

Australian/New Zealand Standard®

Restraint systems for motor vehicles— Performance tests

Method 4: Determination of adjustment device forces

METHOD

1 SCOPE This Standard sets out the method for determining the forces required to draw webbing through an adjustment device to increase or decrease the size of fitment of a restraint assembly.

2 REFERENCED DOCUMENT The following Standard is referred to in this Standard:

AS/NZS

4475 Restraint systems for motor vehicle—Performance tests

4475.5 Method 5: Determination of locking angle of tilt-lock adjustment device

3 PRINCIPLE Webbing is drawn through the adjustment device at a nominated rate and with the adjustment device in the locked attitude and then at a nominated angle greater than the locked attitude.

4 APPARATUS The following apparatus is required:

- (a) A clamp to hold the tilt-lock adjustment device, which permits webbing to be drawn through the adjustment device, and which permits the tilt-lock adjustment device to be rotated from a 'webbing fully unlocked' attitude to a locked attitude. The axis of rotation is to lie in the plane of the webbing and be normal to the length of the webbing.
- (b) A machine capable of drawing the webbing through the adjustment device at a rate of 500 ± 50 mm/min.
The machine shall indicate the force being applied to the webbing to an accuracy of ± 1.0 N.
- (c) A means of establishing a reference line to the tilt-lock adjustment device.

5 TEST SPECIMEN Test specimens shall be dry, unused, and not previously tested.

6 PREPARATION OF TEST SPECIMENS With the adjustment device in an unlocked attitude, the webbing shall be drawn through the device to the limit of the webbing travel 10 times in both directions.

7 PROCEDURE The procedure shall be as follows:

- (a) Grip a portion of the seat belt assembly and apply a force of 90 N in a straight line through the tilt-lock adjustment device such that the adjustment device is permitted to assume its normal locking attitude. Apply a reference line to the tilt-lock device parallel to the line of force in the loaded webbing when viewed from the edge of the webbing.
- (b) Draw webbing through the device in a direction equivalent to that which makes the seat belt suit a larger person, so that sufficient webbing is available to obtain a result.

NOTE: The minimum length of webbing should be determined by trial before the test.

- (c) Hold the adjustment device in the clamp and in the 'webbing locked' attitude.
- (d) Attach the webbing to the machine and draw the webbing through the adjustment device in a direction equivalent to that which makes the seat belt suit a smaller person, at a rate of 500 ± 50 mm/min.
- (e) After the first 25 mm of travel, measure the force applied to the webbing.
- (f) Repeat Steps (c), (d) and (e) but hold the adjustment device in an attitude not less than 5 degrees greater than the locking angle as determined in AS/NZS 4475.5 and draw with webbing through the device in the direction equivalent to making the belt suit a larger person.

8 REPORT The report shall include the following:

- (a) Sufficient description to identify the adjustment device and webbing.
- (b) The force measured while pulling the webbing in each direction.
- (c) The number of this Australian/New Zealand Standard, i.e. AS/NZS 4475.4.