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

GB/T 21956.4-2009

**The strength testing method and accepting condition of protective
structures on narrow-track wheeled agricultural and forestry tractors --
Part 4: Dynamic testing method of rear mounted ROPS
(English Translation)**

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Foreword

GB/T 21956 "narrow-track wheeled agricultural and forestry tractors guard strength test method and acceptance conditions" is divided into four parts.

- Part 1. Static testing method of front mounted;
- Part 2. Pre Dynamic testing method;
- Part 3. Static testing method of rear;
- Part 4. Rear dynamic test methods.

This section GB/T Part of 421,956.

The partial modification of the Standard Rules on the use of tests of agricultural and forestry tractors Official rules of the organization (OECD) 2005 enacted 7OECD Code7.2005 "narrow - track wheeled agricultural and forestry tractors - Rear-mounted roll-over protective strength testing method" in the dynamic test section.

Wherein the same parts of the contents of the corresponding standards, citing the appropriate standards in place in China.

According to this section OECDCode7.2005 redrafted.

For ease of use, this section made the following editorial changes.

--- "The Rules" be replaced by "this section";

"," --- With a decimal point instead of a comma as the decimal point, "";

--- Modify the standard name.

This section of Appendix A normative appendix.

This part is proposed by China Machinery Industry Federation.

This part of the National Standardization Technical Committee under the jurisdiction of the tractor.

This section drafted by. National Tractor Quality Supervision and Inspection Center.

1 Scope

GB/T 21956 provisions of this part of the dynamic test methods for agriculture, forestry narrow track wheeled tractors - Rear-mounted guards and inspection Closing conditions.

This section GB/T 21956 is applicable to a pneumatic tire tractor two shafts, ground clearance is not its lowest point of front and rear axles to 600mm; on the front or rear wheels fitted with tires of a larger size, whether it is fixed or adjustable track width, which should be less than the minimum tread 1150mm; tractor idling quality (including the largest tire and guards provided by the manufacturer) is greater than 600kg, such as two-way travel trailer While drawing machine should be less than 3000kg.

2 Normative references

The following documents contain provisions which, through reference GB/T 21956 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest

versions apply to this section.

GB/T 700 carbon structural steel (GB/T 700-2006, ISO 630:1995, Structural steels-Plates, wide flats, bars, sections and profiles, NEQ) GB/T 6236 Tractors and machinery for agriculture and forestry seat landmarks (GB/T 6236-2008, ISO 5353:1995, Earth-moving machinery, and tractors and machinery for agricultural and forestry-Seat index point, MOD) GB/T 6960.7 Tractor terminology - Part 7. Cab, seat and cover

3 Terms and Definitions

GB/T 6960.7 and established the following terms and definitions apply to this part of the GB/T 21956 of.

At least self-propelled wheeled or tracked vehicles both axes, designed mainly for the following basic agricultural and forestry purposes.

--- Tractor trailer;

--- Carrying, pulling or pushing agricultural and forestry machinery or equipment, and according to need, or traveling in a tractor parked state is supporting Powered equipment.

3.2.1

The basic definition. the wheel center plane Wheel center plane is two away from the outer circumference of the rim plane equidistant plane.

3.2.2 Tread

Vertical plane through the wheel axis line of intersection with the wheel center plane of the support plane turned at one point, if A and B points are tractor 2.2 wheels on the same axis so defined, the wheelbase is the distance between point A and point B is. This definition applies to the front and rear wheels. Correct Double wheels, two pairs wheelbase is the distance between the wheel center plane.

3.2.3 Additional definition. tractor center plane

The tractor rear axle A and B points raised outermost limit position (which gives the maximum wheel base), and AB line perpendicular to the vertical midpoint Straight plane is the central plane of the tractor.

Obtained by the above definition of two straight lines AB (one for the front line, a line for the rear wheel) as two perpendicular planes, namely two wheelbase the distance between the planes.

4 Units and measurement tolerances

Linear dimensions. $\pm 3\text{mm}$ Except for the following dimensions.

--- Tire deformation $\pm 1\text{mm}$

--- Pendulum drop height of $\pm 1\text{mm}$ Quality. $\pm 1\%$ Load. $\pm 2\%$ Angle. $\pm 2^\circ$

5 Symbol

B tractor outline the minimum width in millimeters (mm) B6 guard maximum outline width in millimeters (mm) the amount of deformation D guards at the impact point, in millimeters (mm) D 'is reached the theoretical amount of deformation energy of the guard, in millimeters (mm) Fv crushed vertical force in Newtons (N) H pendulum drop height, in millimeters (mm) H 'falling height when additional testing of the pendulum, in millimeters (mm) I centerline of the rear axle tractor reference moment of inertia about, nothing to do with the quality of the rear axle, in kilograms meters ($\text{kg} \cdot \text{m}^2$) Tractor reference wheelbase L, in millimeters (mm) Mt Tractor reference mass during strength test, as defined by the 6.5, in kilograms (kg)

6 Test preparation, tractors and guards

6.1

according to GB/T 6236 to determine the position of the driver's seat landmarks.

6.2

protective device according to the technical specifications for mass production, the method according to the manufacturer's fixed on supporting the tractor.

6.3

tractor (or pilot plant) should be installed on all production components which may affect the strength or intensity of protective devices necessary for the test; can You can invade shelter area components should be installed to the tractor (or test device), in order to check whether these components meet acceptance 9.2 condition.

6.4

strength test, remove all trim and detachable non-structural components.

6.5 Tractor reference mass

For calculating the height of the pendulum fall and crush force reference mass Mt at least for the quality of the tractor, excluding optional accessories, but we want to include Coolant, fuel, lubricants and guards brought tools. Tractor mass does not include the front and rear optional counterweight, tire weight, and other farm machinery His special parts.