Australian Standard™

Heavy road vehicles—Electrical connectors for articulated vehicles

Standards Australia

This Australian Standard was prepared by Committee ME-053, Heavy Road Vehicles. It was approved on behalf of the Council of Standards Australia on 13 May 2003 and published on 16 June 2003.

The following are represented on Committee ME-053:

Australian Automotive Aftermarket Association
Australian Road Transport Suppliers Association
Australian Trucking Association
AUSTROADS
Commercial Vehicle Industry Association of Australia
Commonwealth department of Transport and Regional Services (Australia)
Department of Defence, Australia
Institute of Road Transport Engineers, New Zealand
Land Transport Safety Authority, New Zealand
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New Zealand Heavy Haulage Association
New Zealand Heavy Transport Wheel Aligners Association
New Zealand Truck and Trailer Manufacturers Federation
Road Transport Forum, New Zealand
Society of Automotive Engineers, Australasia
Truck Industry Council
W.A. Department for Planning and Infrastructure

Additional interests participating in the preparation of this Standard:

Automotive Lighting & Electrical Components Manufacturers and Suppliers
Trailer Manufacturers
Truck Manufacturers

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-053, Heavy Road Vehicles. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of the Standard is to provide requirements for the compatibility and performance of electrical connectors between a towing vehicle and one or more towed vehicles above 4.5 tonnes GVM or ATM.

Other connectors used in auxiliary systems such as ABS systems are covered by separate Standards.

During the preparation of this Standard consideration was given to ISO 1185:1997, *Road vehicles—Electrical connections between towing and towed vehicles with 24 V systems—7 pole connector type 24 N (normal),* ISO 3731:1997, *Road vehicles—Electrical connections between towing and towed vehicles with 24 V Systems—7 pole connector type 24S (supplementary),* ISO 4091:1992, *Road vehicles—Connectors for electrical connections between towing vehicles and trailers—Test methods and performance requirements,* and SAE J-560: 1998, *Seven conductor electrical connector for truck-trailer jumper cable.*

The ISO 1185 and SAE J-560 7-pin connectors are interchangeable.

Information about the design and maintenance practices for electrical systems on heavy vehicles (*The Heavy Vehicle Electrical Wiring—Code of Practice*) is available from the Australian Trucking Association.

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1 SCOPE

This Standard specifies requirements for the compatibility and performance of connectors used to make an electrical connection between a towing vehicle and one or more towed vehicles above 4.5 tonnes GVM or ATM. The connection is to be made by hand and readily detachable. The electrical equipment supplied by the connector will normally operate at a nominal direct current (d.c.) of 12 V or 24 V.

2 APPLICATION

This Standard is intended for vehicles fitted with tungsten filament bulbs but does not preclude the use of other visible light emitting devices, for example light emitting diodes (LED).

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

ISO
1185 Road vehicles—Electrical connections between towing and towed vehicles with 24 V systems—7 pole connector type 24 N (normal)

SAE
J560 Seven conductor electrical connector for truck-trailer jumper cable

4 DEFINITIONS

For the purpose of this Standard, the following definitions apply:

4.1 ATM (Aggregated trailer mass)

The total mass of the laden trailer when carrying the maximum load recommended by the manufacturer. This includes any mass imposed onto the drawing vehicle when the combination vehicle is resting on a horizontal supporting plane.

4.2 Connector

A two-part device used to make a detachable electrical connection between a towing vehicle and a towed vehicle.

4.3 Contact

The mating components of a connector through which the electrical connection between plug and socket is made.

4.4 GVM (Gross vehicle mass)

The maximum loaded mass of the vehicle, either—

(a) specified by the manufacturer on an identification plate on the vehicle; or

(b) if there is no specification by the manufacturer on an identification plate on the vehicle or the specification is not appropriate because the vehicle has been modified—certified by the vehicle registration authority.