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Procedure for H-point and R-point determination

H点和R点确定程序

(English Translation)

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Foreword

The redrafted in accordance with the standard GB/T 1.1-2009 given rules.

This standard uses redrafted law revision using ISO 6549:1999 (E) "Road vehicles - H-point and the R point determination procedures" and ISO 20176:2006 "Road vehicles - H point machine (HPM-II) H-point determination procedures and technical requirements." Listed in Appendix A of this standard and ISO 6549:1999 and ISO 20176:2006 reg number of the control list.

Information on normative references, this standard has been adjusted technical differences, in order to adapt our technical conditions, adjust the set as reflected in Chapter 2, "Normative references", the specific adjustments are as follows. with GB/T 3730.1-2001 instead of ISO 3833 (see this mark Chapter 2 Quasi).

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

This standard by the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

This standard was drafted. Dongfeng Motor Corporation Technical Center.

Introduction

Chapter 4 of this standard given H point determination procedures and appliances based on ISO 6549. H point machine (HPM) 1999's. It aims to Take the reference point and the design torso angle measurements were compared with the manufacturer. HPM is used to check the loading of a designated seating position Set, and not for measuring or indicating device capability or occupant comfort.

The standard Chapter 5 gives the H point determination procedures and appliances based on ISO 20176:2006 H-point machine (HPM-II). In the vapor Vehicle design and development, HPM-II vehicle for establishing a reference point of the internal structure and occupant size and verify these relationships in check Location and physical dimensions of the key reference point. HPM-II is also used for the seat design and verification, but in this case, the reference point and size really Fixed seat structure and/or surface, but not to the internal structure of the vehicle. This chapter H-point device placement procedure has been simplified, not I shall use footwear or calf. In order to facilitate simple, a number of terms related to the use of HPM-II relevant parts of the human body's name. but, They are not used to measure or indication occupant adaptability, human capacity or comfort devices. HPM-II is a key vehicle for the establishment of group Physical means punctuality and size (see Appendix B), it does not represent all the crew size or attitude can not be used to define or evaluate the temporary seat Chairs, such as folding chairs. H Point Design Tool (HPD) is a simplified version of the CAD HPM-II, it can take a measurement and HPM-II Optional measurement specified in this standard can also be used independently in product design (see Appendix C).

Compared with HPM, HPM-II main change is to improve the repeatability, easier to use and adds some additional components to enhance the ability to measure and minimize the impact of these improvements on the location of the reference point, and other measurements. The following are some of the changes.

a) isolating the member for HPM-II, legs (thighs and calves), footwear, seat and back are completely separate section, placed more convenient.

H point device b) without legs the main advantage of HPM-II is to allow the determination of the H-point connection without legs. HPM-II new program in place, do not Placed legs, optionally placed legs.

c) footwear

For footwear and how it is mounted on a vehicle made some improvements. include.

- The ball of the foot from the heel to be changed to 200mm;
- the establishment of a new pedal reference point (PRP);
- develop a more complete footwear placed the program.

d) seat angle

The new device can be measured independently of the angle of the thigh cushion angle, while other measurable size. HPM cushion angle measurement based on thigh Line, we need to place a separate H-point devices.

e) lumbar support

Back assembly of the hinge mechanism makes HPM-II better sitting on the seat surface, here is a new measurement

--- The amount of lumbar support projecting amount (LSP). This amount represents the amount of support in the face of the seat back curvature of the lumbar spine. HPM-II in the middle Attitude (LSP = 0), its backplane assembly outline is consistent with HPM.

Vehicle manufacturers are free to decide to use HPM and HPM-II any one of the three-dimensional H point machine design, but must inform the management Type H-point device employed agencies and other parties who need to know their bodies.

H point and the R point determination procedures

1 Scope

This standard specifies the procedure for determining the H point and the R point.

Chapter 4 provides for determining when the seat H point and the actual torso angle HPM, and the determination of the seat H point and the actual torso angle HPM's placement procedures applicable to motor vehicles following characteristics.

- a) points to the driver's heel by the vertical distance between the reference point is less than 550mm;
- b) After the inclination of the torso than 5 ° angle with the horizontal center line of the thigh or the thigh bar represents more than 5 °.

Chapter 5 provides for the use of HPM-II inspection (verification) of the vehicle key reference point and the size of procedures and technical requirements. HPM-II provisions A passenger space and/or reliable method of measuring arrangement with a seat occupant.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

the latest edition (including any amendments) applies to this document.

GB/T 3730.1-2001 road vehicle type of terms and definitions ISO 4130 Road vehicles - three-dimensional reference system and reference point type definitions (Road vehicles-Three-dimensional referencesystemandfiducialmarks-Definitions)

3 Terms and Definitions

Three-dimensional H point means three-dimensionalH-pointmachine HPM it means for the actual vehicle on the H-point and the actual torso angle measurement.

Three-dimensional H point machine -II three-dimensionalH-pointmachine-II HPM-II the new SAE (SocietyofAutomotiveEngineers. Society of Automotive Engineers) H-point means for more accurate measurement Given the actual H point on the vehicle and the actual torso angle and the other device parameter values. HPM-II main change is to improve the repeatability, Easier to use and adds some additional components to enhance the measurement capabilities, and minimize those improvements position the reference point and the other test the magnitude of the impact.

H H-point point

In the HPM, the H-point is the center of rotation of the torso and thigh, simulate the human torso and thigh hinging center for the actual seat H point Determination.

In the HPM-II, H point is a board seat and back assembly of the hinge assembly center, located HPM-II or HPD lateral center on-line.

Note 1: In the HPM, HPM H point is located in the center of the surface, at the midpoint of the device on both sides of the H-point mark button connection.