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PEOPLE'S REPUBLIC OF CHINA**

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**Motorcycles -- Measurement method for location of centre of
gravity**

摩托车重心位置的测量方法

(English Translation)

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Foreword

This revised standard adopts the International Standard ISO 9130:2005 "Measurement motorcycle center of gravity position" (in English).

This standard is based on ISO 9130:2005 redrafted. Listed in Appendix A of this standard reg number and ISO 9130:2005 reg Control list numbered.

Taking into account China's national conditions, adopting ISO 9130:2005, the standard of this made some changes, given these technical in Appendix B List of differences and the reasons for the reference.

For ease of use, for the ISO 9130:2005 This standard also made the following editorial changes.

- a) Remove the ISO 9130:2005 Foreword and Introduction;
- b) increasing the symbol explanation PKF, PKR in 5.1.2.2 formula wherein;
Increasing the symbol explanation PKL, PKR in 5.1.3.2 formula wherein;
- c) Information Appendix C in Table C. 1 adds gravity position measurement method motorcycle horizontal plane and the center of gravity position 2 Motorcycle high center of gravity position measurements.

The Standard Appendix A, Appendix B, Appendix C are informative appendices.

This standard was proposed by the National Development and Reform Commission.

This standard by the National Automotive Standardization Technical Committee.

This standard was drafted. Longxin Industry Co., Ltd., Shanghai Motor Vehicle Inspection Center.

Introduction

The stability of the motorcycle is the impact of their driving safety is a very important factor. Motorcycle/driver combinations thereof and in which the ring Habitat constitute a unique closed loop (closed-loop) systems, however, due to the stability of the motorcycle itself, the position of the driver, and driving Members of the interaction of several factors in response to changing circumstances, so that the assessment of the motorcycle/driver combination becomes non-stability Often complex.

Sports performance parameters when assessing the stability of the motorcycle to determine the motorcycle/driver combination is an important basis for the design of the vehicle.

Measurement method described in this standard involves only one factor affecting the movement stable performance --- motorcycles and motorcycle/driver combination the center of gravity.

The measurement results are given by standard methods acquired (recording format see Appendix C) relates only to the above-mentioned very complex phenomenon of a party Surface, and therefore can not be used alone to evaluate the stability of the vehicle.

Measurement motorcycle center of gravity position

1 Scope

This standard specifies two methods of measurement and motorcycles/driver combination weight center position. It can also use proven with Other measurements of gravity position equivalent method.

This standard applies to a motorcycle (hereinafter referred to as the motorcycle).

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

CFR49. Section 572 B Division [US Federal regulations from the US National Highway Traffic Safety Administration (NHTSA) published] dummy

3 Terms and Definitions

The following terms and definitions apply to this standard.

Set in the motorcycle right-handed orthogonal coordinate system. When the motorcycle traveling straight on a level surface, x0 axis is horizontal, pointing forward and Vehicle longitudinal symmetry in a plane; y-axis pointing to the left side of the driver; z axis vertically upwards.

Note 1: The coordinate system applies to other means and rotating means regulating or motorcycle together.

Note 2: Assuming the motorcycle is set on the platform, the coordinate system is also applicable to this platform.

Set on the ground right-handed orthogonal coordinate system, X-axis and Y-axis is located in a horizontal plane, Z-axis vertically upwards.

4 Measurement Conditions

No measuring 4.1 on the motorcycle when the driver shall comply with the following conditions.

- a) motorcycle should be no deformation, should not stick muddy, and manipulate normal; vehicle curb weight should be ready;
- b) Press the maintenance manual or vehicle curb weight requirements filled with gasoline;
- c) Press the maintenance manual or vehicle curb weight requirement to join the lubricating oil and coolant;
- d) to a predetermined pressure maintenance instructions to tire;
- e) test equipment should be installed in the specified location (and the meter register description);
- f) front and rear suspension systems should be placed in a static position;
- g) the front wheels should be placed along the X axis.

If the result of the actual situation of the measurement object needs to change conditions, it should be stated in the meter register.

There motorcycle measuring 4.2 on the driver should meet the following conditions.

- a) motorcycle test conditions according to the provisions of 4.1;

- b) test should use a CFR49. Part 572 Subpart B provisions (AM50 percentile) as the driver test dummy, fake Quality people should be $76\text{kg} \pm 2\text{kg}$; or use the same quality (or similar physical characteristics) reality as a driver;
- c) motorcycles placed in the ground coordinate system, the dummy placed in the center plane of the motorcycle;