working Width  |
|------------------------------------|--|
| Definition                         | Actual Working Width of Device Element   |
| Comment                            | This is the effective / active working width during operation.   |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |

|                 |   |
|-----------------|---|
| Submit Date     | 2003-08-01                                  |
| Submit Company  | 89 - Kverneland Group, Electronics Division |
| Revision Number | 1   |
| Current Status  | ISO-Approved                                |
| Status Date     | 2009-02-05                                  |
| Status Comments | Added comment for clarification.            |

| <b>DD Entity</b>                   | <b>68 - Default Working Width</b>  |
|------------------------------------|--|
| Definition                         | Default Working Width of Device Element  |
| Comment                            |  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>69 - Minimum Working Width</b>  |
|------------------------------------|--|
| Definition                         | Minimum Working Width of Device Element  |
| Comment                            |  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |

|                 |   |
|-----------------|---|
| Current Status  | ISO-Published   |
| Status Date     | 2005-02-02  |
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>70 - Maximum Working Width</b>  |
|------------------------------------|--|
| Definition                         | Maximum Working Width of Device Element  |
| Comment                            |  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>71 - Setpoint Volume Content</b>   |
|------------------------------------|---|
| Definition                         | Setpoint Device Element Content specified as volume   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                                 |

| DD Entity                          | 72 - Actual Volume Content  |
|------------------------------------|---|
| Definition                         | Actual Device Element Content specified as volume   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| DD Entity                          | 73 - Maximum Volume Content   |
|------------------------------------|---|
| Definition                         | Maximum Device Element Content specified as volume  |
| Comment                            | is a minimum needed as well ??  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |



|                 |   |
|-----------------|---|
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |
|-----------------|---|

| <b>DD Entity</b>                   | <b>74 - Setpoint Mass Content</b>   |
|------------------------------------|---|
| Definition                         | Setpoint Machine Element Content specified as mass  |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| <b>DD Entity</b>                   | <b>75 - Actual Mass Content</b>  |
|------------------------------------|--|
| Definition                         | Actual Device Element Content specified as mass  |
| Comment                            | If the device is equipped with a weighing system which provides the possibility to tare the current load it is possible that the value has a negative sign in case of an unload operation. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers                    |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 2  |

|                 |               |
|-----------------|---------------|
| Current Status  | ISO-Published |
| Status Date     | 2011-04-04    |
| Status Comments |               |

| DD Entity                          | 76 - Maximum Mass Content   |
|------------------------------------|---|
| Definition                         | Maximum Device Element Content specified as mass  |
| Comment                            | is a minimum needed as well ??  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| DD Entity                          | 77 - Setpoint Count Content   |
|------------------------------------|---|
| Definition                         | Setpoint Device Element Content specified as count  |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |

|                 |   |
|-----------------|---|
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |
|-----------------|---|

| <b>DD Entity</b>                   | <b>78 - Actual Count Content</b>  |
|------------------------------------|---|
| Definition                         | Actual Device Element Content specified as count  |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| <b>DD Entity</b>                   | <b>79 - Maximum Count Content</b>                                       |
|------------------------------------|---|
| Definition                         | Maximum Device Element Content specified as count                       |
| Comment                            | is a minimum needed as well ??  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>80 - Application Total Volume in [L]</b>                                |
|------------------------------------|--|
| Definition                         | Accumulated Application specified as volume in liter [L]                   |
| Comment                            | is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | L - Capacity count   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

| <b>DD Entity</b>                   | <b>81 - Application Total Mass in [kg]</b>                                 |
|------------------------------------|--|
| Definition                         | Accumulated Application specified as mass in kilogram [kg]                 |
| Comment                            | is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.    |

| <b>DD Entity</b>                   | <b>82 - Application Total Count</b>                                     |
|------------------------------------|---|
| Definition                         | Accumulated Application specified as count                              |
| Comment                            | is a counter of a device element  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers                 |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>83 - Volume Per Area Yield</b>  |
|------------------------------------|--|
| Definition                         | Yield as volume per area   |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | ml/m <sup>2</sup> - Capacity per area large  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |



| <b>DD Entity</b>                   | <b>84 - Mass Per Area Yield</b>  |
|------------------------------------|--|
| Definition                         | Yield as mass per area, not corrected for the reference moisture percentage DDI 184.   |
| Comment                            | This Mass per Area yield is the mass that includes the actual percentage moisture (DDI 99) if this is measured on e.g. harvesting equipment. This comment is added to clarify and differentiate this DDI from the Dry Mass Per Area Yield (DDI 181). |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>85 - Count Per Area Yield</b>  |
|------------------------------------|---|
| Definition                         | Yield as count per area   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>86 - Volume Per Time Yield</b>                                       |
| Definition                         | Yield as volume per time  |
| Comment                            |   |
| Typically used by Device Class(es) | 0 - Non-specific system   |
| Unit Symbol                        | ml/s - Float large  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>87 - Mass Per Time Yield</b>  |
| Definition                         | Yield as mass per time, not corrected for the reference moisture percentage DDI 184.   |
| Comment                            | This Mass per Time yield is the mass that includes the actual percentage moisture (DDI 99) if this is measured on e.g. harvesting equipment. This comment is added to clarify and differentiate this DDI from the Dry Mass Per Time Yield (DDI 182). |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>88 - Count Per Time Yield</b>  |
|------------------------------------|---|
| Definition                         | Yield as count per time   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>89 - Yield Total Volume</b>   |
|------------------------------------|--|
| Definition                         | Accumulated Yield specified as volume  |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | L - Quantity per volume  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |

| <b>DD Entity</b>                   | <b>90 - Yield Total Mass</b>   |
|------------------------------------|--|
| Definition                         | Accumulated Yield specified as mass, not corrected for the reference moisture percentage DDI 184.  |
| Comment                            | This Yield Total Mass is the mass that includes the average percentage moisture (DDI 262) if this is measured on e.g. harvesting equipment. This comment is added to clarify and differentiate this DDI from the Yield Total Dry Mass (DDI 183). |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>91 - Yield Total Count</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Yield specified as count   |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>92 - Volume Per Area Crop Loss</b>  |
| Definition                         | Crop yield loss as volume per area   |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | ml/m <sup>2</sup> - Capacity per area large  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>93 - Mass Per Area Crop Loss</b>                                     |
| Definition                         | Crop yield loss as mass per area  |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit                                  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>94 - Count Per Area Crop Loss</b>                                    |
| Definition                         | Crop yield loss as count per area                                       |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | /m <sup>2</sup> - Quantity per area unit                                |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>95 - Volume Per Time Crop Loss</b>  |
| Definition                         | Crop yield loss as volume per time   |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | ml/s - Float large   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>96 - Mass Per Time Crop Loss</b>                                     |
| Definition                         | Crop yield loss as mass per time  |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | mg/s - Mass flow  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>97 - Count Per Time Crop Loss</b>                                    |
| Definition                         | Crop yield loss as count per time                                       |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>98 - Percentage Crop Loss</b>  |
| Definition                         | Crop yield loss   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>99 - Crop Moisture</b>   |
| Definition                         | Moisture in crop yield  |
| Comment                            | This DDE defines the actual percentage moisture of the crop.            |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |



| <b>DD Entity</b>                   | <b>100 - Crop Contamination</b>   |
|------------------------------------|---|
| Definition                         | Dirt or foreign material in crop yield                                  |
| Comment                            | This DDE defines the contamination in ratio of the yield DDI units.     |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester            |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>101 - Setpoint Bale Width</b>  |
|------------------------------------|---|
| Definition                         | Setpoint Bale Width for square baler or round baler                     |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>102 - Actual Bale Width</b>  |
| Definition                         | Actual Bale Width for square baler or round baler                       |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>103 - Default Bale Width</b>   |
| Definition                         | Default Bale Width for square baler or round baler                      |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| DD Entity                          | 104 - Minimum Bale Width  |
|------------------------------------|---|
| Definition                         | Minimum Bale Width for square baler or round baler                      |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| DD Entity                          | 105 - Maximum Bale Width  |
|------------------------------------|---|
| Definition                         | Maximum Bale Width for square baler or round baler                      |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>106 - Setpoint Bale Height</b>                                       |
| Definition                         | Setpoint Bale Height is only applicable to square baler                 |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>107 - ActualBaleHeight</b>   |
| Definition                         | Actual Bale Height is only applicable to square baler                   |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>108 - Default Bale Height</b>  |
| Definition                         | Default Bale Height is only applicable to square baler                  |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>109 - Minimum Bale Height</b>  |
| Definition                         | Minimum Bale Height is only applicable to square baler                  |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>110 - Maximum Bale Height</b>  |
| Definition                         | Maximum Bale Height is only applicable to square baler                  |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>111 - Setpoint Bale Size</b>   |
| Definition                         | Setpoint Bale Size as length for a square baler or diameter for a round baler |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.       |

| <b>DD Entity</b>                   | <b>112 - Actual Bale Size</b>   |
|------------------------------------|---|
| Definition                         | Actual Bale Size as length for a square baler or diameter for a round baler |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                 |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.     |

| <b>DD Entity</b>                   | <b>113 - Default Bale Size</b>   |
|------------------------------------|--|
| Definition                         | Default Bale Size as length for a square baler or diameter for a round baler |
| Comment                            |  |
| Typically used by Device Class(es) | 9 - Forage harvester   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.      |

| <b>DD Entity</b>                   | <b>114 - Minimum Bale Size</b>   |
|------------------------------------|--|
| Definition                         | Minimum Bale Size as length for a square baler or diameter for a round baler |
| Comment                            |  |
| Typically used by Device Class(es) | 9 - Forage harvester   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.      |

| <b>DD Entity</b>                   | <b>115 - Maximum Bale Size</b>   |
|------------------------------------|--|
| Definition                         | Maximum Bale Size as length for a square baler or diameter for a round baler |
| Comment                            |  |
| Typically used by Device Class(es) | 9 - Forage harvester   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.      |



| <b>DD Entity</b>                   | <b>116 - Total Area</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Area   |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | m <sup>2</sup> - Area  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>117 - Effective Total Distance</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Distance in working position   |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |

|                 |   |
|-----------------|---|
| Display Range   | 0 - 2147483647  |
| Submit by       | Part 10 Task Force  |
| Submit Date     | 2003-08-01  |
| Submit Company  | 89 - Kverneland Group, Electronics Division                             |
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2005-02-02  |
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>118 - Ineffective Total Distance</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Distance out of working position   |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 2003-08-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| <b>DD Entity</b>                   | <b>119 - Effective Total Time</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Time in working position   |
| Comment                            | is a counter of a machine element  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | s - Time count   |

|                 |   |
|-----------------|---|
| Resolution      | 1   |
| SAE SPN         | not specified                               |
| CANBus Range    | 0 - 2147483647                              |
| Display Range   | 0 - 2147483647                              |
| Submit by       | Part 10 Task Force                          |
| Submit Date     | 2003-08-01                                  |
| Submit Company  | 89 - Kverneland Group, Electronics Division |
| Revision Number | 2   |
| Current Status  | ISO-Published                               |
| Status Date     | 2011-12-21                                  |
| Status Comments |   |

| DD Entity                          | 120 - Ineffective Total Time  |
|------------------------------------|---|
| Definition                         | Accumulated Time out of working position  |
| Comment                            | is a counter of a machine element   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| DD Entity                          | 121 - Product Density Mass Per Volume   |
|------------------------------------|---|
| Definition                         | Product Density as mass per volume  |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mg/l - Mass per capacity unit   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |

|                 |   |
|-----------------|---|
| Display Range   | 0 - 2147483647  |
| Submit by       | Part 10 Task Force  |
| Submit Date     | 2003-08-01  |
| Submit Company  | 89 - Kverneland Group, Electronics Division                             |
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2005-02-02  |
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>122 - Product Density Mass PerCount</b>  |
| Definition                         | Product Density as mass per count   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mg/1000 - 1000 seed Mass  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>123 - Product Density Volume Per Count</b>   |
| Definition                         | Product Density as volume per count   |
| Comment                            |   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml/1000 - Volume per quantity unit  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Part 10 Task Force  |
| Submit Date                        | 2003-08-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |

|                 |   |
|-----------------|---|
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |
|-----------------|---|



| <b>DD Entity</b>                   | <b>124 - Auxiliary Valve Scaling Extend</b>   |
|------------------------------------|---|
| Definition                         | Factor to apply to AuxValveCommand PortFlowCommand. The scaling of the port flow relates to flow, not to spool position, although the position of the spool is of course indirectly affected. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | % - Percent   |
| Resolution                         | 0,1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| <b>DD Entity</b>                   | <b>125 - Auxiliary Valve Scaling Retract</b>  |
|------------------------------------|---|
| Definition                         | Factor to apply to AuxValveCommand PortFlowCommand. The scaling of the port flow relates to flow, not to spool position, although the position of the spool is of course indirectly affected. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | % - Percent   |
| Resolution                         | 0,1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>126 - Auxiliary Valve Ramp Extend Up</b>   |
| Definition                         | The valve will apply a ramp to the Auxiliary ValveCommand PortFlowCommand, to limit the acceleration or deceleration of flow. The valve must apply the ramp to create a linear increase/decrease of flow over time. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>127 - Auxiliary Valve Ramp Extend Down</b>   |
| Definition                         | The valve will apply a ramp to the Auxiliary ValveCommand PortFlowCommand, to limit the acceleration or deceleration of flow. The valve must apply the ramp to create a linear increase/decrease of flow over time. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| DD Entity                          | 128 - Auxiliary Valve Ramp Retract Up   |
|------------------------------------|---|
| Definition                         | The valve will apply a ramp to the Auxiliary ValveCommand PortFlowCommand, to limit the acceleration or deceleration of flow. The valve must apply the ramp to create a linear increase/decrease of flow over time. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| DD Entity                          | 129 - Auxiliary Valve Ramp Retract Down   |
|------------------------------------|---|
| Definition                         | The valve will apply a ramp to the Auxiliary ValveCommand PortFlowCommand, to limit the acceleration or deceleration of flow. The valve must apply the ramp to create a linear increase/decrease of flow over time. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| <b>DD Entity</b>                   | <b>130 - Auxiliary Valve Float Threshold</b>  |
|------------------------------------|---|
| Definition                         | Safety function. Current output of valve must be above threshold before float command is allowed. |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | % - Percent   |
| Resolution                         | 0,1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                           |

| <b>DD Entity</b>                   | <b>131 - Auxiliary Valve Progressivity Extend</b>   |
|------------------------------------|---|
| Definition                         | Define non-linear relationship between command and flow by 2nd degree polynomium. (I will get polynomium) |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                                   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>132 - Auxiliary Valve Progressivity Retract</b>  |
| Definition                         | Define non-linear relationship between command and flow by 2nd degree polynomium. (I will get polynomium) |
| Comment                            |   |
| Typically used by Device Class(es) | - Not Assigned  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Lars Althof   |
| Submit Date                        | 2004-09-10  |
| Submit Company                     | 57 - Sauer-Danfoss Co.  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.                                   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>133 - Auxiliary Valve Invert Ports</b>  |
| Definition                         | Tell valve to swap extend and retract ports, easier than redoing plumbing on valve |
| Comment                            |  |
| Typically used by Device Class(es) | - Not Assigned   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Lars Althof  |
| Submit Date                        | 2004-09-10   |
| Submit Company                     | 57 - Sauer-Danfoss Co.   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.            |

| DD Entity                          | 134 - Device Element Offset X  |
|------------------------------------|--|
| Definition                         | X direction offset of a DeviceElement relative to a Device.  |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-01-20   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| DD Entity                          | 135 - Device Element Offset Y  |
|------------------------------------|--|
| Definition                         | Y direction offset of a DeviceElement relative to a Device.  |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |

|                 |   |
|-----------------|---|
| Submit by       | 11783-Part 10 Task Force  |
| Submit Date     | 2005-01-20  |
| Submit Company  | 89 - Kverneland Group, Electronics Division                             |
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2005-02-02  |
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |

| DD Entity                          | 136 - Device Element Offset Z  |
|------------------------------------|--|
| Definition                         | Z direction offset of a DeviceElement relative to a Device.  |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-01-20   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-02-02   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

| DD Entity                          | 137 - Device Volume Capacity  |
|------------------------------------|---|
| Definition                         | DeviceElement Volume Capacity, dimension of a DeviceElement   |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-01-20  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |



|                 |   |
|-----------------|---|
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2005-02-02  |
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>138 - Device Mass Capacity</b>   |
|------------------------------------|---|
| Definition                         | DeviceElement Mass Capacity, dimension of a DeviceElement   |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-01-20  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

| <b>DD Entity</b>                   | <b>139 - Device Count Capacity</b>  |
|------------------------------------|---|
| Definition                         | DeviceElement Count Capacity, dimension of a DeviceElement  |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-01-20  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-02-02  |

|                 |   |
|-----------------|---|
| Status Comments | DDEs have been moved to published for creating the new Annex A version. |
|-----------------|---|

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>140 - Setpoint Percentage Application Rate</b>                          |
| Definition                         | Application Rate expressed as percentage                                   |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.                 |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-01-20   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                                |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-01-26   |
| Status Comments                    |  |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>141 - Actual Work State</b>  |
| Definition       | Actual Work State, 2 bits defined as 00=disabled/off, 01=enabled/on, 10=error, 11=undefined/not installed   |
| Comment          | See the DDI 290 attachment<br>"ISO11783-11-DDI-289-SetpointWorkState" as reference for implementation guideline.<br><br>This DDE has been revised in 2012 to be used as the Actual Work State. A separate Setpoint Work State was added to the data dictionary at that time.<br><br>Original comment: this DDE was a result of March 2005 TF10 meeting. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-03-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>142 - Physical Setpoint Time Latency</b>   |
|------------------------------------|---|
| Definition                         | The Setpoint Value Latency Time is the time lapse between the moment of receipt of a setpoint value command by the working set and the moment this setpoint value is physically applied on the device. That means if the setpoint value is communicated on the network (CAN bus) but the system needs 2 seconds to adjust the value physically on the desired unit (device element) then the Setpoint Latency Time is 2 seconds.<br>The setpoint time latency value can only be positive. |
| Comment                            | The use of this DDE is to inform the overall system (e.g. Dektop Software, Task Controller) how the system works. The TC shall not shift this information into log files nor shall the device do that when sending actual values.   |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-03-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 2   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-04  |
| Status Comments                    |   |

| <b>DD Entity</b> | <b>143 - Physical Actual Value Time Latency</b> |
|------------------|---|
|------------------|---|

|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The Actual Value Latency Time is the time lapse between the moment this actual value is communicated to the Task Controller, and the moment that this actual value is physically applied on the device. That means if the system needs 2 seconds to calculate or measure a value before communicating it on the network, then the Actual Latency Time value is minus 2 seconds.</p> <p>Depending of the system characteristics the latency time could be negative or positive.</p> <p>In case where the system communicates an actual value before the actual value has been physically applied the latency value should be positive.</p> <p>In case where the system communicates an actual value after the actual value has been physically applied the latency value should be negative.</p>  |
| Comment                            | <p>The use of this DDE is to inform the overall system (e.g. Dektop Software, Task Controller) how the system works. The TC shall not shift this information into log files nor shall the device do that when sending actual values.</p> <p>Example for a positive value:</p> <p>A seed flow sensor is placed at the start of the seed tube. At the moment the sensor measures seed flow X, it takes Y seconds for this flow to reach the coulter. The measured value is ahead of the physical value of the unit (coulter). So the latency could be plus 2 seconds.</p> <p>Example for a negative value:</p> <p>A flow sensor has a delay in its response to a flow change that means it takes Y seconds to realize the change. At the moment the sensor measures flow X, the flow is already present for Y seconds on the physical unit. The actual value is ahead of measured value. So the latency could be minus 2 seconds.</p> |
| Typically used by Device Class(es) | <p>2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 14 - Special Crops</p>   |
| Unit Symbol                        | ms - Time   |

|                 |   |
|-----------------|---|
| Resolution      | 1   |
| SAE SPN         | not specified                               |
| CANBus Range    | -2147483648 - 2147483647                    |
| Display Range   | -2147483648 - 2147483647                    |
| Submit by       | 11783-Part 10 Task Force                    |
| Submit Date     | 2005-03-01                                  |
| Submit Company  | 89 - Kverneland Group, Electronics Division |
| Revision Number | 2   |
| Current Status  | ISO-Approved                                |
| Status Date     | 2011-04-04                                  |
| Status Comments |   |



| <b>DD Entity</b>                   | <b>144 - Yaw Angle</b>  |
|------------------------------------|---|
| Definition                         | Pivot / Yaw Angle of a DeviceElement                                    |
| Comment                            | This DDE was a result of March 2005 TF10 meeting                        |
| Typically used by Device Class(es) |   |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -180000 - 180000  |
| Display Range                      | -180,000 - 180,000  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-03-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-05-09  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

| <b>DD Entity</b>                   | <b>145 - Roll Angle</b>   |
|------------------------------------|---|
| Definition                         | Roll Angle of a DeviceElement   |
| Comment                            | This DDE was a result of March 2005 TF10 meeting                        |
| Typically used by Device Class(es) |   |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -180000 - 180000  |
| Display Range                      | -180,000 - 180,000  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-03-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-05-09  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>146 - Pitch Angle</b>  |
| Definition                         | Pitch Angle of a DeviceElement  |
| Comment                            | This DDE was a result of March 2005 TF10 meeting                        |
| Typically used by Device Class(es) |   |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 0,001   |
| SAE SPN                            | not specified   |
| CANBus Range                       | -180000 - 180000  |
| Display Range                      | -180,000 - 180,000  |
| Submit by                          | 11783-Part 10 Task Force  |
| Submit Date                        | 2005-03-01  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division                             |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-05-09  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version. |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>147 - Log Count</b>   |
| Definition                         | Log Counter, may be used to control data log record generation on a Task Controller  |
| Comment                            | This DDE was a result of March 2005 TF10 meeting   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-03-01   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2005-05-09   |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>148 - Total Fuel Consumption</b>   |
| Definition                         | Accumulated Fuel Consumption as Counter   |
| Comment                            |   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            | not specified   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Stephan Zelleröhr   |
| Submit Date                        | 2005-04-12  |
| Submit Company                     | 103 - Agrocom GmbH & Co. Agrarsystem KG   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2005-05-09  |
| Status Comments                    | DDEs have been moved to published for creating the new Annex A version.   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>149 - Instantaneous Fuel Consumption per Time</b> |
| Definition       | Fuel consumption per time                            |
| Comment          |  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Stephan Zelleröhr  |
| Submit Date                        | 2005-04-12   |
| Submit Company                     | 103 - Agrocom GmbH & Co. Agrarsystem KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    | Added "Instantaneous" for clarification  |

|                                       |  |
|---------------------------------------|--|
| <b>DD Entity</b>                      | <b>150 - Instantaneous Fuel Consumption per Area</b>   |
| Definition                            | Fuel consumption per area  |
| Comment                               |  |
| Typically used by Device<br>Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                           | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit   |
| Resolution                            | 1  |
| SAE SPN                               | not specified  |
| CANBus Range                          | 0 - 2147483647   |
| Display Range                         | 0 - 2147483647   |
| Submit by                             | Stephan Zelleröhr  |
| Submit Date                           | 2005-04-12   |
| Submit Company                        | 103 - Agrocom GmbH & Co. Agrarsystem KG  |
| Revision Number                       | 1  |
| Current Status                        | ISO-Approved   |
| Status Date                           | 2009-02-05   |
| Status Comments                       | Added "Instantaneous" for clarification.   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>151 - Instantaneous Area Per Time Capacity</b> |
| Definition       | Area per time capacity                            |
| Comment          |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm <sup>2</sup> /s - Area per time unit  |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Stephan Zelleröhr  |
| Submit Date                        | 2005-04-12   |
| Submit Company                     | 103 - Agrocom GmbH & Co. Agrarsystem KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    | Added "Instantaneous" for clarification.   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>153 - Actual Normalized Difference Vegetative Index (NDVI)</b>  |
| Definition                         | The Normalized Difference Vegetative Index (NDVI) computed from crop reflectances as the difference between NIR reflectance in the 780 to 880 nm band and red reflectance in the 640 to 680 nm band divided by the sum of the NIR and red reflectance in the same bands. |
| Comment                            | Document attached.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 0,001  |
| SAE SPN                            | TBD  |
| CANBus Range                       | -1 - 1   |
| Display Range                      | -0,001 - 0,001   |
| Submit by                          | Marvin Stone   |
| Submit Date                        | 2008-04-28   |
| Submit Company                     | 39 - Microfirm Inc.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 0000-00-00   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2009-08-11: Definition summary - NDVI definition summary.pdf</a>   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>154 - Physical Object Length</b>  |
| Definition                         | Length of device element (dimension along the X-axis)  |
| Comment                            | The reference point of the device element shall be located in the center of the device element   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |

|                 |                    |
|-----------------|--------------------|
| CANBus Range    | 0 - 2147483647     |
| Display Range   | 0 - 2147483647     |
| Submit by       | Hans Jürgen Nissen |
| Submit Date     | 2008-12-03         |
| Submit Company  | 33 - John Deere    |
| Revision Number | 1                  |
| Current Status  | ISO-Approved       |
| Status Date     | 2009-02-05         |
| Status Comments |                    |



| DD Entity                          | 155 - Physical Object Width   |
|------------------------------------|---|
| Definition                         | Width of device element (dimension along the Y-axis)  |
| Comment                            | The reference point of the device element shall be located in the center of the device element  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Hans Jürgen Nissen  |
| Submit Date                        | 2008-12-03  |
| Submit Company                     | 33 - John Deere   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2009-02-05  |
| Status Comments                    |   |

| DD Entity  | 156 - Physical Object Height   |
|------------|--|
| Definition | Height of device element (dimension along the Z-axis)  |
| Comment    | The reference point of the device element shall be located in the center of the device element |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Hans Jürgen Nissen   |
| Submit Date                        | 2008-12-03   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    |  |

| DD Entity                          | 157 - Connector Type   |
|------------------------------------|--|
| Definition                         | <p>Specification of the type of coupler. The value definitions are:</p> <p>0 = unknown (default),<br/> 1 = ISO 6489-3 Tractor drawbar,<br/> 2 = ISO 730 Three-point-hitch semi-mounted,<br/> 3 = ISO 730 Three-point-hitch mounted,<br/> 4 = ISO 6489-1 Hitch-hook,<br/> 5 = ISO 6489-2 Clevis coupling 40,<br/> 6 = ISO 6489-4 Piton type coupling,<br/> 7 = ISO 6489-5 CUNA hitch, or ISO 5692-2 Pivot wagon hitch<br/> 8 = ISO 24347 Ball type hitch<br/> 9 = Chassis Mounted - Self-Propelled</p> <p>All other values are reserved for future assignments.</p> |
| Comment                            | <p>This DDE allows systems to automatically select the connection between devices. For instance, when 2 devices are on the network that declare device elements with the same connector type, the system can connect them accordingly.</p> <p>This DDE shall be used with the Device Element of type "Connector" only.</p>   |
| Typically used by Device Class(es) | <p>0 - Non-specific system<br/> 1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers<br/> 12 - Farmyard Work<br/> 13 - Powered Auxiliary Units<br/> 14 - Special Crops<br/> 15 - Municipal Work</p>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 9  |
| Display Range                      | 0 - 9  |
| Submit by                          | Hans Jürgen Nissen   |
| Submit Date                        | 2008-12-03   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2018-06-18   |
| Status Comments                    | Status was published   |

| DD Entity                          | 158 - Prescription Control State   |
|------------------------------------|--|
| Definition                         | <p>Defines and synchronise the actual state of the prescription system. The state is represented by the lowest significant 2 bits in the lowest significant byte of the process data value: Byte 1: bit 0-1: 00 = manual/off, 01 = auto/on, 10 = error indicator, 11 = undefined/not installed. bits 2-7: reserved set to 0. Byte 2-4: reserved set to 0.</p> <p>The DDI shall support the On Change trigger so that the TC is able to get informed when the value gets changed by the Working Set Master. The TC shall active this trigger when using the DDI.</p> <p>See attachment for more information</p>   |
| Comment                            | <p>The prescription control master and its clients need to be synchronized in terms of their general state or activation by the user (System activated/deactivated in individual setups). This DDE serves 2 purposes, one is to synchronize the prescription control state and the other is to enable a TC client to announce the support and initial state of its prescription control capabilities. Synchronisation by the prescription master (TC) is done by setting the prescription state of connected TC clients with a process data set value message with this DDE. It is recommended that TC clients reply their state immediately (within 250 ms) when such a message is received. The property flag "setable" and the trigger method "on change" shall be used with this DDE. The state "manual/off" indicates that the device is in manual state and will ignore all prescription commands. The "auto/on" state indicates that the client accepts the prescription commands as far as its overall process state allows.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> </ul>   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |

