
**Road vehicles — Interchange of digital
information on electrical connections
between towing and towed vehicles —**

Part 2:

**Application layer for brakes and running
gear**

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AMENDMENT 1

ISO 11992-2:2003/Amd.1:2007
https://standards.iteh.ai/en/standards/iso-11992-2-2003-amd-1-2007
b8cab2bb9c15/iso-11992-2-2003-amd-1-2007
*Véhicules routiers — Échange d'informations numériques sur les
connexions électriques entre véhicules tracteurs et véhicules tractés —*

*Partie 2: Couche d'application pour les équipements de freinage et les
organes de roulement*

AMENDEMENT 1



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Published in Switzerland

Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO 11992-2:2003 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

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Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles —

Part 2: Application layer for brakes and running gear

AMENDMENT 1

Page iv, Foreword, 7th paragraph

Replace the list of parts with the following.

- Part 1: Physical and data-link layers
- Part 2: Application layer for brakes and running gear
- Part 3: Application layer for equipment other than brakes and running gear
- Part 4: Diagnostics

<https://standards.iteh.ai/catalog/standards/sist/b8ae1d57-6f96-4c64-b585-b8cab2bb9c15/iso-11992-2-2003-amd-1-2007>

Page 1, Clause 2 <https://standards.iteh.ai/catalog/standards/sist/b8ae1d57-6f96-4c64-b585-b8cab2bb9c15/iso-11992-2-2003-amd-1-2007>

Replace the entire list of normative references with the following new list.

ISO 11898 (all parts), *Road vehicles — Controller area network (CAN)*

ISO 11992-1, *Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 1: Physical and data-link layers*

Page 5, 6.2, 5th paragraph, 2nd sentence

Delete the following sentence: “To avoid any transmission conflict during the dynamic address assignment phase (power-up), the PDU 2 type message shall have even PS (GE) in the predecessor transmission direction and odd PS (GE) in the successor transmission direction.”

Page 8, 6.3, Figure 9

Replace the existing figure with the following new figure.

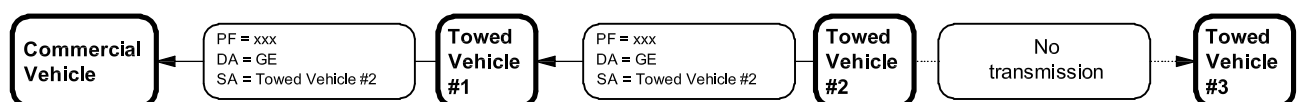


Figure 9 — Example of PDU 2 type message from towed vehicle #2

Page 18, 6.4.2.2.33

Add the following note at the end of 6.4.2.2.33.

NOTE The amber warning signal request is regarded as providing the same information as the yellow warning signal, activated by the trailer on pin 5 of the electric connector conforming to ISO 7638, as specified in UNECE Regulation 13.

Page 19, 6.4.2.2.36

Replace the entire subclause with the following new subclause.

6.4.2.2.36 VDC active

VDC (Vehicle Dynamic Control) means an electronic vehicle stability function which is a function within the braking system and reacts to stabilise the vehicle during dynamic manoeuvres. VDC includes Roll Over Prevention (ROP) and/or Yaw Control (YC).

The parameter VDC Active shall only be set to active when a vehicle stability function event occurs where the intent is to impact on vehicle stability. Interventions by the vehicle stability function in any process designed to determine the physical characteristics of the vehicle are not considered to be VDC Active events.

NOTE 1 In UNECE Regulation No. 13, Roll Over Prevention is referred to as Roll-Over Control and Yaw Control is referred to as Directional Control.

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NOTE 2 Active does not mean "installed" or "enabled" but indicates an actual VDC situation.

- 00 — VDC passive, but installed
 - 01 — VDC active
- Type: Measured
- <https://standards.itih.ai/catalog/standards/sist/b8ae1d57-6f96-4c64-b585-b8cab2bb9c15/iso-11992-2-2003-amd-1-2007>

Page 19

Insert the following new subclauses immediately after 6.4.2.2.40, including the new Table 7 and the new Figure 11.

