

COUNCIL DIRECTIVE

of 20 May 1975

on the approximation of the laws of the Member States relating to the steering equipment of wheeled agricultural or forestry tractors

(75/321/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament ⁽¹⁾;

Having regard to the Opinion of the Economic and Social Committee ⁽²⁾;

Whereas the technical requirements with which tractors must comply pursuant to national laws relate, *inter alia*, to steering equipment;

Whereas these requirements differ from one Member State to another; whereas it is therefore necessary that all Member States adopt the same requirements either in addition to or in place of their existing rules in order, in particular, to allow the EEC type approval procedure which was the subject of Council Directive 74/150/EEC ⁽³⁾ of 4 March 1974 on the approximation of the laws of the Member States relating to the type approval of wheeled agricultural or forestry tractors to be applied in respect of each type of tractor,

HAS ADOPTED THIS DIRECTIVE :

Article 1

1. 'Agricultural or forestry tractor' means any motor vehicle fitted with wheels or caterpillar tracks and having at least two axles, the main function of which lies in its tractive power and which is specially designed to tow, push, carry or power certain tools, machinery or trailers intended for agricultural or forestry use. It may be equipped to carry a load and passengers.

2. This Directive shall apply only to tractors defined in the preceding paragraph which are fitted with pneumatic tyres and which have two axles and a maximum design speed of between 6 and 25 kilometres per hour.

Article 2

No Member State may refuse to grant EEC type approval or national type approval of a tractor on grounds relating to the steering equipment if this satisfies the requirements set out in the Annex.

Article 3

No Member State may refuse the registration or prohibit the sale, entry into service, or use of tractors on grounds relating to the steering equipment if this satisfies the requirements set out in the Annex.

Article 4

The amendments necessary for adapting the requirements of the Annex to technical progress shall be adopted in accordance with the procedure laid down in Article 13 of Directive 74/150/EEC.

Article 5

1. Member States shall bring into force the provisions necessary in order to comply with this Directive within 18 months of its notification and shall forthwith inform the Commission thereof.

2. Member States shall ensure that the texts of the main provisions of national law which they adopt in the field covered by this Directive are communicated to the Commission.

Article 6

This Directive is addressed to the Member States.

Done at Brussels, 20 May 1975.

For the Council

The President

R. RYAN

⁽¹⁾ OJ No C 160, 18. 12. 1969, p. 29.

⁽²⁾ OJ No C 48, 16. 4. 1969, p. 21.

⁽³⁾ OJ No L 84, 28. 3. 1974, p. 10.

ANNEX

1. DEFINITIONS

1.1. 'Steering equipment'

'Steering equipment' means all the equipment the purpose of which is to alter the direction of movement of the tractor.

The steering equipment may be considered to include:

- the steering control;
- the steering gear;
- the steered wheels;
- where applicable, special equipment to produce additional or independent power.

1.1.1. 'Steering control'

'Steering control' means the part directly operated by the driver in order to steer the tractor.

1.1.2. 'Steering gear'

'Steering gear' means all the components between the steering control and the steered wheels, with the exception of the special equipment referred to in 1.1.4. The steering gear may be mechanical, hydraulic, pneumatic, electric or a combination of any of these.

1.1.3. 'Steered wheels'

'Steered wheels' means:

- the wheels the alignment of which may be altered directly or indirectly in relation to that of the tractor in order to obtain a change in the direction of movement of the tractor;
- all wheels of articulated tractors;
- wheels on the same axle, the speed of which may be varied in order to obtain a change in the direction of movement of the tractor.

Self-tracking castor wheels are not steered wheels.

1.1.4. 'Special equipment'

'Special equipment' means that part of the steering equipment by which additional or independent power is produced. Additional or independent power may be produced by any mechanical, hydraulic, pneumatic or electrical system, or by any combination of these (for example by an oil pump, air pump or battery, etc.).

1.2. 'Different types of steering equipment'

1.2.1. Depending on the source of power which is necessary for the deflection of the steered wheels, the following types of steering equipment are identified:

1.2.1.1. *Manual steering equipment*, in which the steering power is provided solely by the muscular power of the driver;

- 1.2.1.2. *Assisted steering equipment*, in which the steering power is provided both by the muscular power of the driver and by the special equipment referred to in 1.1.4;

Steering equipment where the steering power is normally provided solely by the special equipment referred to in 1.1.4, but which in the event of failure of the special equipment enables the muscular power of the driver to be used for steering, shall be considered as 'assisted steering equipment'.

- 1.2.1.3. *Servo-steering equipment*, in which the steering power is provided solely by the special equipment referred to in 1.1.4.