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|-----------------|---|
| Submit by       | Matthias Meyer  |
| Submit Date     | 2008-11-07  |
| Submit Company  | 33 - John Deere   |
| Revision Number | 1   |
| Current Status  | ISO-Approved  |
| Status Date     | 2009-02-05  |
| Status Comments |   |
| Attachment      | <a href="#">2010-04-06: Example Prescription Control State use - PCS Implementation Example.pdf</a> |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>159 - Number of Sub-Units per Section</b>   |
| Definition                         | Specifies the number of sub-units for a section (e.g. number of nozzles per sprayer section or number of planter row units per metering device).   |
| Comment                            | This DDE is used for objects which have further sub-units per section, which are of interest to the operator but not needed for the Task Controller operation itself. With this information and the overall width of the section the system can calculate for instance the row spacing without having individual objects for each row in the DCD.                              |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jason Walter   |
| Submit Date                        | 2008-12-03   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    |  |

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|------------------|------------------------------------|
| <b>DD Entity</b> | <b>160 - Section Control State</b> |
|------------------|------------------------------------|

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|------------|--|
| Definition | <p>Specifies the actual state of section control. The value definitions are:</p> <p>Byte 1 (bitfield) Bit 0-1: 00 = manual/off, 01 = auto/on, 10 = error indicator, 11 = undefined/not installed. Bits 2-7: reserved, set to 0.</p> <p>Bytes 2-4: reserved, set to 0.</p> <p>The DDI shall support the On Change trigger so that the TC is able to get informed when the value gets changed by the Working Set Master. The TC shall active this trigger when using the DDI.</p> <p>See attachment for more information</p> |
|------------|--|

|         |   |
|---------|---|
| Comment | <p>In section control systems, the section control master and its clients need to be synchronized in terms of their general state or activation by the user (System activated/deactivated in individual setups). This DDE serves 2 purposes, one is to synchronize the section control state and the other is to enable a TC client to announce the support and initial state of its section control capabilities. Synchronisation by the section control master (TC) is done by setting the section control state of connected TC clients with a process data set value message with this DDE. It is recommended that TC clients reply their state immediately (within 250 ms) when such a message is received. The property flag "setable" and the trigger method "on change" should be used with this DDE. The state "manual/off" indicates that the device is in manual state and will ignore all control commands for section control. The "auto/on" state indicates that the client accepts the section control commands as far as its overall process state allows.</p> <p>Listed below are 4 example Use Cases for this DDE:</p> <p>Use case "Start up operation":</p> <ol style="list-style-type: none"><li>1. During a start up the implement shall set the SCS to 'manual mode'.</li></ol> <p>Use case "Auto request from TC":</p> <ol style="list-style-type: none"><li>1. The implement receives an 'auto' request from TC.</li><li>2. The implement shall check whether all setup conditions are fulfilled to allow section control.</li><li>3. If this check is ok: The implement may respond with 'auto mode' and set its internal SCS client to 'auto mode'.</li><li>4. If this check not ok: The implement shall respond with 'manual mode'. The internal state is still in manual mode. The TC may inform the operator accordingly.</li></ol> <p>Use case "Manual request from TC":</p> <ol style="list-style-type: none"><li>1. The implement receives a manual request from TC.</li><li>2. If the implement is still in 'auto mode' the implement shall set its internal SCS client to 'manual mode'.</li></ol> <p>Use case "Loss of requirements for auto mode":</p> <ol style="list-style-type: none"><li>1. The implement internal setup conditions don't allow for automatic section control anymore.</li><li>2. The implement shall set the internal SCS client to 'manual mode'.</li><li>3. The implement shall send the SCS to inform the TC accordingly. On reception of this 'manual mode' the TC/Section Control Master may inform the operator accordingly.</li></ol> |
|---------|---|



|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2008-12-03   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    |  |

| DD Entity                          | 161 - Actual Condensed Work State (1-16)   |
|------------------------------------|--|
| Definition                         | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 1 to 16 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment                            | <p>See attachment on DDI 290<br/>"ISO11783-11-DDI-290-SetpointCondensedWorkState" for implementation guideline.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |
| Typically used by Device Class(es) | <p>0 - Non-specific system<br/>1 - Tractor<br/>2 - Primary Soil Tillage<br/>3 - Secondary Soil Tillage<br/>4 - Planters /Seeders<br/>5 - Fertilizer<br/>6 - Sprayers<br/>7 - Harvesters<br/>8 - Root Harvester<br/>9 - Forage harvester<br/>10 - Irrigation<br/>11 - Transport / Trailers<br/>12 - Farmyard Work<br/>13 - Powered Auxilary Units<br/>14 - Special Crops<br/>15 - Municipal Work</p>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>162 - Actual Condensed Work State (17-32)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 17 to 32 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>163 - Actual Condensed Work State (33-48)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 33 to 48 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>164 - Actual Condensed Work State (49-64)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 49 to 64 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>165 - Actual Condensed Work State (65-80)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 65 to 80 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment<br>"ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |



|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>166 - Actual Condensed Work State (81-96)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 81 to 96 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>167 - Actual Condensed Work State (97-112)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 97 to 112 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 4294967295  |
| Display Range                      | 0 - 4294967295  |
| Submit by                          | Adam Bogenrief  |

|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>168 - Actual Condensed Work State (113-128)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 113 to 128 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>169 - Actual Condensed Work State (129-144)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 129 to 144 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

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|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>170 - Actual Condensed Work State (145-160)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 145 to 160 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>171 - Actual Condensed Work State (161-176)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 161 to 176 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>172 - Actual Condensed Work State (177-192)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 177 to 192 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>173 - Actual Condensed Work State (193-208)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 193 to 208 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

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|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>174 - Actual Condensed Work State (209-224)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 209 to 224 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>175 - Actual Condensed Work State (225-240)</b>   |
| Definition                         | Combination of the actual work states of individual sections or units (e.g. nozzles) number 225 to 240 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements. |
| Comment                            | See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.<br><br>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |

|                 |                 |
|-----------------|-----------------|
| Submit Date     | 2008-01-14      |
| Submit Company  | 33 - John Deere |
| Revision Number | 1               |
| Current Status  | ISO-Published   |
| Status Date     | 2012-04-02      |
| Status Comments |                 |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>176 - Actual Condensed Work State (241-256)</b>  |
| Definition       | <p>Combination of the actual work states of individual sections or units (e.g. nozzles) number 241 to 256 into a single actual work state of their parent device element. The actual condensed work state contains the child element actual work states, in the driving direction from left to right, where the leftmost child element actual work state are the 2 lowest significant bits of the Process Data Value. Each child device elements actual work state is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element actual work states can be contained in one actual condensed work state of their parent device element. If less than 16 child device element actual work states are available, then the unused bits shall be set to value 11 (not installed). When the parent device element contains the Actual Condensed Work State DDE, then the device descriptor shall not contain the individual actual work state DDEs of the child device elements.</p> |
| Comment          | <p>See the DDI 161 attachment "ISO11783-11-DDI-289-SetpointWorkState" for implementation guidelines.</p> <p>This DDE is used to reduce number of messages. Individual work state messages for a many-sectioned device can potentially cause performance issues due to overloading communication. With this DDE, 16 work states can be sent via a single message, resulting in less traffic to convey on/off status for an entire device.</p>  |



|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Adam Bogenrief   |
| Submit Date                        | 2008-01-14   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>177 - Actual length of cut</b>   |
| Definition                         | Actual length of cut for harvested material, e.g. Forage Harvester or Tree Harvester.                         |
| Comment                            | none.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483,647   |
| Display Range                      | 0,000 - 2,147,484   |
| Submit by                          | Hans Jürgen Nissen  |
| Submit Date                        | 2008-09-22  |
| Submit Company                     | 33 - John Deere   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2009-02-05  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>178 - Element Type Instance</b>  |
| Definition       | This DDI is used to enumerate and identify multiple device elements (DET) of the same type within one Device Description object pool. The value of this DDI is independent of the DET number. The combination of device element type and value of Element Type Instance ETI represents a unique object inside the device description object pool and therefore shall exist only once per object pool. Recommendation: The definition of the device elements should be made from left to right direction or from front to back direction. When in a matrix, count left-to-right first, then front-to-back and at last top-to-bottom. See attachment for more information.  |
| Comment          | This DDE allows the system to communicate with a device element object independent of the device element number. The same tank of a seeder for instance could have various device element numbers based upon the DDD. The DDD structure may change during setup the implement. In this case a unique implement tank might has a different element number as before. Particular if the Task Controller (TC) use a user interface to display and change data by the operator. Therefore the TC needs clear or rather unique device element information. Assign this DDE for instance to a DET of type bin. This number can be displayed to the operator while it may be printed physically at the bin. The ETI number range from 0 to 65533 inside the object pool corresponds to a displayed value from 1 to 65534 on a user interface or physical device. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | - Not Assigned   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 65533  |
| Display Range                      | 0 - 65533  |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2010-01-15   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2010-04-06: Example Device Descriptions with Element Type Instance DDI - Mixed product implement DDD recommendation 20100118.pdf</a> |

| DD Entity                          | 179 - Actual Cultural Practice   |
|------------------------------------|--|
| Definition                         | <p>This DDI is used to define the current cultural practice which is performed by an individual device operation. For instance a planter/seeder could provide a sowing and a fertilizing operation at the same time.</p> <p>The cultural practice value definitions are: 0=Unknown, 1=Fertilizing, 2=Sowing and Planting, 3=Crop Protection, 4=Tillage, 5=Baling, 6=Mowing, 7=Wrapping, 8=Harvesting, 9=Forage Harvesting, 10=Transport, 11=Swathing, 12=Slurry/Manure Application, 13=Self-Loading Wagon, 14=Tedding, 15-255=Reserved for future Assignment</p> <p>See attachment for more information.</p>   |
| Comment                            | <p>Implements as Planter or Seeder which provides more than one product application need an option to sign the cultural practice that is performed by each operation. More then ever if the applied products have the same unit type. As for instance a seeder provides a sowing and fertilizing operation which have both mass per area as unit defined. In this case it is not clear to the TC that the second operation is a fertilizing operation. Particular if the TC owns a user interface to display these information to the operator. Through this DDE the TC user interface can display the appropriate information. Adding this DDI to the device element of type device the main cultural practice of the device could be defined. For instance a baler will claim on the bus as forage device class and have set the actual cultural practice as baling.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> </ul>   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |

|                 |   |
|-----------------|---|
| Submit Date     | 2010-01-15  |
| Submit Company  | 33 - John Deere   |
| Revision Number | 2   |
| Current Status  | ISO-Published   |
| Status Date     | 2015-01-28  |
| Status Comments |   |
| Attachment      | <a href="#">2011-01-11: - Multiple and Single Product Implement Description.pdf</a> |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>180 - Device Reference Point (DRP) to Ground distance</b>  |
| Definition                         | This DDI is used to specify the distance from the Device Reference Point (DRP) down to the ground surface. The DRP to Ground DDI shall be attached only to the Device Element (DET) with element number zero.   |
| Comment                            | Depending on the application it might be required to know the distance of a device element down to the ground. All device element offsets refer to the DRP which is the centre of the device coordinate system and usually not at the ground surface. For instance the DRP of a tractor is the centre of the rear axle. In this case the distance from a GPS receiver (DET of type navigation reference) attached on the roof of the cab is calculated through sum up the Z-offset of the DET and the distance of the DRP to ground. The value of the DRP in this case is equivalent to the radius of the rolling wheel which is attached on the tractor rear axle. |
| Typically used by Device Class(es) |   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2010-01-15  |
| Submit Company                     | 33 - John Deere   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2010-03-12  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>181 - Dry Mass Per Area Yield</b>  |
| Definition                         | Actual Dry Mass Per Area Yield. The definition of dry mass is the mass with a reference moisture specified by DDI 184.  |
| Comment                            | The earlier defined DDI 84 is the mass per area that is measured on e.g. harvesting equipment as a mass including a possibly unknown moisture percentage. This DDI 181 is the mass per area yield, corrected to a reference moisture. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Lyle Jensen   |
| Submit Date                        | 2010-01-29  |
| Submit Company                     | 102 - AGCO GmbH & Co  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2010-03-12  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>182 - Dry Mass Per Time Yield</b>  |
| Definition                         | Actual Dry Mass Per Time Yield. The definition of dry mass is the mass with a reference moisture specified by DDI 184.  |
| Comment                            | The earlier defined DDI 87 is the mass per time that is measured on e.g. harvesting equipment as a mass including a possibly unknown moisture percentage. This DDI 182 is the mass per time yield, corrected to a reference moisture. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | mg/s - Mass flow  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Lyle Jensen   |
| Submit Date                        | 2010-01-29  |
| Submit Company                     | 102 - AGCO GmbH & Co  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2010-03-12  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>183 - Yield Total Dry Mass</b>  |
|------------------------------------|--|
| Definition                         | Accumulated Yield specified as dry mass. The definition of dry mass is the mass with a reference moisture specified by DDI 184.  |
| Comment                            | The earlier defined DDI 90 is considered to be the total mass that is measured on e.g. harvesting equipment as a mass including a possibly unknown moisture percentage. This DDI 183 is the yield total mass, corrected to a reference moisture. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Lyle Jensen  |
| Submit Date                        | 2010-01-29   |
| Submit Company                     | 102 - AGCO GmbH & Co   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>184 - Reference Moisture For Dry Mass</b>   |
|------------------------------------|--|
| Definition                         | Moisture percentage used for the dry mass DDIs 181, 182 and 183.                             |
| Comment                            | Example: this definition is similar to the "Standard Payable Moisture" term used by farmers. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops           |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Lyle Jensen  |
| Submit Date                        | 2010-01-29   |
| Submit Company                     | 102 - AGCO GmbH & Co   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>185 - Seed Cotton Mass Per Area Yield</b>   |
|------------------------------------|--|
| Definition                         | Seed cotton yield as mass per area, not corrected for a possibly included lint percentage.   |
| Comment                            | This Seed Cotton Mass Per Area Yield is the mass of the raw harvested cotton product as it is measured on e.g. harvesting equipment. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops   |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Andy Beck  |
| Submit Date                        | 2010-02-26   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>186 - Lint Cotton Mass Per Area Yield</b>   |
|------------------------------------|--|
| Definition                         | Lint cotton yield as mass per area.  |
| Comment                            | This Lint Cotton Mass Per Area Yield is the mass of the lint after it has been removed from the seed cotton at a cotton gin. Calculated by use of the Lint Turnout Percentage. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops   |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Andy Beck  |
| Submit Date                        | 2010-02-26   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>187 - Seed Cotton Mass Per Time Yield</b>   |
| Definition                         | Seed cotton yield as mass per time, not corrected for a possibly included lint percentage.   |
| Comment                            | This Seed Cotton Mass Per Time Yield is the mass of the raw harvested cotton product as it is measured on e.g. harvesting equipment. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops   |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Andy Beck  |
| Submit Date                        | 2010-02-26   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>188 - Lint Cotton Mass Per Time Yield</b>   |
| Definition                         | Lint cotton yield as mass per time.  |
| Comment                            | This Lint Cotton Mass Per Time Yield is the mass of the lint after it has been removed from the seed cotton at a cotton gin. Calculated by use of the Lint Turnout Percentage. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops   |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Andy Beck  |
| Submit Date                        | 2010-02-26   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

| DD Entity                          | 189 - Yield Total Seed Cotton Mass  |
|------------------------------------|---|
| Definition                         | Accumulated yield specified as seed cotton mass, not corrected for a possibly included lint percentage.                                 |
| Comment                            | This Yield Total Seed Cotton Mass is the total mass of the raw harvested cotton product as it is measured on e.g. harvesting equipment. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Andy Beck   |
| Submit Date                        | 2010-02-26  |
| Submit Company                     | 33 - John Deere   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2010-03-12  |
| Status Comments                    |   |

| DD Entity                          | 190 - Yield Total Lint Cotton Mass   |
|------------------------------------|--|
| Definition                         | Accumulated yield specified as lint cotton mass.   |
| Comment                            | This Yield Total Lint Cotton Mass is the total lint cotton mass, after it has been removed from the total seed cotton at a cotton gin. |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops   |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Andy Beck  |
| Submit Date                        | 2010-02-26   |
| Submit Company                     | 33 - John Deere  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2010-03-12   |
| Status Comments                    |  |

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|--------------------------|--------------------------------------|
| <b>DD Entity</b>         | <b>191 - Lint Turnout Percentage</b> |
| Definition               | Percent of lint in the seed cotton.  |
| Comment                  |                                      |
| Typically used by Device | 7 - Harvesters                       |
| Class(es)                | 14 - Special Crops                   |
| Unit Symbol              | ppm - Parts per million              |
| Resolution               | 1                                    |
| SAE SPN                  |                                      |
| CANBus Range             | 0 - 2147483647                       |
| Display Range            | 0 - 2147483647                       |
| Submit by                | Andy Beck                            |
| Submit Date              | 2010-02-26                           |
| Submit Company           | 33 - John Deere                      |
| Revision Number          | 1                                    |
| Current Status           | ISO-Approved                         |
| Status Date              | 2010-03-12                           |
| Status Comments          |                                      |

|                          |   |
|--------------------------|---|
| <b>DD Entity</b>         | <b>192 - Ambient temperature</b>  |
| Definition               | Ambient temperature measured by a machine. Unit is milli-Kelvin (mK).   |
| Comment                  |   |
| Typically used by Device | 0 - Non-specific system   |
| Class(es)                | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol              | mK - Temperature  |
| Resolution               | 1   |
| SAE SPN                  |   |
| CANBus Range             | 0 - 1000000   |
| Display Range            | 0 - 1000000   |
| Submit by                | Timo Oksanen  |
| Submit Date              | 2011-01-17  |
| Submit Company           | Aalto University  |
| Revision Number          | 1   |

|                 |              |
|-----------------|--------------|
| Current Status  | ISO-Approved |
| Status Date     | 2011-04-04   |
| Status Comments |              |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>193 - Setpoint Product Pressure</b>  |
| Definition                         | Setpoint Product Pressure to adjust the pressure of the product flow system at the point of dispensing.   |
| Comment                            | On pressure-based control systems, it is important to be able to monitor and control the system pressure to ensure the proper flow rate and droplet size. Being able to display and log pressure is important. On sprayers, this would be the boom pressure.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Tony Woodcock   |
| Submit Date                        | 2011-01-19  |
| Submit Company                     | Ag Leader Technology  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-03-27  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>194 - Actual Product Pressure</b>   |
| Definition       | Actual Product Pressure is the measured pressure in the product flow system at the point of dispensing.  |
| Comment          | On pressure-based control systems, it is important to be able to monitor and control the system pressure to ensure the proper flow rate and droplet size. Being able to display and log pressure is important. On sprayers, this would be the boom pressure. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>195 - Minimum Product Pressure</b>  |
| Definition                         | Minimum Product Pressure in the product flow system at the point of dispensing.  |
| Comment                            | Minimum system product pressure to ensure a consistent product flow.<br>See also "Setpoint Product Pressure"   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>196 - Maximum Product Pressure</b>  |
| Definition       | Maximum Product Pressure in the product flow system at the point of dispensing.                          |
| Comment          | Maximum system product to ensure a stable and safe product flow.<br>See also "Setpoint Product Pressure" |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>197 - Setpoint Pump Output Pressure</b>  |
| Definition                         | Setpoint Pump Output Pressure to adjust the pressure at the output of the solution pump.  |
| Comment                            |   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Tony Woodcock   |
| Submit Date                        | 2011-01-19  |
| Submit Company                     | Ag Leader Technology  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-03-27  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>198 - Actual Pump Output Pressure</b>                                 |
| Definition       | Actual Pump Output Pressure measured at the output of the solution pump. |
| Comment          |  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>199 - Minimum Pump Output Pressure</b>   |
| Definition                         | Minimum Pump Output Pressure for the output pressure of the solution pump.  |
| Comment                            |   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxilary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Tony Woodcock   |
| Submit Date                        | 2011-03-09  |
| Submit Company                     | Ag Leader Technology  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-04  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>200 - Maximum Pump Output Pressure</b>                                  |
| Definition       | Maximum Pump Output Pressure for the output pressure of the solution pump. |
| Comment          |  |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Tony Woodcock   |
| Submit Date                        | 2011-03-09  |
| Submit Company                     | Ag Leader Technology  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-04  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>201 - Setpoint Tank Agitation Pressure</b>   |
|------------------------------------|---|
| Definition                         | Setpoint Tank Agitation Pressure to adjust the pressure for a stir system in a tank.  |
| Comment                            | In a liquid application system, this is the pressure used to stir the tank contents to prevent products in liquid suspension from settling in the tank.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748364,8 - 214748364,7  |
| Submit by                          | Tony Woodcock   |
| Submit Date                        | 2011-01-19  |
| Submit Company                     | Ag Leader Technology  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-03-27  |
| Status Comments                    |   |

| <b>DD Entity</b> | <b>202 - Actual Tank Agitation Pressure</b>   |
|------------------|---|
| Definition       | Actual Tank Agitation Pressure measured by the tank stir system.  |
| Comment          | In a liquid application system, this is the pressure used to stir the tank contents to prevent products in liquid suspension from settling in the tank. Typically measured at the agitation manifold. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>203 - Minimum Tank Agitation Pressure</b>   |
| Definition                         | Minimum Tank Agitation Pressure for a stir system in a tank.   |
| Comment                            | Minimum tank agitation pressure to prevent products in liquid suspension from settling in the tank.<br>See also "Setpoint Tank Agitation Pressure".  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>204 - Maximum Tank Agitation Pressure</b>   |
| Definition       | Maximum Tank Agitation Pressure for a stir system in a tank.   |
| Comment          | Maximum tank agitation pressure to prevent products in liquid suspension from settling in the tank.<br>See also "Setpoint Tank Agitation Pressure" |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748364,8 - 214748364,7   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-05   |
| Status Comments                    |  |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>205 - SC Turn On Time</b>   |
| Definition                         | <p>The Section Control Turn On Time defines the overall time lapse between the moment the TC sends a turn on section command to the working set and the moment this section is physically turned on and the product is applied.</p> <p>The working set may support this DDE as an optional feature to provide the possibility to store the time settings direct on the device to make the settings available after a power cycle. Therefore this DDE needs always to be setable by the TC and shall not be used to change any working set system behavior.</p> <p>The DDI shall support the On Change trigger so that the TC is able to get informed when the value gets changed by the Working Set Master. The TC shall active this trigger when using the DDI.</p>                                 |
| Comment                            | <p>The SC Turn On Time setting is used to compensate the average physical machine reaction time (Electrical &amp; Mechanical) from the moment the Task Controller send the command and the Working Set applies the product.</p> <p>To find the right time setting for the used system combination of Task Controller and Working Set it could take awhile and therefore it is a big benefit to store the setting on the working set to make them again available after a power cycle. For working sets supporting Section Control it is recommended to add SC Turn On Time to its device description and make it setable.</p> <p>In case where the device description contains also Physical Setpoint Time Latency or Physical Actual Time Latency the TC Turn On Time will always supercede it.</p> |
| Typically used by Device Class(es) | <p>0 - Non-specific system</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p>  |
| Unit Symbol                        | ms - Time  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2011-03-09   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-03-28   |
| Status Comments                    |  |

