

**DEPARTMENT OF TRADE AND INDUSTRY
DEPARTEMENT VAN HANDEL EN NYWERHEID**

No. 355

26 March 2004

STANDARDS ACT, 1993

**WITHDRAWAL AND REPLACEMENT OF THE COMPULSORY SPECIFICATION
FOR VEHICLES OF CATEGORY 01 AND 02**

I, Alexander Erwin, Minister of Trade and Industry, hereby under Section 22(1)(a)(i) of the Standards Act, 1993 (Act No. 29 of 1993), and on the recommendation of the Council of the South African Bureau of Standards, withdraw the compulsory specification for vehicles of category 01 and 02, and replace it with the compulsory specification as set out in the Schedule, with effect from the date 2 months after the date of publication of this notice.

A Erwin
Minister of Trade and Industry

SCHEDULE

COMPULSORY SPECIFICATION FOR CATEGORY O₁ AND O₂ VEHICLES (CARAVANS AND LIGHT TRAILERS)

1 Scope

1.1 This specification covers the requirements for vehicle models of categories O₁ and O₂ designed or adapted for operation on a public road at speeds greater than 40 kph, including new vehicle models and vehicle models that have not previously been registered or licensed in South Africa.

1.2 The requirements of this specification, in so far as the vehicle parts already incorporated are concerned, apply in respect of an incomplete vehicle supplied for further manufacture by one manufacturer to another and the entire specification applies to the vehicle after completion thereof by the last-mentioned manufacturer.

1.3 This specification does not apply to experimental vehicles or to prototype vehicles constructed or imported by the original manufacturer or importers for the purpose of testing, assessment or development, or to agricultural trailers, unless they are subsequently sold for use on a public road in South Africa.

1.4 The relevant requirements of this specification that take effect on any specified date do not apply to vehicles models homologated before the operative date given in schedule 1 of this specification, until the exclusions expiry date.

1.5 Where a South African National Standard, including an International Standard or an ECE regulation adopted by Standards South Africa as a National Standard, is incorporated by reference into this specification, only the technical requirements of the specifications for the commodity, and the tests to verify compliance, apply.

2 Definitions

For the purposes of this specification, the following definitions apply:

2.1

axle unit

set of two or more parallel axles that are so interconnected as to form a unit and the distance between adjacent axles is less than 1,2 m

2.2

caravan

trailer that provides mobile living accommodation and that has a gross vehicle mass not exceeding 3,5 t

2.3

category O

trailers

2.3.1

category O₁

single-axled trailers, other than semi-trailers, with a maximum mass not exceeding 0,75 t

2.3.2

category O₂

trailers other than category O₁, with a maximum mass not exceeding 3,5 t

2.4

equalizer

device that is connected between the towing vehicle and a trailer, and that is designed to reduce the vertical load imposed on the ball coupling by the trailer and to transfer load to the front and rear axles of the vehicle combination. The device usually takes the form of a pair of downward curved springs, one on each side of the drawbar, that are tensioned upwards when coupled to the towing vehicle

2.5

manufacturer

person who makes, produces, assembles, alters, modifies or converts a category O vehicle, and "manufacture" has a corresponding meaning

2.6

model

manufacturer's description for a series of vehicle designs that do not differ in respect of axle configuration, trailer configuration, coupling device, and braking system, or in respect of the vehicle category by which they are introduced to South Africa by a specific source

NOTE The regulatory authority reserves the sole right to decide which variations or combinations of variations constitute a new model, and could also take cognizance of the classification system applied in the country of origin of the design.

