

## Department of Transport Information Sheet, September 2011

### 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 3500kg<sup>1</sup> 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particular regulation after the date of publication or if they have reason to believe any part is not correct or is now out of date.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.

<sup>1</sup> In the case of a semi-trailer 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 semi-trailer or centre-axle trailer when coupled to the towing vehicle and carrying its maximum load.

#### 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 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.

***(Please note that on our trailers all 4 wheels are braked thus meeting these regulations.)***

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.