|                  |                               |
|------------------|-------------------------------|
| <b>DD Entity</b> | <b>206 - SC Turn Off Time</b> |
|------------------|-------------------------------|

|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The Section Control Turn Off Time defines the overall time lapse between the moment the TC sends a turn off section command to the working set and the moment this section is physically turned off.</p> <p>The working set may support this DDE as an optional feature to provide the possibility to store the time settings direct on the device to make the settings available after a power cycle. Therefore this DDE needs always to be settable by the TC and shall not be used to change any working set system behavior.</p> <p>The DDI shall support the On Change trigger so that the TC is able to get informed when the value gets changed by the Working Set Master. The TC shall active this trigger when using the DDI.</p> |
| Comment                            | <p>The SC Turn Off Time setting is used to compensate the average physical machine reaction time (Electrical &amp; Mechanical) from the moment the Task Controller send the command and the Working Set turns off the sections.</p> <p>To find the right time setting for the used system combination of Task Controller and Working Set it could take awhile and therefore it is a big benefit to store the setting on the Working Set to make them again available after a power cycle. For Working Sets supporting Section Control it is recommended to add SC Turn Off Time to its device description and make it settable.</p>   |
| Typically used by Device Class(es) | <p>0 - Non-specific system</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p>   |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-03-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-03-28  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>207 - Wind speed</b>   |
| Definition                         | Wind speed measured in the treated field at the beginning of operations or on the application implement during operations. Measurements at to be made at 2m height or 1 m over the canopy in tree and bush crops.<br>On implements the wind speed needs to be compansated by implement true ground speed and heading. |
| Comment                            | Requested by TC23 SC6 WG15  |
| Typically used by Device Class(es) | 1 - Tractor<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation<br>14 - Special Crops<br>17 - Sensor System  |
| Unit Symbol                        | mm/s - Speed  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 100000000   |
| Display Range                      | 0 - 100000000   |
| Submit by                          | Bob Benneweis   |
| Submit Date                        | 2011-03-16  |
| Submit Company                     | Benneweis Consulting Ltd  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-04  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>208 - Wind direction</b>   |
| Definition                         | Wind direction measured in the treated field at the beginning of operations or on the application implement during operations. Measurements at to be made at 2m height or 1 m over the canopy in tree and bush crops.<br>On implements the wind direction needs to be compansated by implement true ground speed and heading. |
| Comment                            |   |
| Typically used by Device Class(es) | 1 - Tractor<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation<br>14 - Special Crops<br>17 - Sensor System  |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 359   |
| Display Range                      | 0 - 359   |
| Submit by                          | Bob Benneweis   |

|                 |                          |
|-----------------|--------------------------|
| Submit Date     | 2011-03-16               |
| Submit Company  | Benneweis Consulting Ltd |
| Revision Number | 1                        |
| Current Status  | ISO-Approved             |
| Status Date     | 2011-04-04               |
| Status Comments |                          |

| DD Entity                          | 209 - Relative Humidity  |
|------------------------------------|--|
| Definition                         | Ambient humidity measured by a weather station in a treated field or on the application implement.   |
| Comment                            |  |
| Typically used by Device Class(es) | 1 - Tractor<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 100  |
| Display Range                      | 0 - 100  |
| Submit by                          | Bob Benneweis  |
| Submit Date                        | 2011-03-16   |
| Submit Company                     | Benneweis Consulting Ltd   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-04   |
| Status Comments                    |  |

| DD Entity  | 210 - Sky conditions   |
|------------|--|
| Definition | <p>This DDE is used to define the current sky conditions during operation. The METAR format and its abbreviations is used as follows to define the sky conditions:</p> <p>CLR=Clear, NSC=Mostly Sunny, FEW=Partly Sunny, SCT=Partly cloud, BKN=Mostly cloudy, OVC=overcast/cloudy</p> <p>1. Byte = first character<br/>2. Byte = second character<br/>3. Byte = third character<br/>4. Byte = fourt character</p> <p>Unused bytes shall be set to 0x20<br/>Byte 1 to 4 set to 0x00 = error<br/>Byte 1 to 4 set to 0xFF = not available</p> |

|                                    |   |
|------------------------------------|---|
| Comment                            | To setup the METAR abbrivations the ISO 8859-1 standard is used.<br>From the Latin-1 printable characters set the capitals from "A" (0x41) to "Z" (0x5A ) shall be used. The space "SP" (0x20) is used for unused bytes.<br><br>Example for Clear (CLR):<br>1. Byte = 0x43(C)<br>2. Byte = 0x4C(L)<br>3. Byte = 0x52 (R)<br>4. Byte = 0x20 (unused) |
| Typically used by Device Class(es) | 1 - Tractor<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops<br>17 - Sensor System  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 4294967295  |
| Display Range                      | 0 - 4294967295  |
| Submit by                          | Bob Benneweis   |
| Submit Date                        | 2011-03-16  |
| Submit Company                     | Benneweis Consulting Ltd  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-29  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>211 - Last Bale Flakes per Bale</b>   |
| Definition                         | The number of flakes in the most recently produced bale.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler can add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000   |
| Display Range                      | 0 - 1000   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>212 - Last Bale Average Moisture</b>  |
| Definition                         | The average moisture in the most recently produced bale.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 100000000  |
| Display Range                      | 0 - 100000000  |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>213 - Last Bale Average Strokes per Flake</b>   |
|------------------------------------|--|
| Definition                         | The number of baler plunger compression strokes per flake that has entered the bale compression chamber. This value is the average valid for the most recently produced bale.  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000   |
| Display Range                      | 0 - 1000   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>214 - Lifetime Bale Count</b>  |
|------------------------------------|---|
| Definition                         | The number of bales produced by a machine over its entire lifetime. This DDE value can not be set through the process data interface but can be requested and added to a datalog. This DDE value is not affected by a task based total bales but will increment at the same rate as the task based total. |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced.                        |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2011-04-30  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |



|                 |              |
|-----------------|--------------|
| Current Status  | ISO-Approved |
| Status Date     | 2011-04-30   |
| Status Comments |              |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>215 - Lifetime Working Hours</b>  |
| Definition                         | The number of working hours of a device element over its entire lifetime. This DDE value can not be set through the process data interface but can be requested and added to a datalog.  |
| Comment                            | <p>The recommended use of this DDE is to be transmitted on a request basis only.</p> <p>The Lifetime Working Hours is the overall time when the device was turned on.</p> <p>This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the settable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> <p>Note: unit is h and the bit resolution is 0.05 h/bit, this aligns the resolution and range with similar SPNs as defined in SAE J1939-71.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | h - Hour   |
| Resolution                         | 0,05   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 210554060,75   |
| Display Range                      | 0,0 - 10527703,038   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |

|                 |              |
|-----------------|--------------|
| Submit Company  | AGCO         |
| Revision Number | 1            |
| Current Status  | ISO-Approved |
| Status Date     | 2011-04-30   |
| Status Comments |              |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>216 - Actual Bale Hydraulic Pressure</b>  |
| Definition                         | The actual value of the hydraulic pressure applied to the sides of the bale in the bale compression chamber. |
| Comment                            | The actual pressure is the resultant of the baler controller targeting a certain setpoint plunger load.      |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>217 - Last Bale Average Hydraulic Pressure</b>  |
|------------------------------------|--|
| Definition                         | The average actual value of the hydraulic pressure applied to the sides of the bale in the bale compression chamber. This average is calculated over the most recently produced bale.  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>218 - Setpoint Bale Compression Plunger Load</b>   |
|------------------------------------|---|
| Definition                         | The setpoint bale compression plunger load expressed as percentage  |
| Comment                            | This value is measured / controlled for each new flake that entered the baler chamber and obtained at the rear dead end of the plunger. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2011-04-30  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2011-04-30  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>219 - Actual Bale Compression Plunger Load</b>   |
| Definition                         | The actual bale compression plunger load expressed as percentage.   |
| Comment                            | This is the plunger load measured at the rear dead end of the plunger cycle and only updated for each new flake that has entered the baler chamber. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2011-04-30  |
| Submit Company                     | AGCO  |
| Revision Number                    | 2   |
| Current Status                     | Published   |
| Status Date                        | 2018-02-26  |
| Status Comments                    | There was an industry request to change the unit to ppm.  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>220 - Last Bale Average Bale Compression Plunger Load</b>   |
| Definition                         | The average bale compression plunger load for the most recently produced bale expressed as percentage.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>221 - Last Bale Applied Preservative</b>  |
| Definition                         | The total preservative applied to the most recently produced bale.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>222 - Last Bale Tag Number</b>  |
| Definition                         | The Last Bale Tag Number as a decimal number in the range of 0 to 4294967295. Note that the value of this DDI has the limitation of being an unsigned 32 bit number.   |
| Comment                            | For balers: the recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |

|                 |            |
|-----------------|------------|
| Status Date     | 2011-04-30 |
| Status Comments |            |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>223 - Last Bale Mass</b>  |
| Definition                         | The mass of the bale that has most recently been produced.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-04-30   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2011-04-30   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>224 - Delta T</b>  |
| Definition                         | The difference between dry bulb temperature and wet bulb temperature measured by a weather station in a treated field or on the application equipment.  |
| Comment                            | This parameter is used to determine spray effectiveness in hot and dry environments. If the Delta T value is too high the effectiveness of the overall spray application does not match the requirement for this operation. This value can be used by the application to notify the operator about the effectiveness and whether he should continue with the application or not. It can also be used to document the application environment within the log files for the task. |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>9 - Forage harvester<br>17 - Sensor System  |
| Unit Symbol                        | mK - Temperature  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 1000000   |
| Display Range                      | 0 - 1000000   |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-05-25  |



|                 |              |
|-----------------|--------------|
| Submit Company  | John Deere   |
| Revision Number | 1            |
| Current Status  | ISO-Approved |
| Status Date     | 2011-06-20   |
| Status Comments |              |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>225 - Setpoint Working Length</b>  |
| Definition                         | Setpoint Working Length of Device Element.  |
| Comment                            | This is the desired working length of the device element during operation. For the geometry definition and example use, see the attachment of the Actual Working Length, DDI 226.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxillary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Moritz Roeingh  |
| Submit Date                        | 2011-07-12  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-08-31  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>226 - Actual Working Length</b>   |
| Definition       | Actual Working Length of a Device Element.   |
| Comment          | Used for Section Control. By using the Actual Working Length of a device element a rectangular area is defined. This area represents the current working area and defines offsets for turning sections on and off by Section Control. The Actual Working Length parameter is useful for fertilizer spreaders and similar implements. |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Moritz Roeingh  |
| Submit Date                        | 2011-07-07  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-08-31  |
| Status Comments                    |   |
| Attachment                         | <a href="#">2012-07-03: - ISO11783-11-DDI-226-ActualWorkingLength-v1.pdf</a>  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>227 - Minimum Working Length</b>   |
| Definition                         | Minimum Working Length of Device Element.   |
| Comment                            | This is the minimum working length of the device element during operation. For the geometry definition and example use, see the attachment of the Actual Working Length, DDI 226.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxillary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Moritz Roeingh  |
| Submit Date                        | 2011-07-12  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-08-31  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>228 - Maximum Working Length</b>   |
| Definition       | Maximum Working Length of Device Element.   |
| Comment          | This is the maximum working length of the device element during operation. For the geometry definition and example use, see the attachment of the Actual Working Length, DDI 226. |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Moritz Roeingh  |
| Submit Date                        | 2011-07-12  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-08-31  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>229 - Actual Net Weight</b>   |
| Definition                         | Actual Net Weight value specified as mass  |
| Comment                            | The Actual Net Weight is the current measured mass by a weighing system.<br>For more information see attachment located at Actual Net Weight DDE |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System  |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2011-09-13   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-09-28   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2011-09-28: - ISO11783-11-DDI-229-Weighing System Implementation.pdf</a>   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>230 - Net Weight State</b>   |
| Definition                         | Net Weight State, 2 bits defined as:<br>00 = unstable measurement<br>01 = stable measurement<br>10 = error (measuring error)  |
| Comment                            | The Net Weight State indicates whether the current Actual Net Weight value is a reliable value or not.<br>Example: After a mass of grain is filled into a grain cart it takes a while until the weighing system is able to provide the valid value of the load. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 3   |
| Display Range                      | 0 - 3   |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-09-13  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-09-28  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>231 - Setpoint Net Weight</b>   |
|------------------------------------|--|
| Definition                         | Setpoint Net Weight value.   |
| Comment                            | The Setpoint Net Weight value is used to prompt the weighing system to perform a tare procedure. For more information see attachment located at Actual Net Weight DDE. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System  |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2011-09-13   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-09-28   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>232 - Actual Gross Weight</b>   |
|------------------------------------|--|
| Definition                         | Actual Gross Weight value specified as mass  |
| Comment                            | The Actual Gross Weight is the overall measured mass by a weighing system. For more information see attachment located at Actual Net Weight DDE. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System  |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2011-09-13   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-09-28   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>233 - Gross Weight State</b>   |
|------------------------------------|---|
| Definition                         | Gross Weight State, 2 bits defined as:<br>00 = unstable measurement<br>01 = stable measurement<br>10 = error (measuring error)  |
| Comment                            | The Gross Weight State indicates whether the current Actual Gross Weight value is a reliable value or not. For more information see attachment located at Actual Net Weight DDE.<br><br>Example: After a mass of grain is filled into a grain cart it takes a while until the weighing system is able to provide the valid value of the load. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 3   |
| Display Range                      | 0 - 3   |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-09-13  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-09-28  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>234 - Minimum Gross Weight</b>   |
|------------------------------------|---|
| Definition                         | Minimum Gross Weight specified as mass.   |
| Comment                            | The Minimum Gross Weight may represent the minimum value of the effective range of the weighing system. For more information see attachment located at Actual Net Weight DDE. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System   |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-09-13  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-09-28  |
| Status Comments                    |   |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>235 - Maximum Gross Weight</b>   |
| Definition                         | Maximum Gross Weight specified as mass.   |
| Comment                            | Maximum Gross Weight may represent the maximum value of the effective range of the weighing system. For more information see attachment located at Actual Net Weight DDE. |
| Typically used by Device Class(es) | 11 - Transport / Trailers<br>17 - Sensor System   |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2011-09-13  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-09-28  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>236 - Thresher Engagement Total Time</b>  |
| Definition                         | Accumulated time while the threshing mechanism is engaged  |
| Comment                            | This DDE represents the total engagement time of the threshing mechanism of the machine and is recommended to be used at maximum once within the device description in the device element that represents the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | s - Time count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>237 - Actual Header Working Height Status</b>  |
|------------------------------------|---|
| Definition                         | Actual status of the header being above or below the threshold height for the in-work state.<br>2 bit status indicator:<br>00=disabled/off/above threshold height<br>01=enabled/on/below threshold height<br>10=error<br>11=undefined/not installed |
| Comment                            | The DDE has been defined to be able to communicate a more detailed work state of a machine.   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 3   |
| Display Range                      | 0 - 3   |
| Submit by                          | Robert Waggoner   |
| Submit Date                        | 2011-07-08  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-11-17  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>238 - Actual Header Rotational Speed Status</b>  |
|------------------------------------|---|
| Definition                         | Actual status of the header rotational speed being above or below the threshold for in-work state.<br>2 bit status indicator:<br>00=disabled/off/below threshold speed<br>01=enabled/on/above threshold speed<br>10=error<br>11=undefined/not installed |
| Comment                            | The DDE has been defined to be able to communicate a more detailed work state of a machine.   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 3   |
| Display Range                      | 0 - 3   |
| Submit by                          | Robert Waggoner   |

|                 |               |
|-----------------|---------------|
| Submit Date     | 2011-07-08    |
| Submit Company  | AGCO          |
| Revision Number | 1             |
| Current Status  | ISO-Published |
| Status Date     | 2011-10-17    |
| Status Comments |               |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>239 - Yield Hold Status</b>  |
| Definition                         | Status indicator for the yield measurement system. When enabled/on, the measurements from the yield measurement system are ignored and the yield is held constant.<br>2 bit status indicator:<br>00=disabled/off<br>01=enabled/on<br>10=error<br>11=undefined/not installed   |
| Comment                            | This status indicator can e.g. be set by the operator when entering an area of the field where the yield measurement system yield measurements should not be used.<br>This DDE shall not be settable by the TC.<br>The values of the following list of DDE's is are held constant when this DDE is enabled/on: DDI's 83 to 91, 181 to 183 and 185 to 190. |
| Typically used by Device Class(es) | 6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 3   |
| Display Range                      | 0 - 3   |
| Submit by                          | Robert Waggoner   |
| Submit Date                        | 2011-07-08  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-10-17  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>240 - Actual (Un)Loading System Status</b> |
|------------------|---|

|                                    |  |
|------------------------------------|--|
| Definition                         | Actual status of the Unloading and/or Loading system. This DDE covers both Unloading and Loading of the device element wherein it is listed.<br>Byte 1:<br>2 bit unloading status indicator:<br>00=disabled/off<br>01=enabled/on/unloading<br>10=error<br>11=undefined/not installed<br>Byte 2:<br>2 bit loading status indicator:<br>00=disabled/off<br>01=enabled/on/loading<br>10=error<br>11=undefined/not installed |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>241 - Crop Temperature</b>  |
| Definition                         | Temperature of harvested crop  |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mK - Temperature   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000000  |
| Display Range                      | 0 - 1000000  |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>242 - Setpoint Sieve Clearance</b>  |
| Definition                         | Setpoint separation distance between Sieve elements  |
| Comment                            |  |
| Typically used by Device Class(es) | 6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>243 - Actual Sieve Clearance</b>  |
|------------------------------------|--|
| Definition                         | Actual separation distance between Sieve elements                                  |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>244 - Minimum Sieve Clearance</b>   |
|------------------------------------|--|
| Definition                         | Minimal separation distance between Sieve elements                                 |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>245 - Maximum Sieve Clearance</b>   |
| Definition                         | Maximum separation distance between Sieve elements.                                |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>246 - Setpoint Chaffer Clearance</b>  |
| Definition                         | Setpoint separation distance between Chaffer elements.                             |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |



| DD Entity                          | 247 - Actual Chaffer Clearance   |
|------------------------------------|--|
| Definition                         | Actual separation distance between Chaffer elements.                               |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| DD Entity                          | 248 - Minimum Chaffer Clearance  |
|------------------------------------|--|
| Definition                         | Minimum separation distance between Chaffer elements.                              |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>249 - Maximum Chaffer Clearance</b>   |
|------------------------------------|--|
| Definition                         | Maximum separation distance between Chaffer elements.                              |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>250 - Setpoint Concave Clearance</b>  |
|------------------------------------|--|
| Definition                         | Setpoint separation distance between Concave elements.                             |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>251 - Actual Concave Clearance</b>  |
|------------------------------------|--|
| Definition                         | Actual separation distance between Concave elements.                               |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>252 - Minimum Concave Clearance</b>   |
|------------------------------------|--|
| Definition                         | Minimum separation distance between Concave elements.                              |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>253 - Maximum Concave Clearance</b>   |
| Definition                         | Maximum separation distance between Concave elements.                              |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>254 - Setpoint Separation Fan Rotational Speed</b>  |
| Definition                         | Setpoint rotational speed of the fan used for separating product material from non product material. |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops                   |
| Unit Symbol                        | /s - Quantity per time unit  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2011-10-17   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>255 - Actual Separation Fan Rotational Speed</b>  |
| Definition                         | Actual rotational speed of the fan used for separating product material from non product material. |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops                 |
| Unit Symbol                        | /s - Quantity per time unit  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>256 - Minimum Separation Fan Rotational Speed</b>  |
| Definition                         | Minimum rotational speed of the fan used for separating product material from non product material. |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops                  |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2011-10-17  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-10-17  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>257 - Maximum Separation Fan Rotational Speed</b>  |
| Definition                         | Maximum rotational speed of the fan used for separating product material from non product material. |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops                  |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2011-10-17  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-10-17  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>258 - Hydraulic Oil Temperature</b>  |
| Definition                         | Temperature of fluid in the hydraulic system.   |
| Comment                            |   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mK - Temperature  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2000000   |
| Display Range                      | 0 - 2000000   |
| Submit by                          | Robert Waggoner   |
| Submit Date                        | 2011-07-08  |
| Submit Company                     | AGCO  |

|                 |               |
|-----------------|---------------|
| Revision Number | 3             |
| Current Status  | ISO-Published |
| Status Date     | 2011-10-17    |
| Status Comments |               |

| <b>DD Entity</b>                   | <b>259 - Yield Lag Ignore Time</b>  |
|------------------------------------|---|
| Definition                         | Amount of time to ignore yield data, starting at the transition from the in-work to the out-of-work state. During this time, the yield sensor provides inconsistent or unreliable crop flow data.                                 |
| Comment                            | This DDE can be used to filter the yield data when creating yield maps. The values of the following list of DDE's may be inconsistent or unreliable during this yield lag ignore time: DDI's 83 to 91, 181 to 183 and 185 to 190. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | ms - Time   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Robert Waggoner   |
| Submit Date                        | 2011-07-08  |
| Submit Company                     | AGCO  |
| Revision Number                    | 3   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2011-10-17  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>260 - Yield Lead Ignore Time</b>  |
|------------------------------------|--|
| Definition                         | Amount of time to ignore yield data, starting at the transition from the out-of-work to the in-work state. During this time, the yield sensor provides inconsistent or unreliable crop flow data.                                  |
| Comment                            | This DDE can be used to filter the yield data when creating yield maps. The values of the following list of DDE's may be inconsistent or unreliable during this yield lead ignore time: DDI's 83 to 91, 181 to 183 and 185 to 190. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | ms - Time  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |



|                 |            |
|-----------------|------------|
| Status Date     | 2011-10-17 |
| Status Comments |            |

| <b>DD Entity</b>                   | <b>261 - Average Yield Mass Per Time</b>   |
|------------------------------------|--|
| Definition                         | Average Yield expressed as mass per unit time, not corrected for the reference moisture percentage DDI 184. This value is the average for a Task and may be reported as a total.   |
| Comment                            | <p>This Average Yield Mass Per Time is the mass that includes the average crop moisture (DDI 262) if this is measured on e.g. harvesting equipment. This average yield mass per time is calculated as the yield total mass (DDI 90) divided by the effective total time (DDI 119) of the active task.</p> <p>When a task is resumed and its previously recorded totals are sent by the task controller to the connected working set, a situation can occur where there is a discrepancy between the yield total mass, the effective total time and the average yield mass per time values. In case all three of these DDI's are present in the device description and all three values are set by the task controller upon resuming a task, the working set shall compute its average yield mass per time from the yield total mass divided by the effective total time and shall discard the average yield mass per time value that it received from the task controller.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>262 - Average Crop Moisture</b>  |
|------------------|---|
| Definition       | Average Moisture of the harvested crop. This value is the average for a Task and may be reported as a total.  |
| Comment          | <p>This is the average of the actual crop moisture (DDI 99) for the active task and is calculated as an average based upon the yield total mass (DDI 90). In order to correctly calculate this value when a task is resumed, the yield total mass shall also be reported by the device as a total. When a task is resumed, the task controller sets both the yield total mass and the average crop moisture values. The device uses these values to derive the total moisture and calculate and report the new average crop moisture values for the resumed task.</p> |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>263 - Average Yield Mass Per Area</b>   |
|------------------------------------|--|
| Definition                         | Average Yield expressed as mass per unit area, not corrected for the reference moisture percentage DDI 184. This value is the average for a Task and may be reported as a total.   |
| Comment                            | <p>This Average Yield Mass Per Area is the mass that includes the average crop moisture (DDI 262) if this is measured on e.g. harvesting equipment. This average yield mass per area is calculated as the yield total mass (DDI 90) divided by the total area (DDI 116) of the active task.</p> <p>When a task is resumed and its previously recorded totals are sent by the task controller to the connected working set, a situation can occur where there is a discrepancy between the yield total mass, the total area and the average yield mass per area values. In case all three of these DDI's are present in the device description and all three values are set by the task controller upon resuming a task, the working set shall compute its average yield mass per area from the yield total mass divided by the total area and shall discard the average yield mass per area value that it received from the task controller.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Robert Waggoner  |
| Submit Date                        | 2011-07-08   |
| Submit Company                     | AGCO   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2011-10-17   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>264 - Connector Pivot X-Offset</b>   |
|------------------|---|
| Definition       | X direction offset of a connector pivot point relative to DRP.<br>This DDE shall be only attached to a DET element of type connector.   |
| Comment          | Some connector types are equipped with a pivot point which will influence the accuracy of applications as section control, prescription or sequence control. The Pivot X-Offset is used to define the distance from the device DRP to the connector pivot point in X direction. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-03-07   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2012-03-07: - ISO11783-11-DDI-264-Connector Pivot X-Offset-v1.pdf</a>  |

