SAE International

SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J339 JUN2013

Issued 1968-05
Cancelled 2013-06

Superseding J339 JUN1994

Seat Belt Hardware Webbing Abrasion Test Procedure

RATIONALE

Seat belt webbing abrasion and tilt lock performance requirements are defined in SAE J114. The corresponding test methods are defined in SAE J339. Both these documents define abrasion and tilt lock testing for two point adjust tongues.

Two point adjust tongues are currently used in very few new passenger car and multi purpose vehicles. The FMVSS regulations only allow a 2 point belt at the front center seating position. Very few new vehicles have a front center seating position. Occupancy of this seating position, in the vehicles that have it, is low. As a result, abrasion from two point adjust tongues is not a concern in new vehicles.

Two point adjust tongues are more frequently used on off highway vehicles. Tilt lock and abrasion requirements for such vehicles are defined in SAE J386.

The scope of the SAE Belt Systems Standards Subcommittee is new passenger cars and multi purpose vehicles. For these vehicles, SAE J339 and SAE J114 are no longer required. For off road vehicles, that use 2 point adjust tongues, SAE J386 provides direction. Therefore it is proposed that SAE J114 and SAE J339 be changed to CANCELLED

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1. ***Scope***—This SAE Recommended Practice describes a test procedure for evaluating the abrasion resistance characteristics of webbing when used in adjustment hardware of seat belt assemblies such as those described in SAE J140.

2. ***References***

2.1 Applicable Publication—The following publication forms a part of the specification to the extent specified herein. Unless otherwise indicated the lastest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J140—Seat Belt Hardware Test Procedure

3. ***Test Equipment***—Means shall be provided for lengthening and shortening applicable assemblies. Figure 1 illustrates the means and direction of pull on webbing to be used for evaluating tilt-lock type adjustment hardware. For other types of adjustment hardware, modifications may be needed to achieve equivalent results.

NOTE—The directions indicated in Figure 1 are not necessarily intended to duplicate adjustment hardware usage angles. However, the test will provide comparative data on hardware types, webbing types, and combinations designed to be compatible in a system.

3.1 General—The seat belt assembly webbing abrasion test shall consist of 2500 cycles.

4. ***Test Conditions***—The hardware and webbing shall be conditioned a minimum of 4 h prior to original tensile test and abrasion test at 23 °C ± 2 °C and relative humidity of 48 to 67%. All testing shall be conducted under these conditions.

5. ***Test Procedure***—Three new seat belt assemblies shall be tested. Use the test equipment described with a length of stroke of 150 to 200 mm (6 to 8 in) and a cycle rate of 16 to 18 cpm. One cycle consists of one lengthening stroke and one shortening stroke.

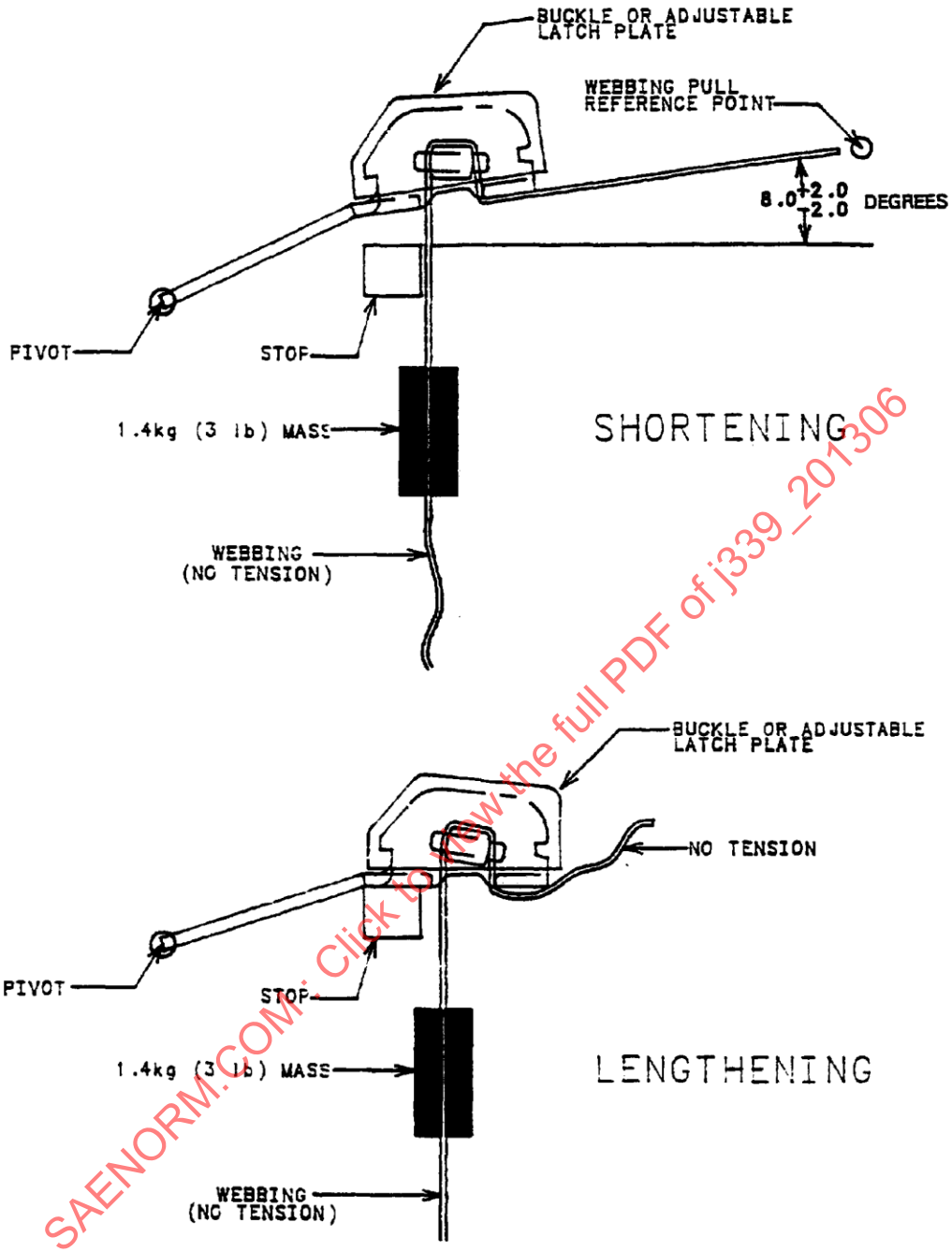

FIGURE 1—WEBBING ABRASION

At the completion of the abrasion test, the following additional tests shall be conducted in the abraded area:

a. Adjustment Force—Test in accordance with SAE J140, paragraph 4.1
b. Tilt-Lock Adjustment—Test in accordance with SAE J140, paragraph 4.2 (where applicable)
c. Webbing Breaking Strength—Test in accordance with SAE J140, paragraph 3.8