



International  
Organization for  
Standardization

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

<b>DD Entity</b>	<b>0 - Internal Data Base DDI</b>
Definition	This DDI is reserved for internal use only.
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-Submitted (Pending)
Status Date	2005-02-02
Status Comments	

<b>DD Entity</b>	<b>1 - Setpoint Volume Per Area Application Rate as [mm<sup>3</sup>/m<sup>2</sup>]</b>
Definition	Setpoint Application Rate specified as volume per area as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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 as [mm<sup>3</sup>/m<sup>2</sup>]</b>
Definition	Actual Application Rate specified as volume per area as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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>3 - Default Volume Per Area Application Rate as [mm<sup>3</sup>/m<sup>2</sup>]</b>
Definition	Default Application Rate specified as volume per area as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	use when missing Position data or outside any Treatment Zone
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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 as [mm<sup>3</sup>/m<sup>2</sup>]</b>
Definition	Minimum Application Rate specified as volume per area as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	supplied by device as physical minimum
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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 as [mm<sup>3</sup>/m<sup>2</sup>]</b>
Definition	Maximum Application Rate specified as volume per area as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	supplied by device as physical maximum
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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.

DD Entity	6 - Setpoint Mass Per Area Application Rate
Definition	Setpoint Application Rate specified as mass per area
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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.

DD Entity	7 - Actual Mass Per Area Application Rate
Definition	Actual Application Rate specified as mass per area
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 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 - 2147483,647
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.

DD Entity	12 - Actual Count Per Area Application Rate
Definition	Actual Application Rate specified as count per area
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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 - 2147483,647
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.

DD Entity	13 - Default Count Per Area Application Rate
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 5 - Fertilizer 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 - 2147483,647
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.



DD Entity	14 - Minimum Count Per Area Application Rate
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 5 - Fertilizer 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 - 2147483,647
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.

DD Entity	15 - Maximum Count Per Area Application Rate
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 5 - Fertilizer 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 - 2147483,647
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	Handling 0 value for Seed Spacing - The 0 rate indicates nothing shall be applied. Even though Seed spacing defines distance between 2 Seeds. As this is rate DDI, zero value shall indicate no Seeds are applied for Rate Application.
Typically used by Device Class(es)	4 - Planters /Seeders 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	2
Current Status	Published
Status Date	2020-12-15
Status Comments	Comment added

<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 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	18 - Default Spacing Application Rate
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 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	19 - Minimum Spacing Application Rate
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 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 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 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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>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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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>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 5 - Fertilizer 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 5 - Fertilizer 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	not specified
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 5 - Fertilizer 6 - Sprayers
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	not specified
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 5 - Fertilizer
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	not specified
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 5 - Fertilizer 6 - Sprayers
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	not specified
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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.

DD Entity	50 - Maximum Count Per Time Application Rate
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 5 - Fertilizer 6 - Sprayers
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	not specified
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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.

DD Entity	51 - Setpoint Tillage Depth
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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 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 3 - Secondary Soil Tillage 4 - Planters /Seeders 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 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	

DD Entity	54 - Minimum Tillage Depth
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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 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	

DD Entity	55 - Maximum Tillage Depth
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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 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	

DD Entity	56 - Setpoint Seeding Depth
Definition	Setpoint Seeding Depth of Device Element below soil surface, value increases with depth
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 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	57 - Actual Seeding Depth
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.

DD Entity	58 - Default Seeding Depth
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.

DD Entity	59 - Minimum Seeding Depth
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.

DD Entity	60 - Maximum Seeding Depth
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 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	61 - Setpoint Working Height
Definition	Setpoint Working Height of Device Element above crop or soil
Comment	
Typically used by Device Class(es)	0 - Non-specific system 5 - Fertilizer 6 - Sprayers 7 - Harvesters 9 - Forage harvester 10 - Irrigation 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.



DD Entity	62 - Actual Working Height
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 6 - Sprayers 7 - Harvesters 9 - Forage harvester 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.

DD Entity	63 - Default Working Height
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 6 - Sprayers 7 - Harvesters 9 - Forage harvester 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 6 - Sprayers 7 - Harvesters 9 - Forage harvester 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 6 - Sprayers 7 - Harvesters 9 - Forage harvester 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 14 - Special Crops 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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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.

DD Entity	68 - Default Working Width
Definition	Default Working Width of Device Element
Comment	
Typically used by Device Class(es)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	69 - Minimum Working Width
Definition	Minimum Working Width of Device Element
Comment	
Typically used by Device Class(es)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	70 - Maximum Working Width
Definition	Maximum Working Width of Device Element
Comment	
Typically used by Device Class(es)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	71 - Setpoint Volume Content
Definition	Setpoint Device Element Content specified as volume
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.
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DD Entity	74 - Setpoint Mass Content
Definition	Setpoint Machine Element Content specified as mass
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	75 - Actual Mass Content
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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.
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DD Entity	78 - Actual Count Content
Definition	Actual Device Element Content specified as count
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.

DD Entity	79 - Maximum Count Content
Definition	Maximum Device Element Content specified as count
Comment	is a minimum needed as well ??
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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 as [L]</b>
Definition	Accumulated Application specified as volume as liter [L]
Comment	is a counter of a device element
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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.

DD Entity	82 - Application Total Count
Definition	Accumulated Application specified as count
Comment	Task total of a device element for the application of a countable product. Often used as total for the group Setpoint, Actual, Default, Minimum & Maximum Count Per Area Application Rate (DDI 11 through 15). This DDI is meant for countable products.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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	Published
Status Date	2022-08-09
Status Comments	Comment update only!

DD Entity	83 - Volume Per Area Yield
Definition	Yield as volume per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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.



DD Entity	84 - Mass Per Area Yield
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 8 - Root Harvester 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.

DD Entity	85 - Count Per Area Yield
Definition	Yield as count per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 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 - 2147483,647
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.

DD Entity	86 - Volume Per Time Yield
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.

DD Entity	87 - Mass Per Time Yield
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 8 - Root Harvester 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.

DD Entity	88 - Count Per Time Yield
Definition	Yield as count per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 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 - 2147483,647
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.

DD Entity	89 - Yield Total Volume
Definition	Accumulated Yield specified as volume
Comment	is a counter of a machine element
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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.

DD Entity	90 - Yield Total Mass
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 8 - Root Harvester 9 - Forage harvester 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.

DD Entity	91 - Yield Total Count
Definition	Accumulated Yield specified as count
Comment	is a counter of a machine element
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 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.

DD Entity	94 - Count Per Area Crop Loss
Definition	Crop yield loss as count per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 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 - 2147483,647
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.

DD Entity	95 - Volume Per Time Crop Loss
Definition	Crop yield loss as volume per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 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 8 - Root Harvester 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 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 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 8 - Root Harvester 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 - Actual Bale Height</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	2
Current Status	Published
Status Date	2024-04-15
Status Comments	Typo fix only

<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.

DD Entity	110 - Maximum Bale Height
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.

DD Entity	111 - Setpoint Bale Size
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.

DD Entity	112 - Actual Bale Size
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.

DD Entity	113 - Default Bale Size
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.

DD Entity	114 - Minimum Bale Size
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.

DD Entity	115 - Maximum Bale Size
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.



DD Entity	116 - Total Area
Definition	Accumulated Area
Comment	is a counter of a machine element
Typically used by Device Class(es)	0 - Non-specific system 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 14 - Special Crops 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.

DD Entity	117 - Effective Total Distance
Definition	Accumulated Distance in working position
Comment	is a counter of a machine element
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	

<b>DD Entity</b>	<b>120 - Ineffective Total Time</b>
Definition	Accumulated Time out of working position
Comment	is a counter of a machine element
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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.

<b>DD Entity</b>	<b>121 - Product Density Mass Per Volume</b>
Definition	Product Density as mass per volume
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.

DD Entity	122 - Product Density Mass PerCount
Definition	Product Density as mass per count
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.

DD Entity	123 - Product Density Volume Per Count
Definition	Product Density as volume per count
Comment	
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.
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DD Entity	124 - Auxiliary Valve Scaling Extend
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.

DD Entity	125 - Auxiliary Valve Scaling Retract
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.

<b>DD Entity</b>	<b>128 - Auxiliary Valve Ramp Retract 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>129 - Auxiliary Valve Ramp Retract 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	130 - Auxiliary Valve Float Threshold
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.

DD Entity	131 - Auxiliary Valve Progressivity Extend
Definition	Define non-linear relationship between command and flow by 2nd degree polynomial. (I will get polynomial)
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	The DDI 134, Device element offset X is used to represent the position offset for any DET element with respect to DRP. Further details and geometry inheritance can be referenced in ISO11783 part 10.
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	2
Current Status	Published
Status Date	2021-03-09
Status Comments	Comment update

DD Entity	135 - Device Element Offset Y
Definition	Y direction offset of a DeviceElement relative to a Device.
Comment	The DDI 135, Device element offset Y is used to represent the position offset for any DET element with respect to DRP. Further details and geometry inheritance can be referenced in ISO11783 part 10
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Published
Status Date	2021-03-09
Status Comments	Comment update

DD Entity	136 - Device Element Offset Z
Definition	Z direction offset of a DeviceElement relative to a Device.
Comment	The DDI 136, Device element offset Z is used to represent the position offset for any DET element with respect to DRP. Further details and geometry inheritance can be referenced in ISO11783 part 10
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Published
Status Date	2021-03-09
Status Comments	Comment update.

DD Entity	137 - Device Volume Capacity (Deprecated)
Definition	DeviceElement Volume Capacity, dimension of a DeviceElement
Comment	This DDE can be used to define the physical volume capacity that can be filled into this element, like the number of liters that can be filled into a bin. Note, there are a preferred duplicate DDIs 71, 72 and 73!
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Published
Status Date	2024-02-05
Status Comments	Update comment to use lower DDIs

DD Entity	138 - Device Mass Capacity (Deprecated)
Definition	DeviceElement Mass Capacity, dimension of a DeviceElement
Comment	This DDE can be used to define the weight that can be loaded into the element. Note, there are a preferred duplicate DDIs 74, 75 and 76!
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Published
Status Date	2024-02-05
Status Comments	Update comment to use lower DDIs

DD Entity	139 - Device Count Capacity (Deprecated)
Definition	DeviceElement Count Capacity, dimension of a DeviceElement
Comment	This DDE can be used to define the count capacity that can be loaded into the element, like the number of seeds that a grain bin can carry. Note, there are a preferred duplicate DDIs 77, 78 and 79!
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Published
Status Date	2024-02-05
Status Comments	Update comment to use lower DDIs

<b>DD Entity</b>	<b>140 - Setpoint Percentage Application Rate</b>
Definition	Application Rate expressed as percentage
Comment	This DDE defines the setpoint application rate expressed in percentage. Usually this DDI is used within FMIS systems in combination with other information like a base-rate or a default-rate.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 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	Published
Status Date	2023-07-10
Status Comments	Comment update

<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	<p>See the DDI 290 attachment "ISO11783-11-DDI-289-SetpointWorkState" as reference for implementation guideline.</p> <p>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.</p> <p>Original comment: this DDE was a result of March 2005 TF10 meeting.</p>

Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	142 - Physical Setpoint Time Latency
Definition	<p>The Setpoint Value Latency Time is the time lapse between the moment of receival 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.</p> <p>The setpoint time latency value can only be positive.</p>
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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	

DD Entity	143 - Physical Actual Value Time Latency
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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</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>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	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers
Unit Symbol	Â° - 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	Published
Status Date	2023-07-10
Status Comments	Comment "This DDE was a result of March 2005 TF10 meeting." removed

<b>DD Entity</b>	<b>145 - Roll Angle</b>
Definition	Roll Angle of a DeviceElement
Comment	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers
Unit Symbol	Â° - 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	New Request Submitted
Status Date	2023-07-10
Status Comments	Comment "This DDE was a result of March 2005 TF10 meeting." removed

<b>DD Entity</b>	<b>146 - Pitch Angle</b>
Definition	Pitch Angle of a DeviceElement
Comment	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers
Unit Symbol	Â° - 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	Published
Status Date	2023-07-10
Status Comments	Comment "This DDE was a result of March 2005 TF10 meeting." removed

<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	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 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	Published
Status Date	2023-07-10
Status Comments	Comment "This DDE was a result of March 2005 TF10 meeting." removed

<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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 Zeller
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 Zeller
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 Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 Zeller
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 Zeller
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.



DD Entity	153 - Actual Normalized Difference Vegetative Index (NDVI)
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 5 - Fertilizer 6 - Sprayers 10 - Irrigation
Unit Symbol	n.a. -
Resolution	0,001
SAE SPN	TBD
CANBus Range	-1000 - 1000
Display Range	-1,000 - 1,000
Submit by	Marvin Stone
Submit Date	2008-04-28
Submit Company	39 - Microfirm Inc.
Revision Number	1
Current Status	Published
Status Date	2020-05-04
Status Comments	CANBus Range and Display Range change
Attachment	<a href="#">2009-08-11: Definition summary - NDVI definition summary.pdf</a>

DD Entity	154 - Physical Object Length
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work
Unit Symbol	mm - Length
Resolution	1
SAE SPN	

CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hans JÃ¼rgen 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	

<b>DD Entity</b>	<b>155 - Physical Object Width</b>
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hans JÃ¼rgen 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	

<b>DD Entity</b>	<b>156 - Physical Object Height</b>
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hans JÃ¼rgen 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> <ul style="list-style-type: none"> <li>-1 = Not available</li> <li>0 = unknown (default),</li> <li>1 = ISO 6489-3 Tractor drawbar,</li> <li>2 = ISO 730 Three-point-hitch semi-mounted,</li> <li>3 = ISO 730 Three-point-hitch mounted,</li> <li>4 = ISO 6489-1 Hitch-hook,</li> <li>5 = ISO 6489-2 Clevis coupling 40,</li> <li>6 = ISO 6489-4 Piton type coupling,</li> <li>7 = ISO 6489-5 CUNA hitch,</li> <li>8 = ISO 24347 Ball type hitch,</li> <li>9 = Chassis Mounted - Self-Propelled,</li> <li>10 = ISO 5692-2 Pivot wagon hitch</li> </ul> <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> <p>Other standards for Mechanical connections between towed and towing vehicles to look at are:</p> <p>ISO 8755, ISO 21244, ISO 5692-1, ISO 8718, ISO 12357, ISO 3584, ISO 1102, ISO 11406, ISO 11407, ISO 20019, DIN 74054, DIN 11026, DIN 11043</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	-1 - 10

Display Range	-1 - 10
Submit by	Hans JÃ¼rgen Nissen
Submit Date	2008-12-03
Submit Company	33 - John Deere
Revision Number	3
Current Status	Published
Status Date	2020-10-05
Status Comments	Define Pivot Wagon Hitch as own type number 10.

