



SURFACE VEHICLE RECOMMENDED PRACTICE

J2568™

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Intrusion Resistance of Safety Glazing Systems for Road Vehicles

RATIONALE

Since EPG marking is still a desired glazing system attribute, SAE J2568 remains a viable recommended practice. This document has been reviewed and revisions such as typographical corrections, spelling changes, and reference updates have been made.

SAE J2568 has been reaffirmed to comply with the SAE Five-Year Review policy.

FOREWORD

Installation of enhanced protective side and rear glazing systems to provide improved intrusion resistance is growing rapidly. With this growth comes an industry need for a standardized intrusion resistance test to ensure that vehicle glazing systems provide a defined minimum level of performance.

1. SCOPE

This SAE Recommended Practice specifies an intrusion resistance test method for glazing systems installed in motor vehicles.

Intrusion resistance performance is determined not solely by the glazing but also by the glazing attachment to the vehicle and by the vehicle structure. Therefore, the glazing/attachment/vehicle structure must be tested as a single unit.

This test determines intrusion resistance only. The test applies to those materials that meet the requirements for use as safety glazing materials as specified in ANSI/SAE Z26.1 or other applicable standards. The test applies to all installation locations.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

ANSI/SAE Z26.1 American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard

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Full document details: SAE J2568_202508

For more information on this standard, visit
https://www.sae.org/standards/content/J2568_202508/

Documents

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2.1.2 BSI Publications

Available from British Standards Institution, Customer Services, 389 Chiswick High Road, London W4 4AL United Kingdom, Tel: +44-0-20-8996-9001, www.bsi-global.com.

BS AU 209-4a:1995 Vehicle Security - Specification for Security Glazing for Passenger Cars and Car Derived Vehicles (This version of the procedure is required. Any future versions are not to be followed.)

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

Esposito, R., "Intrusion Resistance Test Development for Automotive Glazing," SAE Technical Paper 1999-01-3159, 1999, <https://doi.org/10.4271/1999-01-3159>.

Chlastawa, S. and Horaney, S., "Evaluating the Intrusion Resistance of Installed Motor Vehicle Glazing," SAE Technical Paper 982319, 1998, <https://doi.org/10.4271/982319>.

Jourdain, L., Offermann, V., Linnhiifer, D., Maurer, M. et al., "Laminated Sidelights and Asymmetrical Windshields for Cars," SAE Technical Paper 982320, 1998, <https://doi.org/10.4271/982320>.

Smith, C., "System Design Parameters in Determining Automotive Sidelite Glazing Performance," SAE Technical Paper 2000-01-2693, 2000, <https://doi.org/10.4271/2000-01-2693>.

3. DEFINITIONS

3.1 INTRUSION RESISTANT GLAZING

Glazing which deters unauthorized entry into or theft of motor vehicles.

3.2 DAYLIGHT OPENING

Aperture in the vehicle through which daylight enters the passenger compartment, usually covered with transparent glazing.

4. TECHNICAL REQUIREMENTS

4.1 Test Apparatus

- 4.1.1 A spring-loaded center punch or a hammer of about 75 g, each with a point having a radius of curvature of $0.2 \text{ mm} \pm 0.05 \text{ mm}$, shall be used for initial fracture test.
- 4.1.2 A pendulum device as specified in BS AU 209-4a: 1995 (see 2.1.2) shall be used for the exterior impact testing.
- 4.1.3 A ram capable of applying and measuring a force of up to at least 400 N at an accuracy of $\pm 5\%$, with a $76.2 \text{ mm} \pm 3.8 \text{ mm}$ radius hemispherical headform and traveling at a rate of $102 \text{ mm/min} \pm 5 \text{ mm/min}$, shall be used for the pushout test, pushing from the interior of the vehicle towards the exterior. The ram will be positioned normal to the interior surface of the glazing. The headform will not crush or otherwise significantly deform during the test.