

Compulsory Specification for

## **Agricultural tractors**

Published by Government Notice R. 209 (Government Gazette 26014)  
of 20 February 2004

ICS 43.080.99; 53.060

**VC 8057**  
Ed. 2



---

**GOVERNMENT NOTICES**  
**GOEWERMENSKENNISGEWINGS**

---

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

**No. R. 209**

**20 February 2004**

**STANDARDS ACT, 1993**

**WITHDRAWAL OF THE COMPULSORY SPECIFICATION FOR SLOW SPEED VEHICLES AND  
REPLACEMENT WITH THE COMPULSORY SPECIFICATION FOR AGRICULTURAL TRACTORS**

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 Slow Speed Vehicles, 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 AGRICULTURAL TRACTORS

#### 1 Scope

**1.1** This specification covers the requirements for agricultural tractors that have a maximum design speed not exceeding 40 km/h, and that have not previously been registered in South Africa.

**1.2** This specification does not apply to:

- a) experimental or prototype agricultural tractors that have been constructed or imported for the purpose of testing, assessment or development; and
- b) industrial tractors, earthmoving tractors and purpose-built forestry tractors.

**1.3** The relevant requirements of the specification that take effect on any specified date do not apply to agricultural tractors manufactured or imported before the operative date given in schedule 1 of this specification.

**1.4** 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/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

**agricultural tractor**

power-driven vehicle, either wheeled or track laying, which has at least two axles, and whose function depends essentially on its tractive power, and that is specially designed to pull, push, carry or actuate certain implements, machines or trailers intended for use in agriculture

##### 2.2

**importer**

person who, for the purpose of selling agricultural tractors, imports new or used agricultural tractors into South Africa

##### 2.3

**manufacturer**

person who makes, produces, assembles, alters, modifies or converts an agricultural tractor, and "manufacture" has a corresponding meaning

##### 2.4

**maximum design speed**

average speed measured in accordance with annex A

##### 2.5

**model**

manufacturer's description for a series of agricultural tractor designs that do not differ in respect of body, chassis structure or the number of axles

NOTE The Regulatory Authority reserves the right to decide which variations or combinations of variations constitute a different model, and may also take cognizance of the classification system applied in the country of origin of the design.

The following variations do not necessarily constitute a new model:

- a) a variant in relation to trim or optional features for which compliance has been fully demonstrated;
- b) different engine capacity and transmission combinations, including petrol and diesel engines, and manual and automatic transmissions;
- c) wheelbase variations; and
- d) a number of configurations such as cab enclosures, roll-over protection, open-station operator's platforms, two-wheel drive and mechanical front-wheel drive

## 2.6

### regulatory authority

organization appointed by the Minister of the Department of Trade and Industry to implement this specification on behalf of the South African Government

## 3 General requirements

### 3.1 Requirements for lights and lighting equipment

#### 3.1.1 Lights

Lights fitted to an agricultural tractor shall comply with the relevant requirements of the following standards:

SANS 20001/ECE R1 (SABS ECE R1), *Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam and/or a driving beam and equipped with filament lamps of categories R2 and/or HS1.*

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

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

SANS 20005/ECE R5 (SABS ECE R5), *Uniform provisions for the approval of motor vehicle "sealed beam" headlamps (SB) emitting a European asymmetrical passing beam or a driving beam or both.*

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

SANS 20007/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 20008/ECE R8 (SABS ECE R8), *Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (H1, H2, H3, HB3, HB4, H7, H8, H9, HIR1 and/or HIR2).*

SANS 20020/ECE R20 (SABS ECE R20), *Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (H4 lamps).*

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

SANS 20031/ECE R31 (SABS ECE R31), *Uniform provisions concerning the approval of halogen sealed-beam unit (HSB unit) motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both.*

SANS 20037/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), *Uniform provisions concerning the approval of side-marker lamps for motor vehicles and their trailers.*

### **3.1.2 Lighting**

**3.1.2.1** An agricultural tractor shall be fitted with

- a) dipped-beam headlights,
- b) direction indicators,
- c) hazard warning lights,
- d) rear position lights, and
- e) rear retroreflectors.