<b>DD Entity</b>	<b>158 - Prescription Control State</b>
Definition	<p>Defines and synchronise the actual state of the prescription system.</p> <p>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 when such a message is received. The property flag "settable" 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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 3
Display Range	0 - 3
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	2019-01-14: Example Prescription Control State - <a href="#">ISO11783-11-DDI-158-Prescription Control State-v2.pdf</a>

DD Entity	159 - Number of Sub-Units per Section
Definition	Specifies the number of Units for a section (e.g. number of nozzles per sprayer section or number of planter seeding rows common to a controlled section).
Comment	<p>This DDE is used in a Section Device Element to indicate the number of physical Units under that section. The Units 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, a Task Controller with a user interface may calculate and depict for instance the row spacing without having individual objects for each row in the DDOP. An implement should not include Unit Device Elements under any Section where this DDI exists. If Unit device elements are defined under a Section element in the DDOP and this DDI value is also included in the Section element, this DDI value shall be ignored.</p>
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	Published
Status Date	2024-02-14
Status Comments	Textual update on the Definition and Comments field only.



DD Entity	160 - Section Control State
Definition	<p>Specifies the actual state of section control. The value definitions are:</p> <p>Byte 1 (bitfield)</p> <p>Bit 0-1:</p> <p>00 = manual/off,</p> <p>01 = auto/on,</p> <p>10 = error indicator,</p> <p>11 = undefined/not installed.</p> <p>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 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>
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Typically used by Device Class(es)	0 - Non-specific system 4 - Planters /Seeders 5 - Fertilizer 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	
Attachment	<a href="#">2023-03-24: - ISO11783-11-DDI-160-Section Control State-v2.pdf</a>

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 "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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	163 - Actual Condensed Work State (33-48)
Definition	<p>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.</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)	<p>0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	165 - Actual Condensed Work State (65-80)
Definition	<p>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.</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)	<p>0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	167 - Actual Condensed Work State (97-112)
Definition	<p>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.</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)	<p>0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	169 - Actual Condensed Work State (129-144)
Definition	<p>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.</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)	<p>0 - Non-specific system  1 - Tractor  2 - Primary Soil Tillage  3 - Secondary Soil Tillage  4 - Planters /Seeders  5 - Fertilizer  6 - Sprayers  7 - Harvesters  8 - Root Harvester  9 - Forage harvester  10 - Irrigation  11 - Transport / Trailers  12 - Farmyard Work  13 - Powered Auxiliary Units  14 - Special Crops  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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	171 - Actual Condensed Work State (161-176)
Definition	<p>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.</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)	<p>0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	

DD Entity	173 - Actual Condensed Work State (193-208)
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.  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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
Status Date	2012-04-02
Status Comments	



DD Entity	175 - Actual Condensed Work State (225-240)
Definition	<p>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.</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)	<p>0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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-Submitted (Pending)
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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
Submit by	Hans JÃ¼rgen Nissen
Submit Date	2008-09-22
Submit Company	33 - John Deere
Revision Number	1
Current Status	Published
Status Date	2020-04-28
Status Comments	Remove of decimal point in CANBus Range

<b>DD Entity</b>	<b>178 - Element Type Instance</b>
Definition	<p>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.</p>
Comment	<p>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.</p>

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	Published
Status Date	2021-08-11
Status Comments	Added latest version of attachment
Attachment	<u>2021-08-11: Example of DDOPs with multiple or mixed products - Multiple and Single Product Implement Description 20101222-v1.pdf</u>

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 (Pressing), 6=Mowing, 7=Wrapping, 8=Harvesting, 9=Forage Harvesting, 10=Transport, 11=Swathing, 12=Slurry/Manure Application, 13=Self-Loading Wagon, 14=Tedding, 15=Measuring, 16=Irrigation, 17=Feeding/Mixing, 18=Mulching, 19-255=Reserved for future Assignment</p> <p>See attachment for more information and DDI 471 Setpoint Cultural Practice</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)	<p>0 - Non-specific system  1 - Tractor  2 - Primary Soil Tillage  3 - Secondary Soil Tillage  4 - Planters /Seeders  5 - Fertilizer  6 - Sprayers  7 - Harvesters  8 - Root Harvester  9 - Forage harvester  10 - Irrigation  11 - Transport / Trailers  12 - Farmyard Work  13 - Powered Auxillary Units  14 - Special Crops</p>
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	Published
Status Date	2021-12-01
Status Comments	New attachment wand reference information to DDI 471 Setpoint Cultural Practice
Attachment	<u><a href="#">2021-12-01: - Multiple and Single Product Implement Description-v2.pdf</a></u>

<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	

DD Entity	181 - Dry Mass Per Area Yield
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 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	182 - Dry Mass Per Time Yield
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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 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 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 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 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>189 - Yield Total Seed Cotton Mass</b>
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 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	

<b>DD Entity</b>	<b>190 - Yield Total Lint Cotton Mass</b>
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 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	

<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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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. See also "Setpoint Product Pressure"
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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. See also "Setpoint Product Pressure"

Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	

DD Entity	199 - Minimum Pump Output Pressure
Definition	Minimum Pump Output Pressure for the output pressure of the solution pump.
Comment	
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	

DD Entity	200 - Maximum Pump Output Pressure
Definition	Maximum Pump Output Pressure for the output pressure of the solution pump.
Comment	

Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxillary Units 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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. See also "Setpoint Tank Agitation Pressure".
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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. See also "Setpoint Tank Agitation Pressure"

Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 Setpoint 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 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 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 settable.</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. See also attachment and DDI 206, 656 and 657.</p>
Typically used by Device Class(es)	0 - Non-specific system 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers
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	2
Current Status	Published
Status Date	2022-01-10
Status Comments	Renamed from SC Tirn On Time to SC Setpoint Turn On Tim and added attachment
Attachment	<a href="#">2022-01-10: - ISO11783-11-DDI-205-SC Actual Turn On-Off Time-v1.pdf</a>

<b>DD Entity</b>	<b>206 - SC Setpoint 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. See also DDI 205 including attachment and DDI 656 and 657</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	2
Current Status	Published
Status Date	2022-01-10
Status Comments	Renamed to SC Setpoint Turn Off Time; Comment Update

<b>DD Entity</b>	<b>207 - Wind speed</b>
Definition	<p>Wind speed measured in the treated field at the beginning of operations or on the application implement during operations.</p> <p>Measurements at to be made at 2m height or 1 m over the canopy in tree and bush crops.</p> <p>On implements the wind speed needs to be compensasated by implement true ground speed and heading.</p>
Comment	Requested by TC23 SC6 WG15
Typically used by Device Class(es)	1 - Tractor 5 - Fertilizer 6 - Sprayers 10 - Irrigation 14 - Special Crops 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	<p>Wind direction measured in the treated field at the beginning of operations or on the application implement during operations.</p> <p>Measurements at to be made at 2m height or 1 m over the canopy in tree and bush crops.</p> <p>On implements the wind direction needs to be compensasated by implement true ground speed and heading.</p>
Comment	
Typically used by Device Class(es)	1 - Tractor 5 - Fertilizer 6 - Sprayers 10 - Irrigation 14 - Special Crops 17 - Sensor System
Unit Symbol	Â° - 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 9 - Forage harvester 10 - Irrigation 14 - Special Crops 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 2. Byte = second character 3. Byte = third character 4. Byte = fourth character</p> <p>Unused bytes shall be set to 0x20 Byte 1 to 4 set to 0x00 = error Byte 1 to 4 set to 0xFF = not available</p>

Comment	<p>To setup the METAR abbreviations the ISO 8859-1 standard is used. 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.</p> <p>Example for Clear (CLR):</p> <ol style="list-style-type: none"> <li>1. Byte = 0x43(C)</li> <li>2. Byte = 0x4C(L)</li> <li>3. Byte = 0x52 (R)</li> <li>4. Byte = 0x20 (unused)</li> </ol>
Typically used by Device Class(es)	<p>1 - Tractor</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>9 - Forage harvester</p> <p>10 - Irrigation</p> <p>14 - Special Crops</p> <p>17 - Sensor System</p>
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	



DD Entity	211 - Last Bale Flakes per Bale
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 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	

DD Entity	212 - Last Bale Average Moisture
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 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	

DD Entity	213 - Last Bale Average Strokes per Flake
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 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	

DD Entity	214 - Lifetime Bale Count
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 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	Published
Status Date	2024-02-05
Status Comments	Add attachment
Attachment	<a href="#">2024-02-05: - ISO11783-11-DD-214-Bale Documentation-v1.pdf</a>

<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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	h - Hour
Resolution	0,05
SAE SPN	
CANBus Range	0 - 4211081215
Display Range	0,00 - 210554060,75
Submit by	Jaap van Bergeijk
Submit Date	2011-04-30

Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2020-05-04
Status Comments	CANBus Range and Display Range correction

<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 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 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 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 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 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 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 2147483647. Note that the value of this DDI has the limitation of being an signed 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 9 - Forage harvester
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483648 - 2147483647
Submit by	Jaap van Bergeijk
Submit Date	2011-04-30
Submit Company	AGCO
Revision Number	1
Current Status	Published



Status Date	2024-03-05
Status Comments	Change of value range to signed integer format

DD Entity	223 - Last Bale Mass
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 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	

DD Entity	224 - Delta T
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 6 - Sprayers 7 - Harvesters 9 - Forage harvester 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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. For more information see attachment located at Actual Net Weight DDE
Typically used by Device Class(es)	11 - Transport / Trailers 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: 00 = unstable measurement 01 = stable measurement 10 = error (measuring error)
Comment	The Net Weight State indicates whether the current Actual Net Weight value is a reliable value or not. 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 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 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 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	

DD Entity	233 - Gross Weight State
Definition	Gross Weight State, 2 bits defined as: 00 = unstable measurement 01 = stable measurement 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.  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 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	

DD Entity	234 - Minimum Gross Weight
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 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 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 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	237 - Actual Header Working Height Status
Definition	Actual status of the header being above or below the threshold height for the in-work state. 2 bit status indicator: 00=disabled/off/above threshold height 01=enabled/on/below threshold height 10=error 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 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	238 - Actual Header Rotational Speed Status
Definition	Actual status of the header rotational speed being above or below the threshold for in-work state. 2 bit status indicator: 00=disabled/off/below threshold speed 01=enabled/on/above threshold speed 10=error 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 8 - Root Harvester 9 - Forage harvester 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	<p>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.</p> <p>2 bit status indicator:</p> <p>00=disabled/off</p> <p>01=enabled/on</p> <p>10=error</p> <p>11=undefined/not installed</p>
Comment	<p>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.</p> <p>This DDE shall not be settable by the TC.</p> <p>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.</p>
Typically used by Device Class(es)	<p>6 - Sprayers</p> <p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>14 - Special Crops</p>
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>
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Definition	<p>Actual status of the Unloading and/or Loading system. This DDE covers both Unloading and Loading of the device element wherein it is listed. Bits that are not mentioned are reserved and shall be set to 1.</p> <p>Byte 1:</p> <p>2 bit unloading status indicator, bit 1 and 2:</p> <p>00=disabled/off</p> <p>01=enabled/on/unloading</p> <p>10=error</p> <p>11=undefined/not installed</p> <p>Byte 2:</p> <p>2 bit loading status indicator, bit 1 and 2:</p> <p>00=disabled/off</p> <p>01=enabled/on/loading</p> <p>10=error</p> <p>11=undefined/not installed</p> <p>Byte 3: set to FF</p> <p>Byte 4: set to FF</p>
Comment	Note: The bits of a byte are defined from 1 to 8 (87654321)
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	n.a. -
Resolution	1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	0 - 2147483647
Submit by	Robert Waggoner
Submit Date	2011-07-08
Submit Company	AGCO
Revision Number	2
Current Status	New Request Submitted
Status Date	2020-04-23
Status Comments	added that byte 3 and 4 shall be set to FF; The value that is transferred over the canbus can be negative

<b>DD Entity</b>	<b>241 - Crop Temperature</b>
Definition	Temperature of harvested crop
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	



DD Entity	243 - Actual Sieve Clearance
Definition	Actual separation distance between Sieve elements
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	244 - Minimum Sieve Clearance
Definition	Minimal separation distance between Sieve elements
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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	249 - Maximum Chaffer Clearance
Definition	Maximum separation distance between Chaffer elements.
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	250 - Setpoint Concave Clearance
Definition	Setpoint separation distance between Concave elements.
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	251 - Actual Concave Clearance
Definition	Actual separation distance between Concave elements.
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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	252 - Minimum Concave Clearance
Definition	Minimum separation distance between Concave elements.
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	

DD Entity	259 - Yield Lag Ignore Time
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 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	260 - Yield Lead Ignore Time
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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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-Approved
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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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-Submitted (Pending)
Status Date	2011-10-17
Status Comments	

<b>DD Entity</b>	<b>264 - Connector Pivot X-Offset</b>
Definition	<p>X direction offset of a connector pivot point relative to DRP.</p> <p>This DDE shall be only attached to a DET element of type connector.</p>
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	2012-03-07: - ISO11783-11-DDI-264-Connector Pivot <a href="#">X-Offset-v1.pdf</a>

<b>DD Entity</b>	<b>265 - Remaining Area</b>
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>

<b>DD Entity</b>	<b>266 - Lifetime Application Total Mass</b>
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 5 - Fertilizer 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-Published
Status Date	2012-02-15
Status Comments	

DD Entity	267 - Lifetime Application Total Count
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)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers
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	

DD Entity	268 - Lifetime Yield Total Volume
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)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
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 8 - Root Harvester 9 - Forage harvester 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 8 - Root Harvester 9 - Forage harvester 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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 14 - Special Crops 15 - Municipal Work
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 in working position.

