ISO 11783-11

Mobile Data Element Dictionary

DDE Request Form

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DDE Supplement / Attachment

DDE Number	DDEName
229	Actual Net Weight
230	Net Weight State
231	Setpoint Net Weight
232	Actual Gross Weight
233	Gross Weight State
234	Minimum Gross Weight
235	Maximum Gross Weight

Version: 20240521

The DDI's Actual Net Weight, Setpoint Net Weight, Net Weight State, Actual/Minimum/Maximum Gross Weight and Gross Weight State are used within a weighing system to share measured load information between a Task Controller and a Weighing System. For a weighing system it is also required to tare a current load and to provide information whether the measurement is stable or not. The tare process will be supported by the Setpoint Net Weight DDI. Every time the TC sends a setpoint value to the Setpoint Net Weight DDI the weighing system shall perform a tare procedure. See also message handling diagram below.

The Minimum/Maximum Gross Weight can be used by the weighing system to indicate the effective range to the Task Controller. It is up to the weighing system to provide a means to the operator to reset the overall Gross Weight value.

A common use case within the agriculture industry is the load measurement of a harvested product by a grain cart when transported from the field.

The following Device Description structure and message handling diagram is a recommendation how to implement a TC capable weighing system.

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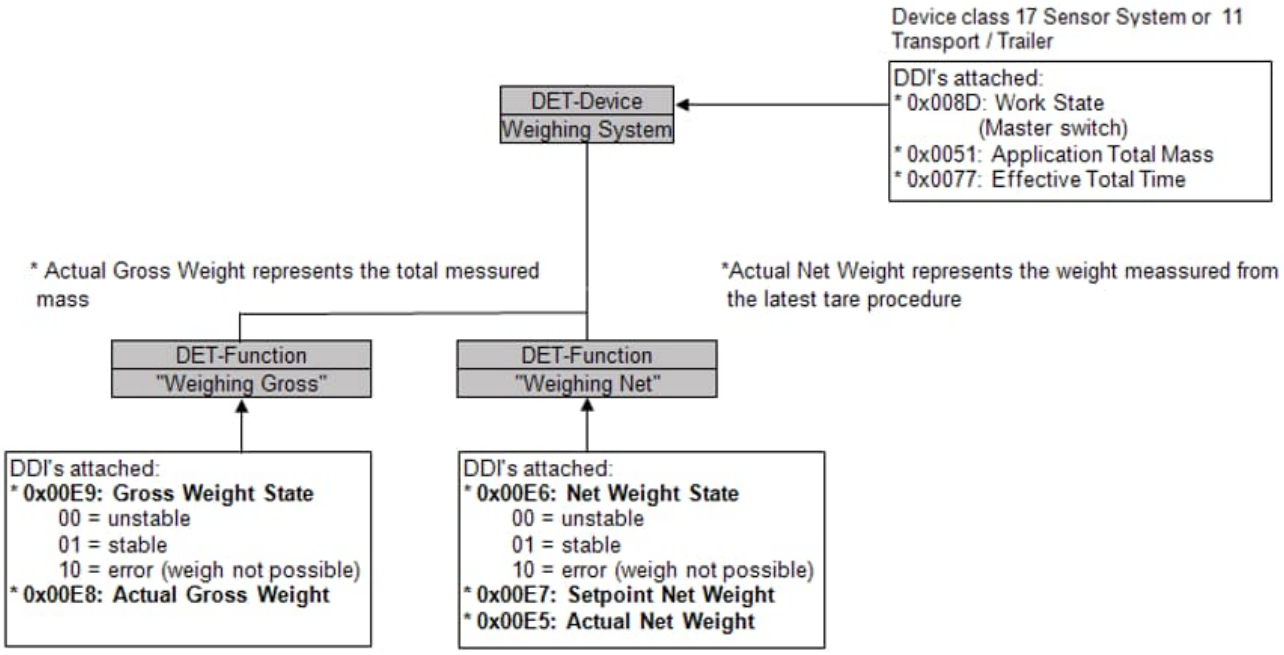
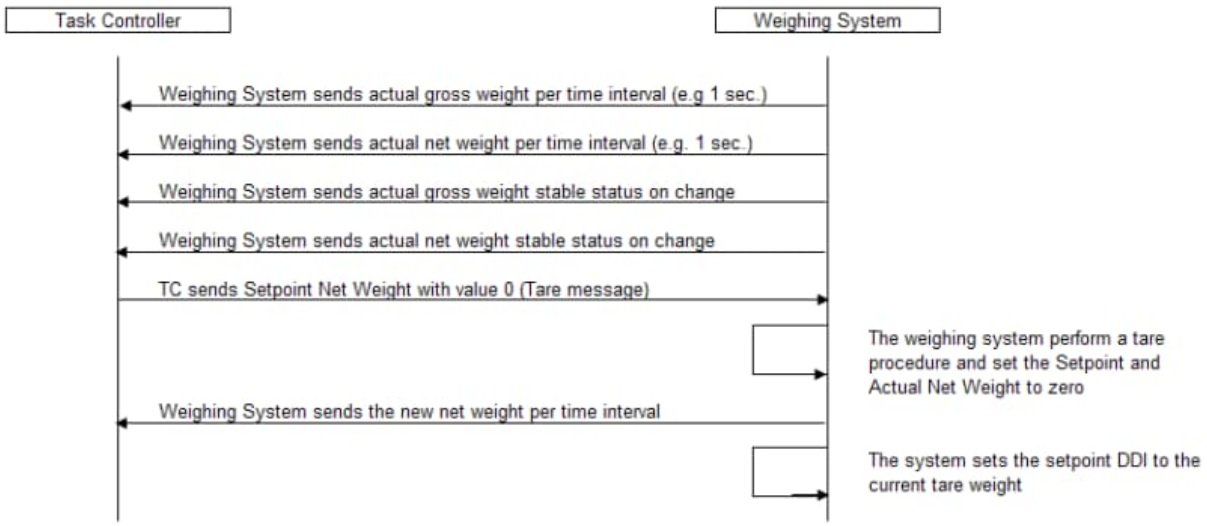
ISOBUS Weighing System Device Description Data



