

KES

Forward Vision (Day
Light Opening Lay Out)

KES M – C404

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1. Scope of Application

This standard shall apply to sedans and commercial vehicles.

2. Purpose

This standard shall apply the position of vehicle glaze belt, which is installed out of driver's front vision range through front & right/left windows

3. Definition of Terminology

3.1 Vacant state

It is a state, where passengers or cargo are not on board to vehicle and the fuel, coolant & lubricants are full to be capable of driving.

3.2 3-D Coordinate system

3-D Coordinate system is composed of X-Z, X-Y, Y-Z planes as figure 1 and employed to determine the difference between design points and points of actual vehicle.

3.3 Angle for seatback support

It is a slope of seatback support to vertical line.

3.4 V point

It is determined by the related functions to the vertical direction plane passing the center of the most outer designated seat position on front seat, R point and angle for design seatback. This point is employed to prove the appropriateness of visibility conditions.

3.5 R point (Seating Reference Point)

It is a defined reference point by vehicle manufacturer and a positioned point of theoretical point (H-point) for rotation of torso & thigh on lowest & most rear normal driving state. Or it is each seating positioned point, which is specified by vehicle manufacturer.

4. Examination Data

(1) V point

(2) R point

5. Examination Conditions

5.1 Vehicle is on the condition, where only one passenger is boarded on the vacant vehicle.

5.2 Sun visor is on the condition, where it is located at the fixed position.

5.3 The adjustable seat such as height of driver's seat is on the adjusted condition, where the lowest vertical position is on the most rear of vertical adjust range.

5.4 The seatback is on the condition, where its angle is adjusted to be 25° . When it is impossible to adjust its angle to be 25° , the position of V point can be determined by using the revised value on table 2.

5.5 V point is employed to specify the visible area (See figure 2) and is classified into V_1 & V_2 point.

(1) V_1 point is located 665 mm above X-Y plane, 68 mm back of Y-Z plane and 5 mm left of X-Z plane.

(2) V_2 point is located 76 mm below V_1 point.

6. Examination Sequences

6.1 Position of V point

When the design seatback angle is 25° , the standard coordinate of table 1 is determined and others follow table 2.

6.2 Visible range of front windshield

Visible range of front windshield is defined as the boundary by the intersecting region of 4 planes of following each arc on the front windshield surface.