| DD Entity                          | 265 - Remaining Area   |
|------------------------------------|--|
| Definition                         | Remaining Area of a field, which is calculated from the total area and the processed area.   |
| Comment                            | See DDI attachment for further details.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> <li>17 - Sensor System</li> </ul> |
| Unit Symbol                        | m <sup>2</sup> - Area  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Markus Eikler  |
| Submit Date                        | 2011-12-15   |
| Submit Company                     | Mueller Elektronik GmbH & Co. KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2012-04-02: - ISO11783-11-DDI-265-Remaining Area-v1.pdf</a>  |

| DD Entity  | 266 - Lifetime Application Total Mass   |
|------------|---|
| Definition | Entire Application Total Mass of the device lifetime.   |
| Comment    | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the settable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Approved  |
| Status Date                        | 2012-02-15  |
| Status Comments                    | Status was approved                                     |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>267 - Lifetime Application Total Count</b>   |
| Definition                         | Entire Application Total Count of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p>  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>268 - Lifetime Yield Total Volume</b>  |
| Definition                         | Entire Yield Total Volume of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>14 - Special Crops</p>   |
| Unit Symbol                        | L - Quantity per volume   |



|                 |                |
|-----------------|----------------|
| Resolution      | 1              |
| SAE SPN         |                |
| CANBus Range    | 0 - 2147483647 |
| Display Range   | 0 - 2147483647 |
| Submit by       | Matthias Meyer |
| Submit Date     | 2012-01-09     |
| Submit Company  | John Deere     |
| Revision Number | 1              |
| Current Status  | ISO-Published  |
| Status Date     | 2012-02-15     |
| Status Comments |                |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>269 - Lifetime Yield Total Mass</b>  |
| Definition                         | Entire Yield Total Mass of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>270 - Lifetime Yield Total Count</b>   |
| Definition                         | Entire Yield Total Count of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |

|                 |                    |
|-----------------|--------------------|
| Unit Symbol     | # - Quantity/Count |
| Resolution      | 1                  |
| SAE SPN         |                    |
| CANBus Range    | 0 - 2147483647     |
| Display Range   | 0 - 2147483647     |
| Submit by       | Matthias Meyer     |
| Submit Date     | 2012-01-09         |
| Submit Company  | John Deere         |
| Revision Number | 1                  |
| Current Status  | ISO-Published      |
| Status Date     | 2012-02-15         |
| Status Comments |                    |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>271 - Lifetime Total Area</b>  |
| Definition                         | Entire Total Area of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> </ul>   |
| Unit Symbol                        | m <sup>2</sup> - Area   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>272 - Lifetime Effective Total Distance</b> |
| Definition       | Entire Total Distance of the device lifetime.  |

|                                    |   |
|------------------------------------|---|
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers</p>   |
| Unit Symbol                        | m - Distance  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-03-09  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>273 - Lifetime Ineffective Total Distance</b>  |
| Definition                         | Entire Ineffective Total Distance of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor</p> <p>2 - Primary Soil Tillage</p> <p>3 - Secondary Soil Tillage</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p>   |
| Unit Symbol                        | m - Distance  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-03-09  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>274 - Lifetime Effective Total Time</b>          |
| Definition       | Entire Effective Total Time of the device lifetime. |

|                                    |   |
|------------------------------------|---|
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers<br/> 12 - Farmyard Work<br/> 13 - Powered Auxiliary Units<br/> 14 - Special Crops<br/> 15 - Municipal Work<br/> 17 - Sensor System</p>  |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>275 - Lifetime Ineffective Total Time</b>  |
| Definition                         | Entire Ineffective Total Time of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor</p> <p>2 - Primary Soil Tillage</p> <p>3 - Secondary Soil Tillage</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p> <p>12 - Farmacyard Work</p> <p>13 - Powered Auxillary Units</p> <p>14 - Special Crops</p> <p>15 - Municipal Work</p> <p>17 - Sensor System</p>  |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>276 - Lifetime Fuel Consumption</b>          |
| Definition       | Entire Fuel Consumption of the device lifetime. |



|                                    |   |
|------------------------------------|---|
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers<br/> 12 - Farmyard Work<br/> 13 - Powered Auxiliary Units<br/> 14 - Special Crops<br/> 15 - Municipal Work</p>  |
| Unit Symbol                        | L - Capacity count  |
| Resolution                         | 0,5   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 1073741823,5  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>277 - Lifetime Average Fuel Consumption per Time</b>   |
| Definition                         | Entire Average Fuel Consumption per Time of the device lifetime.  |
| Comment                            | <p>This is the overall average of the device. This average does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor</p> <p>2 - Primary Soil Tillage</p> <p>3 - Secondary Soil Tillage</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p> <p>12 - Farmacyard Work</p> <p>13 - Powered Auxillary Units</p> <p>14 - Special Crops</p> <p>15 - Municipal Work</p>  |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          |   |
| Submit Date                        | 2012-01-09  |
| Submit Company                     |   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>278 - Lifetime Average Fuel Consumption per Area</b>          |
| Definition       | Entire Average Fuel Consumption per Area of the device lifetime. |

|                                    |   |
|------------------------------------|---|
| Comment                            | <p>This is the overall average of the device. This average does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers<br/> 12 - Farmyard Work<br/> 13 - Powered Auxiliary Units<br/> 14 - Special Crops<br/> 15 - Municipal Work</p>  |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>279 - Lifetime Yield Total Dry Mass</b>  |
| Definition                         | Entire Yield Total Dry Mass of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>280 - Lifetime Yield Total Seed Cotton Mass</b>  |
| Definition                         | Entire Yield Total Seed Cotton Mass of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |

|                 |                |
|-----------------|----------------|
| SAE SPN         |                |
| CANBus Range    | 0 - 2147483647 |
| Display Range   | 0 - 2147483647 |
| Submit by       | Matthias Meyer |
| Submit Date     | 2012-01-09     |
| Submit Company  | John Deere     |
| Revision Number | 1              |
| Current Status  | ISO-Published  |
| Status Date     | 2012-02-15     |
| Status Comments |                |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>281 - Lifetime Yield Total Lint Cotton Mass</b>  |
| Definition                         | Entire Yield Total Lint Cotton Mass of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>14 - Special Crops  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-09  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>282 - Lifetime Threshing Engagement Total Time</b>   |
| Definition                         | Entire Threshing Engagement Total Time of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops  |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |

|                 |                |
|-----------------|----------------|
| SAE SPN         |                |
| CANBus Range    | 0 - 2147483647 |
| Display Range   | 0 - 2147483647 |
| Submit by       | Matthias Meyer |
| Submit Date     | 2012-01-09     |
| Submit Company  | John Deere     |
| Revision Number | 1              |
| Current Status  | ISO-Published  |
| Status Date     | 2012-02-15     |
| Status Comments |                |

| <b>DD Entity</b>                   | <b>283 - Precut Total Count</b>   |
|------------------------------------|---|
| Definition                         | The total number of pre-cutted product units produced by a device during an operation.  |
| Comment                            | Precut Total Count is a total of a device element. It is intended to be used as a task based total value and therefore it is recommended to support the on-time and on-change trigger methods. The total trigger method and the setable property are required for this DDE. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-12  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>284 - Uncut Total Count</b>   |
|------------------------------------|--|
| Definition                         | The total number of un-cutted product units produced by a device during an operation.  |
| Comment                            | Uncut Total Count is a total of a device element. It is intended to be used as a task based total value and therefore it is recommended to support the on-time and on-change trigger methods. The total trigger method and the setable property are required for this DDE. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-01-12   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-02-15   |
| Status Comments                    |  |



| <b>DD Entity</b>                   | <b>285 - Lifetime Precut Total Count</b>  |
|------------------------------------|---|
| Definition                         | Entire Precut Total Count of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2012-01-12  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-02-15  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>286 - Lifetime Uncut Total Count</b>   |
|------------------------------------|---|
| Definition                         | Entire Uncut Total Count of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |

|                 |                |
|-----------------|----------------|
| Display Range   | 0 - 2147483647 |
| Submit by       | Matthias Meyer |
| Submit Date     | 2012-01-12     |
| Submit Company  | John Deere     |
| Revision Number | 1              |
| Current Status  | ISO-Published  |
| Status Date     | 2012-02-15     |
| Status Comments |                |

| DD Entity                          | 287 - Setpoint Prescription Mode   |
|------------------------------------|--|
| Definition                         | This DDE defines the source of the Task Controller set point value sent to the Control Function. This DDI shall be defined as DPD in the DDOP and needs to be settable. The TC shall then set this DDI before starting a prescription operation. The WS (Working Set) shall set this value to zero (0) after system start. |
| Comment                            | The Task Controller Prescription Mode shall have the following values:<br>0 = Unknown / not defined<br>1 = Prescription Rate<br>2 = Prescription Default<br>3 = Prescription GPS loss<br>4 = Prescription Out Of Field<br>5 = Manual Entry<br>6 = Peer Control<br>7 and higher are reserved for future assignments         |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 6  |
| Display Range                      | 0 - 6  |
| Submit by                          | Joe Tevis  |
| Submit Date                        | 2013-09-23   |
| Submit Company                     | Topcon   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Submitted (Pending)  |
| Status Date                        | 2015-07-30   |
| Status Comments                    |  |
| Attachment                         | <u><a href="#">2013-09-23: Prescription Mode and Control Function Mode Use Cases - Prescription Mode Supporting Doc-v1.ppt</a></u>   |

| DD Entity  | 288 - Actual Prescription Mode  |
|------------|---|
| Definition | This DDE defines the actual source of the set point value used by the Control Function. This DDI shall be defined as DPD in the DDOP and shall not be settable and need to support the on change trigger. The TC should request this DDI in case of an active prescription operation for documentation purpose. |

|                                    |  |
|------------------------------------|--|
| Comment                            | The Control Function Prescription Mode shall have one of the following values:<br>0 = Unknown / not defined<br>1 = TC rate<br>2 = Manual Entry<br>3 = Peer Control<br>4 = Max override<br>5 = Min override<br>6 and higher are reserved for future assignments |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 5  |
| Display Range                      | 0 - 5  |
| Submit by                          | Joe Tevis  |
| Submit Date                        | 2013-09-23   |
| Submit Company                     | Topcon   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Submitted (Pending)  |
| Status Date                        | 2015-07-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>289 - Setpoint Work State</b>   |
| Definition                         | The Setpoint Work State DDI is the control command counterparts to the Work State DDI (141). The separation of the control commands through one DDI from the actual state communicated through another DDI enables verification of the transmission of the control commands independent from the effectuation of the requested control action. |
| Comment                            | See DDI 290 attachment for implementation guideline.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    | Status was published   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>290 - Setpoint Condensed Work State (1-16)</b> |
|------------------|---|

|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 1 to 16 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 4294967295  |
| Display Range                      | 0 - 4294967295  |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2012-01-19  |
| Submit Company                     | AGCO corporation  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-04-02  |
| Status Comments                    |   |
| Attachment                         | <a href="#">2016-04-05: - ISO11783-11-DDI-290-SetpointWorkState-v1.pdf</a>  |

| <b>DD Entity</b>                   | <b>291 - Setpoint Condensed Work State (17-32)</b>   |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 17 to 32 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>292 - Setpoint Condensed Work State (33-48)</b> |
|------------------|--|
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|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 33 to 48 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>293 - Setpoint Condensed Work State (49-64)</b>   |
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 49 to 64 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

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| <b>DD Entity</b> | <b>294 - Setpoint Condensed Work State (65-80)</b> |
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|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 65 to 80 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>295 - Setpoint Condensed Work State (81-96)</b>   |
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 81 to 96 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>296 - Setpoint Condensed Work State (97-112)</b> |
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|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 97 to 112 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 4294967295  |
| Display Range                      | 0 - 4294967295  |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2012-01-19  |
| Submit Company                     | AGCO corporation  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2012-04-02  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>297 - Setpoint Condensed Work State (113-128)</b>   |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 113 to 128 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>298 - Setpoint Condensed Work State (129-144)</b> |
|------------------|--|
|------------------|--|

|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 129 to 144 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

| DD Entity                          | 299 - Setpoint Condensed Work State (145-160)  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 145 to 160 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

| DD Entity | 300 - Setpoint Condensed Work State (161-176) |
|-----------|---|
|-----------|---|

|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 161 to 176 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |



| DD Entity                          | 301 - Setpoint Condensed Work State (177-192)  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 177 to 192 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>14 - Special Crops  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

| DD Entity | 302 - Setpoint Condensed Work State (193-208) |
|-----------|---|
|-----------|---|

|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 193 to 208 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>303 - Setpoint Condensed Work State (209-224)</b>   |
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 209 to 224 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>304 - Setpoint Condensed Work State (225-240)</b> |
|------------------|--|

|                                    |  |
|------------------------------------|--|
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 225 to 240 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>305 - Setpoint Condensed Work State (241-256)</b>   |
| Definition                         | <p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 – 176).</p> <p>The value is a combination of the setpoint work states of individual sections or units (e.g. nozzles) number 241 to 256 into a single setpoint work state of their parent device element. The setpoint condensed work state contains the child element setpoint work states, in the driving direction from left to right, where the leftmost child element setpoint work state are the 2 lowest significant bits of the Process Data Value. Each child device elements setpoint work state is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element setpoint work states can be contained in one setpoint condensed work state of their parent device element. If less than 16 child device element setpoint work states are available, then the unused bits shall be set to value 11 (no change). When the parent device element contains the Setpoint Condensed Work State DDE, then the device descriptor shall not contain the individual setpoint work state DDEs in the child device elements.</p> |
| Comment                            | See the Setpoint Work State DDI (289) attachment for backwards compatibility and implementation guidelines.  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>14 - Special Crops</li> </ul>  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Jaap van Bergeijk  |
| Submit Date                        | 2012-01-19   |
| Submit Company                     | AGCO corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-04-02   |
| Status Comments                    | Status was published   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>306 - True Rotation Point X-Offset</b>  |
| Definition                         | X direction offset of the device rotation point relative to the DRP.   |
| Comment                            | For devices with more than one axle the rotation point can be located at another position within the device than the DRP. In this case, the True Rotation Point X and Y Offset DDIs shall be used to define the location of the rotation point on the device. Both DDI's shall be attached to the device element of type Device.               |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-06-05   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-07-03   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2012-07-03: - ISO11783-11-DDI-306-True Rotation Point-v1.pdf</a>   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>307 - True Rotation Point Y-Offset</b>  |
| Definition                         | Y direction offset of the device rotation point relative to the DRP.   |
| Comment                            | For devices with more than one axle the rotation point can be located at another position within the device than the DRP. In this case, the True Rotation Point X and Y Offset DDIs shall be used to define the location of the rotation point on the device. Both DDI's shall be attached to the device element of type Device. See also attachment of True Rotation Point X-Offset, DDI 306. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-06-05   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-07-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>308 - Actual Percentage Application Rate</b>                            |
| Definition                         | Actual Application Rate expressed as percentage                            |
| Comment                            | Counterpart to DDI 140 (Percentage Application Rate Setpoint)              |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |

|                 |                                      |
|-----------------|--------------------------------------|
| Display Range   | 0 - 2147483647                       |
| Submit by       | Jan Steenbock                        |
| Submit Date     | 2012-06-05                           |
| Submit Company  | 98 - Müller-Elektronik GmbH & Co. KG |
| Revision Number | 1                                    |
| Current Status  | ISO-Published                        |
| Status Date     | 2012-07-03                           |
| Status Comments |                                      |



| <b>DD Entity</b>                   | <b>309 - Minimum Percentage Application Rate</b>                           |
|------------------------------------|--|
| Definition                         | Minimum Application Rate expressed as percentage                           |
| Comment                            | Supplied by device as physical minimum, see also DDI 140.                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-07-03   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | Request Pending  |
| Status Date                        | 2012-07-03   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>310 - Maximum Percentage Application Rate</b>                           |
|------------------------------------|--|
| Definition                         | Maximum Application Rate expressed as percentage                           |
| Comment                            | Supplied by device as physical maximum, see also DDI 140.                  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2012-07-03   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | Request Pending  |
| Status Date                        | 2012-07-03   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>311 - Relative Yield Potential</b>  |
|------------------------------------|--|
| Definition                         | Relative yield potential provided by a FMIS or a sensor or entered by the operator for a certain task expressed as percentage.   |
| Comment                            | Relative yield potential could be used as input for an intelligent unit to calculate the appropriate amount of fertilizer / seed / etc. more accurate. Typical range is 80 to 120%. Expressed in ppm this is 800,000 to 1,200,000. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System  |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-07-26   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-08-27   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>312 - Minimum Relative Yield Potential</b>  |
|------------------------------------|--|
| Definition                         | Minimum potential yield expressed as percentage.   |
| Comment                            | This DDIs is used by the system to provide information about its value range support for relative yield potential. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System                                      |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-07-29   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-08-27   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>313 - Maximum Relative Yield Potential</b>  |
| Definition                         | Maximum potential yield expressed as percentage.   |
| Comment                            | This DDIs is used by the system to provide information about its value range support for relative yield potential. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System                                      |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-08-27   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | Request Pending  |
| Status Date                        | 2012-08-27   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>314 - Actual Percentage Crop Dry Matter</b>                                     |
| Definition                         | Actual Percentage Crop Dry Matter expressed as parts per million.                  |
| Comment                            | This DDE defines the actual percentage of dry matter in the harvested crop.        |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>17 - Sensor System |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-09-17   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-09-24   |
| Status Comments                    |  |

| DD Entity                          | 315 - Average Percentage Crop Dry Matter   |
|------------------------------------|--|
| Definition                         | Average Percentage Crop Dry Matter expressed as parts per million.                 |
| Comment                            | This DDE defines the average percentage of dry matter in the harvested crop.       |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>17 - Sensor System |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-09-17   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-09-24   |
| Status Comments                    |  |

| DD Entity                          | 316 - Effective Total Fuel Consumption   |
|------------------------------------|--|
| Definition                         | Accumulated total fuel consumption in working position.  |
| Comment                            |  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-09-17   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-09-24   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>317 - Ineffective Total Fuel Consumption</b>  |
| Definition                         | Accumulated total fuel consumption in non working position.  |
| Comment                            |  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-09-17   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2012-09-24   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>318 - Effective Total Diesel Exhaust Fluid Consumption</b>  |
| Definition                         | Accumulated total Diesel Exhaust Fluid consumption in working position.  |
| Comment                            | Example: Diesel Exhaust Fluid as specified per ISO22241.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |

|                 |                                 |
|-----------------|---------------------------------|
| Submit by       | Martin Sperlich                 |
| Submit Date     | 2012-09-17                      |
| Submit Company  | CLAAS Agrosystems GmbH & Co. KG |
| Revision Number | 1                               |
| Current Status  | ISO-Published                   |
| Status Date     | 2012-09-24                      |
| Status Comments |                                 |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>319 - Ineffective Total Diesel Exhaust Fluid Consumption</b>  |
| Definition                         | Accumulated total Diesel Exhaust Fluid consumption in non working position.  |
| Comment                            | Example: Diesel Exhaust Fluid as specified per ISO22241.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Martin Sperlich  |
| Submit Date                        | 2012-09-24   |
| Submit Company                     | CLAAS Agrosystems GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | Request Pending  |
| Status Date                        | 2012-09-24   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>320 - Last loaded Weight</b>  |
| Definition                         | Last loaded Weight value specified as mass   |
| Comment                            | After a loading Procedure, this DDI sends the loaded Mass.<br><br>For more information see attachment located at Last loaded Weight DDE                    |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |

|                 |   |
|-----------------|---|
| Submit Date     | 2013-01-14  |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2013-02-04  |
| Status Comments |   |
| Attachment      | <u><a href="#">2017-11-20: Trigger method update - ISO 11783-11-DDI-320-Weighing Load Unload-v4.pdf</a></u> |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>321 - Last unloaded Weight</b>  |
| Definition                         | Last unloaded Weight value specified as mass   |
| Comment                            | After a unloading Procedure, this DDI sends the unloaded Mass.<br><br>For more information see attachment located at Last loaded Weight DDE                |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2013-01-14   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2013-02-04   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>322 - Load Identification Number</b>   |
| Definition                         | The Load Identification Number as a decimal number in the range of 0 to 4294967295. Note that the value of this DDI has the limitation of being an unsigned 32 bit number.  |
| Comment                            | The DDI Load Identification Number can be used together with the DDI "320 - Last loaded Weight" to document the loading of material on a weighing system. See also the attached document for more details.          |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |

|                 |   |
|-----------------|---|
| CANBus Range    | 0 - 2147483647  |
| Display Range   | 0 - 2147483647  |
| Submit by       | Franz Hoepfinger  |
| Submit Date     | 2013-05-21  |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number | 1   |
| Current Status  | ISO-Published   |
| Status Date     | 2013-07-15  |
| Status Comments |   |
| Attachment      | <u>2013-09-22: -</u><br><u>ISO11783-11-DDI-322-Load Identification Number v1-v2.pdf</u> |

| DD Entity                          | 323 - Unload Identification Number  |
|------------------------------------|---|
| Definition                         | The Unload Identification Number as a decimal number in the range of 0 to 2147483647. Note that the value of this DDI has the limitation of being an unsigned 32 bit number.  |
| Comment                            | The DDI Unload Identification Number can be used together with the DDI "321 - Last Unloaded Weight" to document the unloading of material on a weighing system. See also the attached document for more details.    |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2013-07-15  |
| Submit Company                     | 367 - Fliegl Agratechnik GmbH   |
| Revision Number                    | 1   |
| Current Status                     | Request Pending   |
| Status Date                        | 2013-07-15  |
| Status Comments                    |   |
| Attachment                         | <a href="#">2013-07-15: - ISO11783-11-DDI-323-Unload Identification Number v1-v1.pdf</a>  |

| DD Entity                          | 324 - Chopper Engagement Total Time  |
|------------------------------------|--|
| Definition                         | Accumulated time while the chopping mechanism is engaged   |
| Comment                            | This DDE represents the total engagement time of the chopping mechanism of the machine and is recommended to be used at maximum once within the device description in the device element that represents the machine.<br><br>This DDE is designated for the chopping unit of a forage harvester. It could be also used for the straw chopper of a harvester. For combine harvesters please also see DDE 236 Threshing Engagement Total Time. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |

|                 |                                    |
|-----------------|------------------------------------|
| Unit Symbol     | s - Time count                     |
| Resolution      | 1                                  |
| SAE SPN         |                                    |
| CANBus Range    | 0 - 2147483647                     |
| Display Range   | 0 - 2147483647                     |
| Submit by       | Martin Sperlich                    |
| Submit Date     | 2013-06-17                         |
| Submit Company  | CLAAS Agrosystems KGaA mbH & Co KG |
| Revision Number | 1                                  |
| Current Status  | ISO-Published                      |
| Status Date     | 2013-07-15                         |
| Status Comments |                                    |

| <b>DD Entity</b>                   | <b>325 - Lifetime Application Total Volume</b>   |
|------------------------------------|--|
| Definition                         | Entire Application Total Volume of the device lifetime.  |
| Comment                            | This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.<br>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.<br>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>9 - Forage harvester<br>10 - Irrigation   |
| Unit Symbol                        | L - Capacity count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2013-09-02   |
| Submit Company                     | AMAZONE  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2013-09-27   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>326 - Setpoint Header Speed</b>  |
|------------------------------------|---|
| Definition                         | The setpoint rotational speed of the header attachment of a chopper, mower or combine                     |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2015-11-27  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |

|                 |               |
|-----------------|---------------|
| Current Status  | ISO-Published |
| Status Date     | 2013-12-04    |
| Status Comments |               |

| DD Entity                          | 327 - Actual Header Speed   |
|------------------------------------|---|
| Definition                         | The actual rotational speed of the header attachment of a chopper, mower or combine                       |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2013-12-04  |
| Status Comments                    |   |