**3.1.2.2** The lights and retroreflectors listed in 3.1.2.1 shall be so fitted to an agricultural tractor that they comply with the relevant requirements given in SANS 20086/ECE R86 (SABS ECE R86), *Uniform provisions concerning the approval of agricultural or forestry tractors with regard to the installation of lighting and light-signalling devices*, provided that:

- a) the dipped-beam headlamps shall have sufficient inclination to comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996);
- b) the height of rear retroreflectors shall not exceed 2 100 mm; and
- c) the height of the lamps shall not exceed 3 500 mm.

**3.1.2.3** Where an agricultural tractor is fitted with lights that are not listed in 3.1.2.1, their installation shall comply with the relevant requirements given in the said SANS 20086/ECE R86 (SABS ECE R86), provided that the maximum height for all lamps other than

- a) end-outline marker lamps,
- b) rear registration plate lamps,
- c) reversing lamps, and
- d) main-beam headlamps,

shall be increased to 3 500 mm.

## **3.2 Requirements for rear-view mirrors (if fitted)**

### **3.2.1 General requirements for rear-view mirrors**

**3.2.1.1** Where an agricultural tractor is equipped with one exterior rear-view mirror, the mirror shall be fitted to the right-hand side of the tractor.

**3.2.1.2** The exterior rear-view mirror shall be placed so that the driver, when sitting on the driver's seat in the normal driving position, has a clear view of that part of the road as defined under the field of vision (3.2.1.6).

**3.2.1.3** Exterior rear-view mirrors shall not protrude more than 0,20 m on either side of the longitudinal plane of the agricultural tractor, beyond the overall width of the tractor, measured without the rear-view mirrors.

**3.2.1.4** Subject to 3.2.1.3, exterior rear-view mirrors may protrude beyond the permissible maximum width of 2,5 m.

**3.2.1.5** Rear-view mirrors shall be adjustable.

**3.2.1.6** The field of vision of the right-hand exterior rear-view mirror shall be such that the driver can see, at least as far as the horizon, that part of the road to the rear.

**3.2.1.7** Rear-view mirrors shall be fitted in such a way that they remain steady during normal driving conditions.

### **3.2.2 Specific requirements for rear-view mirrors**

Rear-view mirrors shall comply with the relevant requirements for class I and class II mirrors given in SANS 20046/ECE R46 (SABS ECE R46), *Uniform provisions concerning the approval of rear-view mirrors, and of motor vehicles with regard to the installation of rear-view mirrors.*

## **3.3 Requirements for windscreens, windows and partitions (where fitted)**

### **3.3.1 Windscreens**

**3.3.1.1** If a windscreen is fitted to an agricultural tractor, it shall be of safety glass that complies with the relevant requirements given in SANS 1191 (SABS 1191), *Safety glass for vehicles - High penetration-resistant laminated safety glass for vehicles*, or SANS 1193 (SABS 1193), *Toughened safety glass for vehicles*.

**3.3.1.2** For the purposes of this specification, the marking requirements shall be as follows:

- a) the windscreen shall bear the glass manufacturer's registered trade mark; and
- b) the glass fitted shall comply with an approved national standard, recognized by the Regulatory Authority, which shall provide a method of identifying the glass type.

### **3.3.2 Windows and partitions**

**3.3.2.1** Glass partitions and glass windows fitted to an agricultural tractor shall comply with the relevant requirements given in the said SANS 1191 (SABS 1191) or SANS 1193 (SABS 1193).

**3.3.2.2** For the purposes of this specification, the marking requirements shall be as follows:

- a) the glass shall bear the glass manufacturer's registered trade mark; and
- b) the glass fitted shall comply with an approved national standard, recognized by the Regulatory Authority, which shall provide a method of identifying the glass type.