Message handling

The Setpoint Net Weight DDI below the Net weighing function is used to tare the weight.
The Setpoint and Actual Net Weight DDI shall both present the current tare weight.
If the TC sends a zero value to the Setpoint Net Weight DDI the weighing system shall start tare procedure. After the tare procedure both DDI will have a zero value.



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Example:
Transport application where the grain cart loads and unloads the harvested product.

Gross	Net	
0	0	
2000	2000	Load 2000
2000	0	Tare msg
5000	3000	Load 3000
5000	0	Tare
6500	1500	Load 1500
6500	0	Tare
4500	-2000	Unload 2000
4500	0	Tare
3000	-1500	Unload 1500
3000	0	Tare
7000	4000	Load 4000

The table provides an example of how the DDI's can be used for a certain use case. This represents just an example and depending on the use case different DDIs might be used like "Unloaded/Loaded Total Mass" (428,429) instead of "Application Total Mass" (81).

Weighing System DDI	DDI dez	DDI hex	Type		Properties		Trigger Methods				
DDI ISO name			DPD	DPT	Setable	Default set	Time interval	Distance interval	Threshold limits	On change	Total
DET-Device Weighing System											
Work State	141	0x00D8	x			x	x			x	
Application Total Mass	81	0x0051	x		x		x	x			x
Effective Total Time	119	0x0077			x		x	x			x
DET-Function Weighing Gross											
Gross Weight State	233	0x00E9	x			x	x			x	
Actual Gross Weight	232	0x00E8	x			x	x			x	
Minimum Gross Weight	234	0x00EA	x	x							
Maximum Gross Weight	235	0x00EB	x	x							
DET-Function Weighing Net											
Net Weight State	230	0x00E6	x			x	x			x	
Setpoint Net Weight	231	0x00E7	x		x	x				x	
Actual Net Weight	229	0x00E5	x			x	x			x	