| DD Entity                          | 328 - Minimum Header Speed  |
|------------------------------------|---|
| Definition                         | The minimum rotational speed of the header attachment of a chopper, mower or combine                                |
| Comment                            | This is a value recommended by the manufacturer of the machine as the minimum speed (unlike 0) for a proper working |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work           |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>329 - Maximum Header Speed</b>  |
| Definition                         | The maximum rotational speed of the header attachment of a chopper, mower or combine                             |
| Comment                            | This is a value recommended by the manufacturer of the machine as the maximum speed the machine is able to offer |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work        |
| Unit Symbol                        | /s - Quantity per time unit  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-01-17   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>330 - Setpoint Cutting drum speed</b>  |
| Definition                         | The setpoint speed of the cutting drum of a chopper   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>331 - Actual Cutting drum speed</b>  |
| Definition                         | The actual speed of the cutting drum of a chopper   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>332 - Minimum Cutting drum speed</b>   |
| Definition                         | The minimum speed of the cutting drum of a chopper  |
| Comment                            | This is a value recommended by the manufacturer of the machine as the minimum speed (unlike 0) for a proper working |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work           |
| Unit Symbol                        | /s - Quantity per time unit   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>333 - Maximum Cutting drum speed</b>  |
| Definition                         | The maximum speed of the cutting drum of a chopper   |
| Comment                            | This is a value recommended by the manufacturer of the machine as the maximum speed the machine is able to offer |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops<br>15 - Municipal Work        |
| Unit Symbol                        | /s - Quantity per time unit  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-01-17   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>334 - Operating Hours Since Last Sharpening</b>   |
| Definition                         | This value describes the working hours since the last sharpening of the cutting device.  |
| Comment                            | As the sharpness of the cutting drums cutters on a harvester is an important indicator for cutting quality and an important factor for the fuel usage, this value provides information about quality and effectivity of the harvesting process |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work  |
| Unit Symbol                        | s - Time count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-01-17   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>335 - Front PTO hours</b>   |
|------------------------------------|--|
| Definition                         | The hours the Front PTO of the machine was running for the current Task  |
| Comment                            | This value provides information of the active working time for example of the header attachment of a selfpropelled machine   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | s - Time count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-01-17   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>336 - Rear PTO hours</b>  |
|------------------|--|
| Definition       | The hours the Rear PTO of the machine was running for the current Task   |
| Comment          | This value provides information of the active working time for example of the header attachment of a selfpropelled machine |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2014-01-17  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>337 - Lifetime Front PTO hours</b>  |
| Definition                         | The hours the Front PTO of the machine was running for the lifetime of the machine   |
| Comment                            | This value provides information of the active working time for example of the header attachment of a selfpropelled machine   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | h - Hour   |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,0 - 214748364,7  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-01-17   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>338 - Lifetime Rear PTO Hours</b>   |
| Definition       | The hours the Rear PTO of the machine was running for the lifetime of the machine  |
| Comment          | This value provides information of the active working time for example of the header attachment of a selfpropelled machine |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | h - Hour  |
| Resolution                         | 0,1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,0 - 214748364,7   |
| Submit by                          | Meyer Matthias  |
| Submit Date                        | 2014-01-17  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>339 - Effective Total Loading Time</b>   |
| Definition                         | The total time needed in the current task to load a product such as crop.                 |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>340 - Effective Total Unloading Time</b>   |
| Definition                         | The total time needed in the current task to unload a product crop.   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work |
| Unit Symbol                        | s - Time count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2013-12-04  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-01-17  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>341 - Setpoint Grain Kernel Cracker Gap</b>   |
| Definition                         | The setpoint gap (distance) of the grain kernel cracker drums in a chopper.                    |
| Comment                            | The gap (distance) of the grain kernel cracker is an indicator to the quality of chopped corn. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops             |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2013-12-04   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-02-24   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>342 - Actual Grain Kernel Cracker Gap</b>  |
| Definition                         | The actual gap (distance) of the grain kernel cracker drums in a chopper                              |
| Comment                            | The actual gap (distance) of the grain kernel cracker is an indicator to the quality of chopped corn. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops                    |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0,000 - 2,147,483,647   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2014-02-25  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-02-25  |
| Status Comments                    |   |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>343 - Minimum Grain Kernel Cracker Gap</b>                                      |
| Definition                         | The minimum gap (distance) of the grain kernel cracker drums in a chopper          |
| Comment                            | The minimum gap (distance) of the grain kernel cracker that can be adjusted        |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2014-02-25   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-02-25   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>344 - Maximum Grain Kernel Cracker Gap</b>                                      |
| Definition                         | The maximum gap (distance) of the grain kernel cracker drums in a chopper          |
| Comment                            | The maximum gap (distance) of the grain kernel cracker that can be adjusted.       |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2014-02-25   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-02-25   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>345 - Setpoint Swathing Width</b>   |
|------------------------------------|--|
| Definition                         | This is the setpoint swathing width of the swath created by a raker.   |
| Comment                            | For mowers the working width DDIs will represent the width of the mower whereas swathing width will represent the swath with created by the mover. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2014-03-17   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-03-25   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>346 - Actual Swathing Width</b>  |
|------------------------------------|---|
| Definition                         | This is the width of the swath currently created by a raker.  |
| Comment                            | For mowers the working width DDIs will represent the width of the mower whereas swathing width will represent the swath width created by the mover. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2014-03-17  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-03-25  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>347 - Minimum Swathing Width</b>   |
| Definition                         | This is the minimum swath width the raker can create.   |
| Comment                            | For mowers the working width DDIs will represent the width of the mower whereas swathing width will represent the swath width created by the mover. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2014-03-17  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-03-25  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>348 - Maximum Swathing Width</b>   |
| Definition                         | This is the maximum with of the swath the raker can create.   |
| Comment                            | For mowers the working width DDIs will represent the width of the mower whereas swathing width will represent the swath width created by the mover. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2014-03-17  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-03-25  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>349 - Nozzle Drift Reduction</b>   |
|------------------------------------|---|
| Definition                         | The Nozzle Drift Reduction classification value of the spraying equipment as percentage   |
| Comment                            | <p>The use of this DDE is to document the current used drift reducing classification of the nozzles or combination of drift reducing technique as percentage value.</p> <p>To record documentation obligation product during applying in adjacency of sensitive areas.</p> <p>For more information about nozzle drift classification see also Standard ISO 22369-1 "Crop protection equipment - Drift classification of spraying equipment"</p> |
| Typically used by Device Class(es) | 6 - Sprayers  |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 100   |
| Display Range                      | 0 - 100   |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2014-06-18  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-06-18  |
| Status Comments                    |   |

| <b>DD Entity</b> | <b>350 - Function or Operation Technique</b>   |
|------------------|--|
| Definition       | The Function or Operation Technique DDE can be used to define the operation technique or functionality performed by a device element defined within the DDOP. The values to be used are defined in the attached document.  |
| Comment          | In a DDOP (Device Description Object Pool) of an ISOBUS device there are different functionalities covered. The device element types in the Task Controller standard which are Device, Function, Bin, Section, Unit, Connector Type, and Navigation Reference do not last out for certain or more complex devices to describe all information in a unique way to the Task Controller Server. For more information see the attached document. |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2014-07-01  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-04-09  |
| Status Comments                    | In Version 6 a function for proprietary usage was added   |
| Attachment                         | <u><a href="#">2018-04-09: Version 5: Fixed some typos - ISO11783-11-DDI-350-Function and Operation Technique Type-v6.pdf</a></u>   |

| DD Entity                          | 351 - Application Total Volume in [ml]                                     |
|------------------------------------|--|
| Definition                         | Accumulated Application specified as volume in milliliter [ml]             |
| Comment                            | is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2014-07-02   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-07-02   |
| Status Comments                    |  |

| DD Entity                          | 352 - Application Total Mass in gram [g]                                   |
|------------------------------------|--|
| Definition                         | Accumulated Application specified as mass in gram [g]                      |
| Comment                            | is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>10 - Irrigation |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2014-07-02   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-07-02   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>353 - Total Application of Nitrogen</b>                     |
|------------------------------------|--|
| Definition                         | Accumulated application of nitrogen [N2] specified as gram [g] |
| Comment                            | This total is a counter of a device element                    |
| Typically used by Device Class(es) | 5 - Fertilizer   |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Christoph Staub  |
| Submit Date                        | 2014-06-04   |
| Submit Company                     | Zunhammer  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-08-26   |
| Status Comments                    | Status was published   |

| <b>DD Entity</b>                   | <b>354 - Total Application of Ammonium</b>                      |
|------------------------------------|---|
| Definition                         | Accumulated application of ammonium [NH4] specified as gram [g] |
| Comment                            | This total is a counter of a device element                     |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2014-06-04  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-08-26  |
| Status Comments                    | Status was published  |

| <b>DD Entity</b>                   | <b>355 - Total Application of Phosphor</b>                       |
|------------------------------------|--|
| Definition                         | Accumulated application of phosphor (P2O5) specified as gram [g] |
| Comment                            | This total is a counter of a device element                      |
| Typically used by Device Class(es) | 5 - Fertilizer   |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Christoph Staub  |
| Submit Date                        | 2014-06-04   |
| Submit Company                     | Zunhammer GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-08-26   |
| Status Comments                    | Status was published   |

| <b>DD Entity</b>                   | <b>356 - Total Application of Potassium</b>                     |
|------------------------------------|---|
| Definition                         | Accumulated application of potassium (K2) specified as gram [g] |
| Comment                            | This total is a counter of a device element                     |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | g - Mass large  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2014-06-04  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-08-26  |
| Status Comments                    | Status was published  |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>357 - Total Application of Dry Matter</b>  |
| Definition                         | Accumulated application of dry matter in kilogram [kg]. Dry matter measured at zero percent of moisture |
| Comment                            | This total is a counter of a device element   |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2014-06-04  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-08-26  |
| Status Comments                    | Status was published  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>358 - Average Dry Yield Mass Per Time</b>   |
| Definition                         | Average Yield expressed as mass per unit time, corrected for the reference moisture percentage DDI 184. This value is the average for a Task and may be reported as a total.   |
| Comment                            | This Average Dry Yield Mass Per Time is the mass flow that has been corrected for the average crop moisture (DDI 262) based on the reference moisture for dry mass (DDI 184). This is the "dry" equivalent to DDI 261. This average yield mass per time is calculated as the yield total dry mass (DDI 183) divided by the effective total time (DDI 119) of the active task. When resuming a task, the working set shall compute its average dry yield mass per time from the yield total mass (DDI 90), average crop moisture (DDI 262), reference moisture percentage (DDI 184), and effective total time (119) assuming these DDI's are sent by the task controller. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | mg/s - Mass flow   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2014-08-08   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |

|                 |                      |
|-----------------|----------------------|
| Status Date     | 2014-08-26           |
| Status Comments | Status was published |

| <b>DD Entity</b>                   | <b>359 - Average Dry Yield Mass Per Area</b>   |
|------------------------------------|--|
| Definition                         | Average Yield expressed as mass per unit area, corrected for the reference moisture percentage DDI 184. This value is the average for a Task and may be reported as a total.   |
| Comment                            | This Average Dry Yield Mass Per Area is the mass flow that has been corrected for the average crop moisture (DDI 262) based on the reference moisture for dry mass (DDI 184). This is the "dry" equivalent to DDI 263. This average yield mass per area is calculated as the yield total dry mass (DDI 183) divided by the total area (DDI 116) of the active task. When resuming a task, the working set shall compute its average dry yield mass per area from the yield total mass (DDI 90), average crop moisture (DDI 262), reference moisture percentage (DDI 184), and total area (DDI 116) assuming these DDI's are sent by the task controller. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops   |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Tony Woodcock  |
| Submit Date                        | 2014-08-08   |
| Submit Company                     | Ag Leader Technology   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-08-26   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>360 - Last Bale Size</b>  |
|------------------------------------|--|
| Definition                         | The bale size of the most recently produced bale. Bale Size as length for a square baler or diameter for a round baler.  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler can add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |

|                 |                     |
|-----------------|---------------------|
| Display Range   | 0 - 2147483647      |
| Submit by       | Lynn Derynck        |
| Submit Date     | 2014-11-07          |
| Submit Company  | CNH Industrial N.V. |
| Revision Number | 1                   |
| Current Status  | ISO-Published       |
| Status Date     | 2014-12-03          |
| Status Comments |                     |

| <b>DD Entity</b>                   | <b>361 - Last Bale Density</b>   |
|------------------------------------|--|
| Definition                         | The bale density of the most recently produced bale.<br><br>Unit: mg/l (mass per unit volume)  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler can add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | mg/l - Mass per capacity unit  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Lynn Derynck   |
| Submit Date                        | 2014-11-07   |
| Submit Company                     | CNH Industrial N.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-12-03   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>362 - Total Bale Length</b>  |
|------------------------------------|---|
| Definition                         | Gives the total baled meters during a task. This is calculated as the sum of the lengths of all knotted bales (square baler). |
| Comment                            |   |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Lynn Derynck  |
| Submit Date                        | 2014-11-07  |
| Submit Company                     | CNH Industrial N.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2014-12-03  |
| Status Comments                    |   |
| Attachment                         | 2014-11-07: - ISO 11783-11 DDIdentifier Total Bale Length-v1.doc  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>363 - Last Bale Dry Mass</b>  |
| Definition                         | The dry mass of the bale that has most recently been produced. This is the bale mass corrected for the average moisture of this bale (DDI 212).  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | g - Mass large   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Lynn Derynck   |
| Submit Date                        | 2014-11-07   |
| Submit Company                     | CNH Industrial N.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2014-12-03   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2014-11-07: - ISO 11783-11 DDIdentifier Last Bale Mass Dry-v1.doc</a>  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>364 - Actual Flake Size</b>   |
| Definition                         | Actual size of the flake that is currently produced by the chamber.  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for each new flake that entered the baler chamber and obtained at the maximum compression of the plunger. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE at each new flake. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000   |
| Display Range                      | 0 - 1000   |
| Submit by                          | Lynn Derynck   |
| Submit Date                        | 2014-11-07   |
| Submit Company                     | CNH Industrial N.V.  |
| Revision Number                    | 1  |

|                 |   |
|-----------------|---|
| Current Status  | ISO-Published   |
| Status Date     | 2015-01-13  |
| Status Comments |   |
| Attachment      | 2014-11-07: - ISO 11783-11 DDIdentifier Flake Size-v1.doc |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>365 - Setpoint Downforce Pressure</b>  |
| Definition                         | Setpoint downforce pressure for an operation  |
| Comment                            | This value represents the system pressure to produce the downforce (or upforce) for an operation measured in Pa (Pascal); In case of an negative value the system pressure would produce Upforce. |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer   |
| Unit Symbol                        | Pa - Pressure   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Brandon McDonald  |
| Submit Date                        | 2014-12-04  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-01-13  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>366 - Actual Downforce Pressure</b>   |
| Definition                         | Actual downforce pressure for an operation   |
| Comment                            | This value represents the actual system pressure to produce the downforce (or upforce) for an operation measured in Pa (Pascal); In case of an negative value the system pressure would produce Upforce. |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer  |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Brandon McDonald   |
| Submit Date                        | 2014-12-04   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-01-13   |
| Status Comments                    |  |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>367 - Condensed Section Override State (1-16)</b>  |
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 1 to 16 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>  |
| Unit Symbol                        | not defined - not defined   |

|                 |  |
|-----------------|--|
| Resolution      | 1                                      |
| SAE SPN         |  |
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2014-11-18                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>368 - Condensed Section Override State (17-32)</b>  |
| Definition       | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 17 to 32 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment          | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-20   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>369 - Condensed Section Override State (33-48)</b>  |
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 33 to 48 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |

|                 |  |
|-----------------|--|
| SAE SPN         |  |
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2015-01-20                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>370 - Condensed Section Override State (49-64)</b>  |
| Definition       | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 49 to 64 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment          | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-20   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

| DD Entity  | 371 - Condensed Section Override State (65-80)   |
|------------|--|
| Definition | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 65 to 80 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment    | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

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|------------------|---|
| <b>DD Entity</b> | <b>372 - Condensed Section Override State (81-96)</b> |
|------------------|---|



|            |  |
|------------|--|
| Definition | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 81 to 96 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment    | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers “on change” and “time based”. The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

| DD Entity  | 373 - Condensed Section Override State (97-112)   |
|------------|---|
| Definition | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 97 to 112 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment    | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>374 - Condensed Section Override State (113-128)</b> |
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|            |  |
|------------|--|
| Definition | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 113 to 128 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment    | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

| DD Entity  | 375 - Condensed Section Override State (129-144)   |
|------------|--|
| Definition | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 129 to 144 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment    | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>376 - Condensed Section Override State (145-160)</b> |
|------------------|---|



|                                    |  |
|------------------------------------|--|
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 145 to 160 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |

|                 |  |
|-----------------|--|
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2015-01-21                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>377 - Condensed Section Override State (161-176)</b>  |
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 161 to 176 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |

|                 |  |
|-----------------|--|
| SAE SPN         |  |
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2015-01-21                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>378 - Condensed Section Override State (177-192)</b>  |
| Definition       | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 177 to 192 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment          | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

| DD Entity                          | 379 - Condensed Section Override State (193-208)   |
|------------------------------------|--|
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 193 to 208 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |

|                 |  |
|-----------------|--|
| SAE SPN         |  |
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2015-01-21                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>380 - Condensed Section Override State (209-224)</b>  |
| Definition       | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 209 to 224 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment          | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>381 - Condensed Section Override State (225-240)</b>  |
| Definition                         | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 225 to 240 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment                            | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> </ul>   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |

|                 |  |
|-----------------|--|
| SAE SPN         |  |
| CANBus Range    | 0 - 4294967295                         |
| Display Range   | 0 - 4294967295                         |
| Submit by       | Michael Köcher                         |
| Submit Date     | 2015-01-21                             |
| Submit Company  | AMAZONEN-Werke H. Dreyer GmbH & Co. KG |
| Revision Number | 2                                      |
| Current Status  | ISO-Published                          |
| Status Date     | 2016-06-27                             |
| Status Comments | Status was published                   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>382 - Condensed Section Override State (241-256)</b>  |
| Definition       | <p>This DDE is used by the implement to communicate that a certain section is overridden and will not follow the section control commands. The value is a combination of the override states of individual sections number 241 to 256 into a single override state. The condensed section override state contains the child element override states, in the driving direction from left to right, where the leftmost child element override state are the 2 lowest significant bits of the Process Data Value. Each child device elements override state is represented by 2 bits and defined as: 00 = section is not overridden, 01 = section is overridden, 10 = reserved, 11 = undefined / not installed. In total 16 child device element override states can be contained in one condensed section override state. If less than 16 child device element override states are available, then the unused bits shall be set to value 11 (undefined / not installed). This DDE shall be placed in the same device element as the corresponding actual condensed work state.</p> |
| Comment          | <p>It is common for SC servers to show the current state of the sections in a proprietary screen. As the implement is allowed to override the commanded state from the task controller it is impossible for the operator to predict what happens when driving into an unworked area. With this DDE it is possible for the SC server to show overridden sections in the proprietary screen.</p> <p>This DDE shall be defined as DPD in the DDOP of the implement. The DPD shall at least support the datalog triggers "on change" and "time based". The value shall only be sent by the implement if it was requested (single request or datalog trigger) by the TC-SC server.</p>  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Michael Köcher   |
| Submit Date                        | 2015-01-21   |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-27   |
| Status Comments                    | Status was published   |

| <b>DD Entity</b>                   | <b>383 - Apparent Wind Direction</b>  |
|------------------------------------|---|
| Definition                         | The apparent wind is the wind which is measured on a moving vehicle. It is the result of two motions: the actual true wind and the motion of the vehicle. The wind angle is referenced to the present heading of the vehicle (Zero degree refers to the vehicle driving direction). |
| Comment                            | DDI 207 defines the true wind.<br>DDI 208 defines the true wind angle.  |
| Typically used by Device Class(es) | 0 - Non-specific system   |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 359   |
| Display Range                      | 0 - 359   |
| Submit by                          | Jan Steenbock   |
| Submit Date                        | 2015-01-12  |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG   |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-02-10  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>384 - Apparent Wind Speed</b>  |
|------------------------------------|---|
| Definition                         | The apparent wind is the wind which is measured on a moving vehicle. It is the result of two motions: the actual true wind and the motion of the vehicle. |
| Comment                            | DDI 207 defines the true wind.<br>DDI 208 defines the true wind angle.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>17 - Sensor System   |
| Unit Symbol                        | mm/s - Speed  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 100000000   |
| Display Range                      | 0 - 100000000   |
| Submit by                          | Jan Steenbock   |
| Submit Date                        | 2015-01-12  |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG   |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-02-10  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>385 - MSL Atmospheric Pressure</b>  |
| Definition                         | The atmospheric pressure MSL (Mean Sea Level) is the air pressure related to mean sea level.   |
| Comment                            | In weather charts only the converted pressure to mean sea level is indicated. Only the pressure changes due to the weather has to be considered. |
| Typically used by Device Class(es) | 0 - Non-specific system<br>17 - Sensor System  |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2000000  |
| Display Range                      | 0,0 - 200000,0   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-03-30   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>386 - Actual Atmospheric Pressure</b>   |
| Definition                         | The Actual Atmospheric Pressure is the air pressure currently measured by the weather station. |
| Comment                            | This value does take the current altitude (field position) into count.                         |
| Typically used by Device Class(es) | 0 - Non-specific system<br>17 - Sensor System  |
| Unit Symbol                        | Pa - Pressure  |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2000000  |
| Display Range                      | 0,0 - 200000,0   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-03-30   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-30   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>387 - Total Revolutions in Fractional Revolutions</b>  |
| Definition                         | Accumulated Revolutions specified with fractional revolutions   |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers.To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers   |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 0,0001  |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -214748,3648 - 214748,3647  |
| Submit by                          | Mike Schmidt  |
| Submit Date                        | 2015-04-24  |
| Submit Company                     | AGCO Corporation  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-04-24  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>388 - Total Revolutions in Complete Revolutions</b>   |
| Definition                         | Accumulated Revolutions specified as completed integer revolutions   |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Mike Schmidt   |
| Submit Date                        | 2015-04-24   |
| Submit Company                     | AGCO Corporation   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-04-24   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>389 - Setpoint Revolutions specified as count per time</b>  |
| Definition                         | Setpoint Revolutions specified as count per time   |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748,3648 - 214748,3647   |
| Submit by                          | David Kuhnel   |
| Submit Date                        | 2015-04-24   |
| Submit Company                     | DICKEY-john Corp   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-04-24   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>390 - Actual Revolutions Per Time</b>   |
| Definition                         | Actual Revolutions specified as count per time   |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748,3648 - 214748,3647   |
| Submit by                          | David Kuhnel   |
| Submit Date                        | 2015-03-23   |
| Submit Company                     | DICKEY-john Corp   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-23   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>391 - Default Revolutions Per Time</b>  |
|------------------------------------|--|
| Definition                         | Default Revolutions specified as count per time  |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748,3648 - 214748,3647   |
| Submit by                          | David Kuhnel   |
| Submit Date                        | 2015-03-23   |
| Submit Company                     | DICKEY-john Corp   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-23   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>392 - Minimum Revolutions Per Time</b>  |
|------------------------------------|--|
| Definition                         | Minimum Revolutions specified as count per time  |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748,3648 - 214748,3647   |
| Submit by                          | David Kuhnel   |
| Submit Date                        | 2015-03-23   |
| Submit Company                     | DICKEY-john Corp   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-23   |
| Status Comments                    |  |



| DD Entity                          | 393 - Maximum Revolutions Per Time   |
|------------------------------------|--|
| Definition                         | Maximum Revolutions specified as count per time  |
| Comment                            | Forward or Clockwise rotation represented as positive numbers and reverse or Counter-Clockwise rotation represented by negative numbers. To prevent rounding errors the basic unit r/min where chosen. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers  |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -214748,3648 - 214748,3647   |
| Submit by                          | David Kuhnel   |
| Submit Date                        | 2015-07-02   |
| Submit Company                     | DICKEY-john Corp   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-07-02   |
| Status Comments                    |  |

| DD Entity                          | 394 - Actual Fuel Tank Content   |
|------------------------------------|--|
| Definition                         | The actual content of the fuel tank  |
| Comment                            | This value can be used to see the refilling of the fuel tank or the theft of fuel.   |
| Typically used by Device Class(es) | 1 - Tractor<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Hans van Zadelhoff   |
| Submit Date                        | 2015-07-02   |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-05   |
| Status Comments                    | Status was published   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>395 - Actual Diesel Exhaust Fluid Tank Content</b>  |
| Definition                         | The actual content of the diesel exhaust fluid tank  |
| Comment                            | This value can be used to see the refilling of the diesel exhaust fluid tank or the theft of diesel exhaust fluid.                     |
| Typically used by Device Class(es) | 1 - Tractor<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Hans van Zadelhoff   |
| Submit Date                        | 2015-07-02   |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-07-02   |
| Status Comments                    |  |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>396 - Setpoint Speed</b>   |
| Definition       | The setpoint speed that can be specified in a process data variable for communication between farm management information systems and mobile implement control systems. The setpoint speed DDI may also be used in a device description object pool to specify support for speed control by a device. A positive value will represent forward direction and a negative value will represent reverse direction.  |
| Comment          | The implementation of speed control on the mobile implement control system may use other ISO11783 network parameter groups (e.g. ISO11783-7 Commanded Vehicle Speed and Machine Selected Speed Setpoint) and may be subject to control request authentication requirements. The definition of this DDI has been added to the ISO 11783-11 data dictionary to facilitate the specification of a setpoint speed in a task data transfer file and to enable specification of the support of speed control in a device description object pool. |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | mm/s - Speed  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Hans van Zadelhoff  |
| Submit Date                        | 2015-02-12  |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG  |
| Revision Number                    | 3   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-04-24  |
| Status Comments                    |   |

| DD Entity                          | 397 - Actual Speed   |
|------------------------------------|--|
| Definition                         | The actual speed as measured on or used by a device for the execution of task based data, e.g. to convert a setpoint rate expressed per area to device specific control data that is expressed as a rate per time. The actual speed can be measured by the device itself or it can be a speed value that is obtained from one of the speed parameter groups that are broadcasted on the ISO11783 network and defined in ISO11783-7. Examples of broadcasted speed parameter groups are wheel based speed, ground based speed and machine selected speed. The source of the actual speed can be specified by a Speed Source DDI that is present in the same device element as the speed DDI. A positive value will represent forward direction and a negative value will represent reverse direction. |
| Comment                            | This DDI has been added to the data dictionary to support logging of the speed that the device uses for processing and for generation of task data. The addition of a DDI for actual speed allows speed values to be added to the default data set that devices present to a task controller or a data logger.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops  |
| Unit Symbol                        | mm/s - Speed   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Hans van Zadelhoff   |
| Submit Date                        | 2015-04-24   |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-04-24   |
| Status Comments                    |  |

| DD Entity | 398 - Minimum Speed |
|-----------|---------------------|
|-----------|---------------------|