2.7

public road

road, street or thoroughfare, including the verges, or any other place, whether a thoroughfare or not, to which the public or sections of the public have the right of access and commonly use

2.8

regulatory authority

the organization appointed by any Minister to implement technical regulations (specifically the Minister of the Department of Trade and Industry with regard to this specification)

2.9

semi-trailer

trailer having no front axle and so designed that at least 15 % of its tare is super-imposed on and borne by a vehicle drawing such trailer

2.10

stabilizer

device that is connected between the towing vehicle and the trailer, and that is designed to reduce or dampen any lateral (anti-snake) oscillations or vertical (anti-pitch) oscillations, or combinations thereof, of the vehicle combination. The device usually takes the form of a friction or hydraulic damping medium in either the horizontal or vertical plane, or a combination of both, and may be incorporated with an equalizer

2.11

tent trailer

trailer that has a gross vehicle mass not exceeding 3,5 t and that provides mobile living accommodation by means of a collapsible soft-topped tent that can be permanently attached to or can be removable from the trailer

2.12

trailer

vehicle that is not self-propelled and that is designed or adapted to be drawn by a motor vehicle, but does not include a side-car attached to a motor cycle

3 General requirements

3.1 Requirements for lights, lighting and warning signs

3.1.1 Lights

Lights fitted to a trailer shall comply with the relevant requirements given in the following standards:

SANS 20003/ECE R3 (SABS ECE R3:1996), *Uniform provisions concerning the approval of retro-reflecting devices for power-driven vehicles and their trailers.*

SANS 20004/ECE R4 (SABS ECE R4:1997), *Uniform provisions for the approval of devices for the illumination of rear registration plates of motor vehicles (except motor cycles) and their trailers.*

SANS 20006:2003/ECE R6, *Uniform provisions concerning the approval of direction indicators for motor vehicles and their trailers.*

SANS 20007:2002/ECE R7, *Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for motor vehicles (except motor cycles) and their trailers.*

SANS 20023/ECE R23 (SABS ECE R23:1992), *Uniform provisions concerning the approval of reversing lamps for power-driven vehicles and their trailers.*

SANS 20037:2002/ECE R37, *Uniform provisions concerning the approval of filament lamps for use in approved lamp units of power-driven vehicles and of their trailers.*

SANS 20091/ECE R91 (SABS ECE R91:1993), *Uniform provisions concerning the approval of side-marker lamps for motor vehicles and their trailers.*

3.1.2 Lighting

Lighting shall be fitted to a trailer and shall comply with the relevant requirements given in SANS 20048/ECE R48 (SABS ECE R48:1994), *Uniform provisions concerning the approval of vehicles with regard to the installation of lighting and light-signalling devices.*

The specific requirements of the said SANS 20048/ECE R48 (SABS ECE R48:1994) for **rear fog lamps** as set out in 6.11, shall be treated as **OPTIONAL** for the purpose of this compulsory specification:

Provided that, if any vehicle is fitted with such devices or lamps, they shall comply with the applicable requirements.

The requirements for the installation of retroreflectors may be met by the use and fitting of retroreflectors that are defined in the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996) and in addition, the requirements may also be met by the use and fitting of retroreflectors that are integral portions of another light lens assembly.

3.1.3 Rear warning sign (chevrons)

A rear warning sign shall be fitted to a trailer and shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

3.1.4 Emergency warning signs (triangles)

In the case of a vehicle supplied with a warning triangle as part of the vehicle equipment, such a warning triangle shall comply with the relevant regulation of the National Road Traffic Act, 1996 (Act 93 of 1996).

3.2 Requirements for windows and partitions

Transparent partitions and windows fitted to any trailer shall be:

- a) of safety glass that complies with the relevant requirements given in SANS 1191 (SABS 1191:1997), *Safety glass for vehicles – High penetration-resistant laminated safety glass for vehicles*, in SANS 1192 (SABS 1192:1994), *Safety glass for vehicles – Laminated safety glass for vehicles* or in SANS 1193 (SABS 1193:2001), *Toughened safety glass for vehicles*; or
- b) of plastics safety glazing material that complies with the relevant requirements of SANS 1472 (SABS 1472:1989), *Plastics safety glazing materials for motor vehicles*.

3.3 Requirements for brakes and braking equipment

A trailer shall be fitted with braking equipment that complies with the relevant requirements given in SANS 20013/ECE R13 (SABS ECE R13:1996), *Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking*.

