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**Tractors and machinery for agricultural and forestry -
Requirements of the lighting and light-signaling
devices**

农林拖拉机和机械 照明和光信号装置的要求

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Tractors and machinery for agricultural and forestry - Requirements of the lighting and light-signaling devices

1 Scope

This Standard specifies general requirements, main performance requirements, product inspection requirements, inspection and judgment rules for the lighting and light-signaling devices of tractors and machinery for agricultural and forestry.

This Standard is applicable to tractors and machinery for agricultural and forestry (hereinafter referred to as the tractor).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 4785, *Prescription for installation of the external lighting and light-signaling devices for motor vehicles and their trailers*

GB/T 10485, *Road vehicles - Lighting and light-signaling devices - Environmental endurance*

GB 11564, *Retro reflector for motor vehicles*

GB 18447.1, *Safety requirements for tractors - Part 1: Wheeled tractors*

GB 18447.2, *Safety requirements for tractors - Part 2: Walking tractors*

GB 18447.3, *Safety requirements for tractors - Part 3: Crawler tractors*

GB 18447.4, *Safety requirements for tractors - Part 4: Belt-drive wheeled tractors*

JB/T 6701, *Tractor - Headlight*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 tractors headlights

Lamps that provide high beam, or low beam, or far and low beam illumination of the road ahead of the tractor

3.2 main-beam headlight

lamps for lighting the long-distance road ahead of the tractor

3.3 dipped-beam headlight

lamps that illuminate the road ahead of the tractor and do not cause dazzling or discomfort to oncoming drivers and other road users

3.4 front position (side) lamp

lamps that indicate the presence and width of the tractor when viewed from the front of the tractor

3.5 rear position (side) lamp

lamps that indicate the presence and width of the tractor when viewed from the rear of the tractor

3.6 stop lamp

lamps to indicate to other road users behind the tractor that the tractor is braking

3.7 direction-indicator lamp

lamps used to indicate to other road users that the tractor will turn left or right

3.8 hazard-warning signal lamp

turn on all the turn signals on the tractor at the same time to draw the attention of other road users that the tractor temporarily has some special hazard

3.9 reflex reflector

it consists of one or more retro-reflection optical units and has retro-reflection function; a device that indicates the presence of the tractor to an observer located near the light source through reflected light from an external light source

A non-triangular retroreflector is a retroreflector whose shape is not triangular.

inspection items and sequence in Table 4.

5.3.2 After the stop lamp is installed on the tractor, turn on the stop lamp and rear position (side) lamp installed on the tractor separately. The luminous intensity of the stop lamp should be more than 5 times that of the rear position (side) lamp. The stop lamp and rear position (side) lamp are visually discernible at night at a distance of 150m directly behind the tractor.

5.4 Position lamp

5.4.1 The light distribution performance requirements of the front and rear position lamps shall comply with the provisions of the front position lamps and rear position lamps for agricultural and forestry tractors and machinery. Anti-environmental test and other requirements shall comply with the provisions of GB/T 10485. Carry out the inspection according to the inspection items and sequence in Table 4.

5.4.2 After the rear position lamp is installed on the tractor, turn on the rear position lamp and stop lamp installed on the tractor separately. The luminous intensity of the rear position lamp should be less than 1/5 of the luminous intensity of the stop lamp. The rear position lamp and stop lamp can be visually recognized at night at a distance of 150m directly behind the tractor.

5.5 Hazard-warning signal lamp

5.5.1 The light distribution performance requirements of hazard-warning signal lamp shall comply with the regulations of direction-indicator lamp for agricultural and forestry tractors and machinery. Anti-environmental test and other requirements shall comply with the provisions of GB/T 10485. Carry out the inspection according to the inspection items and order in Table 4.

5.5.2 After hazard-warning signal lamp is installed on the tractor, all direction-indicator lamps are turned on by individually configured switches and flash synchronously. The flash frequency should reach (1.5 ± 0.5) Hz. After starting the light signal switch, it should light up within 1.5s. Then flash at the specified frequency.

5.5.3 If the tractor has a trailer, the hazard warning signal control switch on the tractor should also control all direction-indicator lamps on the trailer. Even if the engine control device is in a situation where it cannot be restarted, it should be able to issue a hazard warning signal.

5.6 Reflex reflector

5.6.1 The shape, size, structure, chromaticity, photometric and anti-environmental test requirements of the reflex reflector shall comply with the requirements of GB 11564. Carry out according to the inspection items and

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