|                                    |   |
|------------------------------------|---|
| Definition                         | The minimum speed that can be specified in a process data variable for communication between farm management information systems and mobile implement control systems. A positive value will represent forward direction and a negative value will represent reverse direction.   |
| Comment                            | This DDI has been added to the data dictionary to support the setting and logging of a minimum speed for a part of a device. See also the definitions of the Setpoint, Actual and Maximum Speed DDIs for additional definition and implementation information of Speed DDIs.  |
| Typically used by Device Class(es) | - Not Assigned<br>0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | mm/s - Speed  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Hans van Zadelhoff  |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-09-02  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>399 - Maximum Speed</b>  |
| Definition                         | The maximum speed that can be specified in a process data variable for communication between farm management information systems and mobile implement control systems. A positive value will represent forward direction and a negative value will represent reverse direction.   |
| Comment                            | This DDI has been added to the data dictionary to support the setting and logging of a maximum speed for a part of a device. See also the definitions of the Setpoint, Actual and Minimum Speed DDIs for additional definition and implementation information of Speed DDIs.  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops |
| Unit Symbol                        | mm/s - Speed  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Hans van Zadelhoff  |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | Grimme Landmaschinenfabrik GmbH & Co. KG  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-09-02  |
| Status Comments                    |   |

|                  |                           |
|------------------|---------------------------|
| <b>DD Entity</b> | <b>400 - Speed Source</b> |
|------------------|---------------------------|

|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The Speed Source that the device uses to report actual speed and to process the setpoint, minimum and maximum speeds. The Speed Source value is an enumeration with the following definitions:</p> <ul style="list-style-type: none"> <li>0 = Unknown</li> <li>1 = Wheel-based speed</li> <li>2 = Ground-based speed</li> <li>3 = Navigation-based speed</li> <li>4 = Blended speed</li> <li>5 = Simulated speed</li> <li>6 = Machine Selected speed</li> <li>7 = Machine measured speed (This option indicates the machine uses an own sensor to measures the actual speed, instead of the speed provided on the bus).</li> <li>8 to 254 = Reserved</li> <li>255 = No Source available</li> </ul> |
| Comment                            | <p>The Speed Source DDI can be used in conjunction with the Actual Speed DDI to specify which speed measurement method is used to determine the value reported via the Actual, Setpoint, Minimum and Maximum Speed DDIs. When a device receives commands for Setpoint, Minimum or Maximum Speed then the Speed Source can be used to select a ISO 11783-7 command for speed control.</p>  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> </ul>   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 255   |
| Display Range                      | 0 - 255   |
| Submit by                          | Jaap van Bergeijk   |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | AGCO corporation  |
| Revision Number                    | 2   |
| Current Status                     | Published   |
| Status Date                        | 2018-04-09  |

|                 |  |
|-----------------|--|
| Status Comments | Change information: 8 to 254 = Reserved<br><br>255 = No Source available |
|-----------------|--|



| <b>DD Entity</b>                   | <b>401 - Actual Application of Nitrogen</b>                                       |
|------------------------------------|---|
| Definition                         | Actual application of Nitrogen [N2] specified as milligram per liter [mg/l]       |
| Comment                            | Is the actual amount of Nitrogen [N2] in liquid manure ( see also DD Entity 353 ) |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | mg/l - Mass per capacity unit   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-03-11  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>402 - Actual application of Ammonium</b>  |
|------------------------------------|--|
| Definition                         | Actual application of Ammonium [NH4] specified as milligram per liter [mg/l]       |
| Comment                            | Is the actual amount of Ammonium [NH4] in liquig manure ( see also DD Entity 354 ) |
| Typically used by Device Class(es) | 5 - Fertilizer   |
| Unit Symbol                        | mg/l - Mass per capacity unit  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Christoph Staub  |
| Submit Date                        | 2015-09-02   |
| Submit Company                     | Zunhammer GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-03-11   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>403 - Actual application of Phosphor</b>   |
|------------------------------------|---|
| Definition                         | Actual application of Phosphor [P2O5] specified as milligram per liter [mg/l]       |
| Comment                            | Is the actual amount of Phosphor [P2O5] in liquid manure ( see also DD Entity 355 ) |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | mg/l - Mass per capacity unit   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2015-03-11  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-07-30  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>404 - Actual application of Potassium</b>                                       |
|------------------------------------|--|
| Definition                         | Actual application of Potassium [K2] specified as gram [g]                         |
| Comment                            | is the actual amount of Potassium [K2] in liquid manure ( see also DD Entity 356 ) |
| Typically used by Device Class(es) | 5 - Fertilizer   |
| Unit Symbol                        | mg/l - Mass per capacity unit  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Christoph Staub  |
| Submit Date                        | 2015-09-02   |
| Submit Company                     | Zunhammer GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-09-04   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>405 - Actual application of Dry Matter</b>   |
| Definition                         | Actual application of Dry Matter in kilogram [kg]. Dry matter measured at Zero percent of moisture. |
| Comment                            | is the actual amount of Dry matter in liquid manure ( see also DD Entity 357 )                      |
| Typically used by Device Class(es) | 5 - Fertilizer  |
| Unit Symbol                        | mg/l - Mass per capacity unit   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Christoph Staub   |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | Zunhammer GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-09-04  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>406 - Actual Protein Content</b>  |
| Definition                         | Actual Protein content of a harvested crops                                      |
| Comment                            | Protein content of harvested crop expressed as a percent mass of the total crop. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester   |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Joe Tevis  |
| Submit Date                        | 2015-09-04   |
| Submit Company                     | Topcon   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-09-04   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>407 - Average Protein Content</b>        |
| Definition                         | Average protein content in a harvested crop |
| Comment                            | Average protein content of harvested crop.  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester        |
| Unit Symbol                        | ppm - Parts per million                     |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647                              |
| Display Range                      | 0 - 2147483647                              |
| Submit by                          | Joe Tevis                                   |
| Submit Date                        | 2015-09-04                                  |
| Submit Company                     | Topcon                                      |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published                               |
| Status Date                        | 2015-09-04                                  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>408 - Average Crop Contamination</b>               |
| Definition                         | Average amount of dirt or foreign in a harvested crop |
| Comment                            | Average amount of dirt or foreign in a harvested crop |
| Typically used by Device Class(es) | 7 - Harvesters  |
| Unit Symbol                        | ppm - Parts per million                               |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Ben Craker  |
| Submit Date                        | 2015-09-02  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-06-15  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>409 - Total Diesel Exhaust Fluid Consumption</b>  |
| Definition                         | Accumulated Diesel Exhaust Fluid Consumption as a Task Total.  |
| Comment                            | This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 148 - Total Fuel Consumption. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption.  |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Eric Bongaerts   |
| Submit Date                        | 2015-06-01   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-06-16   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2015-06-01: - DEF DDI Requests-v1.pptx</a>   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>410 - Instantaneous Diesel Exhaust Fluid Consumption per Time</b>   |
| Definition       | Diesel Exhaust Fluid consumption per time  |
| Comment          | This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 149 - Instantaneous Fuel Consumption per Time. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Eric Bongaerts   |
| Submit Date                        | 2015-06-01   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-06-16   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>411 - Instantaneous Diesel Exhaust Fluid Consumption per Area</b>   |
| Definition                         | Diesel Exhaust Fluid consumption per area  |
| Comment                            | This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 150 - Instantaneous Fuel Consumption per Area. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption.   |
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Eric Bongaerts   |
| Submit Date                        | 2015-06-01   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-06-16   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>412 - Lifetime Diesel Exhaust Fluid Consumption</b>                               |
| Definition       | Accumulated Diesel Exhaust Fluid Consumption over the entire lifetime of the device. |

|                                    |   |
|------------------------------------|---|
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value.</p> <p>The Device shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> <p>This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 276 - Lifetime Fuel Consumption. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption.</p> |
| Typically used by Device Class(es) | <p>1 - Tractor<br/> 2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 7 - Harvesters<br/> 8 - Root Harvester<br/> 9 - Forage harvester<br/> 10 - Irrigation<br/> 11 - Transport / Trailers<br/> 12 - Farmyard Work<br/> 13 - Powered Auxiliary Units<br/> 14 - Special Crops<br/> 15 - Municipal Work<br/> 24 - Utility Vehicles<br/> 25 - Slurry Applicators<br/> 26 - Feeder / Mixer</p>   |
| Unit Symbol                        | L - Capacity count  |
| Resolution                         | 0,5   |
| SAE SPN                            | 5963  |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 1073741823,5  |
| Submit by                          | Eric Bongaerts  |
| Submit Date                        | 2015-06-01  |
| Submit Company                     | AGCO  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-06-16  |
| Status Comments                    |   |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>413 - Lifetime Average Diesel Exhaust Fluid Consumption per Time</b>  |
| Definition                         | Average Diesel Exhaust Fluid Consumption per Time over the entire lifetime of the device.  |
| Comment                            | <p>This is the overall average of the device. This average does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Device shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> <p>This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 277 - Lifetime Average Fuel Consumption per Time. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul>  |
| Unit Symbol                        | mm <sup>3</sup> /s - Flow  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Eric Bongaerts   |
| Submit Date                        | 2015-06-01   |
| Submit Company                     | AGCO   |
| Revision Number                    | 1  |

|                 |                      |
|-----------------|----------------------|
| Current Status  | ISO-Published        |
| Status Date     | 2015-06-16           |
| Status Comments | Status was published |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>414 - Lifetime Average Diesel Exhaust Fluid Consumption per Area</b>  |
| Definition                         | Average Diesel Exhaust Fluid Consumption per Area over the entire lifetime of the device.  |
| Comment                            | <p>This is the overall average of the device. This average does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Device shall support the total trigger method for this DDE but shall not support the settable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> <p>This data definition is the Diesel Exhaust Fluid (DEF) consumption counterpart of the previously defined data dictionary entity 278 - Lifetime Average Fuel Consumption per Area. These data dictionary entities can be used by devices that support data logging of Fuel and Diesel Exhaust Fluid consumption.</p> |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul>   |
| Unit Symbol                        | mm <sup>3</sup> /m <sup>2</sup> - Capacity per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |

|                 |                |
|-----------------|----------------|
| Display Range   | 0 - 2147483647 |
| Submit by       | Eric Bongaerts |
| Submit Date     | 2015-06-01     |
| Submit Company  | AGCO           |
| Revision Number | 1              |
| Current Status  | ISO-Published  |
| Status Date     | 2015-06-16     |
| Status Comments |                |

| <b>DD Entity</b>                   | <b>415 - Actual Seed Singulation Percentage</b>  |
|------------------------------------|--|
| Definition                         | Actual Seed Singulation Percentage calculated from measured seed spacing using ISO 7256-1 "Quality of Feed Index" algorithm  |
| Comment                            | Reference ISO 7256-1 "Quality of Feed Index" for details on the standardized method for calculating the seed singulation parameter. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000000  |
| Display Range                      | 0 - 1000000  |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-03-25   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 2  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-28   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>416 - Average Seed Singulation Percentage</b>   |
|------------------------------------|--|
| Definition                         | Average Seed Singulation Percentage calculated from measured seed spacing using ISO 7256-1 "Quality of Feed Index" algorithm. The value is the average for a Task.   |
| Comment                            | Reference ISO 7256-1 "Quality of Feed Index" for details on the standardized method for calculating the seed singulation parameter. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000000  |
| Display Range                      | 0 - 1000000  |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-03-25   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 2  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-28   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>417 - Actual Seed Skip Percentage</b>  |
| Definition                         | Actual Seed Skip Percentage calculated from measured seed spacing using ISO 7256-1 "Miss Index" algorithm   |
| Comment                            | Reference ISO 7256-1 "Miss Index" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 1000000   |
| Display Range                      | 0 - 1000000   |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 2   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>418 - Average Seed Skip Percentage</b>   |
| Definition                         | Average Seed Skip Percentage calculated from measured seed spacing using ISO 7256-1 "Miss Index" algorithm. The value is the average for a Task.  |
| Comment                            | Reference ISO 7256-1 "Miss Index" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 1000000   |
| Display Range                      | 0 - 1000000   |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 3   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>419 - Actual Seed Multiple Percentage</b>   |
| Definition                         | Actual Seed Multiple Percentage calculated from measured seed spacing using ISO 7256-1 "Multiples Index" algorithm.  |
| Comment                            | Reference ISO 7256-1 "Multiples Index" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000000  |
| Display Range                      | 0 - 1000000  |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-03-25   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 3  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-28   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>420 - Average Seed Multiple Percentage</b>  |
| Definition                         | Average Seed Multiple Percentage calculated from measured seed spacing using ISO 7256-1 "Multiples Index" algorithm. The value is the average for a Task.  |
| Comment                            | Reference ISO 7256-1 "Multiples Index" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000000  |
| Display Range                      | 0 - 1000000  |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-03-25   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 3  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-28   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>421 - Actual Seed Spacing Deviation</b>  |
| Definition                         | Actual Seed Spacing Deviation from setpoint seed spacing  |
| Comment                            | Deviation is a positive value independently of if distance between seeds is smaller or larger than the setpoint value |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 3   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>422 - Average Seed Spacing Deviation</b>   |
| Definition                         | Average Seed Spacing Deviation from setpoint seed spacing. The value is the average for a Task.                       |
| Comment                            | Deviation is a positive value independently of if distance between seeds is smaller or larger than the setpoint value |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 3   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>423 - Actual Coefficient of Variation of Seed Spacing Percentage</b>   |
| Definition                         | Actual Coefficient of Variation of Seed Spacing Percentage calculated from measured seed spacing using ISO 7256-1 algorithm   |
| Comment                            | Reference ISO 7256-1 "Coefficient of Variation" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 1000000   |
| Display Range                      | 0 - 1000000   |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 3   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>424 - Average Coefficient of Variation of Seed Spacing Percentage</b>  |
| Definition                         | Average Coefficient of Variation of Seed Spacing Percentage calculated from measured seed spacing using ISO 7256-1 algorithm. The value is the average for a Task.  |
| Comment                            | Reference ISO 7256-1 "Coefficient of Variation" for details on the standardized method for calculating a percentage. The number of seed drops for calculating this real-time percentage is not specified due to the possible differences in measurement and performance of the equipment and seeding rates. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 1000000   |
| Display Range                      | 0 - 1000000   |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-03-25  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 5   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-28  |
| Status Comments                    |   |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>425 - Setpoint Maximum Allowed Seed Spacing Deviation</b>   |
| Definition                         | Setpoint Maximum Allowed Seed Spacing Deviation  |
| Comment                            | Value is for TIM purposes. An acceptable seeding quality range can be defined in a task or prescription. Deviation is a positive value independently of if distance between seeds is smaller or larger than the setpoint value |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-03-25   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 5  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-28   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>426 - Setpoint Downforce as Force</b>   |
| Definition                         | Setpoint Downforce as Force  |
| Comment                            | This value represents the system pressure to produce the downforce (or upforce) for an operation measured in newton; In case of an negative value the system pressure would produce Upforce. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | N - Newton   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Matthias Rothmund  |
| Submit Date                        | 2015-09-03   |
| Submit Company                     | HORSCH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-09-03   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>427 - Actual Downforce as Force</b>  |
| Definition                         | Actual Downforce as Force   |
| Comment                            | This value represents the actual downforce to produce the downforce (or upforce) for an operation measured in newton; In case of an negative value the system pressure would produce Upforce. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | N - Newton  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Matthias Rothmund   |
| Submit Date                        | 2015-09-03  |
| Submit Company                     | HORSCH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-09-03  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>428 - Loaded Total Mass</b>   |
| Definition                         | Accumulated Loads specified as mass, not corrected for the reference moisture percentage DDI 184.  |
| Comment                            | Is a counter of a machine element.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-02   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>429 - Unloaded Total Mass</b>   |
| Definition                         | Accumulated Unloads specified as mass, not corrected for the reference moisture percentage DDI 184.  |
| Comment                            | Is a counter of a machine element.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | kg - Mass  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-02   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>430 - Lifetime Loaded Total Mass</b>   |
| Definition                         | Entire Yield Total Mass of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System  |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |

|                 |                                |
|-----------------|--------------------------------|
| CANBus Range    | 0 - 2147483647                 |
| Display Range   | 0 - 2147483647                 |
| Submit by       | Franz Hoepfinger               |
| Submit Date     | 2015-07-24                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 1                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2015-11-02                     |
| Status Comments |                                |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>431 - Lifetime Unloaded Total Mass</b>   |
| Definition                         | Entire Unloaded Total Mass of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>11 - Transport / Trailers</p> <p>17 - Sensor System</p>   |
| Unit Symbol                        | kg - Mass   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-02  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>432 - Setpoint Application Rate of Nitrogen</b>  |
| Definition                         | Setpoint application rate of nitrogen specified as a mass per area  |
| Comment                            | As a reference the total amount of nitrogen will be documented with DDE353  |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>17 - Sensor System</p> <p>25 - Slurry Applicators</p> |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |

|                 |                               |
|-----------------|-------------------------------|
| Submit by       | Jan Steenbock                 |
| Submit Date     | 2015-11-02                    |
| Submit Company  | Müller-Elektronik GmbH Co. KG |
| Revision Number | 1                             |
| Current Status  | ISO-Published                 |
| Status Date     | 2015-11-03                    |
| Status Comments |                               |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>433 - Actual Application Rate of Nitrogen</b>   |
| Definition                         | Actual application rate of nitrogen specified as a mass per area   |
| Comment                            | As a reference the total amount of nitrogen will be documented with DDE353                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>434 - Minimum Application Rate of Nitrogen</b>  |
| Definition                         | Minimum application rate of nitrogen specified as a mass per area  |
| Comment                            | As a reference the total amount of nitrogen will be documented with DDE353                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>435 - Maximum Application Rate of Nitrogen</b>  |
| Definition                         | Maximum application rate of nitrogen specified as a mass per area  |
| Comment                            | As a reference the total amount of nitrogen will be documented with DDE353                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>436 - Setpoint Application Rate of Ammonium</b>   |
| Definition                         | Setpoint application rate of Ammonium specified as a mass per area                                       |
| Comment                            | As a reference the total amount of ammonium will be documented with DDE354                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |



|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>437 - Actual Application Rate of Ammonium</b>   |
| Definition                         | Actual application rate of Ammonium specified as a mass per area   |
| Comment                            | As a reference the total amount of Ammonium will be documented with DDE354                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>438 - Minimum Application Rate of Ammonium</b>  |
| Definition                         | Minimum application rate of Ammonium specified as a mass per area  |
| Comment                            | As a reference the total amount of ammonium will be documented with DDE354                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>439 - Maximum Application Rate of Ammonium</b>  |
| Definition                         | Maximum application rate of Ammonium specified as a mass per area  |
| Comment                            | As a reference the total amount of ammonium will be documented with DDE354                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>440 - Setpoint Application Rate of Phosphor</b>   |
| Definition                         | Setpoint application rate of phosphor specified as a mass per area                                       |
| Comment                            | As a reference the total amount of phosphor will be documented with DDE355                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>441 - Actual Application Rate of Phosphor</b>   |
| Definition                         | Actual application rate of phosphor specified as a mass per area   |
| Comment                            | As a reference the total amount of phosphor will be documented with DDE355                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>442 - Minimum Application Rate of Phosphor</b>  |
| Definition                         | Minimum application rate of phosphor specified as a mass per area  |
| Comment                            | As a reference the total amount of phosphor will be documented with DDE355                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>443 - Maximum Application Rate of Phosphor</b>  |
| Definition                         | Maximum application rate of phosphor specified as a mass per area  |
| Comment                            | As a reference the total amount of phosphor will be documented with DDE355                               |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>444 - Setpoint Application Rate of Potassium</b>  |
| Definition                         | Setpoint application rate of potassium specified as a mass per area                                      |
| Comment                            | As a reference the total amount of potassium will be documented with DDE356                              |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-02   |
| Status Comments                    |  |

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|------------------------------------|--|
| <b>DD Entity</b>                   | <b>445 - Actual Application Rate of Potassium</b>  |
| Definition                         | Actual application rate of potassium specified as a mass per area  |
| Comment                            | As a reference the total amount of potassium will be documented with DDE356                              |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-02   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>446 - Minimum Application Rate of Potassium</b>   |
| Definition                         | Minimum application rate of potassium specified as a mass per area                                       |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2016-03-29   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

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|------------------------------------|--|
| <b>DD Entity</b>                   | <b>447 - Maximum Application Rate of Potassium</b>   |
| Definition                         | Maximum application rate of potassium specified as a mass per area                                       |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mg/m <sup>2</sup> - Mass per area unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-03   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>448 - Setpoint Application Rate of Dry Matter</b>   |
| Definition                         | Setpoint application rate of dry matter expressed as percentage  |
| Comment                            | As a reference the total amount of dry matter will be documented with DDE 357                            |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steebock   |
| Submit Date                        | 2015-11-03   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>449 - Actual Application Rate of Dry Matter</b>   |
| Definition                         | Actual application rate of dry matter expressed as percentage  |
| Comment                            | As a reference the total amount of dry matter will be documented with DDE 357                            |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-09-03   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>450 - Minimum Application Rate of Dry Matter</b>  |
| Definition                         | Minimum application rate of dry matter expressed as percentage   |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-03   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>451 - Maximum Application Rate of Dry Matter</b>  |
| Definition                         | Maximum application rate of dry matter expressed as percentage   |
| Comment                            |  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | ppm - Parts per million  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Jan Steenbock  |
| Submit Date                        | 2015-11-03   |
| Submit Company                     | Müller-Elektronik GmbH Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>452 - Loaded Total Volume</b>  |
| Definition                         | Accumulated Loaded Volume specified as volume   |
| Comment                            | Is a counter of a machine element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>453 - Unloaded Total Volume</b>  |
| Definition                         | Accumulated Unloaded Volume specified as volume   |
| Comment                            | Is a counter of a machine element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>454 - Lifetime loaded Total Volume</b>   |
| Definition                         | Entire loaded Volume of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>17 - Sensor System   |

|                 |                                |
|-----------------|--------------------------------|
| Unit Symbol     | L - Capacity count             |
| Resolution      | 1                              |
| SAE SPN         |                                |
| CANBus Range    | 0 - 2147483647                 |
| Display Range   | 0 - 2147483647                 |
| Submit by       | Franz Hoepfinger               |
| Submit Date     | 2015-07-24                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 2                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2015-11-03                     |
| Status Comments |                                |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>455 - Lifetime Unloaded Total Volume</b>   |
| Definition                         | Entire unloaded Volume of the device lifetime.  |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p> <p>17 - Sensor System</p>  |
| Unit Symbol                        | L - Capacity count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>456 - Last loaded Volume</b>   |
| Definition       | Last loaded Volume value specified as volume  |
| Comment          | <p>After a loading Procedure, this DDI sends the loaded Volume.</p> <p>For more information see attachment located at Last loaded Weight DDE320</p> |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>457 - Last unloaded Volume</b>   |
| Definition                         | Last unloaded Volume value specified as volume  |
| Comment                            | After a unloading Procedure, this DDI sends the unloaded Volume.<br><br>For more information see attachment located at Last loaded Weight DDE320  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>458 - Loaded Total Count</b>  |
| Definition                         | Accumulated Loads specified as count   |
| Comment                            | Is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 2  |