6.4.2.2.41 Relative brake demand value for front or left vehicle side

The requested percentage of the service brake demand value which has to be applied to the steering axle wheels in case of a drawbar trailer or to the wheels on the left side of the vehicle in case of a semi trailer. This signal supports the trailer stabilisation in case of a trailer instability by the towing vehicle by means of requesting a selective brake force distribution.

- Data length: 1 byte
- Resolution: 0,4 %/bit gain, 0 % offset
- Data range: 0 % to 100 %
- Type: Status

6.4.2.2.42 Relative brake demand value for rear or right vehicle side

The requested percentage of the service brake demand value which has to be applied to the wheels of the rear axle(s) in case of a drawbar trailer or to the wheels on the right side of the vehicle in case of a semi trailer. This signal supports the trailer stabilisation in case of a trailer instability by the towing vehicle by means of requesting a selective brake force distribution.

Data length: 1 byte
 Resolution: 0,4 %/bit gain, 0 % offset
 Data range: 0 % to 100 %
 Type: Status

6.4.2.2.43 Support of side or axle wise brake force distribution

Indicates whether the function of an axle wise brake force distribution (in case of a drawbar trailer) or a side wise brake force distribution (in case of a semi trailer) is enabled.

00 — Side/axle wise brake force distribution disabled
 01 — Side/axle wise brake force distribution enabled
 Type: Measured

iTeh STANDARD PREVIEW**6.4.2.2.44 Lateral acceleration (standards.iteh.ai)**

Indicates a lateral acceleration of the vehicle. A positive lateral acceleration signal results when the vehicle is accelerated to the left.

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Data length: 1 byte
 Resolution: 1/10 m/s²/bit gain, -12,5 m/s² offset
 Data range: -12,5 m/s² to 12,5 m/s²
 Type: Measured

6.4.2.2.45 Stop lamps request

Request from the towed vehicle to the commercial vehicle to illuminate the stop lamps.

00 — No request to illuminate stop lamps
 01 — Request to illuminate stop lamps
 Type: Status

6.4.2.2.46 Braking via electric control line supported

Indicates whether the towed vehicle supports braking via the electric control.

00 — Braking via electric control line not supported
 01 — Braking via electric control line supported
 Type: Measured

6.4.2.2.47 Geometric data index

Serves as an index counter.

- Data length: 1 byte
- Resolution: see Table 7
- Data range: see Table 7
- Type: Measured

6.4.2.2.48 Geometric data indexed content

Geometric data, the content of this parameter depends on the Geometric data index.