1.3. Steering effort

'Steering effort' means the force exerted by the driver on the steering control in order to steer the tractor.

2. CONSTRUCTION, FITTING AND INSPECTION REQUIREMENTS

2.1. General requirements

- 2.1.1. The steering equipment must ensure easy and safe handling of the tractor and must comply with the detailed requirements set out in 2.2.

2.2. Detailed requirements

2.2.1. *Steering control*

- 2.2.1.1. The steering control must be easy to use and grip. It must be designed in such a way as to permit gradual deflection. The direction of movement of the steering control must correspond to the desired change in the direction of the tractor.

- 2.2.1.2. The steering effort required to achieve a turning circle of 12 m radius, starting from the straight ahead position, must not exceed 25 daN. In the case of assisted steering equipment, if the auxiliary power supply fails the steering effort required must not exceed 60 daN.

- 2.2.1.3. In order to check compliance with the requirement in 2.2.1.2, the tractor shall describe a spiral movement at a speed of 10 kilometres per hour, starting from the straight ahead position, on a dry, flat road surface offering good tyre adhesion. The steering effort on the steering control shall be noted until it reaches the position corresponding to the tractor entering a turning circle of 12 m radius. The duration of the manoeuvre (time between the moment when the steering control is first operated and the moment when it reaches the position where the measurements are taken) must not exceed five seconds in normal cases and eight seconds if the special equipment fails. One manoeuvre must be made to the left and one to the right.

For the test, the tractor must be loaded to its technically permissible maximum weight; tyre pressures and weight distribution between the axles must conform to the manufacturer's instructions.

2.2.2. *Steering gear*

- 2.2.2.1. The steering equipment may not include either electrical or wholly pneumatic steering gear.

- 2.2.2.2. The steering gear must be so designed as to meet any operational requirements. It must be easily accessible for maintenance and inspection.

- 2.2.2.3. In the case of steering gear which is not wholly hydraulic, it must be possible to drive the tractor even in the event of failure of the hydraulic or pneumatic components of the steering gear.

- 2.2.2.4. Steering gear which is operated purely hydraulically and the special equipment mentioned in 1.1.4, must meet the following requirements:
- 2.2.2.4.1. One or more pressure limitation devices must protect the whole or part of the circuit against excess pressure;
- 2.2.2.4.2. The pressure limitation devices must be set so as not to exceed a pressure T equal to the maximum operating pressure stated by the manufacturer.
- 2.2.2.4.3. The characteristics and dimensions of the pipe work must be such that the pipes withstand four times the pressure T (permitted by the pressure limitation devices), and must be protected in places and arranged in such a way that the risks of damage by impact or interference are reduced to a minimum, and the risks of damage by rubbing can be considered negligible.
- 2.2.3. *Steered wheels*
- 2.2.3.1. All the wheels may be steered wheels.
- 2.2.4. *Special equipment*
- 2.2.4.1. The special equipment defined in 1.1.4, used in the types of steering equipment defined in 1.2.1.2 and 1.2.1.3, shall be acceptable in the following circumstances:
- 2.2.4.1.1. If the tractor is equipped with assisted steering equipment as defined in 1.2.1.2, it must be possible to drive it even in the event of failure of the special equipment as already stated in 2.2.1.2. If the assisted steering equipment does not have its own source of power, it must be fitted with a power reservoir. This power reservoir may be replaced by a self-contained device providing power supply to the steering equipment with priority over the other systems which are linked to the common energy source. The steering and braking systems must not have a common source of energy. If the source of power is compressed air, the air reservoir must be protected by a non-return valve.
- Where the steering power is normally provided solely by the special equipment referred to in 1.1.4, the assisted steering equipment must be fitted with a device such that if, in the event of failure of the special equipment, the steering effort exceeds 25 daN, a visual or acoustic signal must give warning of such failure.
- 2.2.4.1.2. If the tractor is fitted with servo-steering equipment as defined in 1.2.1.3, and provided that such equipment has a wholly hydraulic steering gear, it must be possible, should the special device fail, to carry out the two manoeuvres specified in 2.2.1.3 using a special additional device. The special additional device may be a compressed air or gas reservoir. An oil pump or compressor may be used as the special additional device if that device is worked by the rotation of the tractor wheels and cannot be disconnected from them. In the event of failure of the special equipment, a visual or acoustic signal must give warning of such failure.
- 2.2.4.1.2.1. If the special device is pneumatic, it must be fitted with a compressed air reservoir protected by a non-return valve. The capacity of the compressed air reservoir must be calculated so that at least seven complete turns (from lock to lock) are possible before the reservoir pressure falls to half its operating pressure; the test must be carried out with the steered wheels off the ground.
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