3.4 Requirements for electrical connectors

Electrical connectors that are fitted for the purpose of towing shall comply with:

- a) in the case of 12 V systems:
 - 1) SANS 1327 (SABS 1327:1997), *Electrical connectors for towing and towed vehicles (7-pole connectors)*; or
 - 2) SANS 11446/ISO 11446 (SABS ISO 11446:1995), *Passenger cars and light commercial vehicles with 12 V systems – 13-pole connectors between towing vehicles and trailers – Dimensions and contact allocation*; and
- b) in the case of 24 V systems:
 - 1) the said SANS 1327; or
 - 2) SANS 12098/ISO 12098 (SABS ISO 12098:1994), *Commercial vehicles with 24 V systems – 15-pole connectors between towing vehicles and trailers – Dimensions and contact allocation*.

3.5 Requirements for couplings and drawbars on trailers with one axle or an axle unit

3.5.1 Coupling device

Excluding semi-trailers, trailers that have a gross vehicle mass not exceeding 3,5 t shall

- a) if equipped with ball type coupling devices on the drawbar, have coupling sockets that comply with the relevant requirements given in the *Compulsory specification for ball type couplings and towing brackets for towing caravans and light trailers*, as published by Government Notice No. R243 (Government Gazette No. 23183) of 8 March 2002 (as amended from time to time); or
- b) if equipped with coupling devices other than in 3.5.1(a), have coupling devices that comply with the relevant requirements given in SANS 20055:2003/ECE R55, *Uniform provisions concerning the approval of mechanical coupling components of combinations of vehicles*.

3.5.2 Static vertical loading on ball couplings

The maximum and minimum static vertical load at the centre of the ball socket on the coupling head shall be determined by the manufacturer, but in no case shall it exceed 100 kg or be less than 25 kg when the trailer is loaded. When a trailer is fitted with a stabilizer or an equalizer by the manufacturer, the effect of such a device on the maximum and minimum static vertical loads shall be stated by the manufacturer.

3.5.3 Height of the ball coupling device

The height of the ball coupling device fitted to a trailer, measured vertically above the ground to the centre of the ball socket and with the interior floor of the trailer horizontal and the trailer at its gross vehicle mass, shall be not less than 350 mm and not more than 465 mm, provided that any custom-built trailers that

- a) have tyre and wheel combinations with overall diameters that exceed 665 mm when measured in the unladen condition; or
- b) are designed or adapted for towing behind vehicles that have a gross vehicle mass exceeding 3 500 kg

shall be excluded for the purposes of this subsection.

3.5.4 Trailer articulation clearance

The coupling device fitted to a trailer shall be located on the drawbar as shown in figure 1.

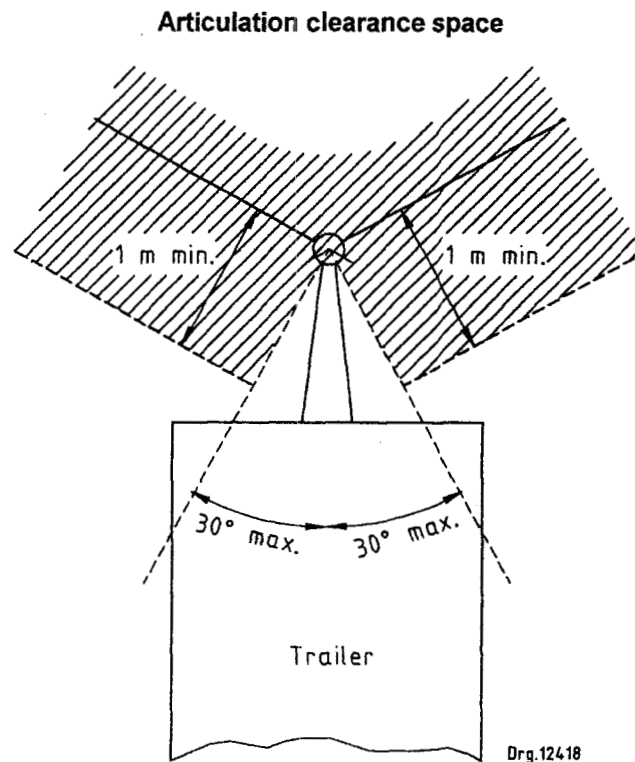


Figure 1 □ Minimum articulation clearance space

3.6 Requirements for the stability of certain trailer/towing vehicle combinations whilst in motion

3.6.1 General

These requirements are only applicable to trailers with ball couplings as specified in 3.5.1 (a). Stability should be determined by calculation or other suitable means, or, in the case of a caravan, by verifying compliance with the metrological requirements of 4.1.2 (overall height), 4.1.3 (centre of gravity) and 4.1.4 (rear overhang).

