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Drop Test for Evaluating Laminated Safety Glass for Use in Automotive Windshields—SAE J938a SAEMORM. COM: Click to view the full PUT Of it

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Society of Automotive Engineers, Inc. 400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096



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Report of Body Engineering and Automotive Safety Committees approved October 1965 and last revised by Body Engineering Committee June 1976.

Scope—The purpose of this SAE Recommended Practice is to provide a laboratory drop test procedure whereby specimens of laminated safety glazing intended for use in automotive windshields can be evaluated on the basis of resistance to penetration.

Test Equipment—The impacting object is a steel sphere weighing 5.00 ± 0.03 lb (2.25-2.28 kg). A holding fixture to support the glass specimen in a horizontal position during the test is shown in Fig. 1. At least 6 in (152 mm) of vertical clearance must be provided below the lower surface of the glass specimen when installed in the holding fixture. The equipment used to support and release the impacting sphere is optional as long as a clean release which imposes no side forces is obtained.

Test Specimen—The size of each glass specimen to be tested is $12.0 \times 12.0 \text{ in} \pm 0.1 \text{ in} (302-397 \text{ mm})$. Only flat specimens are to be tested.

Test Procedure—For 4 h prior to testing, each specimen should be stored at a temperature of 70-85°F (21-29°C) and each test specimen should be at this

temperature when tested. The test sphere shall be raised to a drop height (measured from the top of the test specimen to the bottom of the test sphere) of 12.0 ft (3.66 m) and released so as to strike the approximate geometric center of the test specimen; deviation is not to exceed 1.0 in (2.5 cm). There shall be only one impact per test specimen. Tests shall be run with the plane of the sample normal to the line of fall.

Expression of Results—"If the ball passes completely through the test specimen within 5 s after the impact, the result shall be recorded as a penetration. If the ball remains on top of the specimen, or wedged in a hole, for 5 s or more, the result shall be recorded as a support."

"Note: Present accepted practice in the United States is to require that 8 out of 10 specimens must support the impacting sphere when dropped from 12.0 ft (3.66 mm)." Reference: ANSI Z26.1-1966.

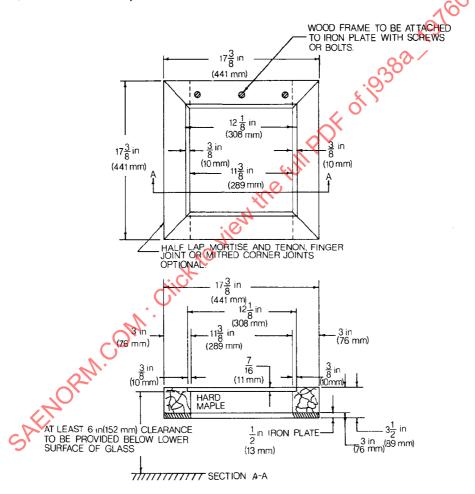


FIG. 1—WOOD HOLDING FIXTURE FOR DROP TEST