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|-----------------|---------------|
| Current Status  | ISO-Published |
| Status Date     | 2015-11-03    |
| Status Comments |               |

| DD Entity                          | 459 - Unloaded Total Count   |
|------------------------------------|--|
| Definition                         | Accumulated Unloaded specified as count  |
| Comment                            | Is a counter of a device element   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

| DD Entity                          | 460 - Lifetime Loaded Total Count   |
|------------------------------------|---|
| Definition                         | Entire Loaded Total Count of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |

|                 |                                |
|-----------------|--------------------------------|
| Display Range   | 0 - 2147483647                 |
| Submit by       | Franz Hoepfinger               |
| Submit Date     | 2015-07-24                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 2                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2015-11-03                     |
| Status Comments |                                |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>461 - Lifetime Unloaded Total Count</b>  |
| Definition                         | Entire Unloaded Total Count of the device lifetime.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>11 - Transport / Trailers</p> <p>14 - Special Crops</p> <p>17 - Sensor System</p>   |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-11-03  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>462 - Last loaded Count</b>  |
| Definition                         | Last loaded Count value specified as count  |
| Comment                            | <p>After a loading Procedure, this DDI sends the loaded Count.</p> <p>For more information see attachment located at Last loaded Weight DDE320</p>                  |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>11 - Transport / Trailers</p> <p>17 - Sensor System</p> |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |

|                 |                                |
|-----------------|--------------------------------|
| SAE SPN         |                                |
| CANBus Range    | 0 - 2147483647                 |
| Display Range   | 0 - 2147483647                 |
| Submit by       | Franz Hoepfinger               |
| Submit Date     | 2015-07-24                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 2                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2015-11-03                     |
| Status Comments |                                |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>463 - Last unloaded Count</b>   |
| Definition                         | Last unloaded Count value specified as count   |
| Comment                            | After a unloading Procedure, this DDI sends the loaded Count.<br><br>For more information see attachment located at Last loaded Weight DDE 320                 |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-11-03   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>464 - Haul Counter</b>  |
| Definition                         | Each Time a Device Element is filled and emptied this is called a haul cycle. This counter counts the cycles   |
| Comment                            | Is a counter of a device element. Can be used to count loads, fillings, tippings and such.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-07-24   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |

|                 |               |
|-----------------|---------------|
| Revision Number | 2             |
| Current Status  | ISO-Published |
| Status Date     | 2015-12-14    |
| Status Comments |               |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>465 - Lifetime Haul Counter</b>  |
| Definition                         | The number of haul cycles done by a machine over its entire lifetime. This DDE value can not be set through the process data interface but can be requested and added to a datalog. This DDE value is not affected by a task based total haul cycles but will increment at the same rate as the task based total.   |
| Comment                            | <p>This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changes. It is up to the device control system when to reset this value.</p> <p>The Working Set Master shall support the total trigger method for this DDE but shall not support the settable property.</p> <p>The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed.</p> |
| Typically used by Device Class(es) | <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p> <p>17 - Sensor System</p>  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-07-24  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2015-12-14  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>466 - Actual relative connector angle</b> |
|------------------|--|

|                                    |   |
|------------------------------------|---|
| Definition                         | <p>The DDI Actual relative connector angle shall be placed in the device element of type connector in the DDOP of the TC-SC Client. The value describes the actual angle of the longitudinal axis of the implement relative to the longitudinal axis of the tractor. This angle should be used by the TC-SC server to calculate the real position of implement. The TC-SC server may smooth the rendering in any proprietary screen.</p> <p>The reference system is the coordinate system of the tractor. This results in the angles from table 1 of the attachment.</p> <p>In case of for example a malfunction sensor the error value is set to 0xFExxxxxx.</p>   |
| Comment                            | <p>When working with Section Control it is necessary that the TC-Server calculates the exact position of the implement and its boom and sections to mark the covered area on its section control screen properly. To calculate the positions the TC-SC server uses the x and y offsets of the DRP and CRP. This works well for mounted and for non-steered trailed implements but comes up against limits when implements do have a steering axle or even a steering drawbar because the TC-SC server can't know the current steering angle and moving the DRP doesn't fit in all means. But this could be solved when the TC-SC server would knew the exact angle of the implement related to the tractor. This information could be provided by the implement because when they have a steering mechanism they even have a sensor to measure the angle between tractor and implement.</p> |
| Typically used by Device Class(es) | <p>2 - Primary Soil Tillage<br/> 3 - Secondary Soil Tillage<br/> 4 - Planters /Seeders<br/> 5 - Fertilizer<br/> 6 - Sprayers<br/> 25 - Slurry Applicators</p>   |
| Unit Symbol                        | ° - Angle   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | -180000 - 180000  |
| Display Range                      | -180,000 - 180,000  |
| Submit by                          | Thomas Konermann  |
| Submit Date                        | 2015-07-27  |
| Submit Company                     | AMAZONEN-Werke H. Dreyer GmbH & Co. KG  |
| Revision Number                    | 2   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-01-25  |
| Status Comments                    |   |
| Attachment                         | <a href="#">2015-07-27: - Actual relative connector angle-v1.pdf</a>  |

| DD Entity                          | 467 - Actual Percentage Content  |
|------------------------------------|--|
| Definition                         | Actual Device Element Content specified as percent.  |
| Comment                            |  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxillary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,01   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 10000  |
| Display Range                      | 0,00 - 100,00  |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2016-06-13   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

| DD Entity  | 472 - Setpoint Length of Cut  |
|------------|---|
| Definition | Setpoint length of cut for harvested material, e.g. Forage Harvester or Tree Harvester. |
| Comment    |   |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483,647   |
| Display Range                      | 0,000 - 2,147,484   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-03-21  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-03-21  |
| Status Comments                    |   |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>473 - Minimum length of cut</b>  |
| Definition                         | Minimum length of cut for harvested material, e.g. Forage Harvester or Tree Harvester.                        |
| Comment                            |   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483,647   |
| Display Range                      | 0,000 - 2,147,484   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-03-21  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-03-21  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>474 - Maximum Length of Cut</b>  |
| Definition                         | Maximum length of cut for harvested material, e.g. Forage Harvester or Tree Harvester.                        |
| Comment                            |   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>14 - Special Crops |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 0,001   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483,647   |
| Display Range                      | 0,000 - 2,147,484   |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-03-21  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-03-21  |
| Status Comments                    |   |

|                          |  |
|--------------------------|--|
| <b>DD Entity</b>         | <b>475 - Setpoint Bale Hydraulic Pressure</b>  |
| Definition               | The setpoint value of the hydraulic pressure applied to the sides of the bale in the bale compression chamber. |
| Comment                  |  |
| Typically used by Device | 7 - Harvesters   |
| Class(es)                | 9 - Forage harvester   |
| Unit Symbol              | Pa - Pressure  |
| Resolution               | 1  |
| SAE SPN                  |  |
| CANBus Range             | 0 - 2147483647   |
| Display Range            | 0 - 2147483647   |
| Submit by                | Frank Wiebeler   |
| Submit Date              | 2016-03-21   |
| Submit Company           | Maschinenfabrik Bernard Krone GmbH   |
| Revision Number          | 1  |
| Current Status           | ISO-Published  |
| Status Date              | 2016-03-21   |
| Status Comments          |  |

|                          |   |
|--------------------------|---|
| <b>DD Entity</b>         | <b>476 - Minimum Bale Hydraulic Pressure</b>  |
| Definition               | The minimum value of the hydraulic pressure applied to the sides of the bale in the bale compression chamber. |
| Comment                  |   |
| Typically used by Device | 7 - Harvesters  |
| Class(es)                | 9 - Forage harvester  |
| Unit Symbol              | Pa - Pressure   |
| Resolution               | 1   |
| SAE SPN                  |   |
| CANBus Range             | 0 - 2147483647  |
| Display Range            | 0 - 2147483647  |
| Submit by                | Frank Wiebeler  |
| Submit Date              | 2016-03-21  |
| Submit Company           | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number          | 1   |
| Current Status           | ISO-Published   |
| Status Date              | 2016-03-21  |
| Status Comments          |   |

|                          |   |
|--------------------------|---|
| <b>DD Entity</b>         | <b>477 - Maximum Bale Hydraulic Pressure</b>  |
| Definition               | The maximum value of the hydraulic pressure applied to the sides of the bale in the bale compression chamber. |
| Comment                  |   |
| Typically used by Device | 7 - Harvesters  |
| Class(es)                | 9 - Forage harvester  |
| Unit Symbol              | Pa - Pressure   |
| Resolution               | 1   |
| SAE SPN                  |   |
| CANBus Range             | 0 - 2147483647  |
| Display Range            | 0 - 2147483647  |
| Submit by                | Frank Wiebeler  |
| Submit Date              | 2016-03-21  |
| Submit Company           | Maschinenfabrik Bernard Krone GmbH  |
| Revision Number          | 1   |
| Current Status           | ISO-Published   |
| Status Date              | 2016-03-21  |
| Status Comments          |   |

|                          |   |
|--------------------------|---|
| <b>DD Entity</b>         | <b>478 - Setpoint Flake Size</b>                          |
| Definition               | Setpoint size of the flake to be produced by the chamber. |
| Comment                  | See also DDI 364.   |
| Typically used by Device | 7 - Harvesters  |
| Class(es)                | 9 - Forage harvester                                      |
| Unit Symbol              | mm - Length   |
| Resolution               | 1   |
| SAE SPN                  |   |
| CANBus Range             | 0 - 1000  |
| Display Range            | 0 - 1000  |
| Submit by                | Frank Wiebeler  |
| Submit Date              | 2016-03-21  |
| Submit Company           | Maschinenfabrik Bernard Krone GmbH                        |
| Revision Number          | 1   |
| Current Status           | ISO-Published   |
| Status Date              | 2016-03-21  |
| Status Comments          |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>479 - Minimum Flake Size</b>                                |
| Definition                         | Minimum size of the flake that can be produced by the chamber. |
| Comment                            | See also DDI 364.  |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester                         |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000   |
| Display Range                      | 0 - 1000   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-03-21   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH                             |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-03-21   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>480 - Maximum Flake Size</b>                                |
| Definition                         | Maximum size of the flake that can be produced by the chamber. |
| Comment                            | See also DDI 364   |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester                         |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 1000   |
| Display Range                      | 0 - 1000   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-03-21   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH                             |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-03-21   |
| Status Comments                    |  |

| DD Entity                          | 481 - Setpoint Number of Subbales   |
|------------------------------------|---|
| Definition                         | Number of smaller bales that shall be included in one bigger bale.                        |
| Comment                            | Defines the number of sub-bales included of a big square bale.                            |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers |
| Unit Symbol                        | not defined - not defined   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-03-09  |
| Submit Company                     | Maschinenfabrik Bernard Krone   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-06-13  |
| Status Comments                    |   |

| DD Entity                          | 482 - Last Bale Number of Subbales   |
|------------------------------------|--|
| Definition                         | Number of smaller bales included in the latest produced bale.  |
| Comment                            | This DDI is needed as there might be another bale in the chamber.<br>When sending this DDI on dropping the bale on the field, the system can define how many subbales are in that specific bale. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester<br>11 - Transport / Trailers  |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-03-09   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>483 - Setpoint Engine Speed</b>   |
| Definition                         | The setpoint of the rotational speed of the engine.  |
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,0000 - 214748,3647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>484 - Actual Engine Speed</b>       |
| Definition       | Actual rotational speed of the engine. |

|                                    |  |
|------------------------------------|--|
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger.   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxillary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,0000 - 214748,3647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>485 - Minimum Engine Speed</b>  |
| Definition                         | The minimum of the rotational speed of the engine.   |
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,0000 - 214748,3647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>486 - Maximum Engine Speed</b>                  |
| Definition       | The maximum of the rotational speed of the engine. |



|                                    |  |
|------------------------------------|--|
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger.   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxillary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,0000 - 214748,3647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>488 - Diesel Exhaust Fluid Tank Percentage Level</b>  |
| Definition                         | The actual level of the Diesel Exhaust Fluid Tank in percent.  |
| Comment                            | The addition of a percentage DDI allows such values to be added to the default data set that devices present to a task controller or a data logger   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,01   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 10000  |
| Display Range                      | 0,00 - 100,00  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-13   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>489 - Maximum Diesel Exhaust Fluid Tank Content</b> |
|------------------|--|

|                                    |   |
|------------------------------------|---|
| Definition                         | This value describes the maximum amount of Diesel Exhaust fluid, that can be filled into the tank of the machine  |
| Comment                            |   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-04-01  |
| Submit Company                     | Maschinenfabrik Bernard Krone   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-06-13  |
| Status Comments                    |   |

| DD Entity                          | 490 - Maximum Fuel Tank Content  |
|------------------------------------|--|
| Definition                         | This value describes the maximum amount of fuel that can be filled into the machines Fuel tank.  |
| Comment                            |  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | ml - Capacity large  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-14   |
| Status Comments                    |  |

| DD Entity  | 491 - Fuel Percentage Level                           |
|------------|---|
| Definition | The actual level of the machine fuel tank in percent. |
| Comment    |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,01   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,00 - 21474836,47   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-14   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>492 - Total Engine Hours</b>   |
| Definition                         | The total time the engine was running when the task was active.   |
| Comment                            |   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | h - Hour  |
| Resolution                         | 0,05  |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 210554060,75  |
| Display Range                      | 0,0 - 10527703,038  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2016-04-01  |
| Submit Company                     | Maschinenfabrik Bernard Krone   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-06-14  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>493 - Lifetime Engine Hours</b>  |
| Definition       | The total time, when the engine was running over the whole lifetime of the machine. |
| Comment          |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | h - Hour   |
| Resolution                         | 0,1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 214748364,7  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     |  |
| Status Date                        | 2016-04-01   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>494 - Last Event Partner ID (Byte 1-4)</b>  |
|------------------------------------|--|
| Definition                         | Last Event Partner ID as a decimal number of 128bit length.<br><br>This DDI should include the Byte 1-4 of the Last Event Partner ID. It should always be sent as Group of 4 DDI's to send all 128 bit together. After this a DDI 147 "Log Count" shall be sent. |
| Comment                            | Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System   |
| Unit Symbol                        | not defined - not defined  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 0xFFFFFFFF   |
| Display Range                      | 0 - 0xFFFFFFFF   |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2016-07-20   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2015-10-11   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2016-07-20: - ISO11783-11-DDI-494 Partner ID-v1.pdf</a>  |

| <b>DD Entity</b> | <b>495 - Last Event Partner ID (Byte 5-8)</b>  |
|------------------|--|
| Definition       | Last Event Partner ID as a decimal number of 128bit length.<br><br>This DDI should include the Byte 5-8 of the Last Event Partner ID. It should always be sent as Group of 4 DDI's to send all 128 bit together. After this a DDI 147 "Log Count" shall be sent. |
| Comment          | Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS. See also DDI 494 attachment.  |



|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0x00000000 - 0xFFFFFFFF  |
| Display Range                      | 0x00000000 - 0xFFFFFFFF  |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-10-11   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-15   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>496 - Last Event Partner ID (Byte 9-12)</b>  |
| Definition                         | Last Event Partner ID as a decimal number of 128bit length.<br><br>This DDI should include the Byte 9-12 of the Last Event Partner ID. It should always be sent as Group of 4 DDI's to send all 128 bit together. After this a DDI 147 "Log Count" shall be sent. |
| Comment                            | Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS.<br>See also DDI 494 attachment.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System  |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0x00000000 - 0xFFFFFFFF   |
| Display Range                      | 0x00000000 - 0xFFFFFFFF   |
| Submit by                          | Franz Hoepfinger  |
| Submit Date                        | 2015-10-11  |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH  |
| Revision Number                    | 3   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-06-15  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>497 - Last Event Partner ID (Byte 13-16)</b>  |
| Definition                         | Last Event Partner ID as a decimal number of 128bit length.<br><br>This DDI should include the Byte 13-16 of the Last Event Partner ID. It should always be sent as Group of 4 DDI's to send all 128 bit together. After this a DDI 147 "Log Count" shall be sent. |
| Comment                            | Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS.<br>See also DDI 494 attachment.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System   |

|                 |                                |
|-----------------|--------------------------------|
| Unit Symbol     | not defined - not defined      |
| Resolution      | 1                              |
| SAE SPN         |                                |
| CANBus Range    | 0x00000000 - 0xFFFFFFFF        |
| Display Range   | 0x00000000 - 0xFFFFFFFF        |
| Submit by       | Franz Hoepfinger               |
| Submit Date     | 2015-10-11                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 3                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2016-06-15                     |
| Status Comments |                                |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>498 - Last Event Partner ID Type</b>  |
| Definition                         | Defines The Type of the Partner ID Device. See Attachment for Definition.  |
| Comment                            | See also DDI 494 attachment.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0x00000000 - 0xFFFFFFFF  |
| Display Range                      | 0x00000000 - 0xFFFFFFFF  |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-10-11   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 4  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-20   |
| Status Comments                    | Status was published   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>499 - Last Event Partner ID Manufacturer ID Code</b>   |
| Definition                         | The Partner ID has to tell its Manufacturer, and the Manufacturer Numbers from SAE J1939 / ISO 11783 shall be used.   |
| Comment                            | Remark: This is not the Manufacturer of the ISOBUS ECU sending this DDI to the Task-Controller, but the Manufacturer of the "Partner" Device.<br>See also DDI 494 attachment. |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System    |
| Unit Symbol                        | not defined - not defined   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0x00000000 - 0xFFFFFFFF   |
| Display Range                      | 0x00000000 - 0xFFFFFFFF   |
| Submit by                          | Franz Hoepfinger  |

|                 |                                |
|-----------------|--------------------------------|
| Submit Date     | 2015-10-11                     |
| Submit Company  | 367 - Fliegl Agrartechnik GmbH |
| Revision Number | 4                              |
| Current Status  | ISO-Published                  |
| Status Date     | 2016-06-20                     |
| Status Comments | Status was published           |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>500 - Last Event Partner ID Device Class</b>  |
| Definition                         | This DDI should tell the Device Class of the "Partner" Device.   |
| Comment                            | Look at DDI 494 attachment to get the device class details.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>17 - Sensor System |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0x00000000 - 0xFFFFFFFF  |
| Display Range                      | 0x00000000 - 0xFFFFFFFF  |
| Submit by                          | Franz Hoepfinger   |
| Submit Date                        | 2015-10-11   |
| Submit Company                     | 367 - Fliegl Agrartechnik GmbH   |
| Revision Number                    | 4  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-20   |
| Status Comments                    | Status was published   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>501 - Setpoint Engine Torque</b>  |
| Definition       | The setpoint of the engine torque.   |
| Comment          | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger. |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 5  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-28   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>502 - Actual Engine Torque</b>  |
| Definition                         | The current torque of the engine.  |
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger  |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0,000 - 2,147,483,647  |
| Submit by                          |  |
| Submit Date                        | 2016-04-01   |
| Submit Company                     |  |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-28   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>503 - Minimum Engine Torque</b>     |
| Definition       | The minimum value of the engine torque |



|                                    |  |
|------------------------------------|--|
| Comment                            |  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-06-28   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-28   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>504 - Maximum Engine Torque</b>   |
| Definition                         | The maximum value of the engine torque   |
| Comment                            |  |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxillary Units<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>18 - Reserved for Future Assignment<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>23 - Mulchers<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | % - Percent  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483,647  |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-06-28   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-06-28   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>505 - Tramline Control Level</b>                                |
| Definition       | This DDI defines the Tramline Control capability of the Implement. |

|                                    |  |
|------------------------------------|--|
| Comment                            | <p>The Implement shall provide in its root DeviceElement which Tramline Control Levels are supported. The Tramline Control Levels are independent of each other. It is allowed to support for example only Level 3 Tramlining.</p> <p>Byte 1 Bit 0 = 1 Support Tramline Control Level 1<br/> Byte 1 Bit 1 = 1 Support Tramline Control Level 2<br/> Byte 1 Bit 2 = 1 Support Tramline Control Level 3<br/> Byte 1 Bit 3-7 = 0 Reserved</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 7  |
| Display Range                      | 0 - 7  |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 3  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-08-24   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2017-01-25: - TramlineControl_BasicRequirements_v1.12-v2.pdf</a>   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>506 - Setpoint Tramline Control Level</b>   |
| Definition                         | This DDI defines the Tramline Control capability of the Task Controller that is used with the appropriate Implement.   |
| Comment                            | <p>The Task Controller shall send this value to inform the Implement which Tramline Control Level shall be used to operate. In case there is no match between the supported Tramline Control Level on the Task Controller Server side and the Implement, the Task Controller shall inform the Implement by setting the Setpoint Tramline Control Level to 0.</p> <p>This is the response to the Tramline Control Level DDI.</p> <p>0 No common Level<br/> 1 Tramline Control Level 1<br/> 2 Tramline Control Level 2<br/> 3 Tramline Control Level 3<br/> 4-255 Reserved for future Assignment</p> <p>For more details see also attachment on DDI 505.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>507 - Tramline Sequence Number</b>                   |
| Definition       | This DDI defines a group of DDIs which belong together. |

|                                    |   |
|------------------------------------|---|
| Comment                            | <p>In order to ensure that the parameters “Unique A-B Guidance Reference Line ID”, “Actual Track Number”, “Track Number to the right” and “Track Number the left” are belonging together, the Tramline Sequence Number is needed. This parameter has to be sent from the Tramline Controller to indicate a new Tramline Sequence to the Implement. This number shall start with value 1 and increase on every new Tramline Sequence which is going to be sent.</p> <p>These Parameters are only allowed to be sent in a group, except the Unique A-B Guidance Reference Line ID. If one of the parameters is missing, the Tramline Sequence would be invalid. In case the Unique A-B Guidance Reference Line ID shall be part of the Tramline Sequence, this value shall be sent as first value after the Tramline Sequence Number and before other values.</p> <p>It is recommended to send all values belonging to one Tramline Sequence within 500 ms.</p> <p>For more details see also attachment on DDI 505.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-09-01  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>508 - Unique A-B Guidance Reference Line ID</b>   |
|------------------------------------|--|
| Definition                         | This DDI defines a unique ID to identify which Guidance Reference Line is the base for the Tramline calculation.   |
| Comment                            | A field could have more than one Guidance Reference Line. For example the field could have a Guidance Reference Line for the headland and also another Guidance Reference Line for the main field. To distinguish between the several Guidance Reference Lines a Guidance Reference Line ID is used. This unique ID identifies which Guidance Reference Line is the base for the Tramline calculation.<br><br>For more details see also attachment on DDI 505. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>509 - Actual Track Number</b>  |
|------------------------------------|---|
| Definition                         | This DDI defines a unique number of the Guidance Track the Implement is currently located on.   |
| Comment                            | The Actual Track Number is the unique Number of the Guidance Track the Implement is currently located on. This number is provided by the Guidance System.<br><br>For more details see also attachment on DDI 505. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-09-01  |

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|-----------------|--|
| Status Comments |  |
|-----------------|--|

| <b>DD Entity</b>                   | <b>510 - Track Number to the right</b>   |
|------------------------------------|--|
| Definition                         | This DDI defines a unique number of the Guidance Track to right hand side in direction of Implement orientation.   |
| Comment                            | This is the Guidance Track Number to right hand side in direction of Implement orientation. If the Track Number to the right is higher than the Actual Track Number, then the Implement is in the same direction as the A-B reference line. The Implement orientation is independent of the driving direction of the Implement. This value is provided by the Guidance System.<br><br>For more details see also attachment on DDI 505. |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | -2147483648 - 2147483647   |
| Display Range                      | -2147483648 - 2147483647   |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>511 - Track Number to the left</b>   |
|------------------------------------|---|
| Definition                         | This DDI defines a unique number of the Guidance Track to left hand side in direction of Implement orientation.   |
| Comment                            | This is the Guidance Track Number to left hand side in direction of Implement orientation<br><br>This value may be used in addition to the Track Number to the right for differentiating between the two Guidance Track 0 Numbers (0R and 0L). This value is needed, because there are two cases where the Actual Track Number and the Track Number to the right are both 0. This value is provided by the Guidance System.<br><br>For more details see also attachment on DDI 505. |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |



|                 |                               |
|-----------------|-------------------------------|
| Submit Company  | Competence Center ISOBUS e.V. |
| Revision Number | 1                             |
| Current Status  | ISO-Published                 |
| Status Date     | 2016-09-01                    |
| Status Comments |                               |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>512 - Guidance Line Swath Width</b>   |
| Definition                         | The Swath Width is the Distance between two adjacent Guidance Lines in a Guidance Pattern.   |
| Comment                            | <p>The User may prefer to choose a distance between two adjacent Guidance Lines which is a little smaller or bigger than the Seeder Working Width. The Implement may use this information to apply correction on its Tramline calculation.</p> <p>For more details see also attachment on DDI 505.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>513 - Guidance Line Deviation</b>   |
| Definition       | Deviation of the Device-Reference-Point (DRP) to the actual guidance line, in driving direction.   |
| Comment          | <p>This DDI shall be sent from the Guidance System or Task Controller. It specifies the Deviation in mm between the current Guidance Line and the Device Reference Point which is guided along the Guidance Line.</p> <p>The Guidance Line Deviation is positive when the Guidance Line is located on the right hand side of the Device Reference Point in driving direction.</p> <p>The Guidance Line Deviation is negative when the Guidance Line is located on the left hand side of Device Reference Point in driving direction.</p> <p>For more details see also attachment on DDI 505.</p> |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | 1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>17 - Sensor System<br>25 - Slurry Applicators |
| Unit Symbol                        | mm - Length   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | -2147483648 - 2147483647  |
| Display Range                      | -2147483648 - 2147483647  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-09-01  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>514 - GNSS Quality</b>  |
| Definition                         | GNSS Quality Identifier to inform the implement about the used Position Status.  |
| Comment                            | <p>This DDI shall be sent from the Guidance System or Task Controller to the implement. It specifies the quality of the GNSS which is used by the Guidance System or Task Controller.</p> <p>Definition references NMEA2000 Method GNSS parameter as also mentioned in ISO11783-10.</p> <p>For more details see also attachment on DDI 505.</p>  |
| Typically used by Device Class(es) | <p>1 - Tractor</p> <p>2 - Primary Soil Tillage</p> <p>3 - Secondary Soil Tillage</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>11 - Transport / Trailers</p> <p>12 - Farmyard Work</p> <p>13 - Powered Auxiliary Units</p> <p>14 - Special Crops</p> <p>17 - Sensor System</p> <p>25 - Slurry Applicators</p> |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

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|------------------|-------------------------------------|
| <b>DD Entity</b> | <b>515 - Tramline Control State</b> |
|------------------|-------------------------------------|

|                                    |  |
|------------------------------------|--|
| Definition                         | <p>Specifies the actual state of Tramline Control.</p> <p>The value definitions are:</p> <p>Byte 1 Bits 0-1 = 00 manual/off</p> <p>Byte 1 Bits 0-1 = 01 automatic/on</p> <p>Byte 1 Bits 0-1 = 10 error</p> <p>Byte 1 Bits 0-1 = 11 undefined/not supported</p> <p>Byte 1 Bits 2-7 reserved, set to 0.</p> <p>The DDI shall support the OnChange trigger so that the Task Controller is able to get informed when the value gets changed by the Working Set Master. The Task Controller shall activate this trigger when using the DDI.</p> |
| Comment                            | <p>The Tramline Control State has the same purpose and definition like the Section Control State DDI 160.</p> <p>For more details see also attachment on DDI 505.</p>  |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 3  |
| Display Range                      | 0 - 3  |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>516 - Tramline Overdosing Rate</b>   |
| Definition                         | Overdosing Rate for the rows adjacent to the Tramline Track.  |
| Comment                            | <p>This DDI specifies the Overdosing Rate for the rows adjacent to the Tramline Tracks. This value is specified in ppm. The value 1.000.000 (100%) is the normal rate. A value &gt; 100% means that a overdosing is applied.</p> <p>In case of a seeding distance, the implement should calculate the overdosing based on seeds per area and recalculate that value to an overdosing seeding rate.</p> <p>Background: If the seeding distance is just multiplied with the overdosing rate, the seeding distance will increase which leads to less seed on the field!</p> <p>Example: In the case the seeding distance is specified the overdosing rate will result in a shorter seed distance. A seeding distance of 20,00 cm with an overdosing rate of 110% will result in a seed distance of 18,18cm for the rows adjacent to the Tramline Tracks.</p> <p>For more details see also attachment on DDI 505.</p> |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-09-01  |
| Status Comments                    |   |