3.6.2 Trailer configuration

The static vertical load on the ball coupling of the trailer shall be at the minimum value stated by the manufacturer (see 3.5.2) and stability shall be checked for two conditions of loading, given as follows:

- a) with the trailer at its tare fully equipped for service in accordance with the manufacturer's specification but excluding all non-permanent equipment or stores; and
- b) with the trailer at its gross vehicle mass, the load being distributed as recommended by the manufacturer.

4 Requirements concerning metrological data

4.1 Trailer dimensions

4.1.1 General

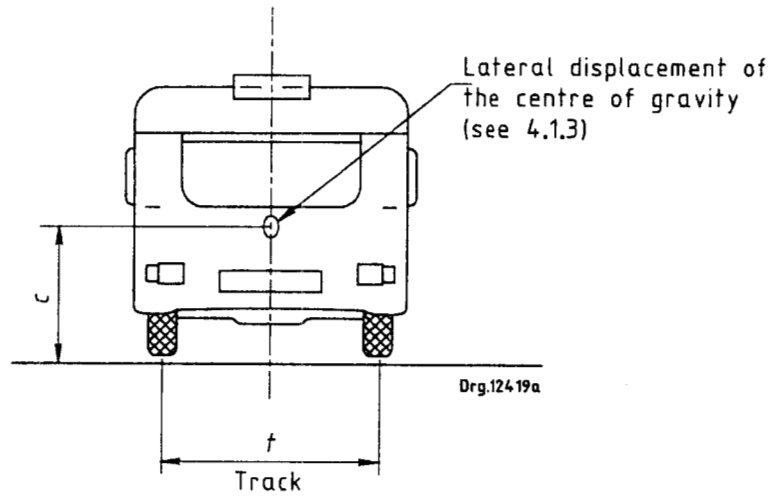
The dimensions of a trailer shall comply with the requirements of the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996), except as provided for in 4.1.2, 4.1.3 and 4.1.4.

4.1.2 Overall height of a caravan

The overall height of a caravan, when measured vertically above ground level, shall not exceed the lesser of 1,8 times the track of the caravan (see figure 2(a)) or 3,0 m.

4.1.3 Centre of gravity of a caravan

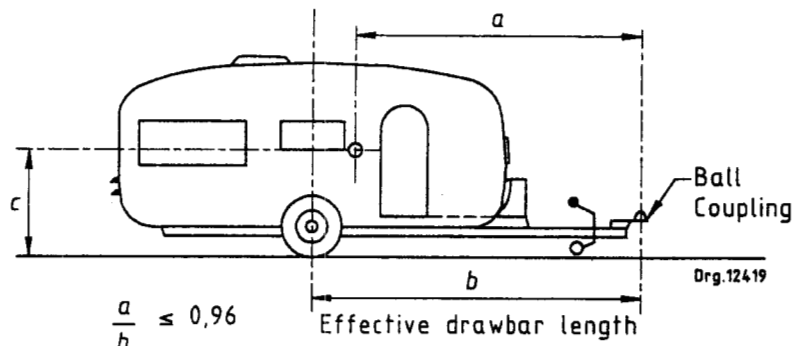
The ratio between the horizontal distances from the centre line of the ball coupling to the centre of gravity and to the centre line of the axle or axle unit of a caravan shall not exceed 0,96 (see figure 2(b)). The ratio between the height of the centre of gravity vertically above ground level to the track of a caravan shall not exceed 0,725 (see figure 2(a)).



$$\frac{c}{t} \leq 0,725$$

$$c_{\text{max.}} = 0,725 t$$

Figure 2(a) □ Vertical limitations



$$\frac{a}{b} \leq 0,96$$

$$a_{\text{max.}} = 0,96 b$$

Figure 2(b) □ Longitudinal limitations

4.1.4 Rear overhang of a trailer

The ratio of the rear overhang of a trailer to the effective drawbar length (the horizontal distance from the centre line of the axle or axle unit to the centre of the ball coupling) shall not exceed 0,7 (see figure 3), provided that the rear overhang shall not exceed 50 % of the length of the trailer body.