**3.3.2.3** Excluding those windows to the immediate right and to the immediate left of the driver, which shall be as in 3.3.2.1 and 3.3.2.2, windows and partitions of plastics material may be fitted and shall comply with SANS 1472 (SABS 1472), *Plastics safety glazing materials for motor vehicles*.

### **3.4 Requirements for windscreen wipers**

Windscreens shall be fitted with at least one windscreen wiper that is capable of operation by means other than manual operation, and the windscreen wiper blade, when in operation, shall effectively wipe the outside of the windscreen directly in front of the drivers' forward line of vision.

### **3.5 Requirements for brakes and braking equipment**

An agricultural tractor shall be fitted with braking equipment that complies with SANS 1447-1 (SABS 1447-1), *Braking (motor and towed vehicles, designed for low speed or for use off public roads) – Part 1: Low speed vehicles*.

### **3.6 Requirements for controls**

**3.6.1** All controls that are fitted to an agricultural tractor, and that are required for the operation of the vehicle on a public road, shall be so located that the driver can reach and operate them when he/she is in the normal driving position, with the seat belt fastened (if a seat belt is fitted).

**3.6.2** An agricultural tractor shall be of a right-hand drive configuration, except as in 3.6.3.

**3.6.3** An agricultural tractor may have a central steering configuration.

### **3.7 Requirements for emergency exits**

If an agricultural tractor is fitted with a canopy or a roll-over protection structure (ROPS), there shall be a means of exit (either a door or a window) such that the driver and passenger(s) (if any) can escape when the tractor is lying on either of its two sides.

### **3.8 Requirements for roll-over protection structures**

If an agricultural tractor is fitted with a roll-over protection structure, such structure shall comply with the relevant requirements given in SANS 1468 (SABS 1468), *Roll-over protection structures for wheeled agricultural or forestry tractors (static testing)*, and shall be indelibly and visibly marked as such by the letters ROPS.

## **4 Requirements for the control of environmental interference and pollution**

### **4.1 Suppression of radio and television interference**

An agricultural tractor and its components, accessories or equipment shall comply with the current applicable regulations relating to interference with communications, promulgated under the Telecommunications Act, 1996 (Act 103 of 1996).

### **4.2 Suppression of atmospheric pollution**

**4.2.1** The exhaust emission from the engine of an agricultural tractor shall be such as to comply with the current applicable regulations promulgated under the Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965).

**4.2.2** The exhaust emission from the engine of an agricultural tractor shall comply with SANS 20096/ECE R96, *Uniform provisions concerning the approval of compression ignition (C.I.) engines to be installed in agricultural and forestry tractors and in non-road mobile machinery with regard to the emissions of pollutants by the engine*, equivalent to ECE R96 up to and inclusive of the 01 series of amendments that came into force on 16 September 2001.



### 4.3 Suppression of noise emission

With the exception of noise emission originating from audible warning devices, any noise emitted by an agricultural tractor, when measured in accordance with SANS 10205 (SABS 0205), *The measurement of noise emitted by motor vehicles in motion*, shall not exceed the following levels:

- a) for tractors having an unladen mass exceeding 1,75 tons: 89 dB; and
- b) for tractors having an unladen mass not exceeding 1,75 tons: 85 dB.

## 5 Requirements concerning metrological data

### 5.1 Dimensions

The dimensions of an agricultural tractor shall comply with the requirements of the applicable regulations promulgated under the National Road Traffic Act, 1996 (Act 93 of 1996).

### 5.2 Information plates

#### 5.2.1 Data plates

5.2.1.1 An agricultural tractor shall have a metal data plate or plates affixed by rivets or by welding or by any other method that will achieve similar permanency of attachment during the life of the tractor. The data plate(s) shall be affixed in a conspicuous position, to a door or post, to a panel in the engine compartment, to the dash panel or in the tractor cab.

5.2.1.2 As an alternative to 5.2.1.1, a data plate may be a self-adhesive, tamper-proof label which

- a) is clearly legible,
- b) is not transferable from one tractor to another, and
- c) undergoes permanent and obvious damage on removal.