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>273 - Lifetime Ineffective Total Distance</b>
Definition	Entire Ineffective Total Distance of the device lifetime out of working position.
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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers
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</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>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>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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
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</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>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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work
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</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>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 8 - Root Harvester 9 - Forage harvester 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 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 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 8 - Root Harvester 9 - Forage harvester 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 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 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	285 - Lifetime Precut Total Count
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 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	286 - Lifetime Uncut Total Count
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 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: 0 = Unknown / not defined 1 = Prescription Rate 2 = Prescription Default 3 = Prescription GPS loss 4 = Prescription Out Of Field 5 = Manual Entry 6 = Peer Control 7 and higher are reserved for future assignments
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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	Published
Status Date	2022-10-28
Status Comments	Change status to published
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: 0 = Unknown / not defined 1 = TC rate 2 = Manual Entry 3 = Peer Control 4 = Max override 5 = Min override 6 and higher are reserved for future assignments
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 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	Published
Status Date	2022-10-28
Status Comments	Change status to published

<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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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>
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	
Attachment	<a href="#">2016-04-05: - ISO11783-11-DDI-290-SetpointWorkState-v1.pdf</a>



DD Entity	291 - Setpoint Condensed Work State (17-32)
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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	292 - Setpoint Condensed Work State (33-48)
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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>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 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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>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)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	295 - Setpoint Condensed Work State (81-96)
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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	296 - Setpoint Condensed Work State (97-112)
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	297 - Setpoint Condensed Work State (113-128)
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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	

DD Entity	298 - Setpoint Condensed Work State (129-144)
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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)
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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)
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Definition	<p>The Setpoint Condensed Work State DDIs are the control command counterparts to the Condensed Work States DDIs (161 â€“ 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	303 - Setpoint Condensed Work State (209-224)
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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	304 - Setpoint Condensed Work State (225-240)
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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 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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>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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 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 5 - Fertilizer 6 - Sprayers 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 - MÄßler-Elektronik GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2012-07-03
Status Comments	

DD Entity	309 - Minimum Percentage Application Rate
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 5 - Fertilizer 6 - Sprayers 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	

DD Entity	310 - Maximum Percentage Application Rate
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 5 - Fertilizer 6 - Sprayers 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	

DD Entity	311 - Relative Yield Potential
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 5 - Fertilizer 6 - Sprayers 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	

DD Entity	312 - Minimum Relative Yield Potential
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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 8 - Root Harvester 9 - Forage harvester 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	

<b>DD Entity</b>	<b>315 - Average Percentage Crop Dry Matter</b>
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 8 - Root Harvester 9 - Forage harvester 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	

<b>DD Entity</b>	<b>316 - Effective Total Fuel Consumption</b>
Definition	Accumulated total fuel consumption in working position.
Comment	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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.  For more information see attachment located at Last loaded Weight DDE
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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	Published
Status Date	2020-05-18
Status Comments	Correct link in attachment
Attachment	<u><a href="#">2020-05-18: Trigger method update - ISO 11783-11-DDI-320-Weighing Load Unload-v5.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.  For more information see attachment located at Last loaded Weight DDE
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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 2147483647. Note that the value of this DDI has the limitation of being an signed 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 14 - Special Crops 17 - Sensor System
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	

CANBus Range	-2147483648 - 2147483647
Display Range	-2147483648 - 2147483647
Submit by	Franz Hoepfinger
Submit Date	2013-05-21
Submit Company	367 - Fliegl Agrartechnik GmbH
Revision Number	1
Current Status	Published
Status Date	2024-03-05
Status Comments	Change of value range to signed integer format
Attachment	<u>2013-09-22: -</u> <u>ISO11783-11-DDI-322-Load Identification Number v1-v2.pdf</u>

<b>DD Entity</b>	<b>323 - Unload Identification Number</b>
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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 14 - Special Crops 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	<u>2013-07-15: -</u> <u>ISO11783-11-DDI-323-Unload Identification Number v1-v1.pdf</u>

<b>DD Entity</b>	<b>324 - Chopper Engagement Total Time</b>
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.  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 8 - Root Harvester 9 - Forage harvester 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	Status was published

<b>DD Entity</b>	<b>325 - Lifetime Application Total Volume</b>
Definition	Entire Application 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 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>9 - Forage harvester</p> <p>10 - Irrigation</p>
Unit Symbol	L - Capacity count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Michael KÄrcher
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)	<p>7 - Harvesters</p> <p>8 - Root Harvester</p> <p>9 - Forage harvester</p> <p>14 - Special Crops</p> <p>15 - Municipal Work</p>
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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	



<b>DD Entity</b>	<b>327 - Actual Header Speed</b>
Definition	The actual rotational speed of the header attachment of a chopper, mower or combine
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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	2013-12-04
Status Comments	

<b>DD Entity</b>	<b>328 - Minimum Header Speed</b>
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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>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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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>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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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>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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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>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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	/s - Quantity per time unit
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 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>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 8 - Root Harvester 9 - Forage harvester 12 - Farmyard Work 14 - Special Crops 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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 the rear PTO of a machine.

Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	2
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 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 the rear PTO of a machine.

Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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	2
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published



<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 9 - Forage harvester 11 - Transport / Trailers 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 7 - Harvesters 8 - Root Harvester 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 7 - Harvesters 8 - Root Harvester 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 7 - Harvesters 8 - Root Harvester 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 7 - Harvesters 8 - Root Harvester 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 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	2019-03-27: Version 7: add Pellets to Baling - <a href="#">ISO11783-11-DDI-350-Function and Operation Technique Type-v8.pdf</a>

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 5 - Fertilizer 6 - Sprayers 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 5 - Fertilizer 6 - Sprayers 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 [N2]</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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class 25

<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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class 25

<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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class 25

<b>DD Entity</b>	<b>356 - Total Application of Potassium</b>
Definition	Accumulated application of potassium [K] specified as gram [g]
Comment	This total is a counter of a device element
Typically used by Device Class(es)	5 - Fertilizer 25 - Slurry Applicators
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	Published
Status Date	2021-10-25
Status Comments	Change unit name from K2 to K only

<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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class 25

<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 8 - Root Harvester 9 - Forage harvester 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

DD Entity	359 - Average Dry Yield Mass Per Area
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 8 - Root Harvester 9 - Forage harvester 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	

DD Entity	360 - Last Bale Size
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 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.  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 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 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 DDIIdentifier 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 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	<u>2014-11-07: - ISO 11783-11 DDIdentifier Flake Size-v1.doc</u>

<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 3 - Secondary Soil Tillage 4 - Planters /Seeders 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 3 - Secondary Soil Tillage 4 - Planters /Seeders 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	

DD Entity	367 - Condensed Section Override State (1-16)
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 Auxilary 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 KÄ¶cher
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄrcher
Submit Date	2015-01-20
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	

DD Entity	369 - Condensed Section Override State (33-48)
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 KÄ¶cher
Submit Date	2015-01-20
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the description by ASCII Character for better processability of the txt export

<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 "â€œon changeâ€œ" and "â€œtime basedâ€œ". 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄ¶cher
Submit Date	2015-01-20
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the description by ASCII Character for better processability of the txt export



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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄrcher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export

<b>DD Entity</b>	<b>372 - Condensed Section Override State (81-96)</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 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄlcher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Section numbers in the definition were wrong

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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄŕcher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the DDI Name by ASCII Character for better processability of the txt export. The Section numbers in the definition were wrong

<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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael Käppler
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export. Section numbers in the definition were wrong



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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄŕcher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the DDI Name by ASCII Character for better processability of the txt export. Section numbers in the definition were wrong.

<b>DD Entity</b>	<b>376 - Condensed Section Override State (145-160)</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 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 Käppler
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export

DD Entity	377 - Condensed Section Override State (161-176)
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 KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the DDI Name by ASCII Character for better processability of the txt export

<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 "œon change" and "œtime 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export

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 KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the DDI Name by ASCII Character for better processability of the txt export

<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 â€œon changeâ€œ and â€œtime basedâ€œ. 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export

DD Entity	381 - Condensed Section Override State (225-240)
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 KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€œ" in the DDI Name by ASCII Character for better processability of the txt export

<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 â€œon changeâ€œ and â€œtime basedâ€œ. 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	0 - 4294967295
Display Range	0 - 4294967295
Submit by	Michael KÄ¶cher
Submit Date	2015-01-21
Submit Company	AMAZONEN-Werke H. Dreyer GmbH & Co. KG
Revision Number	2
Current Status	Request Pending
Status Date	2016-06-27
Status Comments	Replace character "â€" in the DDI Name by ASCII Character for better processability of the txt export

DD Entity	383 - Apparent Wind Direction
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. DDI 208 defines the true wind angle.
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	Â° - Angle
Resolution	1
SAE SPN	
CANBus Range	0 - 359
Display Range	0 - 359
Submit by	Jan Steenbock
Submit Date	2015-01-12
Submit Company	MÃ¼ller-Elektronik GmbH & Co. KG
Revision Number	2
Current Status	ISO-Published
Status Date	2015-02-10
Status Comments	

DD Entity	384 - Apparent Wind Speed
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. DDI 208 defines the true wind angle.
Typically used by Device Class(es)	0 - Non-specific system 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	MÃ¼ller-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 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	MÄ¼ller-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 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	MÄ¼ller-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 5 - Fertilizer 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 5 - Fertilizer 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 5 - Fertilizer 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 5 - Fertilizer 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 5 - Fertilizer 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 5 - Fertilizer 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>393 - Maximum Revolutions Per Time</b>
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 5 - Fertilizer 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	

<b>DD Entity</b>	<b>394 - Actual Fuel Tank Content</b>
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 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 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 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxilary Units 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 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
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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)	<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> </ul>
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 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>
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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 Auxillary 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  255 = No Source available
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<b>DD Entity</b>	<b>401 - Actual Application of Nitrogen [N2] as [mg/l]</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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	added device class 25

<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 liquid manure ( see also DD Entity 354 )
Typically used by Device Class(es)	5 - Fertilizer 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	added device class 25

<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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class

<b>DD Entity</b>	<b>404 - Actual application of Potassium</b>
Definition	Actual application of Potassium [K] specified as gram [g]
Comment	is the actual amount of Potassium [K] in liquid manure ( see also DD Entity 356 )
Typically used by Device Class(es)	5 - Fertilizer 25 - Slurry Applicators
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	Published
Status Date	2021-10-25
Status Comments	Change unit name from K2 to K only

<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 25 - Slurry Applicators
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	Published
Status Date	2020-07-13
Status Comments	Added device class 25

<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 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	

DD Entity	407 - Average Protein Content
Definition	Average protein content in a harvested crop
Comment	Average protein content of harvested crop.
Typically used by Device Class(es)	7 - Harvesters 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	

DD Entity	408 - Average Crop Contamination
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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 24 - Utility Vehicles 25 - Slurry Applicators 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 24 - Utility Vehicles 25 - Slurry Applicators 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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 24 - Utility Vehicles 25 - Slurry Applicators 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</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>15 - Municipal Work</p> <p>24 - Utility Vehicles</p> <p>25 - Slurry Applicators</p> <p>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	

DD Entity	413 - Lifetime Average Diesel Exhaust Fluid Consumption per Time
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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 24 - Utility Vehicles 25 - Slurry Applicators 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	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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 24 - Utility Vehicles 25 - Slurry Applicators 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>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	

DD Entity	427 - Actual Downforce as Force
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 a 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	

DD Entity	428 - Loaded Total Mass
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 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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)	4 - Planters /Seeders 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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>432 - Setpoint Application Rate of Nitrogen [N2]</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)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	MÄßler-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 [N2]</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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	2
Current Status	ISO-Published
Status Date	2021-02-08
Status Comments	Status was published

<b>DD Entity</b>	<b>434 - Minimum Application Rate of Nitrogen [N2]</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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 [N2]</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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	

<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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	

<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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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>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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	MÄller-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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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	MÄller-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 5 - Fertilizer 6 - Sprayers 17 - Sensor System 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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>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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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.  For more information see attachment located at Last loaded Weight DDE320
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 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>459 - Unloaded Total Count</b>
Definition	Accumulated Unloaded specified as count
Comment	Task total of a device element. It shall represent the number of products being unloaded in one or more unload operations. The product itself shall be countable. See Unloaded Total Mass (429) or Unloaded Total Volume (453) if the product isn't countable.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 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	Published
Status Date	2022-08-09
Status Comments	Comment update only!

<b>DD Entity</b>	<b>460 - Lifetime Loaded Total Count</b>
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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 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)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 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>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)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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>463 - Last unloaded Count</b>
Definition	Last unloaded Count value specified as count
Comment	After a unloading Procedure, this DDI sends the loaded Count.  For more information see attachment located at Last loaded Weight DDE 320
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 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 filling and emptying cycles. To more precisely document what your device element is doing, consider to implement DDI 179 Actual Cultural Practice as well - even if the device has only one operation.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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	Published
Status Date	2022-08-09
Status Comments	Comment update only!