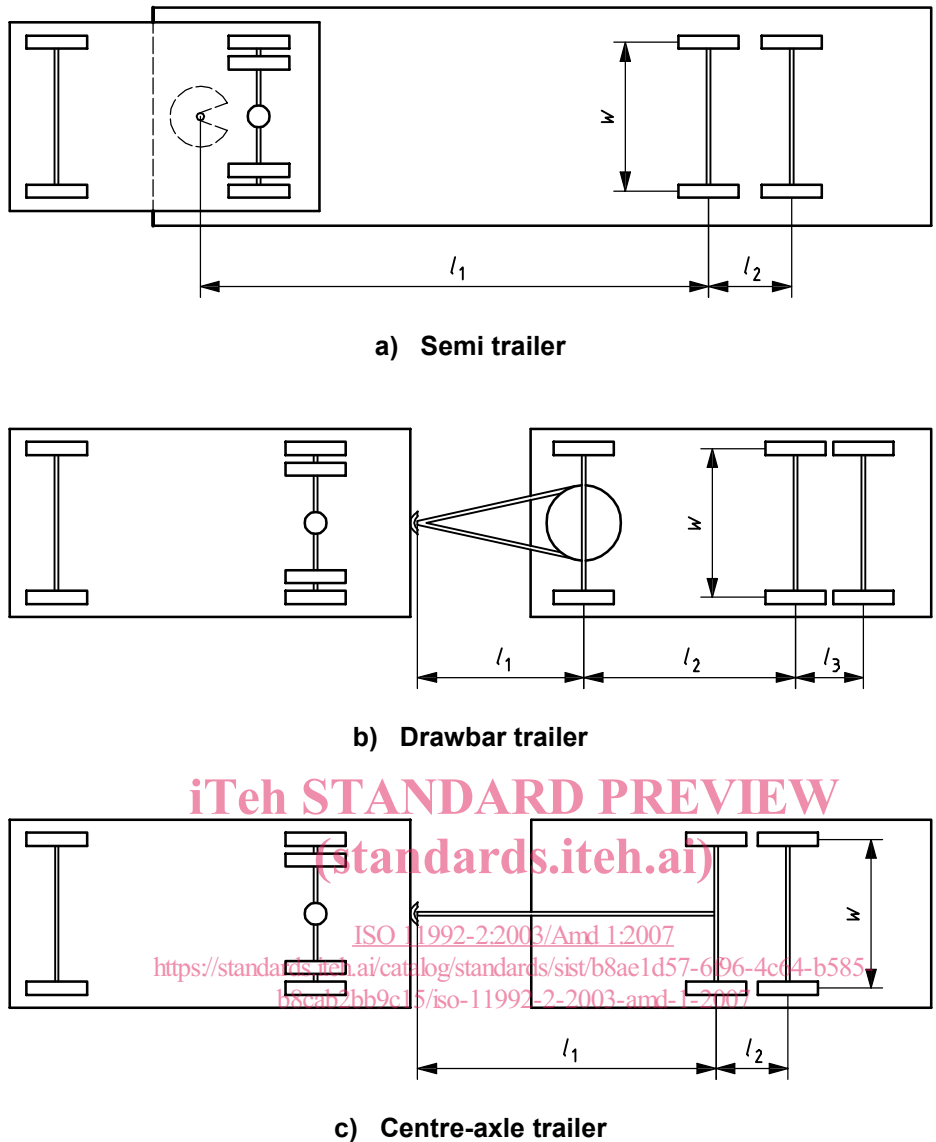
- Data length: 1 byte
- Resolution: see Table 7
- Data range: see Table 7
- Type: Measured

Table 7 — Geometric data
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Geometric data index	Geometric data indexed content
0	Type of the towed vehicle Resolution: 1/bit Data range: 0 to 250 Type: <ul style="list-style-type: none"> 0 Semi trailer 1 Centre-axle trailer 2 Drawbar trailer 3 Dolly 4 to 250 Not defined NOTE Information about “normal trailer” or “dolly” is also available in EBS 22.
1	Length between coupling point and middle of the first axle (see Figure 11) Resolution: 0,1 m/bit Data range: 0 m to 25 m
2	Track width (see Figure 11) Resolution: 10 mm/bit Data range: 0 mm to 2 500 mm
3	Total number of axles Resolution: 1/bit Data range: 0 to 250
4	Number of front axles (only in case of drawbar trailers, i.e. Type = 2) Resolution: 1/bit Data range: 0 to 250

Table 7 (continued)

Geometric data index	Geometric data indexed content
5	Number of lift axles Resolution: 1/bit Data range: 0 to 250
6	Position (axle number) of lift axle 1 Resolution: 1/bit Data range: 0 axle position cannot be identified 1 to 250 axle position
7	Position (axle number) of lift axle 2 Resolution: 1/bit Data range: 0 axle position cannot be identified 1 to 250 axle position
8	Position (axle number) of lift axle 3 Resolution: 1/bit Data range: 0 axle position cannot be identified 1 to 250 axle position
9	Position (axle number) of lift axle 4 Resolution: 1/bit Data range: 0 axle position cannot be identified 1 to 250 axle position
10	Position (axle number) of lift axle 5 Resolution: 1/bit Data range: 0 axle position cannot be identified 1 to 250 axle position
11	Wheel base: first axle to second axle (see Figure 11) Resolution: 0,1 m/bit Data range: 0 m to 25 m
12	Wheel base: second axle to third axle (see Figure 11) Resolution: 0,1 m/bit Data range: 0 m to 25 m
13 to 29	Wheel base: (Geometric data index - 10) axle to (Geometric data index - 9) axle Resolution: 0,1 m/bit Data range: 0 m to 25 m
30 to 250	Not defined



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Key

- w track width
- l_1 length between coupling point and middle of the first axle
- l_2 distance between first axle and second axle in wheel base
- l_3 distance between second axle and third axle in wheel base

Figure 11 — Vehicle dimensions

6.4.2.2.49 Brake cylinder pressure first axle, left wheel

Actual pressure of the wheel-brake actuator at the left wheel of the first axle.