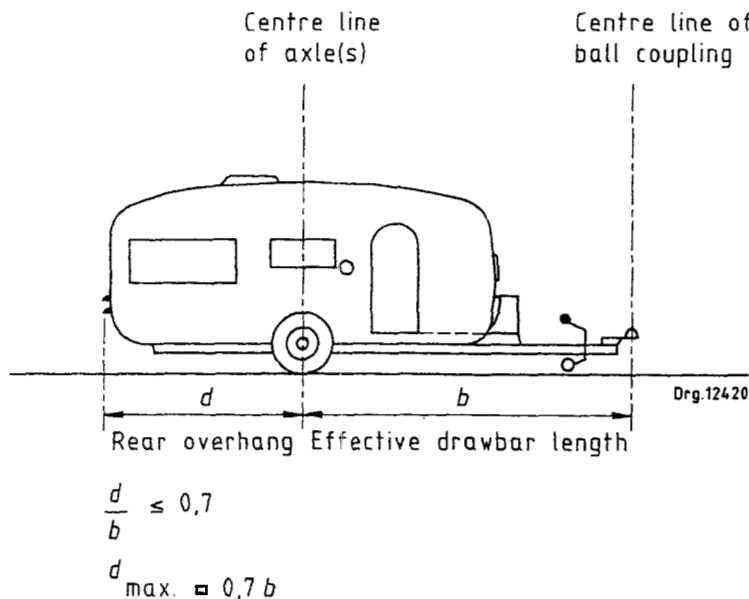


Figure 3 □ Rear overhang limitations of a caravan

4.1.5 Minimum payload of a caravan

To ensure sufficient carrying capacity for movable property, the payload of the caravan (GVM minus tare) shall be not less than the total mass of user effects normally expected to be carried by the caravan (taken to be at least 15 % of the GVM), plus allowances of at least 15 kg for LPG (liquid petroleum gas) cylinders and at least 30 kg for a refrigerator, if such items are not fitted as standard equipment by the manufacturer.

4.2 Information plates

4.2.1 Data plates

A trailer shall have a data plate or data plates permanently affixed to it, or to the trailer drawbar, in a conspicuous position and visible from the left-hand side of the trailer. The information stated in the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996) and the wording "For public road operation" shall be legibly and permanently imprinted or stamped on the data plate(s).

4.2.2 Vehicle Identification Number (VIN)

4.2.2.1 General

A trailer shall have a vehicle identification number that complies with the relevant requirements given in SANS 3779/ISO 3779 (SABS ISO 3779:1983), *Road vehicles – Vehicle identification number (VIN) – Content and structure*, and in SANS 4030/ISO 4030 (SABS ISO 4030:1983), *Road vehicles – Vehicle identification number (VIN) – Location and attachment*, except for clause 5 of the said SANS 4030, which shall be amended in accordance with the requirements in 4.2.2.2 to 4.2.2.4.

4.2.2.2 The VIN shall be marked directly on an integral part of the vehicle; it may be either on the frame or, for integral frame body units, on a part of the body not easily removed or replaced.

4.2.2.3 The VIN shall also be marked on the data plate.

4.2.2.4 The height of the roman letters and the arabic numerals of the VIN shall be as follows:

- a) at least 7 mm if marked in accordance with 4.2.2.2 (frame, body, etc.) on trailers; and
- b) at least 3 mm if marked in accordance with 4.2.2.3 (data plates).

4.2.3 Axle data

4.2.3.1 Each axle on a trailer shall be provided with a data plate as given in 4.2.3.2 or 4.2.3.3, where relevant. The particulars of the information on the data plate shall be permanently and legibly imprinted or stamped and the data plate shall be permanently affixed in a conspicuous position on the axle.