<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)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 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>466 - Actual relative connector angle</b>
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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 know 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  3 - Secondary Soil Tillage  4 - Planters /Seeders  5 - Fertilizer  6 - Sprayers  25 - Slurry Applicators</p>
Unit Symbol	Â° - 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	<u><a href="#">2015-07-27: - Actual relative connector angle-v1.pdf</a></u>



<b>DD Entity</b>	<b>467 - Actual Percentage Content</b>
Definition	Actual Device Element Content specified as percent.
Comment	
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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	

<b>DD Entity</b>	<b>468 - Soil Snow/Frozen Condtion</b>
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Definition	DDI to document the soil snow / frozen condition. Meaning of values: 0 - Not defined 1 - Not frozen or snow-covered 2 - Frozen 3 - Snow-covered >= 4 reserved For a detailed definition of each state please see the attached document.
Comment	
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 3
Display Range	0 - 3
Submit by	Andres Ferreyra / Martin Sperlich
Submit Date	2019-05-28
Submit Company	AgConnections / CLAAS
Revision Number	1
Current Status	Published
Status Date	2019-07-02
Status Comments	
Attachment	<a href="#">2019-07-02: - ISO11783-11-DDI-468-Soil Snow Frozen Condition-v1.pdf</a>

DD Entity	469 - Estimated Soil Water Condition
Definition	DDI to document the estimated soil water condition. Meaning of values: 0 - Not defined 1 - Dry 2 - Slightly moist 3 - Moist 4 - Very wet 5 - Saturated 6 - Inundated ≥ 7 - Reserved
Comment	Find a detailed description for each enum value in the attached document. To further document ground conditions see also DDI 'Soil Compaction'.
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 6
Display Range	0 - 6
Submit by	Martin Sperlich / Andres Ferreyra
Submit Date	2018-12-17
Submit Company	CLAAS / AgConnections
Revision Number	1
Current Status	Published
Status Date	2019-07-02
Status Comments	
Attachment	<a href="#">2019-07-02: - ISO11783-11-DDI-469-Estimated Soil Water Condition-v1.pdf</a>

DD Entity	470 - Soil Compaction
Definition	DDI to document the soil compaction. Meaning of values: 0 - Not defined 1 - Loose 2 - Slightly compacted 3 - Compacted 4 - Very compacted ≥ 5 - Reserved
Comment	Find a detailed description for each enum value in the attached document. To further document ground conditions see also DDI 'Estimated Soil Water Condition'.
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	n.a. -

Resolution	1
SAE SPN	
CANBus Range	0 - 4
Display Range	0 - 4
Submit by	Martin Sperlich / Andres Ferreyra
Submit Date	2018-12-17
Submit Company	CLAAS / AgConnections
Revision Number	1
Current Status	Published
Status Date	2019-07-02
Status Comments	
Attachment	<a href="#">2019-07-02: - ISO11783-11-DDI-470-Soil Compaction-v1.pdf</a>

DD Entity	471 - Setpoint Cultural Practice
Definition	<p>This DDI is used to define the setpoint 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 (Pressing), 6=Mowing, 7=Wrapping, 8=Harvesting, 9=Forage Harvesting, 10=Transport, 11=Swathing, 12=Slurry/Manure Application, 13=Self-Loading Wagon, 14=Tedding, 15=Measuring, 16=Irrigation, 17=Feeding/Mixing, 18=Mulching, 19-255=Reserved</p> <p>See also DDI 179 Actual Cultural Practice for more information and attachment.</p>
Comment	If TC Client has capability of setting and storing cultural practice then it may allow TC Server to redefine Cultural Practice for any Control channel via Setpoint Cultural Practice (SCP) DDI for respective Control channel.
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	n.a. -
Resolution	1
SAE SPN	

CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Rajashri Munot
Submit Date	2021-10-26
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2021-12-01
Status Comments	First version

<b>DD Entity</b>	<b>472 - Setpoint Length of Cut</b>
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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
Submit by	Frank Wiebeler
Submit Date	2016-03-21
Submit Company	Maschinenfabrik Bernard Krone GmbH
Revision Number	1
Current Status	Published
Status Date	2020-04-28
Status Comments	Correction bit of bit resolution and Display Range

<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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
Submit by	Frank Wiebeler
Submit Date	2016-03-21
Submit Company	Maschinenfabrik Bernard Krone GmbH
Revision Number	1
Current Status	New Request Submitted
Status Date	2020-04-28
Status Comments	Correction of bit resolution and Display Range

<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 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,001 - 2147483,647
Submit by	Frank Wiebeler
Submit Date	2016-03-21
Submit Company	Maschinenfabrik Bernard Krone GmbH
Revision Number	1
Current Status	Published
Status Date	2020-04-28
Status Comments	Correction of bit resolution and Display Range

<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	

DD Entity	479 - Minimum Flake Size
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 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	480 - Maximum Flake Size
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 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 8 - Root Harvester 9 - Forage harvester 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. 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 9 - Forage harvester 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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>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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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)	0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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>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>
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Definition	This value describes the maximum ammount 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	

<b>DD Entity</b>	<b>490 - Maximum Fuel Tank Content</b>
Definition	This value describes the maximum ammount of fuel that can be filled into the machines Fuel tank.
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxilary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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	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>491 - Fuel Percentage Level</b>
Definition	The actual level of the machine fuel tank in percent.
Comment	

Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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	For the bit resolution and the CANBus range we do harmonize with SAE J1939-71 SPN 253 Engine Total Idle Hours
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	h - Hour
Resolution	0,05
SAE SPN	
CANBus Range	0 - 4211081215
Display Range	0,00 - 210554060,75
Submit by	Frank Wiebeler
Submit Date	2016-04-01
Submit Company	Maschinenfabrik Bernard Krone
Revision Number	1
Current Status	Published
Status Date	2020-05-04
Status Comments	CANBus Range and Display Range correction

<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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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	

DD Entity	494 - Last Event Partner ID (Byte 1-4)
Definition	<p>Last Event Partner ID as a decimal number of 128bit length.</p> <p>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.</p>
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)	<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>11 - Transport / Trailers</p> <p>17 - Sensor System</p>
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>

DD Entity	495 - Last Event Partner ID (Byte 5-8)
Definition	<p>Last Event Partner ID as a decimal number of 128bit length.</p> <p>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.</p>
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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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	

DD Entity	496 - Last Event Partner ID (Byte 9-12)
Definition	<p>Last Event Partner ID as a decimal number of 128bit length.</p> <p>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.</p>
Comment	<p>Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS.</p> <p>See also DDI 494 attachment.</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>11 - Transport / Trailers</p> <p>17 - Sensor System</p>
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	

DD Entity	497 - Last Event Partner ID (Byte 13-16)
Definition	<p>Last Event Partner ID as a decimal number of 128bit length.</p> <p>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.</p>
Comment	<p>Using Methods do determine the Location of a Vehicle or Storage which is not equipped with ISOBUS and GPS.</p> <p>See also DDI 494 attachment.</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>11 - Transport / Trailers</p> <p>17 - Sensor System</p>



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	

DD Entity	498 - Last Event Partner ID Type
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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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

DD Entity	499 - Last Event Partner ID Manufacturer ID Code
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. See also DDI 494 attachment.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	% - Percent
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0,000 - 2147483,647
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 - 2147483,647
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 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  Byte 1 Bit 1 = 1 Support Tramline Control Level 2  Byte 1 Bit 2 = 1 Support Tramline Control Level 3  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	Published
Status Date	2023-05-17
Status Comments	added new attachment version 1.14
Attachment	<p><u><a href="#">2023-05-17: added version 1.14 -</a></u>  <u><a href="#">TramlineControl_BasicRequirements_v1.14-v1.pdf</a></u></p>

<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  1 Tramline Control Level 1  2 Tramline Control Level 2  3 Tramline Control Level 3  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	

DD Entity	508 - Unique A-B Guidance Reference Line ID
Definition	This DDI defines a unique ID to identify which Guidance Reference Line is the base for the Tramline calculation.
Comment	<p>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.</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	

DD Entity	509 - Actual Track Number
Definition	This DDI defines a unique number of the Guidance Track the Implement is currently located on.
Comment	<p>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.</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	-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	
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DD Entity	510 - Track Number to the right
Definition	This DDI defines a unique number of the Guidance Track to right hand side in direction of Implement orientation.
Comment	<p>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.</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	-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	

DD Entity	511 - Track Number to the left
Definition	This DDI defines a unique number of the Guidance Track to left hand side in direction of Implement orientation.
Comment	<p>This is the Guidance Track Number to left hand side in direction of Implement orientation</p> <p>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.</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	-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	

DD Entity	512 - Guidance Line Swath Width
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	

DD Entity	513 - Guidance Line Deviation
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 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 17 - Sensor System 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 17 - Sensor System 25 - Slurry Applicators
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>515 - Tramline Control State</b>
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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	

<b>DD Entity</b>	<b>517 - Setpoint Tramline Condensed Work State (1-16)</b>
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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.  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	2
Current Status	Published
Status Date	2020-05-04
Status Comments	Brackets (1-16) added

DD Entity	518 - Actual Tramline Condensed Work State (1-16)
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.  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	2
Current Status	Published
Status Date	2020-05-04
Status Comments	Brackets (1-16) added

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

Comment	<p>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.</p>
Typically used by Device Class(es)	<p>7 - Harvesters 8 - Root Harvester 9 - Forage harvester</p>
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 6 - Sprayers 9 - Forage harvester 14 - Special Crops 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)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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	<p>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.</p> <p>The total trigger method and the setable property are required for this DDE.</p> <p>Note, there is a preferred duplicate DDI 683!</p>
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	2
Current Status	Published
Status Date	2024-02-05
Status Comments	Added hint into comment to other DDI 683

<b>DD Entity</b>	<b>523 - Mesh Bale Total Count (Deprecated)</b>
Definition	The total number of mesh bound product units for which mesh binding method was used during operation.
Comment	<p>Mesh 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.</p> <p>The total trigger method and the setable property are required for this DDE. Note, there is a preferred duplicate DDI 682!</p>
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	2
Current Status	Published
Status Date	2024-02-05

Status Comments	Added hint into comment to other DDI 682
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DD Entity	524 - Lifetime Twine Bale Total Count (Deprecated)
Definition	Entire total number of twine bound product units for which Twine binding method was used during operation, of a 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. 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.</p> <p>Note, there is a preferred duplicate DDI 687!</p>
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	3
Current Status	Published
Status Date	2024-02-05
Status Comments	Added hint into comment to other DDI 687

DD Entity	525 - Lifetime Mesh Bale Total Count (Deprecated)
Definition	Total number of mesh bound product units for which mesh binding method was used during operation, of a 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. 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. Note, there is a preferred duplicate DDI 686!</p>
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	2
Current Status	Published
Status Date	2024-02-05
Status Comments	Added hint into comment to other DDI 686

<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. The mass used for calculation should be DDI 223 (Last Bale Mass). 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 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	

DD Entity	529 - Setpoint Tillage Disc Gang Angle
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. See the attachment for more detailed information.
Typically used by Device Class(es)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage
Unit Symbol	Â° - 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	ISO-Published
Status Date	2018-02-14
Status Comments	Status was published
Attachment	<a href="#">2018-02-14: - ISO11783-11-DDI-529-Tillage Gang Angle v 1-v1.pdf</a>

DD Entity	530 - Actual Tillage Disc Gang Angle
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. See the attachment for more detailed information.
Typically used by Device Class(es)	2 - Primary Soil Tillage 3 - Secondary Soil Tillage
Unit Symbol	Â° - 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 25 - Slurry Applicators 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 15 - Municipal Work 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 25 - Slurry Applicators 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 25 - Slurry Applicators 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 setable value, the preservative system is able to control the flow of preservative.
Comment	

Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 25 - Slurry Applicators 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>535 - Maximum Applied Preservative Per Yield Mass</b>
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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 25 - Slurry Applicators 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>536 - Total Applied Preservative</b>
Definition	The total volume of applied preservative, respectively silage additive in this task.
Comment	

Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 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	Published
Status Date	2023-04-27
Status Comments	Added, respectively silage additive to the definition.

<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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 12 - Farmyard Work 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 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 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 14 - Special Crops 15 - Municipal Work 17 - Sensor System 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 24 - Utility Vehicles 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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
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 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 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 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>550 - Ground Cover</b>
Definition	The Ground Cover as an amount of soil that is covered by plants
Comment	Here, the cover of the soil with green plants (chlorophyll) is determined. If there are no plants in the field, the cover is 0%, the soil is completely covered with plants (leaves), this corresponds to 100%. The measurement can be determined as described above via sensors / satellites and calculation of biomass indices or via a camera system and corresponding image analysis. Soil coverage can now be used directly to the online application or to create prescription maps.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 17 - Sensor System 25 - Slurry Applicators
Unit Symbol	% - Percent
Resolution	0,1
SAE SPN	
CANBus Range	0 - 1000

Display Range	0,0 - 100,0
Submit by	Johann Janker
Submit Date	2018-06-26
Submit Company	Fritzmeier Umwelttechnik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2018-12-20
Status Comments	

<b>DD Entity</b>	<b>551 - Actual PTO Torque</b>
Definition	Actual Torque of the Power Take-Off (PTO)
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	N*m - Newton metre
Resolution	0,0001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748,3647
Submit by	Marc-Kevin Doeker
Submit Date	2019-02-05
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-02-11
Status Comments	

<b>DD Entity</b>	<b>552 - Setpoint PTO Torque</b>
Definition	The desired Torque of the Power Take-Off (PTO)
Comment	

Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	N*m - Newton metre
Resolution	0,0001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748,3647
Submit by	Marc-Kevin Doeker
Submit Date	2019-02-05
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-02-11
Status Comments	

<b>DD Entity</b>	<b>553 - Default PTO Torque</b>
Definition	The default Torque of the Power Take-Off (PTO)
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	N*m - Newton metre
Resolution	0,0001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748,3647
Submit by	Marc-Kevin Doeker
Submit Date	2019-02-05
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-02-11
Status Comments	

<b>DD Entity</b>	<b>554 - Minimum PTO Torque</b>
Definition	The minimum Torque of the Power Take-Off (PTO)
Comment	

Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	N*m - Newton metre
Resolution	0,0001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748,3647
Submit by	Marc-Kevin Doeker
Submit Date	2019-02-05
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-02-11
Status Comments	



<b>DD Entity</b>	<b>555 - Maximum PTO Torque</b>
Definition	The maximum Torque of the Power Take-Off (PTO)
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	N*m - Newton metre
Resolution	0,0001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748,3647
Submit by	Marc-Kevin Doeker
Submit Date	2019-02-05
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-02-11
Status Comments	

<b>DD Entity</b>	<b>556 - Present Weather Conditions</b>
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Definition	DDI to document the current weather conditions. Meaning of values: 1 - sunny/clear 2 - partly cloudy 3 - overcast 4 - rain 5 - sleet 6 - snow
Comment	For details and source see attached document. See also DDI 'Previous Weather Conditions'.
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	1 - 6
Display Range	1 - 6
Submit by	Martin Sperlich / Andres Ferreyra
Submit Date	2018-12-17
Submit Company	CLAAS / AgConnectios
Revision Number	1
Current Status	Published
Status Date	2019-03-11
Status Comments	
Attachment	<a href="#">2019-03-11: - ISO11783-11-DDI-556-Present Weather Conditions-v1.pdf</a>

<b>DD Entity</b>	<b>557 - Setpoint Electrical Current</b>
Definition	Setpoint electrical Current of a Device Element
Comment	similar to "56 - Setpoint Seeding Depth"
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	A - Electrical current
Resolution	0,005
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 10737418,235
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-11
Status Comments	

<b>DD Entity</b>	<b>558 - Actual Electrical Current</b>
Definition	Actual Electrical Current of Device Element
Comment	similar to "57 - Actual Seeding Depth"
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	A - Electrical current
Resolution	0,005
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 10737418,235
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-11
Status Comments	

<b>DD Entity</b>	<b>559 - Minimum Electrical Current</b>
Definition	Minimum electrical Current of Device Element
Comment	supplied by device as physical minimum  similar to "59 - Minimum Seeding Depth"
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	A - Electrical current
Resolution	0,005
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 10737418,235
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-11
Status Comments	

<b>DD Entity</b>	<b>560 - Maximum Electrical Current</b>
Definition	Maximum electrical Current of Device Element
Comment	supplied by device as physical minimum  similar to "60 - Maximum Seeding Depth"
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	A - Electrical current
Resolution	0,005
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 10737418,235
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-11
Status Comments	