The self-adhesive, tamper-proof label shall be resistant to engine oils, engine coolants, normal engine temperatures and humidity. In addition, it shall have permanency characteristics similar to those of a metal plate.

5.2.1.3 The data plates required in terms of 5.2.1.1 and 5.2.1.2 shall be legibly and permanently imprinted or stamped with the following information:

- a) the gross vehicle mass, in kilograms, for the model type, denoted and prefixed by the letters GVM/BVM;
- b) the gross combination mass, in kilograms, for the model type, denoted and prefixed by the letters GCM/BKM;
- c) the type of brakes:
  - 1) unbraked;
  - 2) inertia brakes;
  - 3) independent brakes; or
  - 4) hydraulic/pneumatic brakes;

- d) the gross axle mass-load of each axle, or gross axle unit mass-load of each axle unit, in kilograms, for the model type, denoted and prefixed by the letters GA/BA or GAU/BAE, as applicable;
- e) the net power, in kilowatts, prefixed by the letters P/D, determined in accordance with SANS 10013-3 (SABS 013-3), *The determination of performance (at net power) of internal combustion engines – Part 3: Agricultural vehicle internal combustion engines at sea level*;
- f) the manufacturer's design intent, denoted by the wording "For public road operation" or "Not for public road operation"; and
- g) the manufacturer's design speed, in kilometres per hour.

**5.2.1.4** The abbreviations given in 5.2.1.3(a), 5.2.1.3(b) and 5.2.1.3(c) are not required if the information is supplied in the following order:

- a) gross vehicle mass;
- b) gross combination mass;
- c) the type of brakes:
  - 1) unbraked;
  - 2) inertia brakes;
  - 3) independent brakes; or
  - 4) hydraulic/pneumatic brakes; and
- d) gross axle masses, in the order front to rear.

### **5.2.3 Engine number**

The requirements for the engine number of an agricultural tractor shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

### **5.2.4 Provision for registration**

Suitable space shall be provided on the data plate(s) for the following:

- a) T . . . kg (for the tare);
- b) V . . . kg (for the permissible maximum vehicle mass);
- c) A . . . kg or AU/AE . . . kg, as applicable (for the permissible axle mass-load of each axle or the permissible axle unit mass-load of each axle unit); and
- d) D/T . . . kg (for the permissible drawing vehicle mass).

NOTE The responsibility for marking this information on the data plate(s) rests with the final MIB.

### **5.2.5 Identification number (VIN)**

**5.2.5.1** The identification number of an agricultural tractor shall comply with the relevant requirements given in SANS 3779/ISO 3779 (SABS ISO 3779), *Road vehicles – Vehicle identification number (VIN) – Content and structure*. However, the requirements for marking the VIN, as given in clause 5 of SANS 4030:1983/ISO 4030 (SABS ISO 4030), *Road vehicles – Vehicle identification number (VIN) – Location and attachment*, shall, for the purposes of this specification, be taken to read as set out in 5.2.5.2 to 5.2.5.4.

**5.2.5.2** The VIN shall be marked directly on the tractor platform or on a data plate permanently fixed to the platform or on a part of the tractor that is not easily removed or replaced.

**5.2.5.3** The VIN shall also be marked on the data plate.

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

- at least 7 mm, if marked in accordance with 5.2.5.2 (frame, body, etc.) on motor vehicles and trailers; and
- at least 3 mm, if marked in accordance with 5.2.5.3 (data plate).

### **5.3 Measuring units**

All gauges, indicators or instruments that are fitted to an agricultural tractor and are calibrated in physical units, 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).

## **6 Requirements for equipment, components and systems**

### **6.1 Speedometers**

Where a speedometer is fitted to an agricultural tractor, it shall have an accuracy of 15 % of the speed measured. If a speedometer is not fitted to an agricultural tractor that is capable of exceeding a speed of 25 km/h, a notice, in indelible form, that gives the maximum speed of the tractor in the highest gear, shall be affixed in a position where it is easily visible to the driver when he is in the normal driving position.

### **6.2 Engine**

The engine of an agricultural tractor shall be provided with a cover such that any part that constitutes a source of danger is out of the normal reach of a person.