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|------------------|--|
| <b>DD Entity</b> | <b>517 - Setpoint Tramline Condensed Work State 1-16</b> |
|------------------|--|

|                                    |   |
|------------------------------------|---|
| Definition                         | The Setpoint Tramline Condensed Work State DDIs are the control command counterparts to the Actual Tramline Condensed Work States DDIs. The value is a combination of the Setpoint Tramline Valve Work States of individual Tramline Valves number 1 to 16 into a single Setpoint Tramline Condensed Work State of their parent DeviceElement. The Setpoint Tramline Condensed Work State contains the child element Setpoint Tramline Work States, in the driving direction from left to right, where the leftmost child element Setpoint Tramline Work State are the 2 lowest significant bits of the Process Data Value. Each child device elements Setpoint Work State is represented by 2 bits and defined as: 00 = disable/off, 01 = enable/on, 10 = error indicator, 11 = no change. In total 16 child device element Setpoint Tramline Work States can be contained in one Setpoint Tramline Condensed Work State of their parent DeviceElement. If less than 16 child device element Setpoint Tramline Work States are available, then the unused bits shall be set to value 11 (no change). |
| Comment                            | The Setpoint Tramline Condensed Work State 1-16 has the same purpose and definition like the Setpoint Condensed Work State 1-16 DDI 290.<br><br>For more details see also attachment on DDI 505.  |
| Typically used by Device Class(es) | 4 - Planters /Seeders   |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 4294967295  |
| Display Range                      | 0 - 4294967295  |
| Submit by                          | Karsten Helweg  |
| Submit Date                        | 2015-12-10  |
| Submit Company                     | Competence Center ISOBUS e.V.   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-09-01  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>518 - Actual Tramline Condensed Work State 1-16</b>   |
|------------------------------------|--|
| Definition                         | Combination of the Actual States of individual Tramline Valves number 1 to 16 into a single Actual Tramline State of their parent DeviceElement. The Actual Tramline Condensed Work State contains the child element Actual Tramline Work States, in the driving direction from left to right, where the leftmost child element Actual Tramline Work State are the 2 lowest significant bits of the Process Data Value. Each child device elements Actual Tramline Work State is represented by 2 bits and defined as: 00 = disabled/off, 01 = enabled/on, 10 = error indicator, 11 = undefined/not installed. In total 16 child device element Actual Tramline Work States can be contained in one Actual Tramline Condensed Work State of their parent DeviceElement. If less than 16 child device element Actual Tramline Work States are available, then the unused bits shall be set to value 11 (not installed). |
| Comment                            | The Actual Tramline Condensed Work State 1-16 has the same purpose and definition like the Actual Condensed Work State 1-16 DDI 161.<br><br>For more details see also attachment on DDI 505.   |
| Typically used by Device Class(es) | 4 - Planters /Seeders  |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 4294967295   |
| Display Range                      | 0 - 4294967295   |
| Submit by                          | Karsten Helweg   |
| Submit Date                        | 2015-12-10   |
| Submit Company                     | Competence Center ISOBUS e.V.  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-01   |
| Status Comments                    |  |

| <b>DD Entity</b> | <b>519 - Last Bale Lifetime Count</b>  |
|------------------|--|
| Definition       | The Lifetime Bale Count of the bale that leaves the machine.<br>The value shall be equal to the Lifetime Bale Count that was reported when this bale is knotted. |



|                                    |  |
|------------------------------------|--|
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that leaves the machine. A baler can add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE when the bale leaves the machine. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale leaves the machine. The value shall be equal to the Lifetime Bale Count that was reported when this bale is knotted. |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-06-06   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2016-09-19   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>520 - Actual Canopy Height</b>  |
| Definition                         | Actual height of the canopy above ground.  |
| Comment                            |  |
| Typically used by Device Class(es) | 5 - Fertilizer<br>6 - Sprayers<br>9 - Forage harvester<br>14 - Special Crops<br>17 - Sensor System |
| Unit Symbol                        | mm - Length  |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Joe Tevis  |
| Submit Date                        | 2016-10-04   |
| Submit Company                     | Topcon Precision Ag  |
| Revision Number                    | 2  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2018-06-18   |
| Status Comments                    | Status was published   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>521 - GNSS Installation Type</b>   |
| Definition       | <p>The GNSS Installation Type DDE is used by the device to provide additional information about the type and location of the GPS receiver with reference to the overall system.</p> <p>Additional information are required especially when more than one GNSS receiver is installed on the system.</p> <p>The GPS Installation Type value is an instance enumeration with the following definitions:</p> <ul style="list-style-type: none"> <li>0 = Unknown</li> <li>1 = Tractor integrated antenna</li> <li>2 = Tractor universal antenna (removable)</li> <li>3 = First Implement antenna</li> <li>4 = Second Implement antenna</li> <li>5 = Display integrated antenna</li> <li>6 to 100 Reserved</li> </ul> |
| Comment          | <p>Today some devices are equipped with more than one GPS receivers for certain applications. In this case both do have different offset defined and therefore an application need to be able to identify each receiver clearly. This DDI does provide the possibility to add these additional information below the appropriate device element.</p>  |

|                                    |   |
|------------------------------------|---|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | n.a. -  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 100   |
| Display Range                      | 0 - 100   |
| Submit by                          | Meyer Matthias  |
| Submit Date                        | 2016-10-17  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2016-11-28  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>522 - Twine Bale Total Count</b>   |
|------------------------------------|---|
| Definition                         | The total number of twine bound product units for which Twine binding method was used during operation.   |
| Comment                            | Twine Total Count can be used as total counter of a device element. It is intended to be used as task based and therefore it is recommended to support the on-time and on-change trigger methods.<br><br>The total trigger method and the setable property are required for this DDE. |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Elshout   |
| Submit Date                        | 2017-01-26  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2017-02-04  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>523 - Mesh Bale Total Count</b>  |
|------------------------------------|---|
| Definition                         | The total number of mesh product units for which Net binding method was used during operation.  |
| Comment                            | Twine Total Count can be used as total counter of a device element. It is intended to be used as task based and therefore it is recommended to support the on-time and on-change trigger methods.<br><br>The total trigger method and the setable property are required for this DDE. |
| Typically used by Device Class(es) | 9 - Forage harvester  |
| Unit Symbol                        | # - Quantity/Count  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Elshout   |
| Submit Date                        | 2017-01-26  |
| Submit Company                     | 89 - Kverneland Group, Electronics Division   |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2017-02-04  |
| Status Comments                    |   |

| <b>DD Entity</b>                   | <b>524 - Lifetime Twine Bale Total Count</b>   |
|------------------------------------|--|
| Definition                         | Entire total number of twine bound product units for which Twine binding method was used during operation, of a device lifetime  |
| Comment                            | This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value. The Working Set Master shall support the total trigger method for this DDE but shall not support the settable property. The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed. |
| Typically used by Device Class(es) | 9 - Forage harvester   |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Elshout  |
| Submit Date                        | 2017-01-26   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2017-02-04   |
| Status Comments                    |  |

| <b>DD Entity</b>                   | <b>525 - Lifetime Mesh Bale Total Count</b>  |
|------------------------------------|--|
| Definition                         | Entire total number of mesh product units for which Net binding method was used during operation, of a device lifetime   |
| Comment                            | This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be settable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value. The Working Set Master shall support the total trigger method for this DDE but shall not support the settable property. The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed. |
| Typically used by Device Class(es) | 9 - Forage harvester   |
| Unit Symbol                        | # - Quantity/Count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Elshout  |

|                 |   |
|-----------------|---|
| Submit Date     | 2017-01-26                                  |
| Submit Company  | 89 - Kverneland Group, Electronics Division |
| Revision Number | 1   |
| Current Status  | ISO-Published                               |
| Status Date     | 2017-02-04                                  |
| Status Comments |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>526 - Actual Cooling Fluid Temperature</b>  |
| Definition                         | The actual temperature of the cooling fluid for the machine.   |
| Comment                            | The addition of a DDI for such values allows such values to be added to the default data set that devices present to a task controller or a data logger. If not specially defined within a certain function the assumption is that this DDI represents the engine cooling fluid temperature.   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | mK - Temperature   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2016-04-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2017-06-12   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>528 - Last Bale Capacity</b>   |
| Definition                         | The capacity of the bale that leaves the machine.<br>The mass used for calculation should be DDI 223 (Last Bale Mass).<br>The time used for calculation should be the amount of time needed to produce the bale.  |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that leaves the machine. A baler can add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE when the bale leaves the machine. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale leaves the machine. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | kg/h - Mass per hour unit   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Lynn Derynck  |
| Submit Date                        | 2017-03-23  |
| Submit Company                     | CNH Industrial N.V.   |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2017-11-20  |
| Status Comments                    |   |



| <b>DD Entity</b>                   | <b>529 - Setpoint Tillage Disc Gang Angle</b>  |
|------------------------------------|--|
| Definition                         | Setpoint Tillage Gang Angle is the pivot angle of the gangs for the device element   |
| Comment                            | This Serpoint Tillage Gang Angle value represent the angle a tillage disk or disk gang is set to increase or decrease aggressiveness. Typical disk angle is measured perpendicular to implement direction. A single disk angle value typically represents a singular coordinate system where a single value represents an angle offset from the perpendicular plane in each quadrant.<br>See the attachment for more detailed information. |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage   |
| Unit Symbol                        | ° - Angle  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | -180000 - 180000   |
| Display Range                      | -180.0 - 180.0   |
| Submit by                          | Theilen Rick   |
| Submit Date                        | 2017-09-04   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-02-14   |
| Status Comments                    |  |
| Attachment                         | <a href="#">2018-02-14: - ISO11783-11-DDI-529-Tillage Gang Angle v 1-v1.pdf</a>  |

| <b>DD Entity</b>                   | <b>530 - Actual Tillage Disc Gang Angle</b>  |
|------------------------------------|--|
| Definition                         | Actual Tillage Gang Angle is the pivot angle of the gangs for the device element.  |
| Comment                            | This Actual Tillage Gang Angle value represent the actual angle of a tillage disk or disk gang. Typical disk angle is measured perpendicular to implement direction. A single disk angle value typically represents a singular coordinate system where a single value represents an angle offset from the perpendicular plane in each quadrant.<br>See the attachment for more detailed information. |
| Typically used by Device Class(es) | 2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage   |
| Unit Symbol                        | ° - Angle  |
| Resolution                         | 0,001  |
| SAE SPN                            |  |
| CANBus Range                       | -180000 - 180000   |
| Display Range                      | -180.0 - 180.0   |
| Submit by                          | Theilen Rick   |
| Submit Date                        | 2017-09-04   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |

|                 |            |
|-----------------|------------|
| Current Status  | Published  |
| Status Date     | 2018-02-14 |
| Status Comments |            |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>531 - Actual Applied Preservative Per Yield Mass</b>  |
| Definition                         | This DDI shall describe the actual applied preservative per harvested yield mass.  |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2017-08-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG   |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-03-19   |
| Status Comments                    |  |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>532 - Setpoint Applied Preservative Per Yield Mass</b>   |
| Definition       | The desired volume of preservative per harvested yield mass |
| Comment          |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2017-08-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2018-03-19   |
| Status Comments                    | Status was published   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>533 - Default Applied Preservative Per Yield Mass</b>  |
| Definition                         | The default volume of preservative applied per harvested yield mass   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2017-08-01  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG  |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-03-19  |
| Status Comments                    |   |

|                  |  |
|------------------|--|
| <b>DD Entity</b> | <b>534 - Minimum Applied Preservative Per Yield Mass</b>   |
| Definition       | The minimum settable value, the preservative system is able to control the flow of preservative. |
| Comment          |  |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2017-08-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2018-03-19   |
| Status Comments                    | Status was published   |

| DD Entity                          | 535 - Maximum Applied Preservative Per Yield Mass  |
|------------------------------------|--|
| Definition                         | The maximum volume, the preservative system can apply to the harvested yield in a controlled way   |
| Comment                            |  |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>25 - Slurry Applicators<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Frank Wiebeler   |
| Submit Date                        | 2017-08-01   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG   |
| Revision Number                    | 1  |
| Current Status                     | ISO-Published  |
| Status Date                        | 2018-03-19   |
| Status Comments                    | Status was published   |

| DD Entity                          | 536 - Total Applied Preservative  |
|------------------------------------|---|
| Definition                         | The total volume of applied preservative in this task.  |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>26 - Feeder / Mixer |

|                 |  |
|-----------------|--|
| Unit Symbol     | ml - Capacity large                      |
| Resolution      | 1  |
| SAE SPN         |  |
| CANBus Range    | 0 - 2147483647                           |
| Display Range   | 0 - 2147483647                           |
| Submit by       | Frank Wiebeler                           |
| Submit Date     | 2017-08-01                               |
| Submit Company  | Maschinenfabrik Bernard Krone GmbH&CO KG |
| Revision Number | 1  |
| Current Status  | ISO-Published                            |
| Status Date     | 2018-03-19                               |
| Status Comments | Status was published                     |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>537 - Lifetime Applied Preservative</b>  |
| Definition                         | The total applied volume of preservative in the lifetime of the machine   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>26 - Feeder / Mixer |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2017-08-01  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2018-03-19  |
| Status Comments                    | Status was published  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>538 - Average Applied Preservative Per Yield Mass</b>  |
| Definition                         | The average volume per mass for this task.  |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>26 - Feeder / Mixer |
| Unit Symbol                        | mm <sup>3</sup> /kg - Capacity per mass unit  |

|                 |  |
|-----------------|--|
| Resolution      | 1  |
| SAE SPN         |  |
| CANBus Range    | 0 - 2147483647                           |
| Display Range   | 0 - 2147483647                           |
| Submit by       | Frank Wiebeler                           |
| Submit Date     | 2017-08-01                               |
| Submit Company  | Maschinenfabrik Bernard Krone GmbH&CO KG |
| Revision Number | 1  |
| Current Status  | ISO-Published                            |
| Status Date     | 2018-03-19                               |
| Status Comments | Status was published                     |

| <b>DD Entity</b>                   | <b>539 - Actual Preservative Tank Volume</b>  |
|------------------------------------|---|
| Definition                         | The actual volume inside the preservative tank.   |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>26 - Feeder / Mixer |
| Unit Symbol                        | ml - Capacity large   |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Frank Wiebeler  |
| Submit Date                        | 2017-08-01  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH&CO KG  |
| Revision Number                    | 1   |
| Current Status                     | ISO-Published   |
| Status Date                        | 2018-03-19  |
| Status Comments                    | Status was published  |

| <b>DD Entity</b>                   | <b>540 - Actual Preservative Tank Level</b>   |
|------------------------------------|---|
| Definition                         | The percentage level of the preservative tank.  |
| Comment                            |   |
| Typically used by Device Class(es) | 7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>11 - Transport / Trailers<br>14 - Special Crops<br>15 - Municipal Work<br>17 - Sensor System<br>19 - Timber Harvesters<br>20 - Forwarders<br>21 - Timber loaders<br>22 - Timber Processing Machines<br>24 - Utility Vehicles<br>26 - Feeder / Mixer |
| Unit Symbol                        | ppm - Parts per million   |
| Resolution                         | 1   |

|                 |  |
|-----------------|--|
| SAE SPN         |  |
| CANBus Range    | 0 - 2147483647                           |
| Display Range   | 0 - 2147483647                           |
| Submit by       | Frank Wiebeler                           |
| Submit Date     | 2017-08-01                               |
| Submit Company  | Maschinenfabrik Bernard Krone GmbH&CO KG |
| Revision Number | 1  |
| Current Status  | ISO-Published                            |
| Status Date     | 2018-03-19                               |
| Status Comments | Status was published                     |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>541 - Actual PTO Speed</b>   |
| Definition                         | Actual Speed of the Power Take-Off (PTO)  |
| Comment                            |   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute  |
| Resolution                         | 0,0001  |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 214748,3647   |
| Submit by                          | Marc-Kevin Doeker   |
| Submit Date                        | 2018-06-25  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG   |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-07-11  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>542 - Setpoint PTO Speed</b>               |
| Definition       | The desired Speed of the Power Take-Off (PTO) |
| Comment          |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 214748,3647  |
| Submit by                          | Marc-Kevin Doeker  |
| Submit Date                        | 2018-06-25   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-07-11   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>543 - Default PTO Speed</b>  |
| Definition                         | The default Speed of the Power Take-Off (PTO)   |
| Comment                            |   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute  |
| Resolution                         | 0,0001  |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 214748,3647   |
| Submit by                          | Marc-Kevin Doeker   |
| Submit Date                        | 2018-06-25  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG   |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-07-11  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>544 - Minimum PTO Speed</b>                |
| Definition       | The minimum Speed of the Power Take-Off (PTO) |
| Comment          |   |

|                                    |  |
|------------------------------------|--|
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxiliary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute   |
| Resolution                         | 0,0001   |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 214748,3647  |
| Submit by                          | Marc-Kevin Doeker  |
| Submit Date                        | 2018-06-25   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-07-11   |
| Status Comments                    |  |



|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>545 - Maximum PTO Speed</b>  |
| Definition                         | The maximum Speed of the Power Take-Off (PTO)   |
| Comment                            |   |
| Typically used by Device Class(es) | <ul style="list-style-type: none"> <li>- Not Assigned</li> <li>0 - Non-specific system</li> <li>1 - Tractor</li> <li>2 - Primary Soil Tillage</li> <li>3 - Secondary Soil Tillage</li> <li>4 - Planters /Seeders</li> <li>5 - Fertilizer</li> <li>6 - Sprayers</li> <li>7 - Harvesters</li> <li>8 - Root Harvester</li> <li>9 - Forage harvester</li> <li>10 - Irrigation</li> <li>11 - Transport / Trailers</li> <li>12 - Farmyard Work</li> <li>13 - Powered Auxilary Units</li> <li>14 - Special Crops</li> <li>15 - Municipal Work</li> <li>17 - Sensor System</li> <li>18 - Reserved for Future Assignment</li> <li>19 - Timber Harvesters</li> <li>20 - Forwarders</li> <li>21 - Timber loaders</li> <li>22 - Timber Processing Machines</li> <li>23 - Mulchers</li> <li>24 - Utility Vehicles</li> <li>25 - Slurry Applicators</li> <li>26 - Feeder / Mixer</li> </ul> |
| Unit Symbol                        | r/min - Revolutions per minute  |
| Resolution                         | 0,0001  |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 214748,3647   |
| Submit by                          | Marc-Kevin Doeker   |
| Submit Date                        | 2018-06-25  |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG   |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-07-11  |
| Status Comments                    |   |

|                  |   |
|------------------|---|
| <b>DD Entity</b> | <b>546 - Lifetime Chopping Engagement Total Time</b>          |
| Definition       | Entire Chopping Engagement Total Time of the device lifetime. |

|                                    |  |
|------------------------------------|--|
| Comment                            | This is the overall total of the device. This total does not refer to an application controlled by a Task Controller. Therefore this DDE shall not be setable within the device description and neither shall the device reset the value when the task status changed. It is up to the device control system when to reset this value. The Working Set Master shall support the total trigger method for this DDE but shall not support the setable property. The Task Controller can request and store this DDE at the end of a task. But it shall not set this DDE when the task is resumed. |
| Typically used by Device Class(es) | - Not Assigned   |
| Unit Symbol                        | s - Time count   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Marc-Kevin Doeker  |
| Submit Date                        | 2018-06-25   |
| Submit Company                     | Maschinenfabrik Bernard Krone GmbH & Co. KG  |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-07-11   |
| Status Comments                    |  |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>547 - Setpoint Bale Compression Plunger Load (N)</b>   |
| Definition                         | The setpoint bale compression plunger load expressed as Newton.   |
| Comment                            | This value is measured / controlled for each new flake that entered the baler chamber and obtained at the rear dead end of the plunger. This DDI is also available with a unit of ppm, see DDI 218. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | N - Newton  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2018-08-30  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-30  |
| Status Comments                    |   |

|                                    |   |
|------------------------------------|---|
| <b>DD Entity</b>                   | <b>548 - Actual Bale Compression Plunger Load (N)</b>   |
| Definition                         | The actual bale compression plunger load expressed as Newton.   |
| Comment                            | This is the plunger load measured at the rear dead end of the plunger cycle and only updated for each new flake that has entered the baler chamber. This DDI is also available with a unit of ppm, see DDI 219. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester  |
| Unit Symbol                        | N - Newton  |
| Resolution                         | 1   |
| SAE SPN                            |   |
| CANBus Range                       | 0 - 2147483647  |
| Display Range                      | 0 - 2147483647  |
| Submit by                          | Matthias Meyer  |
| Submit Date                        | 2018-08-30  |
| Submit Company                     | John Deere  |
| Revision Number                    | 1   |
| Current Status                     | Published   |
| Status Date                        | 2018-08-30  |
| Status Comments                    |   |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>549 - Last Bale Average Bale Compression Plunger Load (N)</b>   |
| Definition                         | The average bale compression plunger load for the most recently produced bale expressed as newton.   |
| Comment                            | The recommended use of this DDE is for a baler to report this once for every bale that is produced. A baler may add this to its default set of data, based on an internal on-change data trigger that causes the baler to report the value of this DDE after the bale is produced. The recommendation for data logging is that all "Last Bale" DDEs that are supported by a device are reported together at the moment that the bale is produced and leaves the machine. This DDI is also available with a unit of ppm, see DDI 220. |
| Typically used by Device Class(es) | 7 - Harvesters<br>9 - Forage harvester   |
| Unit Symbol                        | N - Newton   |
| Resolution                         | 1  |
| SAE SPN                            |  |
| CANBus Range                       | 0 - 2147483647   |
| Display Range                      | 0 - 2147483647   |
| Submit by                          | Matthias Meyer   |
| Submit Date                        | 2018-08-30   |
| Submit Company                     | John Deere   |
| Revision Number                    | 1  |
| Current Status                     | Published  |
| Status Date                        | 2018-08-30   |
| Status Comments                    |  |

|                                    |  |
|------------------------------------|--|
| <b>DD Entity</b>                   | <b>57342 - PGN Based Data</b>  |
| Definition                         | This DDI is used in the XML files to identify PGN based data.  |
| Comment                            | This DDI is specified in ISO 11783-10 IS paragraph 6.3 Logging parameters from parameter groups.   |
| Typically used by Device Class(es) | 0 - Non-specific system<br>1 - Tractor<br>2 - Primary Soil Tillage<br>3 - Secondary Soil Tillage<br>4 - Planters /Seeders<br>5 - Fertilizer<br>6 - Sprayers<br>7 - Harvesters<br>8 - Root Harvester<br>9 - Forage harvester<br>10 - Irrigation<br>11 - Transport / Trailers<br>12 - Farmyard Work<br>13 - Powered Auxiliary Units<br>14 - Special Crops<br>15 - Municipal Work |
| Unit Symbol                        | n.a. -   |

|                 |                               |
|-----------------|-------------------------------|
| Resolution      | 1                             |
| SAE SPN         |                               |
| CANBus Range    | -2147483648 - 2147483647      |
| Display Range   | -2147483648 - 2147483647      |
| Submit by       | Part 10 Task Force            |
| Submit Date     | 2005-01-25                    |
| Submit Company  | 0 - Reserved                  |
| Revision Number | 1                             |
| Current Status  | ISO-Approved                  |
| Status Date     | 2009-02-05                    |
| Status Comments | Added to the on-line database |

| <b>DD Entity</b>                   | <b>57343 - Request Default Process Data</b>  |
|------------------------------------|--|
| Definition                         | Request Default Process Data. This DDE is the highest ISO assigned entity. The range above this number is reserved for manufacture specific DDE's. |
| Comment                            | This DDE was a result of Jan 2005 Task Controller meeting.   |
| Typically used by Device Class(es) | - Not Assigned   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 1  |
| SAE SPN                            | not specified  |
| CANBus Range                       | 0 - 0  |
| Display Range                      | 0 - 0  |
| Submit by                          | 11783-Part 10 Task Force   |
| Submit Date                        | 2005-01-20   |
| Submit Company                     | 89 - Kverneland Group, Electronics Division  |
| Revision Number                    | 1  |
| Current Status                     | ISO-Approved   |
| Status Date                        | 2009-02-05   |
| Status Comments                    | Updated description, added reference to ISO11783-10  |

| <b>DD Entity</b>                   | <b>57344 - 65534 Proprietary DDI Range</b>                                 |
|------------------------------------|--|
| Definition                         | Manufacturer proprietary definitions                                       |
| Comment                            | It is not recommended to process proprietary DDEs from other manufacturers |
| Typically used by Device Class(es) | - Not Assigned   |
| Unit Symbol                        | n.a. -   |
| Resolution                         | 0  |
| SAE SPN                            |  |
| CANBus Range                       | -  |
| Display Range                      | -  |
| Submit by                          | Part 10 Task Force   |
| Submit Date                        | 0000-00-00   |
| Submit Company                     | 0 - Reserved   |
| Revision Number                    | 1  |

|                                    |                         |
|------------------------------------|-------------------------|
| <b>DD Entity</b>                   | <b>65535 - Reserved</b> |
| Definition                         | Reserved                |
| Comment                            |                         |
| Typically used by Device Class(es) | - Not Assigned          |
| Unit Symbol                        | n.a. -                  |
| Resolution                         | 0                       |
| SAE SPN                            |                         |
| CANBus Range                       | -                       |
| Display Range                      | -                       |
| Submit by                          | Part 10 Task Force      |
| Submit Date                        | 0000-00-00              |
| Submit Company                     | 0 - Reserved            |
| Revision Number                    | 1                       |