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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Tractors for agriculture and forestry - Devices for indirect vision
- Technical specification**

农林拖拉机 间接视野装置 技术规范

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1 Scope

This Standard specifies the definitions, performance requirements, installation requirements, test methods, inspection rules and marking, packaging, transportation and storage of rear-view mirrors for agricultural and forestry wheeled and crawler tractors.

This Standard applies to the agricultural and forestry wheeled and crawler tractors.

2 Normative references

ISO 5353

3 Terms

The following terms and definitions are applicable to this Standard.

3.1 Rear-view mirror

A device that is able to see the rear and side images of the tractor within the vision specified in 3.10.

3.2 Interior rear-view mirror

A device that meets the vision defined in 3.1 and is mounted in the tractor cab.

3.3 Exterior rear-view mirror

A device that meets the vision defined in 3.1 and is mounted on the outer surface of the tractor.

3.4 Class of rear-view mirror

Various rear-view mirrors with one or more common features or functions.

Class I is an interior rear-view mirror; and Class II is an exterior rear-view mirror.

3.5 Center of the mirror

The center of mass of the visible area on the reflecting surface.

3.6 Principal radius of curvature at one point obtained on the

reflecting surface (r_i , r_i') The radius of curvature measured by the instrument specified in 6.3.1 through the center of the reflecting surface, parallel to the line segment b of the mirror and perpendicular to the direction of the line. See 4.3.1.2 for the determination of line segment b .

3.7 Radius of curvature at one point on the reflecting surface (r_{pi})

Refer to the arithmetic mean value of the principal radius of curvature: Where:

r_{pi} - Radius of curvature at the i th point, in millimeters (mm);

r_i , r_i' - Principal radius of curvature measured in two mutually perpendicular directions at the i th point, in millimeters (mm).

3.8 Radius of curvature of the constituent parts of the rear-view mirror

(C) C refers to the radius of the arc of the curved shape of the components such as protective frame, support frame, and connecting member of the rear-view mirror.

3.9 Driver's ocular points

4.1.5 For the edge of the fixed hole or recess with a diameter or a maximum diagonal of less than 12mm on the rear-view mirror, if it has been rounded, the requirements for radius of curvature in 4.1.4 are not necessarily met.

4.1.6 The connection of the rear-view mirror to the tractor is designed to

ensure that the rear-view mirror is offset from the axis of rotation or the center of rotation in the direction of impact, or either of them, to form a cylinder with a radius of 50mm. The cylinder shall be cut at least to the surface portion to which the connector is attached.

4.1.7 For exterior rear-view mirrors, if the parts involved in 4.1.3, 4.1.4, and 4.1.5 are made of materials not greater than Shore hardness of A60, it is not necessary to meet the above requirements.

4.1.8 For interior rear-view mirrors, if the parts on the rear-view mirrors are made of materials less than Shore hardness of A50 and mounted on a steel support, the tests of 4.1.3 and 4.1.4 apply only to this support.

4.2.1 Under the illumination condition of 500 lx, when the mirror surface is viewed from the 45° direction at 500mm from the naked eye, there shall be no defects such as deformation, blur, streaks, bubbles, scratches, cracks and inclusions on the rear-view mirror surface.

4.2.2 Rubber parts shall not have obvious defects such as damages and cracks.

4.2.3 Plastic parts shall not have obvious defects such as fading, cracks, scratches and deformation.

4.3.1.1 Interior rear-view mirror (Class I)

It shall be possible to draw a rectangle with a base of a and a height of 40mm on the reflecting surface. The size a is calculated according to the Formula (2). Where:

4.4.3.2 The difference between r_{pi} ($rp1$, $rp2$ and $rp3$) value and r value of the radius of curvature at any point shall be no more than $0.15r$.

4.5.1 The reflectance value determined according to the method specified in

6.4 shall be not less than 40%. If the rear-view mirror has two working positions (daytime and nighttime), the color signal of road traffic shall be correctly recognized when it is in the daytime position, and the reflectance value at nighttime position shall be no less than 4%.

4.5.2 Except for long-term rear-view mirrors under extremely harsh weather

conditions, the reflectance shall meet the reflectance values specified in 4.5.1 during normal use.

4.6.1 The rear-view mirrors shall be subjected to an anti-impact test in

accordance with 6.5 and subjected to an anti-bending test in accordance with 6.6.

6.5 And the anti-bending test specified in 6.6, the reflecting surface shall not

be broken, but the following two conditions may be considered as meeting the requirements:

4.6.2.1 The shards of glass remain attached to the protective casing or to

objects that are firmly attached to the protective casing. The glass is allowed to partially detach from the above portion, but the length of any side of the rupture shall not exceed 2.5mm. At the point of impact, small shards are allowed to detach from the above portion.

4.6.2.2 The reflecting surface is made of safety glass.

4.6.3 For the rear-view mirror attached to the windshield glass, if the

support member of the rear-view mirror is damaged during the impact test, the residual part of the protruding base shall be no more than 10mm, and the shape shall still meet the requirements of 4.1.4 and 4.6.2.

4.7 Vibration resistance

When the vibration resistance of the rear-view mirror is tested in accordance with the provisions of 6.7, each component shall be free from deformation, damage, or detachment, which may affect its function. The mirror direction shall be kept in the original normal operation position.

5.2.1 The position of the exterior rear-view mirror shall be such that the

driver can clearly see the vision defined in 5.4 when sitting in the seat while driving normally.

5.2.2 The rear-view mirror shall be visible from the part of the windshield

wiper that is not operating, or from the side window of the tractor (if installed).

5.2.3 In the case of the maximum operation mass of the tractor, if the bottom edge of the rear-view mirror is less than 2m from the ground, the installation protrusion of the rear-view mirror shall be no more than 0.20m of the total width of the tractor.

5.3.1 The interior rear-view mirror shall enable the driver to make

adjustments at the driving position.

5.3.2 The exterior rear-view mirror shall enable the driver's arm to make

adjustments by extending out of the tractor or outside the window.