<b>DD Entity</b>	<b>561 - Default Electrical Current</b>
Definition	Default electrical current of Device Element
Comment	The value which will be used by the device if not set through the Task Controller.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	A - Electrical current
Resolution	0,005
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 10737418,235
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>562 - Setpoint Voltage</b>
Definition	Setpoint Voltage of a Device Element
Comment	similar to "56 - Setpoint Seeding Depth"
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	V - Electrical voltage
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>563 - Default Voltage</b>
Definition	Default Voltage of a Device Element
Comment	The value that will be used by the device if not set through the TC.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	V - Electrical voltage
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>564 - Actual Voltage</b>
Definition	Actual Voltage of a Device Element
Comment	
Typically used by Device Class(es)	27 - Weeders
Unit Symbol	V - Electrical voltage
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	2
Current Status	Published
Status Date	2023-03-28
Status Comments	Added Weeders as device class

<b>DD Entity</b>	<b>565 - Minimum Voltage</b>
Definition	Minimum Voltage of a Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	V - Electrical voltage
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>566 - Maximum Voltage</b>
Definition	Maximum Voltage of a Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	V - Electrical voltage
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>567 - Actual Electrical Resistance</b>
Definition	Actual Electrical Resistance of Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	Ohm - Electrical resistance
Resolution	0,01
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 21474836,47
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>568 - Setpoint Electrical Power</b>
Definition	Setpoint Electrical Power of Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	W - Electrical Power
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	



<b>DD Entity</b>	<b>569 - Actual Electrical Power</b>
Definition	Actual Electrical Power of Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	W - Electrical Power
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>570 - Default Electrical Power</b>
Definition	Default Electrical Power of Device Element
Comment	The value that will be used by the device if not set by the TC.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	W - Electrical Power
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>571 - Maximum Electrical Power</b>
Definition	Maximum Electrical Power of Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	W - Electrical Power
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>572 - Minimum Electrical Power</b>
Definition	Minimum Electrical Power of Device Element
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	W - Electrical Power
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-12
Status Comments	

<b>DD Entity</b>	<b>573 - Total Electrical Energy</b>
Definition	Accumulated Electrical Energy Consumption as a Task Total.
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	kWh - Electrical energy
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-14
Status Comments	

<b>DD Entity</b>	<b>574 - Setpoint Electrical Energy per Area Application Rate</b>
Definition	Setpoint Electrical Energy Application Rate specified as kWh per area
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	kWh/m <sup>2</sup> - Electrical energy per area
Resolution	0,0000001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214,7483647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>575 - Actual Electrical Energy per Area Application Rate</b>
Definition	Actual Electrical Energy Application Rate specified as kWh per area
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	kWh/m <sup>2</sup> - Electrical energy per area
Resolution	0,0000001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214,7483647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	ISO-Published
Status Date	2019-03-15
Status Comments	Status was published

<b>DD Entity</b>	<b>576 - Maximum Electrical Energy per Area Application Rate</b>
Definition	Maximum Electrical Energy Application Rate specified as kWh per area
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	kWh/m <sup>2</sup> - Electrical energy per area
Resolution	0,0000001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214,7483647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	2
Current Status	Published
Status Date	2021-01-11
Status Comments	Typo fixed

<b>DD Entity</b>	<b>577 - Minimum Electrical Energy per Area Application Rate</b>
Definition	Minimum Electrical Energy Application Rate specified as kWh per area
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	kWh/m <sup>2</sup> - Electrical energy per area
Resolution	0,0000001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214,7483647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>578 - Setpoint Temperature</b>
Definition	Setpoint Temperature of Device Element specified as milli Kelvin
Comment	Setpoint Temperature of Device Element like a Motor, Engine, inverter, etc.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>579 - Actual Temperature</b>
Definition	Actual Temperature of Device Element specified as milli Kelvin
Comment	Actual Temperature of Device Element like a Motor, Engine, inverter, etc.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>580 - Minimum Temperature</b>
Definition	Minimum Temperature of Device Element specified as milli Kelvin
Comment	Minimum Temperature of Device Element like a Motor, Engine, inverter, etc.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz Hoepfinger
Submit Date	2019-03-15
Submit Company	Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>581 - Maximum Temperature</b>
Definition	Maximum Temperature of Device Element specified as milli Kelvin
Comment	Maximum Temperature of Device Element like a Motor, Engine, inverter, etc.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz Hoepfinger
Submit Date	2019-03-15
Submit Company	Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

<b>DD Entity</b>	<b>582 - Default Temperature</b>
Definition	Default Temperature of Device Element specified as milli Kelvin
Comment	Default Temperature of Device Element like a Motor, Engine, inverter, etc.
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz Hoepfinger
Submit Date	2019-03-15
Submit Company	Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-15
Status Comments	

DD Entity	583 - Setpoint Frequency
Definition	Setpoint Frequency of Device Element specified as Hz
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	Hz - Electrical frequency
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-18
Status Comments	

DD Entity	584 - Actual Frequency
Definition	Actual Frequency of Device Element specified as Hz
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	Hz - Electrical frequency
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-18
Status Comments	



DD Entity	585 - Minimum Frequency
Definition	Minimum Frequency of Device Element specified as Hz
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	Hz - Electrical frequency
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-18
Status Comments	

DD Entity	586 - Maximum Frequency
Definition	Maximum Frequency of Device Element specified as Hz
Comment	
Typically used by Device Class(es)	- Not Assigned
Unit Symbol	Hz - Electrical frequency
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Franz Hoepfinger
Submit Date	2019-02-15
Submit Company	973 - Zasso GmbH
Revision Number	1
Current Status	Published
Status Date	2019-03-18
Status Comments	

<b>DD Entity</b>	<b>587 - Previous Rainfall</b>
Definition	DDI to document past rainfall conditions. Meaning of values: 1 - no rain in the last month 2 - no rain in the last week 3 - no rain in the last 24 hours 4 - rainy without heavy rain in the last 24 hours 5 - heavier rain for some days or rainstorm in the last 24 hours 6 - prolonged rainfall or snowmelt
Comment	For details and source see attached document. See also DDI 'Present Weather Conditions'.
Typically used by Device Class(es)	0 - Non-specific system
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	1 - 6
Display Range	1 - 6
Submit by	Martin Sperlich / Andres Ferreyra
Submit Date	2018-12-17
Submit Company	CLAAS / AgConnections
Revision Number	1
Current Status	Published
Status Date	2019-04-29
Status Comments	
Attachment	<a href="#">2019-04-29: - Previous Rainfall-v1.pdf</a>

<b>DD Entity</b>	<b>588 - Setpoint Volume Per Area Application Rate as [ml/m<sup>2</sup>]</b>
Definition	Setpoint Application Rate specified as volume per area for High Flows as [mm <sup>3</sup> /m <sup>2</sup> ]
Comment	New DDI which supports higher flows is being needed. Use case: Manure Application with 28000 gal/acre
Typically used by Device Class(es)	10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m <sup>2</sup> - Capacity per area large
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Stefan Welsch
Submit Date	2019-04-12
Submit Company	33 - John Deere
Revision Number	1
Current Status	ISO-Published
Status Date	2019-05-02
Status Comments	Status was published

<b>DD Entity</b>	<b>589 - Actual Volume Per Area Application Rate as [ml/m<sup>2</sup>]</b>
Definition	Actual Application Rate specified as volume per area for High Flows as [ml/m <sup>2</sup> ]
Comment	New DDI Request for high flow applications. Usecase Manure application with 28000 gal/acre
Typically used by Device Class(es)	10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m <sup>2</sup> - Capacity per area large
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Stefan Welsch
Submit Date	2019-04-12
Submit Company	33 John Deere
Revision Number	1
Current Status	Published
Status Date	2019-05-02
Status Comments	

<b>DD Entity</b>	<b>590 - Minimum Volume Per Area Application Rate as [ml/m<sup>2</sup>]</b>
Definition	Minimum Application Rate specified as volume per area for High Flows as [ml/m <sup>2</sup> ]
Comment	DDI which supports higher flows is being needed. Use case: Manure Application with 28000 gal/acre
Typically used by Device Class(es)	10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m <sup>2</sup> - Capacity per area large
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Stefan Welsch
Submit Date	2019-05-02
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2019-05-02
Status Comments	

<b>DD Entity</b>	<b>591 - Maximum Volume Per Area Application Rate as [ml/m<sup>2</sup>]</b>
Definition	Maximum Volume Per Area Application Rate for high flows as [ml/m <sup>2</sup> ]
Comment	DDI which supports higher flows is being needed. Use case: Manure Application with 28000 gal/acre
Typically used by Device Class(es)	10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m <sup>2</sup> - Capacity per area large
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Stefan Welsch
Submit Date	2019-05-02
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2019-05-02
Status Comments	

<b>DD Entity</b>	<b>592 - Default Volume Per Area Application Rate as [ml/m<sup>2</sup>]</b>
Definition	Default Volume Per Area Application Rate for high flows as [ml/m <sup>2</sup> ]
Comment	DDI which supports higher flows is being needed. Use case: Manure Application with 28000 gal/acre
Typically used by Device Class(es)	10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m <sup>2</sup> - Capacity per area large
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Stefan Welsch
Submit Date	2019-05-02
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2019-05-02
Status Comments	

DD Entity	593 - Traction Type
Definition	The type of traction system used for a machine. 0 - unknown 1 - Two Track 2 - Four Track 3 - Wheel 4 - Front Track, Rear Wheel 5 - Front Wheel, Rear Track >= 6 are reserved for future assignments
Comment	An example use case for Traction Type is a display system with both a TC server encountering a tractor and a guidance system that needs to know the difference between a wheeled or tracked tractor to determine operating parameters.
Typically used by Device Class(es)	0 - Non-specific system 1 - Tractor 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 24 - Utility Vehicles
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 5
Display Range	0 - 5
Submit by	Nick Linberg
Submit Date	2019-07-09
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2019-08-13
Status Comments	

DD Entity	594 - Steering Type
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Definition	<p>Steering Type DDI is used to define the current active steering type of a machine. This information can be used to finetune or adjust system behavior or to document which steering type was used during operation.</p> <p>The current supported steering types are listed below:</p> <p>0 -- unknown</p> <p>1 â€" Articulated</p> <p>2 â€" Differential</p> <p>3 - Front wheel</p> <p>4 - Rear wheel</p> <p>5 - Four wheel</p> <p>6 - Differential Front with Active Rear support</p> <p>7 â€" Dog-walk Machine</p> <p>&gt;=8 are reserved for future assignments</p>
Comment	<p>Steering type reported by device for use by guidance systems.</p> <p>Depending on the DDI implementation and machine capabilities the Steering Type could change during operation.</p> <p>For more details and examples see attachment.</p>
Typically used by Device Class(es)	<p>0 - Non-specific system</p> <p>1 - Tractor</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>11 - Transport / Trailers</p> <p>24 - Utility Vehicles</p> <p>25 - Slurry Applicators</p>
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 7
Display Range	0 - 7
Submit by	Paul Matthews
Submit Date	2020-02-10
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2020-02-10
Status Comments	First release
Attachment	<a href="#">2020-02-10: - ISO11783-11-DDI-594-Steering Type-v1.pdf</a>

DD Entity	595 - Machine Mode
Definition	<p>This mode does represent the overall current machine mode and shall be used only one time within the DDOP below the device element of type device.</p> <p>If a machine is capable of differentiating between different modes it can be indicated by this mode. The value definitions are</p> <p>0 = Unknown / Not defined</p> <p>1 = Idle</p> <p>2 = Field Mode</p> <p>3 = Street Mode</p> <p>4 = Maintenance</p> <p>5 = Filling</p> <p>6 = Emptying</p> <p>7 = Cleaning</p> <p>8 and higher are reserved for future assignments</p>
Comment	<p>In addition to the current workstate, some machines are capable of differentiating between different modes. In idle/neutral mode, value 1 (Idle) should be used. If a machine is in working/field mode, value 2 (Field Mode) should be indicated. Moving the machine on a road/street should be indicated by value 3 (Street Mode). During maintenance/servicing, the value 4 (Maintenance) must be selected. If the machine is in an unspecified state, value 0 (Unknown / Not defined) should be used.</p> <p>Note: this mode does not define the Work State of a machine function</p> <p>Examples:</p> <p>* A sprayer in the field performing a spraying application is in field mode. A sprayer at the farm filling the bin is in filling mode</p> <p>* A combine harvesting in the field would be in field mode. To indicate unloading the harvester bin DDI 240 should be used</p>

Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-12-04
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2020-09-21
Status Comments	Added mode 5 to 7; Update definition and comment

<b>DD Entity</b>	<b>596 - Cargo Area Cover State</b>
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Definition	Current state of the Cargo Area Cover. Used to determine whether the Cargo Area was covered during transport or other activities. The Cargo Area Cover State is a value from -1 to 100 % . The value definitions are: -1 = Not defined/Unknown 0 = cover open 100 = cover fully closed
Comment	Used to determine whether the Cargo Area is covered during transport or other activities. If the Cargo Area is not covered, value 0 (Open) should be used. If the Cargo Area is fully covered, value 100 (Closed) should be used. If the state changes from open to closed - or vice versa - then a value between 1 and 99 (Intermediate Position) must be selected. If the status cannot be determined, value -1 (Unknown / Not defined) should be used.
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	1
SAE SPN	
CANBus Range	-1 - 100
Display Range	-1 - 100
Submit by	Marc-Kevin Doeker
Submit Date	2019-12-04

Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<b>DD Entity</b>	<b>597 - Total Distance</b>
Definition	Accumulated Distance (independent of working position and surface)
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<b>DD Entity</b>	<b>598 - Lifetime Total Distance</b>
Definition	Entire Total Distance of the device lifetime (independent of working position and surface)

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)	<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	m - Distance
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<b>DD Entity</b>	<b>599 - Total Distance Field</b>
Definition	Accumulated Distance on the field
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<b>DD Entity</b>	<b>600 - Lifetime Total Distance Field</b>
Definition	Entire Total Distance on the field 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)	<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	m - Distance
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doecker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	ISO-Published
Status Date	2019-12-16
Status Comments	Status was published

<b>DD Entity</b>	<b>601 - Total Distance Street</b>
Definition	Accumulated Distance on the street
Comment	
Typically used by Device Class(es)	- Not Assigned 0 - Non-specific system 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 15 - Municipal Work 17 - Sensor System 18 - Reserved for Future Assignment 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 23 - Mulchers 24 - Utility Vehicles 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>602 - Lifetime Total Distance Street</b>
Definition	Entire Total Distance on the street 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)	<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	m - Distance
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Marc-Kevin Doeker
Submit Date	2019-11-19
Submit Company	Maschinenfabrik Bernard Krone GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	