NOTE In the case of a drawbar trailer, “first axle” means the steering axle.

- Data length: 1 byte
- Resolution: 5 kPa/bit gain, 0 kPa offset
- Data range: 0 kPa to 1250 kPa
- Type: Measured

6.4.2.2.50 Brake cylinder pressure first axle, right wheel

Actual pressure of the wheel-brake actuator at the right wheel of the first axle.

NOTE In the case of a drawbar trailer, "first axle" means the steering axle.

Data length: 1 byte
 Resolution: 5 kPa/bit gain, 0 kPa offset
 Data range: 0 kPa to 1250 kPa
 Type: Measured

6.4.2.2.51 Brake cylinder pressure second axle, left wheel

Actual pressure of the wheel-brake actuator at the left wheel of the second axle.

Data length: 1 byte
 Resolution: 5 kPa/bit gain, 0 kPa offset
 Data range: 0 kPa to 1250 kPa
 Type: Measured

6.4.2.2.52 Brake cylinder pressure second axle, right wheel

Actual pressure of the wheel-brake actuator at the right wheel of the second axle.

Data length: 1 byte
 Resolution: 5 kPa/bit gain, 0 kPa offset
 Data range: 0 kPa to 1250 kPa
 Type: Measured

6.4.2.2.53 Brake cylinder pressure third axle, left wheel

Actual pressure of the wheel-brake actuator at the left wheel of the third axle.

Data length: 1 byte
 Resolution: 5 kPa/bit gain, 0 kPa offset
 Data range: 0 kPa to 1250 kPa
 Type: Measured

6.4.2.2.54 Brake cylinder pressure third axle, right wheel

Actual pressure of the wheel-brake actuator at the right wheel of the third axle.

Data length: 1 byte
 Resolution: 5 kPa/bit gain, 0 kPa offset
 Data range: 0 kPa to 1250 kPa
 Type: Measured

6.4.2.2.55 Wheel speed first axle, left wheel

Unfiltered and unbalanced speed of the left wheel on the first axle.

NOTE 1 In the case of a drawbar trailer, “first axle” means the steering axle.

NOTE 2 In the case of a semi trailer, the first non-lifting axle equipped with wheel speed measuring sensors is used. Both sensors are on the same axle.

- Data length: 2 bytes
- Resolution: 1/256 km/h/bit gain, 0 km/h offset
- Data range: 0 km/h to 250 km/h
- Type: Measured

6.4.2.2.56 Wheel speed first axle, right wheel

Unfiltered and unbalanced speed of the right wheel on the first axle.

NOTE 1 In the case of a drawbar trailer, “first axle” means the steering axle.

NOTE 2 In the case of a semi trailer, the first non-lifting axle equipped with wheel speed measuring sensors is used. Both sensors are on the same axle.

- Data length: 2 bytes
 - Resolution: 1/256 km/h/bit gain, 0 km/h offset
 - Data range: 0 km/h to 250 km/h
 - Type: Measured
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6.4.2.2.57 ROP system enabled/disabled

Signal which indicates that the Roll Over Prevention (ROP) system is enabled or disabled.

NOTE In UNECE Regulation No. 13, Roll Over Prevention is referred to as Roll-Over Control.

- 00 — ROP system disabled
- 01 — ROP system enabled
- Type: Measured

6.4.2.2.58 YC system enabled/disabled

Signal which indicates that the Yaw Control (YC) system is enabled or disabled.

NOTE In UNECE Regulation No. 13, Yaw Control is referred to as Directional Control.

- 00 — YC system disabled
- 01 — YC system enabled
- Type: Measured