4.2.3.2 Each axle of a trailer shall have a data plate that gives the following information:

- a) the axle make and serial number;
- b) the load capacity of the axle; and
- c) the maximum rolling radius.

4.2.3.3 Where a braking system is fitted, the axle(s) of a trailer shall have a data plate that gives the information given in 4.2.3.2 and the following information:

- a) the type/size of the shoe/pad, and the grade of the brake lining material, and
- b) in the case of cam brakes operated by air, the brake chamber size and the brake lever length .

4.3 Measuring units

All gauges, indicators and instruments that are fitted to a trailer shall be calibrated in units as prescribed by the current applicable regulations promulgated under the Measuring Units and National Measuring Standards Act, 1973 (Act 76 of 1973).

4.4 Load-carrying capacity of tyres

Tyres for trailers shall comply with the *Compulsory specification for pneumatic tyres for passenger cars and their trailers* or the *Compulsory specification for pneumatic tyres for commercial vehicles and their trailers*, as published by Government Notice No. R1125 (Government Gazette No. 22822) of 16 November 2001 (as amended from time to time), where applicable.

5 Requirements for the control of environmental interference

5.1 Suppression of radio and television interference

All components, accessories or equipment that are fitted to a trailer and that generate and radiate electromagnetic energy shall comply with the current applicable regulations relating to interference with communications promulgated under the Telecommunications Act, 1996 (Act 103 of 1996).

5.2 Suppression of atmospheric pollution

All engines, accessories or equipment that are fitted to a trailer and that generate smoke emissions shall comply with the current regulations promulgated under the Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965).

6 Requirements for caravan equipment and components

6.1 Liquid petroleum gas containers

6.1.1 General

Provision shall be made to ensure that any LPG container(s), carried inside or outside a caravan or tent trailer, are adequately secured to prevent movement in any direction when the caravan or tent trailer is being drawn.

6.1.2 Ventilation

Permanent ventilation at a low floor level shall be provided to the outside atmosphere. The area of ventilation shall be at least the greater of 4 % of the floor area of the housing or compartment or 10 000 mm². The ventilation area shall have no obstruction.

6.1.3 Location

Access to the LPG container(s) shall be from the outside of a caravan or tent trailer and no LPG vapour shall be allowed to penetrate into the interior of the caravan or tent trailer.

6.1.4 Fuel storage

No component or fixture that, in normal use, could damage the LPG installation or that might ignite escaping gas, shall be installed in a fuel storage housing or a fuel storage compartment.

6.2 Provision of fire extinguishers

A caravan or tent trailer shall be provided with one or more portable 1 kg dry powder fire extinguisher(s) securely stowed in a readily accessible position which, in the case of a caravan, shall be adjacent to the main entrance door.

The fire extinguisher(s) shall comply with the relevant requirements given in SANS 810 (SABS 810:1992), *Portable rechargeable fire extinguishers – Dry powder type extinguishers*, or in SANS 1322 (SABS 1322:1988), *Portable, non-refillable fire extinguishers (general purpose type)*.

7 Proof of compliance

7.1 Homologation shall comprise the confirmation by the Regulatory Authority that the manufacturer, importer or builder (registered MIB) has provided the Regulatory Authority with the following specific evidence in respect of the commodity covered by this specification:

- a) a summary of evidence showing that all relevant tests have been conducted by a laboratory, recognised by the Regulatory Authority, with successful test results, carried out under appropriate controls, in respect of the model, or variant, of the commodity;
- b) sufficient data to enable a relevant model, and any variant thereof, and its components to be identified and related to in 7.1(a);
- c) relevant samples for the conducting of whatever tests and inspections are considered appropriate

- by the Regulatory Authority to verify any or all of the evidence provided;
- d) details of the quality management system applied by the registered MIB;
 - e) when relevant, documentation to advise subsequent manufacturers of incomplete commodities of their responsibilities with regard to mandatory items; and
 - f) agreement by the manufacturing source, to permit periodic, or ad-hoc, conformity of production (CoP) audits to be carried out by the Regulatory Authority at the relevant manufacturing, assembling and test facilities.