<b>DD Entity</b>	<b>603 - Actual Tramline Condensed Work State (17-32)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 17 to 32 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 17-32 has the same purpose and definition like the Actual Condensed Work State 17-32 DDI 162. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>604 - Actual Tramline Condensed Work State (33-48)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 33 to 48 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 33-48 has the same purpose and definition like the Actual Condensed Work State 33-48 DDI 163. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	605 - Actual Tramline Condensed Work State (49-64)
Definition	Combination of the Actual States of individual Tramline Valves number 49 to 64 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 49-64 has the same purpose and definition like the Actual Condensed Work State 49-64 DDI 164. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	606 - Actual Tramline Condensed Work State (65-80)
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Definition	Combination of the Actual States of individual Tramline Valves number 65 to 80 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 65-80 has the same purpose and definition like the Actual Condensed Work State 65-80 DDI 165. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>607 - Actual Tramline Condensed Work State (81-96)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 81 to 96 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 81-96 has the same purpose and definition like the Actual Condensed Work State 81-96 DDI 166. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>608 - Actual Tramline Condensed Work State (97-112)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 97 to 112 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 97-112 has the same purpose and definition like the Actual Condensed Work State 97-112 DDI 167. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>609 - Actual Tramline Condensed Work State (113-128)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 113 to 128 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 113-128 has the same purpose and definition like the Actual Condensed Work State 113-128 DDI 168. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>610 - Actual Tramline Condensed Work State (129-144)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 129 to 144 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 129-144 has the same purpose and definition like the Actual Condensed Work State 129-144 DDI 169. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	



<b>DD Entity</b>	<b>611 - Actual Tramline Condensed Work State (145-160)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 145 to 160 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 145-160 has the same purpose and definition like the Actual Condensed Work State 145-160 DDI 170. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>612 - Actual Tramline Condensed Work State (161-176)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 161 to 176 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 161-176 has the same purpose and definition like the Actual Condensed Work State 161-176 DDI 171. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>613 - Actual Tramline Condensed Work State (177-192)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 177 to 192 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 177-192 has the same purpose and definition like the Actual Condensed Work State 177-192 DDI 172. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>614 - Actual Tramline Condensed Work State (193-208)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 193 to 208 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 193-208 has the same purpose and definition like the Actual Condensed Work State 193-208 DDI 173. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>615 - Actual Tramline Condensed Work State (209-224)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 209 to 224 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 209-224 has the same purpose and definition like the Actual Condensed Work State 209-224 DDI 174. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>616 - Actual Tramline Condensed Work State (225-240)</b>
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Definition	Combination of the Actual States of individual Tramline Valves number 225 to 240 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 225-240 has the same purpose and definition like the Actual Condensed Work State 225-240 DDI 175. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>617 - Actual Tramline Condensed Work State (241-256)</b>
Definition	Combination of the Actual States of individual Tramline Valves number 241 to 256 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 241-256 has the same purpose and definition like the Actual Condensed Work State 241-256 DDI 176. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>618 - Setpoint Tramline Condensed Work State (17-32)</b>
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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 17 to 32 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 17-32 has the same purpose and definition like the Setpoint Condensed Work State 17-32 DDI 291. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	



DD Entity	619 - Setpoint Tramline Condensed Work State (33-48)
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 33 to 48 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 33-48 has the same purpose and definition like the Setpoint Condensed Work State 33-48 DDI 292. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	620 - Setpoint Tramline Condensed Work State (49-64)
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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 49 to 64 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 49-64 has the same purpose and definition like the Setpoint Condensed Work State 49-64 DDI 293. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>621 - Setpoint Tramline Condensed Work State (65-80)</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 65 to 80 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 65-80 has the same purpose and definition like the Setpoint Condensed Work State 65-80 DDI 294. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>622 - Setpoint Tramline Condensed Work State (81-96)</b>
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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 81 to 96 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 81-96 has the same purpose and definition like the Setpoint Condensed Work State 81-96 DDI 295. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>623 - Setpoint Tramline Condensed Work State (97-112)</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 97 to 112 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 97-112 has the same purpose and definition like the Setpoint Condensed Work State 97-112 DDI 296. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>624 - Setpoint Tramline Condensed Work State (113-128)</b>
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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 113 to 128 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 113-128 has the same purpose and definition like the Setpoint Condensed Work State 113-128 DDI 297. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	625 - Setpoint Tramline Condensed Work State (129-144)
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 129 to 144 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 129-144 has the same purpose and definition like the Setpoint Condensed Work State 129-144 DDI 298. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	626 - Setpoint Tramline Condensed Work State (145-160)
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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 145 to 160 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 145-160 has the same purpose and definition like the Setpoint Condensed Work State 145-160 DDI 299. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	



DD Entity	627 - Setpoint Tramline Condensed Work State (161-176)
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 161 to 176 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 161-176 has the same purpose and definition like the Setpoint Condensed Work State 161-176 DDI 300. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	628 - Setpoint Tramline Condensed Work State (177-192)
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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 177 to 192 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 177-192 has the same purpose and definition like the Setpoint Condensed Work State 177-192 DDI 301. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	629 - Setpoint Tramline Condensed Work State (193-208)
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 193 to 208 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 193-208 has the same purpose and definition like the Setpoint Condensed Work State 193-208 DDI 302. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	630 - Setpoint Tramline Condensed Work State (209-224)
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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 209 to 224 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 209-224 has the same purpose and definition like the Setpoint Condensed Work State 209-224 DDI 303. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	631 - Setpoint Tramline Condensed Work State (225-240)
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 225 to 240 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 225-240 has the same purpose and definition like the Setpoint Condensed Work State 225-240 DDI 304. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

DD Entity	632 - Setpoint Tramline Condensed Work State (241-256)
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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 241 to 256 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 241-256 has the same purpose and definition like the Setpoint Condensed Work State 241-256 DDI 305. 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	Dominik Diekmann
Submit Date	2019-12-11
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2019-12-16
Status Comments	

<b>DD Entity</b>	<b>633 - Setpoint Volume per distance Application Rate</b>
Definition	Setpoint Application Rate specified as volume per distance
Comment	Defines a target volume to be sprayed per distance travelled. e.g. in vineyards, orchards
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m - Volume per distance
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Stefan Welsch
Submit Date	2020-06-26
Submit Company	John Deere
Revision Number	1
Current Status	ISO-Published
Status Date	2020-07-14
Status Comments	Status was published

<b>DD Entity</b>	<b>634 - Actual Volume per distance Application Rate</b>
Definition	Actual liquid application based on distance travelled, e.g. in vineyards, orchards.
Comment	Actual liquid application based on distance travelled, e.g. in vineyards, orchards.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m - Volume per distance
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Stefan Welsch
Submit Date	2020-06-26
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2020-07-14
Status Comments	

<b>DD Entity</b>	<b>635 - Default Volume per distance Application Rate</b>
Definition	Default Application Rate specified as volume per distance
Comment	Defines a default volume to be sprayed per distance travelled. e.g. in vineyards, orchards
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m - Volume per distance
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Stefan Welsch
Submit Date	2020-07-14
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2020-07-14
Status Comments	

<b>DD Entity</b>	<b>636 - Minimum Volume per distance Application Rate</b>
Definition	Minimum Application Rate specified as volume per distance
Comment	Defines the minimum volume to be sprayed per distance travelled. e.g. in vineyards, orchards
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m - Volume per distance
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Stefan Welsch
Submit Date	2020-07-14
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2020-07-14
Status Comments	



<b>DD Entity</b>	<b>637 - Maximum Volume per distance Application Rate</b>
Definition	Maximum Application Rate specified as volume per distance
Comment	Defines the maximum volume to be sprayed per distance travelled. e.g. in vineyards, orchards
Typically used by Device Class(es)	5 - Fertilizer 6 - Sprayers 7 - Harvesters 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	ml/m - Volume per distance
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Stefan Welsch
Submit Date	2020-07-14
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2020-07-14
Status Comments	

<b>DD Entity</b>	<b>638 - Setpoint Tire Pressure</b>
Definition	Setpoint Tire Pressure to adjust the pressure of the Tire at the point of dispensing.
Comment	On pressure-based control systems, it is important to be able to monitor and control the pressure to ensure the proper Tire pressure. Being able to display and log pressure is important.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	Pa - Pressure
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Rajashri Munot
Submit Date	2020-12-10
Submit Company	John Deere
Revision Number	1
Current Status	ISO-Published
Status Date	2021-02-11
Status Comments	Status was published
Attachment	<a href="#">2021-02-11: - ISO 11783-11-DDI-638-Setpoint Tire Pressure-v1.pdf</a>

<b>DD Entity</b>	<b>639 - Actual Tire Pressure</b>
Definition	Actual Tire Pressure is the measured pressure in the tire during operation.
Comment	On pressure-based control systems, it is important to be able to monitor and control the pressure to ensure the proper performance. Being able to display and log pressure is important.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	Pa - Pressure
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Rajashri Munot
Submit Date	2020-12-09
Submit Company	John Deere
Revision Number	3
Current Status	Published
Status Date	2021-04-01
Status Comments	Fix typo

<b>DD Entity</b>	<b>640 - Default Tire Pressure</b>
Definition	Default Tire Pressure in the tire during operation.
Comment	Default Tire Pressure to ensure a stable and safe tire.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	Pa - Pressure
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Rajashri Munot
Submit Date	2020-12-09
Submit Company	John Deere
Revision Number	2
Current Status	Published
Status Date	2021-04-01
Status Comments	Fix typo

<b>DD Entity</b>	<b>641 - Minimum Tire Pressure</b>
Definition	Minimum Tire Pressure in the tire at the time of operation
Comment	Minimum Tire pressure to ensure a consistent performance.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	Pa - Pressure
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Rajashri Munot
Submit Date	2020-12-09
Submit Company	John Deere
Revision Number	2
Current Status	Published
Status Date	2021-04-19
Status Comments	Typo fix

<b>DD Entity</b>	<b>642 - Maximum Tire Pressure</b>
Definition	Maximum Tire Pressure in the tire during operation
Comment	Maximum Tire pressure to ensure a stable and safe tire.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	Pa - Pressure
Resolution	0,1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 214748364,7
Submit by	Rajashri Munot
Submit Date	2020-12-09
Submit Company	John Deere
Revision Number	2
Current Status	Published
Status Date	2021-04-19
Status Comments	Typo fix

DD Entity	643 - Actual Tire Temperature
Definition	Actual Tire Temperature is the measured temperature in the tire during operation.
Comment	See also the attachment on DDI 638 Setpoint Tire Pressure to get more information about potential device description object pools and where to add Tire DDIs.
Typically used by Device Class(es)	1 - Tractor 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 11 - Transport / Trailers 25 - Slurry Applicators
Unit Symbol	mK - Temperature
Resolution	1
SAE SPN	PGN 65268 SPN 242 Tire Temperature
CANBus Range	0 - 1000000
Display Range	0 - 1000000
Submit by	Franz HÃ¶pfinger
Submit Date	2021-08-02
Submit Company	1116 - HR Agrartechnik GmbH
Revision Number	1
Current Status	Published
Status Date	2021-08-10
Status Comments	

DD Entity	644 - Binding Method
Definition	Specification of the method used to bind bales.  The value definitions represent a set of flags. The flag values are: 0 = unknown (default) 1 = Mesh 2 = Twine 3 = Film 4 = Twine & Mesh 5 = Twine & Film 6 and higher are reserved for future assignments
Comment	This DDE allows a baler to specify what method is being used to bind the bales.
Typically used by Device Class(es)	7 - Harvesters 9 - Forage harvester
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 5
Display Range	0 - 5
Submit by	Mike Schmidt on behalf of Steffen Hoffmann

Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	2
Current Status	New Request Submitted
Status Date	2022-03-21
Status Comments	added 4 and 5;

DD Entity	645 - Last Bale Number of Knives
Definition	Number of cutting knives used 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 9 - Forage harvester
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	

DD Entity	646 - Last Bale Binding Twine Consumption
Definition	Binding twine consumption 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 9 - Forage harvester
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	2
Current Status	Published
Status Date	2023-04-24
Status Comments	Only wording changed from "Twine Binding" to "Binding Twine"

<b>DD Entity</b>	<b>647 - Last Bale Binding Mesh Consumption</b>
Definition	Binding mesh consumption 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 9 - Forage harvester
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2022-10-10
Status Comments	Added "Binding" to name

<b>DD Entity</b>	<b>648 - Last Bale Binding Film Consumption</b>
Definition	Binding film consumption 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 9 - Forage harvester
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2022-10-10
Status Comments	Added "Binding" to name

<b>DD Entity</b>	<b>649 - Last Bale Binding Film Stretching</b>
Definition	Binding film stretching 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 9 - Forage harvester
Unit Symbol	% - Percent
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2022-10-10
Status Comments	Added "Binding" to name

<b>DD Entity</b>	<b>650 - Last Bale Wrapping Film Width</b>
Definition	Wrapping film width 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 9 - Forage harvester
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	



DD Entity	651 - Last Bale Wrapping Film Consumption
Definition	Wrapping film consumption 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 9 - Forage harvester
Unit Symbol	mm - Length
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	

DD Entity	652 - Last Bale Wrapping Film Stretching
Definition	Wrapping film stretching 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 9 - Forage harvester
Unit Symbol	% - Percent
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	

DD Entity	653 - Last Bale Wrapping Film Overlap Percentage
Definition	Wrapping film overlap percentage 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 9 - Forage harvester
Unit Symbol	% - Percent
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483,647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	

DD Entity	654 - Last Bale Wrapping Film Layers
Definition	Wrapping film layers 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 9 - Forage harvester
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2021-04-20
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2021-09-13
Status Comments	

<b>DD Entity</b>	<b>655 - Electrical Apparent Soil Conductivity</b>
Definition	<p>Electrical conductivity also called the EC-Value.</p> <p>For materials this is a constant.</p> <p>For material mixes like soil you can measure a apparent conductivity, which gives information about the soil conditions.</p>
Comment	See Attachement for more Info.
Typically used by Device Class(es)	<p>2 - Primary Soil Tillage</p> <p>3 - Secondary Soil Tillage</p> <p>17 - Sensor System</p>
Unit Symbol	mS/m - Milli Siemens per meter
Resolution	0,1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-3300.0 - 3300.0
Submit by	Franz HÄpfinger
Submit Date	2021-04-14
Submit Company	850 - Geoprospectors GmbH
Revision Number	1
Current Status	Published
Status Date	2021-10-05
Status Comments	
Attachment	<p><u>2021-10-05: -</u></p> <p><u>ISO 11783-11 DDI-655-Electrical Apparent Soil Conductivity-v1.pdf</u></p>

