

**ADHESION RESISTANCE OF MIRROR BUTTON BRACKETS****Application**

This test method determines the amount of peel force required to separate a rear view inside mirror from the windshield.

Apparatus and Materials Required

Method 1: Instron type mechanical pull tester with clamping bracket. The clamping bracket load point is to be 10 +/- 2 mm from the top edge. A cleaving force is required. Pulling from the center of the mirror bracket will not provide the needed peeling effect. See Figure 1.

Method 2: A modified torque wrench with specific loading geometry. Mirror button bracket load point is to be 10 +/- 2 mm from the top edge with a pivot point 5 mm back of bracket top and 13 mm above the glass. The indicator has to be calibrated with a known force at the 10 mm load point. See Figure 2, and Figure 3. The modified wrench will no longer be a torque wrench and as a result, its torque scale needs to be replaced with a lift force scale.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5% relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

General Comments

Method 1 is good for small pieces that are to be destructively pulled and the highest need for accuracy and repeatability are needed. Method 2 can be used on both windshields and small sections but can be to some degree operator influenced. This method is the best for checking minimum load requirements. Either Method 1 or Method 2 is to be used to determine bond peel strength.

Procedure: Method 1

1. Mount sample on test stand
2. Attach clamping bracket
3. Pull at 50 mm/sec
4. Report any separation or loss of adhesion of the mirror bracket to the glass

Date	Action	Revisions
2007 11 19	Revised	Inserted General Comments, Figure 1 & 2; Revised Apparatus and Materials Required; Deleted Procedure & original Figure 1 and changed original Figure 2 to Figure 3 M. Mehandru
2001 03 28	Revised	Editorial – no technical change A. Cockman
1999 01 26		



Procedure: Method 2

1. Verify modified torque wrench calibration.
2. Attach the modified torque wrench to the mirror bracket as shown in Figure 3.
3. Apply a force as specified by the relevant engineering material specification to the torque wrench in the direction shown in Figure 3.
4. Report any separation or loss of adhesion of the mirror bracket to the windshield.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

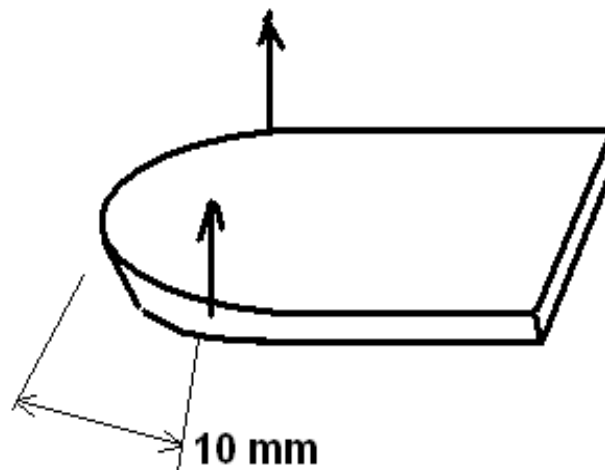


Figure 1

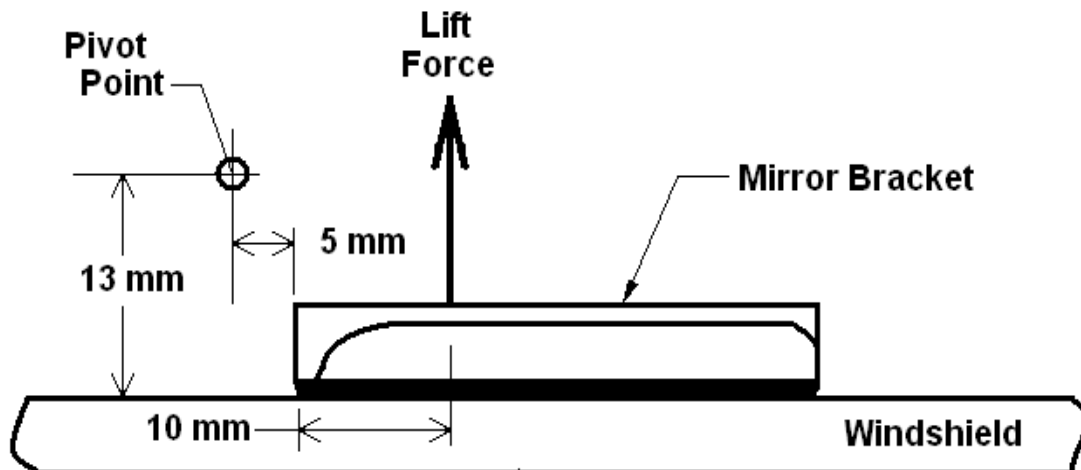


Figure 2