The Regulatory Authority may issue such confirmation, on application, in respect of new models or their variants, provided that such confirmation may not be used for the purposes of advertising or to imply that all units of the commodity necessarily or consequently comply with all the requirements of this specification.

7.2 Proof of compliance shall be provided by the registered MIB to the Regulatory Authority in respect of each vehicle model and its variants, covered by the scope of this specification.

Such proof of compliance shall be made available in the English language, so that the Regulatory Authority can satisfy itself that compliance has been achieved before such vehicle is registered in the Republic of South Africa.

7.3 Failure to provide such proof of compliance within five working days, may constitute reasonable grounds to suspect that the vehicle model does not comply with the requirements of this specification.

8 Equivalent requirements

At the sole discretion of the Regulatory Authority, the requirements of the South African National Standards referred to in this specification may be deemed to have been met, if compliance with the equivalent standards, given in table 1, is achieved.

9 Exemption Dates

All vehicles further introduced, that were excluded from any part of this Technical Regulation, shall comply with the applicable provisions, after the date of exclusion, specified in column 5 of the table of schedule 1, has been reached.

**COMPULSORY SPECIFICATION FOR
CATEGORY O₁ AND O₂ VEHICLES (CARAVANS AND LIGHT TRAILERS)**

SCHEDULE 1 Operative dates

| 1 | 2 | 3 | 4 | 5 |
|------------|---|---------------------------------|---|--------------------------|
| Subsection | Item | Operative date | Exclusions | Exclusion expiry date |
| | All subsections/items not referred to below | 2 months after final gazetting | Vehicle models homologated before the operative dates | 1 Jan 2006 |
| 3.1.1 | Lights to SANS 20003 SANS 20004 SANS 20006 SANS 20007 SANS 20023 SANS 20037 SANS 20091 | 12 months after final gazetting | | |
| 3.1.2 | Lighting to SANS 20048 | 12 months after final gazetting | | |
| 3.3 | Brakes and braking equipment to SANS 20013 | 12 months after final gazetting | | |
| 3.5.1 | Coupling devices to SANS 20055 | 6 months after final gazetting | | |

**COMPULSORY SPECIFICATION FOR
CATEGORY O₁ AND O₂ VEHICLES
(CARAVANS AND LIGHT TRAILERS)**

Table 1 □ Equivalent standards

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|--------------------------|---|------|--------|-----------------------------------|---------------|-----------|
| Subsection | Item | SANS No. | Date | EEC | | ECE | Other |
| | | | | Base | Amdts (up to and including) | | |
| 3.1.1 | Lights | 20003 | 1996 | 76/757 | 97/29 | R3.02 | |
| | | 20004 | 1997 | 76/760 | 97/31 | R4 | |
| | | 20006 | 2003 | 76/759 | 99/15 | R6.01 | |
| | | 20007 | 2002 | 76/758 | 97/30 | R7.02 | |
| | | 20023 | 1992 | 77/539 | 97/32 | R23 | |
| | | 20037 | 2002 | 76/761 | 99/17 | R37.03 | |
| | | 20091 | 1993 | 76/758 | 97/30 | R91 | |
| 3.1.2 | Lighting | 20048 | 1994 | 76/756 | 97/28 | R48.02 | |
| 3.2 | Safety glass | 1191 | 1997 | 92/22 | | R43 | |
| | | 1192 | 1994 | 92/22 | | R43 | |
| | | 1193 | 2001 | 92/22 | | R43 | |
| 3.3 | Braking | 20013 | 1996 | 71/320 | 98/12 | R13.08 | |
| 3.4 | Electrical connectors | 11446 | 1995 | | | | ISO 11446 |
| | | 12098 | 1994 | | | | ISO 12098 |
| 3.5.1 | Coupling devices | 20055 | 2003 | | | R55.01 | |
| 4.2.2 | VIN number | 3779 | 1983 | | | | ISO 3779 |
| | | 4030 | 1983 | | | | ISO 4030 |
| 4.4 | Tyres | Compulsory specifications for pneumatic tyres | 2001 | 92/23 | 01/43 | R30.02 R54 | |