<b>DD Entity</b>	<b>656 - SC Actual Turn On Time</b>
Definition	<p>Definition: The Section Control Actual Turn On Time defines the overall time lapse between the moment the TC client sends the actual Section state 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 setttable 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 activate this trigger when using the DDI.</p>

Comment	<p>This value should be provided by the implement manufacturer if applicable and otherwise only DDI 205 "SC Setpoint Turn On Time" shall be provided. If the system does not define SC Actual Turn On Time and SC Setpoint Turn On Time separately, it implies that "SC Setpoint Turn On Time" may be considered for drawing Actual Coverage. If "SC Actual Turn On Time" is defined as 0, the coverage ON shall be immediate.</p> <p>The usage of " SC Actual Turn On Time" does not eliminate usage of "SC Setpoint Turn On time - DDI 205", it is supporting information for better coverage Map based on Actual CWS. See also DDI 205 including attachment and DDI 206 and 657</p>
Typically used by Device Class(es)	<p>1 - Tractor</p> <p>4 - Planters /Seeders</p> <p>5 - Fertilizer</p> <p>6 - Sprayers</p>
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483648 - 2147483647
Submit by	Rajashri Munot
Submit Date	2021-10-14
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2022-01-10
Status Comments	First version

DD Entity	657 - SC Actual Turn Off Time
Definition	<p>The Section Control Actual Turn Off Time defines the overall time lapse between the moment the TC client sends the actual Section state and the moment this section is physically turned off and the product is stopped from being 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 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 activate this trigger when using the DDI.</p>
Comment	<p>This value should be provided by the implement manufacturer if applicable and otherwise only DDI 206 "SC Setpoint Turn Off Time" shall be provided. If the system does not define SC Actual Turn Off Time and SC Setpoint Turn Off Time separately, it implies that "SC Setpoint Turn Off Time" may be considered for drawing Actual Coverage. If "SC Actual Turn Off Time" is defined as 0, the coverage OFF shall be immediate.</p> <p>The usage of " SC Actual Turn Off Time" does not eliminate usage of "SC Setpoint Turn Off time - DDI 206", it is supporting information for better coverage Map based on Actual CWS. See also DDI 205 including attachment and DDI 206 and 656</p>
Typically used by Device Class(es)	1 - Tractor 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers
Unit Symbol	not defined - not defined
Resolution	1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483648 - 2147483647
Submit by	Rajashri Munot
Submit Date	2021-10-14
Submit Company	John Deere
Revision Number	1
Current Status	Published
Status Date	2022-01-10
Status Comments	First version

DD Entity	658 - Actual CO2 equivalent specified as mass per area
Definition	Actual CO2 equivalent specified as mass per area
Comment	For more details see also ISO-14040 and ISO-14044 documents.

Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 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	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>659 - Actual CO2 equivalent specified as mass per time</b>
Definition	Actual CO2 equivalent specified as mass per time
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>660 - Actual CO2 equivalent specified as mass per mass</b>
Definition	Actual CO2 equivalent specified as mass per mass (application rate)
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	mg/kg - Mass per mass unit
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15

Status Comments	
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<b>DD Entity</b>	<b>661 - Actual CO2 equivalent specified as mass per yield</b>
Definition	Actual CO2 equivalent specified as mass per yield mass
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 19 - Timber Harvesters
Unit Symbol	mg/kg - Mass per mass unit
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>662 - Actual CO2 equivalent specified as mass per volume</b>
Definition	Actual CO2 equivalent specified as mass per volume
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 25 - Slurry Applicators
Unit Symbol	mg/l - Mass per capacity unit
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>663 - Actual CO2 equivalent specified as mass per count</b>
Definition	Actual CO2 equivalent specified as mass per count
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 7 - Harvesters 8 - Root Harvester 19 - Timber Harvesters
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>664 - Total CO2 equivalent</b>
Definition	Accumulated CO2 equivalent specified as mass in kilogram [kg]
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	kg - Mass
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2022-10-20

Submit Company	GRIMME Landmaschinenfabrik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>665 - Lifetime total CO2 equivalent</b>
Definition	Entire Lifetime CO2 equivalent specified as mass in kilogram [kg]
Comment	For more details see also ISO-14040 and ISO-14044 documents.
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 19 - Timber Harvesters 20 - Forwarders 21 - Timber loaders 22 - Timber Processing Machines 25 - Slurry Applicators 26 - Feeder / Mixer
Unit Symbol	kg - Mass
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäcke
Submit Date	2022-10-20
Submit Company	GRIMME Landmaschinenfabrik GmbH & Co. KG
Revision Number	1
Current Status	Published
Status Date	2022-11-15
Status Comments	

<b>DD Entity</b>	<b>666 - Working Direction</b>
Definition	This DDI defines the intended Working Direction in the field and also defines the numbering of the Bouts.
Comment	<p>The Working Direction defines the intended Working Direction in the field and also defines the numbering of the Bouts. If the Working Direction is 1 (working from left to right, compared to AB-reference line) the numbering of the Bouts is also from left to right in ascending order. If the Working Direction is 2 (working from right to left, compared to AB-reference line) the numbering of the Bouts is from right to left in ascending order.</p> <p>For more details see attachment DDI 505.</p>
Typically used by Device Class(es)	4 - Planters /Seeders
Unit Symbol	not defined - not defined
Resolution	1

SAE SPN	
CANBus Range	0 - 2
Display Range	0 - 2
Submit by	Karsten Helweg
Submit Date	2015-12-10
Submit Company	Competence Center ISOBUS e.V.
Revision Number	1
Current Status	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>667 - Distance between Guidance Track Number 0R and 1</b>
Definition	This DDI defines the distance between tracks 0R and 1.
Comment	If the user wants to start with a different Working Width than 100%, the Track Number 0 has to be divided in two separate Tracks 0R and 0L. Therefore, the Tracks 0R and 0L are deviated from the original Track 0. To calculate the correct positions of these Tracks, the distance d0R/1 between Track 0R and 1 and the distance d0R/0L between 0R and 0L have to be defined. For more details see attachment DDI 505.
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	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>668 - Distance between Guidance Track Number 0R and 0L</b>
Definition	This DDI defines the distance between tracks 0R and 0L.
Comment	If the user wants to start with a different Working Width than 100%, the Track Number 0 has to be divided in two separate Tracks 0R and 0L. Therefore, the Tracks 0R and 0L are deviated from the original Track 0. To calculate the correct positions of these Tracks, the distance d0R/1 between Track 0R and 1 and the distance d0R/0L between 0R and 0L have to be defined. For more details see attachment DDI 505.
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	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>669 - Bout Track Number Shift</b>
Definition	This DDI defines the amount of tramlines the Tramline pattern is to be shifted.
Comment	<p>The implement may have the possibility to give a Bout Track Number Shift in its calculation to shift the Tramline pattern. In that case the Tramline calculation is based on the following formula:  <math display="block">\text{Bout Track Number} = \text{Guidance Track Number} + 1 + \text{Bout Track Number Shift}.</math> </p> <p>The Task Controller shall store Bout track number shift in conjunction with the Unique A-B Guidance Reference Line ID. The TC shall send this value on change of Unique A-B Guidance Reference Line ID to inform the implement that it needs to take this Bout Track Number Shift into account. Therefore, this DDI should be settable.</p> <p>The Guidance Track Numbers are not influenced by this DDI. A positive Bout Track Number Shift will shift the Tramline pattern in the direction of the lower Guidance Track Numbers. A negative Bout Track Number Shift will shift the Tramline pattern in the direction of the higher Guidance Track Numbers.</p> <p>For more details see attachment DDI 505.</p>
Typically used by Device Class(es)	4 - Planters /Seeders
Unit Symbol	not defined - not defined
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	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>670 - Tramline Crop protection/fertilization Working Width</b>
Definition	Working Width of the Crop protection/fertilization vehicle which will drive on the tramline tracks.
Comment	<p>Working Width of the Crop protection/fertilization vehicle. This is also the distance between the single Tramline Tracks. This value is a manual user input and is provided by the Implement to the Task Controller.</p> <p>For more details see attachment 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	Published
Status Date	2022-12-02
Status Comments	



DD Entity	671 - Tramline Tire Width
Definition	Width of the largest tire which should fit on the Tramline Track.
Comment	This is the Width of the largest tire which should fit on the Tramline Track. The distance between the rows besides the Tramline Track shall be wider than the Tire Width to avoid crop damage.
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	Published
Status Date	2022-12-02
Status Comments	

DD Entity	672 - Tramline Wheel Distance
Definition	Distance between the centres of the Wheels of the Crop protection/fertilization vehicle.
Comment	For more details see attachment DDI 505.
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	Published
Status Date	2022-12-02
Status Comments	

DD Entity	673 - Tramline Irrigation Working Width
Definition	The Working Width of the Irrigation system is the Distance between the single Tramline Tracks for the Irrigation system.
Comment	Besides a Tramlining rhythm for a Sprayer, a second Tramlining rhythm with a different pattern for an irrigation system may exist. The Working Width of the Irrigation system is also the Distance between the single Tramline Tracks for the Irrigation system. This value is a manual user input and is provided by the Implement to the Tramline Controller. The following picture shows an example with a 6m Seed drill Width, 24m Sprayer Width and a 66m Irrigation Width.
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	Published
Status Date	2022-12-02
Status Comments	

DD Entity	674 - Tramline Irrigation Tire Width
Definition	Width of the largest tire which should fit on the Tramline Track.
Comment	This is the Width of the largest Tire which should fit on the Tramline Track. The distance between the rows besides the Tramline Track shall be wider than the Irrigation Tire Width to avoid crop damage. For more details see attachment DDI 505.
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	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>675 - Tramline Irrigation Wheel Distance</b>
Definition	Distance between the centre of the Wheels of the Irrigation system.
Comment	For more details see attachment DDI 505.
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	Published
Status Date	2022-12-02
Status Comments	

<b>DD Entity</b>	<b>676 - Last Bale Binding Mesh Layers</b>
Definition	Binding mesh layers 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 9 - Forage harvester
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2023-03-23
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2023-04-27
Status Comments	New added

<b>DD Entity</b>	<b>677 - Last Bale Binding Film Layers</b>
Definition	Binding film layers 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 9 - Forage harvester
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2023-03-23
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2023-04-27
Status Comments	New added

<b>DD Entity</b>	<b>678 - Last Bale Binding Twine Layers</b>
Definition	Binding twine layers 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 9 - Forage harvester
Unit Symbol	# - Quantity/Count
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Mike Schmidt on behalf of Steffen Hoffmann
Submit Date	2023-04-28
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2023-05-02
Status Comments	

<b>DD Entity</b>	<b>679 - Crop Contamination Total Mass</b>
Definition	Accumulated mass of contamination in yield by dirt or foreign material as a total counter
Comment	
Typically used by Device	7 - Harvesters
Class(es)	8 - Root Harvester
Unit Symbol	kg - Mass
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>680 - Crop Contamination Lifetime Total Mass</b>
Definition	Accumulated mass of contamination in yield by dirt or foreign material as a lifetime counter
Comment	
Typically used by Device	7 - Harvesters
Class(es)	8 - Root Harvester
Unit Symbol	kg - Mass
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>681 - Film bale Total Count</b>
Definition	The total number of foil or film bound product units for which foil or film binding method was used during operation.
Comment	Foil or Film 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. The total trigger method and the settable 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	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>682 - Mesh bale Total Count</b>
Definition	The total number of mesh bound product units for which mesh binding method was used during operation.
Comment	Mesh 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. The total trigger method and the settable 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	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>683 - 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. The total trigger method and the settable 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	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>684 - Wrapping Film bale Total Count</b>
Definition	The total number of wrapping units for which wrapping film binding method was used during operation.
Comment	Wrapping Film 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. The total trigger method and the settable 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	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>685 - Lifetime Film Bale Total Count</b>
Definition	Total number of film or foil bound product units for which film or foil 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	- 2147483647
Submit by	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>686 - Lifetime Mesh Bale Total Count</b>
Definition	Total number of mesh bound product units for which mesh 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	- 2147483647
Submit by	Indra Tjalma



Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>687 - Lifetime Twine Bale Total Count</b>
Definition	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	- 2147483647
Submit by	Indra Tjalma
Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>688 - Lifetime Wrapping Film Bale Total Count</b>
Definition	Total number of wrapping units for which wrapping film 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	- 2147483647
Submit by	Indra Tjalma

Submit Date	2023-03-27
Submit Company	89 - Kverneland Group, Electronics Division
Revision Number	1
Current Status	New Request Submitted
Status Date	2023-03-27
Status Comments	

<b>DD Entity</b>	<b>689 - Effective Total Electrical Battery Energy Consumption</b>
Definition	Accumulated total electrical battery energy consumption in working position.
Comment	
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers
Unit Symbol	kWh - Electrical energy
Resolution	0,001
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Johannes NÄgele
Submit Date	2023-12-04
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2024-02-19
Status Comments	

<b>DD Entity</b>	<b>690 - Ineffective Total Electrical Battery Energy Consumption</b>
Definition	Accumulated total electrical battery energy consumption in non working position.
Comment	Energy throughput of the battery including secondary consumers like DC/DC converter, AC compressor...
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers
Unit Symbol	kWh - Electrical energy
Resolution	0,001
SAE SPN	

CANBus Range	-2147483648 - 2147483647
Display Range	-2147483,648 - 2147483,647
Submit by	Johannes NÄngele
Submit Date	2023-12-04
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2024-02-19
Status Comments	

<b>DD Entity</b>	<b>691 - Instantaneous Electrical Battery Energy Consumption per Time</b>
Definition	Electrical battery energy consumption per time
Comment	Energy throughput of the battery including secondary consumers like DC/DC converter, AC compressor...
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers
Unit Symbol	W - Electrical Power
Resolution	1
SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-2147483648 - 2147483647
Submit by	Johannes NÄgele
Submit Date	2023-12-04
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2024-02-19
Status Comments	

<b>DD Entity</b>	<b>692 - Instantaneous Electrical Battery Energy Consumption per Area</b>
Definition	Electrical battery energy consumption per area
Comment	Energy throughput of the battery including secondary consumers like DC/DC converter, AC compressor...
Typically used by Device Class(es)	1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers
Unit Symbol	kWh/mÅ² - Electrical energy per area
Resolution	0,00001

