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American Caravan/Trailer Brakes and coupling up to 3500kg maximum laden weight

Statement

Requirements regarding trailers used on the road are given in the *Road Vehicles (Construction and Use) Regulations 1986*, as amended (C&U) and the *Road Vehicles Lighting Regulations 1989*, as amended (RVLR). The following is a summary of the main requirements.

All trailers with a maximum laden weight of 3500kg¹ or less are permitted to have electric brakes regardless of whether they are from America or from somewhere else. Regulations specify that the transmission method by which the signal is used to apply the brakes may be mechanical, hydraulic, pneumatic and, electric.

Every effort has been made to ensure that it is factually correct but recipients should check with the producers of this document if they are unsure about the validity of a particular regulation after the date of publication or if they have reason to believe any part is not correct or is now out of date.

Differences between American caravans and trailers, and European regulations

1 Operating brakes

It is common on American caravans/trailers with electric brakes to have an electrical device mounted in the towing vehicle which the driver operates manually to apply the brakes of the trailer independent to the brakes on the tow vehicle. This is prohibited in Europe where the regulations demand that the service braking system must be applied without the driver removing his hands from the steering control.

2 Mounting sensor devices

Alternatively, American caravans/trailers with electric brakes can have an electrical device mounted in the towing vehicle which senses deceleration in the towing vehicle and transmits a signal to the caravan/trailer braking system to operate the brakes. European requirements demand that this type of device must be mounted on the caravan/trailer.

3 Supply of electricity for electrical braking systems

The electrical energy required for the electrical braking system must be supplied to the trailer by the towing vehicle. If there is a battery on the trailer which is fed by the power supply unit of the towing vehicle, the power from the battery must be disconnected during application of the service braking system.

4 Time delays

Some American caravans/trailers rely on a signal from the towing vehicle stop lamps to initiate braking on the caravans/trailers. Owners of such vehicles need to be aware that the system may not meet the requirement for brake response time. European regulations demand that the time

¹ In the case of a semitrailer or centre-axle trailer, the maximum mass to be considered for classifying the trailer corresponds to the static vertical load transmitted to the ground by the axle or axles of the semitrailer or centre-axle trailer when coupled to the towing vehicle and carrying its maximum load.

delay between the time at which the driver applies the brakes and the time at which the braking force on the least favourably placed axle reaches the level corresponding to the prescribed brake performance must not exceed 0.6 seconds. This could be difficult to achieve on systems that have to wait for the stop lamps to operate before the electronic control unit is activated and the system produces the prescribed brake level.

5 Parking brakes

American caravans/trailers do not always have a parking brake. European requirements demand that a caravan/trailer must be fitted with a parking brake that is capable of holding the vehicle stationary on an 18 per cent up or down gradient. Also, the working parts must be held in the locked position by a purely mechanical device.

6 Braking mechanisms

American caravans/trailers do not always have brakes on all wheels, and it is common for a two axle trailer to have brakes on only one axle. This is prohibited in Europe where regulations demand that each individual wheel must brake.

Caravans and trailers fitted with a braking system are required to be stopped automatically if the coupling separates while the trailer is in motion.

7 Inertia coupling

An inertia braking system must allow the trailer to be reversed with the towing vehicle without imposing a sustained drag force exceeding 8% of the technically permissible maximum mass of the trailer. Devices used for this purpose must act automatically and disengage automatically when the trailer moves forward.

American "5th wheel" type caravans are considered semi trailers and, as such **cannot** use an inertia (overrun) type braking system. The operation of the towing vehicle's braking system must directly operate the brakes on the trailer and electrically controlled systems are permitted.

8 Coupling (ball hitch) dimensions

The American ball hitch diameter is are usually 2 inches whereas the European (UK) is 50mm, therefore the trailer coupling may need changing to be compatible with the 50mm ball.

9 UK Legislation

C&U regulations demand compliance with the technical requirements of Directive 71/320/EEC including amendments up to and including Directive 98/12/EC. C&U Regulation 15 also recognises the technical requirements of United Nations ECE Regulation 13 up to and including the 09 series of amendments.

10 Dimensions

If the towing vehicle has a permissible gross weight in excess of 3.5 tonnes the maximum width and length of the drawbar trailer are 2.55 metres and 12 metres respectively. If however the gross weight of the towing vehicle is 3.5 tonnes or less, then the maximum permissible width and length for a drawbar trailer are 2.55 metres and 7 metres respectively. In both cases, the overall length of the towing vehicle and trailer must not exceed either 18m or 18.75m depending on the type of towing vehicle.

If the vehicle combination (not including buses) is of the articulated category, regardless of the gross weight of the towing vehicle, the maximum permissible width and length of the semi-trailer are 2.55

metres and 12.2 metres respectively. The overall length of the towing vehicle and trailer must not exceed 15.5m².

The C&U definition of the overall length of a trailer makes it clear that the coupling device and draw-bar are not included in the length dimension. In the case of a caravan, where a protective box is mounted on to the front (for example to hold gas storage tanks) and is supported on the draw-bar, this box is included in the overall length.

Additional Information

The above information relates to basic construction requirements and some aspects of the use of trailers. In addition it is recommended that you check whether you have the appropriate Driving Licence entitlement and whether the vehicle or combination of vehicles requires a tachograph to record driver's hours. The latter will apply to most vehicles and combinations of vehicles above 3500kg gross weight, where used for commercial purposes.

For Driving Licence enquiries contact:

DVLA Customer Enquiries, Telephone 0300 790 6801

Further details are available at: <https://www.gov.uk/>

For Tachograph requirement enquiries contact:

Driver and Vehicle Standards Agency, Telephone: 0300 123 9000

Further details are available at:

<https://www.gov.uk/government/organisations/driver-and-vehicle-standards-agency>

Legislation

The Regulations referred to above may be obtained through The Stationery Office (TSO) under the references, SI 1986 No.1078 for the *Road Vehicles (Construction and Use) Regulations* and SI 1989 No. 1796 for the *Road Vehicles Lighting Regulations*. However, there have been many amendments to these base Regulations and it is important to obtain all of these in order to be aware of the current situation.

TSO Orders/Post Cash Department

PO Box 29

Norwich

NR3 1GN

customer.services@tso.co.uk

Tel: 0870 600 5522

Fax: 0870 600 5533

Website: www.tsoshop.co.uk

The RVLIR amendments together with amendments to C&U from 1988 can be found as Statutory Instruments on the following web site: <http://www.legislation.gov.uk/browse>

² 16.5metres if king pin to rear of trailer not over 12 metres and no part of trailer outside 2.04 metre radius in front of kingpin.

Further information

If you require any further information regarding the content of this information sheet, please contact the DfT at the address below:

International Vehicle Standards
Department for Transport
Zone 1/34, Great Minster House
33 Horseferry Road, London, SW1P 4DR

Telephone: 020 7944 2091

Fax: 020 7944 2196

Email: ivs.enquiries@dft.gsi.gov.uk

NOTE: The information in this document is a summary of the Department's understanding of what the law requires. However, ultimately the interpretation of the law is a matter for the courts based on individual facts of any particular case. You are therefore advised to consult the relevant legislation and, if necessary, seek independent advice.

Web Sites

European Braking Directive:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1971L0320:20070101:en:PDF>

United Nations ECE Regulation 13 and amendments:

<http://www.unece.org/trans/main/wp29/wp29regs1-20.html>