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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 17346-2023

Replacing GB/T 17346-1998

Test methods of automobile pedal position dimensions

汽车脚踏板位置尺寸测量方法

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Foreword

This document was drafted in accordance with the rules of GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents. This document serves as a replacement of GB/T 17346-1998 Passenger Cars - Lateral Spacing of Foot Controls. In comparison with GB/T 17346-1998, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

a) The first chapter Scope is modified (see Chapter 1; Chapter 1 of Version 1998);

b) The terms and definitions of vehicle coordinate system, Z-plane, Y-axis direction, pedal centerline, center line of driver, brake pedal reference point, and clutch pedal reference point are added (see 3.1, 3.3, 3.4, 3.11, 3.12,

c) Some terms and definitions are modified (see 3.2, 3.5, 3.6, 3.7, 3.8,

3.9 and 3.10; 3.5, 3.1, 3.2, 3.3, 3.7,

3.8 of Version 1998);

d) The term and definition of "horizontal plane" is deleted (see

3.4 of Version 1998);

e) The content of "arrangement of pedals" is deleted (see

4.1 of Version 1998);

f) The dimension categories of "Y-plane projection view" and "pedal lateral distance at specified position" are added (see

g) The dimension category of "P-plane projection view" is modified (see 4.2.1.1, 4.2.1.2, 4.2.1.4,

4.2.1.6 and 4.2.1.7; 4.2,

4.4 of Version 1998);

1 Scope

GB/T 17346-2023 is the Chinese national standard on test methods of automobile pedal position dimensions, in the field of road vehicles engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 17 March 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 October 2023. Classification: ICS 43.040.50, CCS T23. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the dimension categories and measurement methods of automobile pedal position dimensions. This document is applicable to Category-M and Category-N vehicles, and other vehicles may take this as a reference. This document does not apply to pedals other than accelerator pedals, brake pedals and clutch pedals.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 4782-2001 Road Vehicles - Controls, Indicators and Tell-tales - Vocabulary

GB/T 12673-2019 Motor Vehicle Main Dimensions Measurement Method

GB/T 29120 Procedure for H-point and R-point Determination

3 Terms and Definitions

What is defined in GB/T 4782-2001, GB/T 12673-2019 and GB/T 29120, and the following

terms and definitions are applicable to this document.

3.1 vehicle coordinate system Vehicle coordinate system consists of three interrelated vertical and orthogonal planes, which are used to determine the positional relationship among planes, axes and points. NOTE: see Figure 1. [source: GB/T 12673-2019, 3.1] Center line of driver refers to the Y-coordinate plane of R point where the driver sits.

3.13 brake pedal reference point Brake pedal reference point refers to the midpoint of the brake pedal centerline or the point at which the brake pedal surface centerline is 200 mm from the heel of shoe on the Y-axis direction view. NOTE 1: for suspended brake pedals, the brake pedal reference point is the midpoint of the brake pedal centerline, or the point specified by the manufacturer. NOTE 2: for floor-standing brake pedals, the brake pedal reference point is the point at which the brake pedal surface centerline is 200 mm from the heel of shoe on the Y-axis direction view, or the point specified by the manufacturer.

3.14 clutch pedal reference point Clutch pedal reference point refers to the midpoint of the clutch pedal centerline or the point at which the clutch pedal surface centerline is 200 mm from the heel of shoe on the Y-axis direction view. NOTE 1: for suspended clutch pedals, the clutch pedal reference point is the midpoint of the clutch pedal centerline, or the point specified by the manufacturer. NOTE 2: for floor-standing clutch pedals, the clutch pedal reference point is the point at which the clutch pedal surface centerline is 200 mm from the heel of shoe on the Y-axis direction view, or the point specified by the manufacturer.

4.1.1 Pedal clearance

4.1.1.1 Clearance from brake pedal reference point to accelerator pedal On the Y-plane projection view, when the pedal is in a free state, the minimum distance from the brake pedal reference point to the accelerator pedal centerline, as shown in Figure 5. NOTE: if the brake pedal reference point is below the accelerator pedal centerline, then, this value is negative. 3

---the distance from brake pedal at the specified position to left support surface; 4

---the distance from accelerator pedal at the specified position to right support surface. Figure 11 -- Schematic Diagram of Pedal Lateral Distance at the Specified Position

4.3.2 Distance from brake pedal at specified position to left support surface When the brake pedal is at the specified position of

5.3.4 b), the minimum distance from the left edge to the left support surface, as shown in Figure 11.

4.3.3 Distance from clutch pedal at specified position to left support surface When the clutch pedal is at the specified position of

5.3.4 c), the minimum distance from the left edge to the left support surface, as shown in Figure 11. NOTE: footrest pedal (if present) is included within the range of the left support

surface.

4.3.4 Distance from clutch pedal at specified position to right support surface When the clutch pedal is at the specified position of

5.3.4 c), the minimum distance from the right edge to the right support surface, as shown in Figure 11.

5.1 Vehicle Conditions

5.1.1 During the measurement process, the posture of the vehicle shall be kept unchanged, so as to avoid the change of the measurement datum caused by the change of the vehicle suspension.

5.1.2 If the footrest pedal is adjustable, it shall be placed at the worst position of the measurement in

4.2.1.8 and 4.2.1.9.

5.1.3 If there is no special requirement for the vehicle pedals, they shall be in a free state. For adjustable pedals, they shall be adjusted to the maximum position away from the driver.

5.1.4 If the seat can be adjusted horizontally and vertically, it shall be adjusted to the R point position. NOTE: if the H point determined by coordinates is located in the square whose horizontal and vertical side lengths are both 50 mm, and the diagonal line intersects at the R point, then, it is deemed to satisfy 5.1.4.

5.1.5 When the pedal is adjusted to the specified position and state in accordance with

5.3.4 to measure the relevant dimensions of the clutch pedal and the brake pedal, the vehicle engine is running (the electric vehicle is in a drivable mode), and the clutch and / or braking system is in normal working condition.

5.2 Accuracy Requirements for Measuring Instruments The unit and accuracy of the measuring instruments are shown in Table 1.

5.3 Measurement Procedures

5.3.1 In accordance with the requirements of 5.1, prepare the vehicles.

5.3.2 In accordance with the requirements of GB/T 12673-2019, construct the vehicle coordinate system, and determine the X-plane, X-plane and Z-plane in the vehicle coordinate system.

5.3.3 Measure and record the contours of the upper surface of the accelerator pedal, brake pedal and clutch pedal, and the contours of the pedal support surface on both sides, the uncompressed floor surface and footrest pedal. In accordance with the recorded pedal contours, determine the centerline and midpoint of the pedals.