SAE SPN	
CANBus Range	-2147483648 - 2147483647
Display Range	-21474,83648 - 21474,836470000002
Submit by	Johannes NÄgele
Submit Date	2023-12-04
Submit Company	AGCO
Revision Number	1
Current Status	Published
Status Date	2024-02-19
Status Comments	

DD Entity	32768 - Maximum Droplet Size
Definition	<p>Definition:</p> <p>The maximum droplet size the system can produce. Defined as:</p> <p>0 = Unknown,  1 = Extremely Fine - XF,  2 = Very Fine - VF,  3 = Fine - F,  4 = Medium - M,  5 = Coarse - C,  6 = Very Coarse - VC,  7 = Extremely Coarse - XC,  8 = Ultra Coarse - UC,  9-254 = Reserved,  255 = No Droplet Size Available.</p>
Comment	<p>Droplet sizes are currently defined in ISO 25358 and are broken into 8 classification categories and also assigned a corresponding colour code as follows: Extremely Fine = Purple, Very Fine = Red, Fine = Orange, Medium = Yellow, Coarse = Green, Very Coarse = Blue, Extremely Coarse = White, Ultra Coarse = Black</p>
Typically used by Device Class(es)	<p>4 - Planters /Seeders  5 - Fertilizer  6 - Sprayers  10 - Irrigation  17 - Sensor System</p>
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 255
Display Range	0 - 255
Submit by	John Summers
Submit Date	2021-03-08
Submit Company	TeeJet Technologies
Revision Number	1
Current Status	Published
Status Date	2021-05-12
Status Comments	

DD Entity	32769 - Maximum Crop Grade Diameter
Definition	Maximum crop diameter in mm, measured with crop specific methods
Comment	<p>The diameter of the crop to indicate its grade. An example of the application of this DDI is grading root crops such as potatoes and onions.</p>
Typically used by Device Class(es)	<p>4 - Planters /Seeders  7 - Harvesters  8 - Root Harvester  14 - Special Crops  17 - Sensor System</p>



Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>32770 - Maximum Crop Grade Length</b>
Definition	Maximum crop length in mm, measured with crop specific methods
Comment	The length of the crop to indicate its grade.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>32771 - Maximum Crop Contamination Mass per Area</b>
Definition	Maximum absolut mass of contamination in yield by dirt or foreign material per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
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	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

DD Entity	32772 - Maximum Crop Contamination Mass per Time
Definition	Maximum mass of contamination in yield by dirt or foreign material per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

DD Entity	32773 - Maximum Crop Conditioning Intensity
Definition	The maximum level of crop conditioning intensity, expressed as a percentage of the maximum level offered by the implement.
Comment	Conditioning means, changing the physical properties of the crop. For example, mowers can condition the mowed crop at a particular intensity level, to speed up the drying process. A percentage of the maximum level offered by the implement' is used, because there is currently no known sensor which can measure a conditioning level.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	% - Percent
Resolution	0,01
SAE SPN	
CANBus Range	0 - 100
Display Range	0 - 10000
Submit by	Mike Schmidt
Submit Date	2024-03-13
Submit Company	AGCO Corporation
Revision Number	1
Current Status	Published
Status Date	2024-04-15
Status Comments	

DD Entity	36864 - Minimum Droplet Size
Definition	The minimum droplet size the system can produce. Defined as: 0 = Unknown, 1 = Extremely Fine - XF, 2 = Very Fine - VF, 3 = Fine - F, 4 = Medium - M, 5 = Coarse - C, 6 = Very Coarse - VC, 7 = Extremely Coarse - XC, 8 = Ultra Coarse - UC, 9-254 = Reserved, 255 = No Droplet Size Available.
Comment	Droplet sizes are currently defined in ISO 25358 and are broken into 8 classification categories and also assigned a corresponding colour code as follows: Extremely Fine = Purple, Very Fine = Red, Fine = Orange, Medium = Yellow, Coarse = Green, Very Coarse = Blue, Extremely Coarse = White, Ultra Coarse = Black
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 17 - Sensor System
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 255
Display Range	0 - 255
Submit by	John Summers
Submit Date	2021-03-08
Submit Company	TeeJet Technologies
Revision Number	1
Current Status	Published
Status Date	2021-05-12
Status Comments	

DD Entity	36865 - Minimum Crop Grade Diameter
Definition	Minimum crop diameter in mm, measured with crop specific methods
Comment	The diameter of the crop to indicate its grade. An example of the application of this DDI is grading root crops such as potatoes and onions.

Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>36866 - Minimum Crop Grade Length</b>
Definition	Minimum crop length in mm, measured with crop specific methods
Comment	The length of the crop to indicate its grade.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>36867 - Minimum Crop Contamination Mass per Area</b>
Definition	Minimum absolut mass of contamination in yield by dirt or foreign material per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
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	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>36868 - Minimum Crop Contamination Mass per Time</b>
Definition	Minimum mass of contamination in yield by dirt or foreign material per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>36869 - Minimum Crop Conditioning Intensity</b>
Definition	The minimum level of crop conditioning intensity, expressed as a percentage of the maximum level offered by the implement.
Comment	Conditioning means, changing the physical properties of the crop. For example, mowers can condition the mowed crop at a particular intensity level, to speed up the drying process. A percentage of the maximum level offered by the implement' is used, because there is currently no known sensor which can measure a conditioning level.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	% - Percent
Resolution	0,01
SAE SPN	
CANBus Range	0 - 100
Display Range	0 - 10000
Submit by	Mike Schmidt
Submit Date	2024-03-13
Submit Company	AGCO Corporation
Revision Number	1
Current Status	Published
Status Date	2024-04-15
Status Comments	

DD Entity	40960 - Default Droplet Size
Definition	The default droplet size the system is producing. Defined as: 0 = Unknown, 1 = Extremely Fine - XF, 2 = Very Fine - VF, 3 = Fine - F, 4 = Medium - M, 5 = Coarse - C, 6 = Very Coarse - VC, 7 = Extremely Coarse - XC, 8 = Ultra Coarse - UC, 9-254 = Reserved, 255 = No Droplet Size Available.
Comment	Droplet sizes are currently defined in ISO 25358 and are broken into 8 classification categories and also assigned a corresponding colour code as follows: Extremely Fine = Purple, Very Fine = Red, Fine = Orange, Medium = Yellow, Coarse = Green, Very Coarse = Blue, Extremely Coarse = White, Ultra Coarse = Black
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 17 - Sensor System
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 255
Display Range	0 - 255
Submit by	John Summers
Submit Date	2021-05-12
Submit Company	TeeJet Technologies
Revision Number	1
Current Status	Published
Status Date	2021-05-12
Status Comments	

DD Entity	40961 - Default Crop Grade Diameter
Definition	Default crop diameter in mm, measured with crop specific methods
Comment	The diameter of the crop to indicate its grade. An example of the application of this DDI is grading root crops such as potatoes and onions.



Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>40962 - Default Crop Grade Length</b>
Definition	Default crop length in mm, measured with crop specific methods
Comment	The length of the crop to indicate its grade.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>40963 - Default Crop Contamination Mass per Area</b>
Definition	Default absolut mass of contamination in yield by dirt or foreign material per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
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	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>40964 - Default Crop Contamination Mass per Time</b>
Definition	Default mass of contamination in yield by dirt or foreign material per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>40965 - Default Crop Conditioning Intensity</b>
Definition	The default level of crop conditioning intensity, expressed as a percentage of the maximum level offered by the implement.
Comment	Conditioning means, changing the physical properties of the crop. For example, mowers can condition the mowed crop at a particular intensity level, to speed up the drying process. A percentage of the maximum level offered by the implement' is used, because there is currently no known sensor which can measure a conditioning level.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	% - Percent
Resolution	0,01
SAE SPN	
CANBus Range	0 - 100
Display Range	0 - 10000
Submit by	Mike Schmidt
Submit Date	2024-03-13
Submit Company	AGCO Corporation
Revision Number	1
Current Status	Published
Status Date	2024-04-15
Status Comments	

DD Entity	45056 - Actual Droplet Size
Definition	The actual droplet size the system is producing. Defined as: 0 = Unknown, 1 = Extremely Fine - XF, 2 = Very Fine - VF, 3 = Fine - F, 4 = Medium - M, 5 = Coarse - C, 6 = Very Coarse - VC, 7 = Extremely Coarse - XC, 8 = Ultra Coarse - UC, 9-254 = Reserved, 255 = No Droplet Size Available.
Comment	Droplet sizes are currently defined in ISO 25358 and are broken into 8 classification categories and also assigned a corresponding colour code as follows: Extremely Fine = Purple, Very Fine = Red, Fine = Orange, Medium = Yellow, Coarse = Green, Very Coarse = Blue, Extremely Coarse = White, Ultra Coarse = Black
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 17 - Sensor System
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 255
Display Range	0 - 255
Submit by	John Summers
Submit Date	2021-03-08
Submit Company	TeeJet Technologies
Revision Number	1
Current Status	Published
Status Date	2021-05-12
Status Comments	

DD Entity	45057 - Actual Crop Grade Diameter
Definition	Actual crop diameter in mm, measured with crop specific methods
Comment	The diameter of the crop to indicate its grade. An example of the application of this DDI is grading root crops such as potatoes and onions.

Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>45058 - Actual Crop Grade Length</b>
Definition	Actual crop length in mm, measured with crop specific methods
Comment	The length of the crop to indicate its grade.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>45059 - Actual Crop Contamination Mass per Area</b>
Definition	Absolut mass of contamination in yield by dirt or foreign material per area, see also DDI 100.
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
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	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>45060 - Actual Crop Contamination Mass per Time</b>
Definition	Absolut mass of contamination in yield by dirt or foreign material per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>45061 - Actual Crop Conditioning Intensity</b>
Definition	The actual level of crop conditioning intensity, expressed as a percentage of the maximum level offered by the implement.
Comment	Conditioning means, changing the physical properties of the crop. For example, mowers can condition the mowed crop at a particular intensity level, to speed up the drying process. A percentage of the maximum level offered by the implement' is used, because there is currently no known sensor which can measure a conditioning level.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	% - Percent
Resolution	0,01
SAE SPN	
CANBus Range	0 - 100
Display Range	0 - 10000
Submit by	Mike Schmidt
Submit Date	2024-03-13
Submit Company	AGCO Corporation
Revision Number	1
Current Status	Published
Status Date	2024-04-15
Status Comments	

DD Entity	49152 - Setpoint Droplet Size
Definition	The setpoint for droplet size. Defined as: 0 = Unknown, 1 = Extremely Fine - XF, 2 = Very Fine - VF, 3 = Fine - F, 4 = Medium - M, 5 = Coarse - C, 6 = Very Coarse - VC, 7 = Extremely Coarse - XC, 8 = Ultra Coarse - UC, 9-254 = Reserved, 255 = No Droplet Size Available.
Comment	Droplet sizes are currently defined in ISO 25358 and are broken into 8 classification categories and also assigned a corresponding colour code as follows: Extremely Fine = Purple, Very Fine = Red, Fine = Orange, Medium = Yellow, Coarse = Green, Very Coarse = Blue, Extremely Coarse = White, Ultra Coarse = Black
Typically used by Device Class(es)	4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 10 - Irrigation 17 - Sensor System
Unit Symbol	n.a. -
Resolution	1
SAE SPN	
CANBus Range	0 - 255
Display Range	0 - 255
Submit by	John Summers
Submit Date	2021-03-08
Submit Company	TeeJet Technologies
Revision Number	1
Current Status	ISO-Published
Status Date	2021-05-12
Status Comments	Status was published

DD Entity	49153 - Setpoint Crop Grade Diameter
Definition	Setpoint crop diameter in mm, measured with crop specific methods
Comment	The diameter of the crop to indicate its grade. An example of the application of this DDI is grading root crops such as potatoes and onions.



Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>49154 - Setpoint Crop Grade Length</b>
Definition	Setpoint crop length in mm, measured with crop specific methods
Comment	The length of the crop to indicate its grade.
Typically used by Device Class(es)	4 - Planters /Seeders 7 - Harvesters 8 - Root Harvester 14 - Special Crops 17 - Sensor System
Unit Symbol	mm - Length
Resolution	0,001
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	0 - 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-03-24
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-15
Status Comments	

<b>DD Entity</b>	<b>49155 - Setpoint Crop Contamination Mass per Area</b>
Definition	Setpoint of the absolut mass of contamination in yield by dirt or foreign material per area
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/m <sup>2</sup> - Mass per area unit
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	- 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>49156 - Setpoint Crop Contamination Mass per Time</b>
Definition	Setpoint of the mass of contamination in yield by dirt or foreign material per time
Comment	
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester
Unit Symbol	mg/s - Mass flow
Resolution	1
SAE SPN	
CANBus Range	0 - 2147483647
Display Range	- 2147483647
Submit by	Hendrik Hagebäck
Submit Date	2023-05-02
Submit Company	GRIMME Landmaschinen GmbH & Co.KG
Revision Number	1
Current Status	Published
Status Date	2023-05-31
Status Comments	

<b>DD Entity</b>	<b>49157 - Setpoint Crop Conditioning Intensity</b>
Definition	The setpoint level of crop conditioning intensity, expressed as a percentage of the maximum level offered by the implement.
Comment	Conditioning means, changing the physical properties of the crop. For example, mowers can condition the mowed crop at a particular intensity level, to speed up the drying process. A percentage of the maximum level offered by the implement' is used, because there is currently no known sensor which can measure a conditioning level.
Typically used by Device Class(es)	7 - Harvesters 8 - Root Harvester 9 - Forage harvester 14 - Special Crops 15 - Municipal Work
Unit Symbol	% - Percent
Resolution	0,01
SAE SPN	
CANBus Range	0 - 100
Display Range	0 - 10000
Submit by	Mike Schmidt
Submit Date	2024-03-13
Submit Company	AGCO Corporation
Revision Number	1
Current Status	Published
Status Date	2024-04-15
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 1 - Tractor 2 - Primary Soil Tillage 3 - Secondary Soil Tillage 4 - Planters /Seeders 5 - Fertilizer 6 - Sprayers 7 - Harvesters 8 - Root Harvester 9 - Forage harvester 10 - Irrigation 11 - Transport / Trailers 12 - Farmyard Work 13 - Powered Auxiliary Units 14 - Special Crops 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	
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	Published
Status Date	2023-07-10
Status Comments	Comment "This DDE was a result of March 2005 TF10 meeting." removed

<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