### **6.3 Transmission**

An agricultural tractor, the tare of which exceeds 570 kg, shall be equipped with a transmission that enables it to be controlled and driven in both a forward and a reverse direction.

### **6.4 Tyres**

The tyres fitted to the wheels of an agricultural tractor shall comply with SANS 1550-6 (SABS 1550-6), *Motor vehicle tyres and rims – Dimensions and loads – Part 6: Agricultural vehicle tyres*, and shall conform to the required dimensions and loads compatible with the specified or permitted rims in the case of pneumatic tyres for agricultural tractors. Where non-pneumatic tyres are used, these shall comply with the relevant regulations of the National Road Traffic Act, 1996 (Act 93 of 1996).

## **7 Proof of compliance**

Homologation shall comprise the confirmation by the Regulatory Authority that the manufacturer or importer has provided the following specific evidence in respect of the commodity covered by this specification:

- a) a summary of evidence that shows that all the relevant tests have been conducted with successful results under appropriate controls in respect of the model or variant of the commodity;

- b) sufficient data to enable a relevant model or variant, and its components to be identified and related to (a) above;
- c) relevant samples for the conducting of whatever tests and inspections 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 manufacturer or importer; and
- e) when relevant, documentation to advise subsequent manufacturers or importers of incomplete commodities of their responsibilities.

The Regulatory Authority may issue such confirmation, on application, in respect of new models or variants, provided that such confirmation is not 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.

## **8 Equivalent requirements**

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

**PROPOSED COMPULSORY SPECIFICATION FOR  
AGRICULTURAL TRACTORS****SCHEDULE 1 — Operative dates**

1	2	3	4	5
Sub-section	Item	Operative date	Exclusions	Exclusion expiry date
	All subsections/items not referred to below	2 months after final gazetting	Nil	
4.2	Emission to SANS 20096	2 years after final gazetting of this specification	Agricultural tractor models Homologated prior to the operative date	3 years after the operative date

## PROPOSED COMPULSORY SPECIFICATION FOR AGRICULTURAL TRACTORS

**Table 1 — Equivalent standards**

1	2	3	4	5	6	7
Sub-section	Item	SANS No.	Equivalent standards			
			EU (EEC) directive (Base doc)	EU (EEC) directive amdts (up to and including)	ECE	Others
3.1.1	Lights	20001 20003 20004 20005 20006 20007 20008 20020 20023 20031 20037 20091	76/761 76/757 76/760  76/759 76/758  76/761 77/539 76/761  76/758	99/17 97/29 97/31  99/15 97/30  99/17 97/32 99/17  97/30	R1 R3 R4 R5 R6 R7 R8 R20 R23 R31 R37 R91	
3.1.2	Lighting	20086	78/933	99/56	R86	
3.2.2	Rear-view mirrors	20046	71/127	88/321	R46	
3.3	Windscreens, windows and partitions	1191 1193	92/22 92/22		R43 R43	
3.5	Braking	1447-1	76/432 74/152	397L.0054 98/89		
3.8	Roll-over protection	1468	79/622	82/953		
4.1	Radio interference	Telecommunications Act			R10 01 series	
4.2.2	Atmospheric pollution	20096			R96 01 series	
4.3	Noise when in motion	10205	81/334	99/101	R51	
5.2.1	Data plates		76/114	78/507		
5.2.1.3(e)	Engine net power	10013-3	80/1269	99/99	R85	
5.2.5	VIN	3779 4030				ISO 3779 ISO 4030
6.4	Tyres	National Road Traffic Act			R106	

## **Annex A**

(normative)

### **Determination of maximum design speed**

**A.1** Determine the maximum design speed in accordance with annex A of the said SANS 1447-1:2002 (SABS 1447-1).

**A.2** In order to take account of various unavoidable errors due, in particular, to the measuring technique and to the increase in running speed of the engine with a partial load, a measured speed exceeding the value for the maximum design speed by 10 % shall be acceptable.