SOCIETY OF AUTOMOTIVE ENGINEERS, INC. • TWO PENNSYLVANIA PLAZA • NEW YORK, NEW YORK 10001

LAND SEA AIR SPACE

TECHNICAL REPORT J944a

STEERING CONTROL SYSTEM — PASSENGER CAR — LABORATORY TEST PROCEDURE — SAE J944a

SAE Recommended Practice

Report of Automotive Safety Committee approved December 1965 and last revised November 1968.

1. Scope—This SAE Recommended Practice describes a laboratory test procedure for evaluating the characteristics of steering control systems under simulated driver impact conditions. The test procedure employs a torso-shaped body block which is impacted against the steering control system.

2. Definition—For the purposes of this recommended practice, the steering control system is defined as that portion of the vehicle steering mechanism that may affect the occupant impact characteristics.

3. Reference—SAE J977.

4. Items to be Determined

4.1 Impact velocity of the body block.

4.2 Peak resultant force of the impact.

5. Test Equipment and Instrumentation

5.1 Body Block—The complete body block shall have the following characteristics:

5.1.1 SPRING RATE—107-143 kg/cm, when the chest is loaded by a 4 in. wide by 15 in. long (10.0 by 38.0 cm) beam, 90 deg to the longitudinal axis of the body block, and parallel to the backing plate (Fig. 1). The center of the beam is placed 18.0 ± 0.25 in. (45.7 ± 0.63 cm) from the top of the head, centered laterally, and preloaded to 5 lb (2.26 kg) including the weight of the beam, to establish baseline penetration. Test speed is 10 ± 2 in./minute (25.0 ± 5 cm/minute). The load is measured when the beam has moved 0.50 in. (12.7 cm) into the body block from the baseline and the spring rate is obtained by doubling this load.

5.1.2 WEIGHT—The body block shall weigh 75 +5 −0 lb (33.97 +2.26 −0 kg).

5.1.3 BODY BLOCK CENTER OF GRAVITY—The center of gravity of the

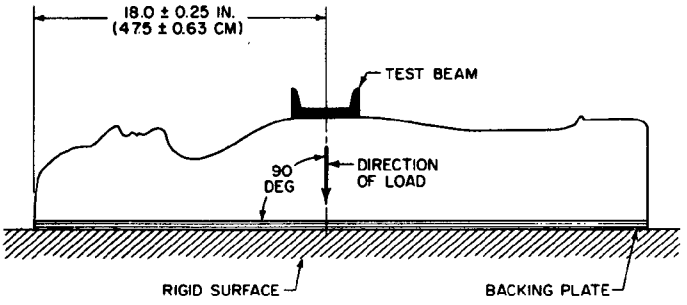

FIG. 1—TEST BEAM LOCATION

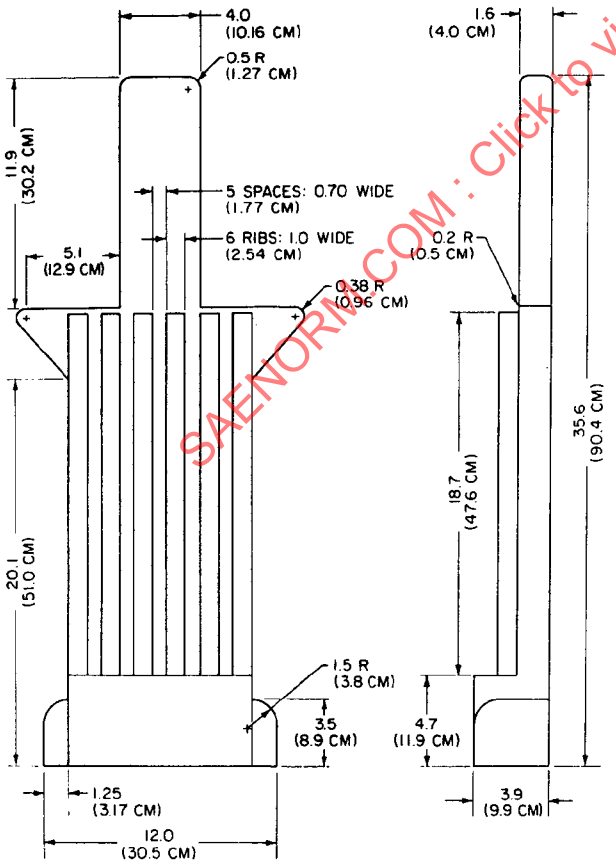

FIG. 2—MOLD INSERT

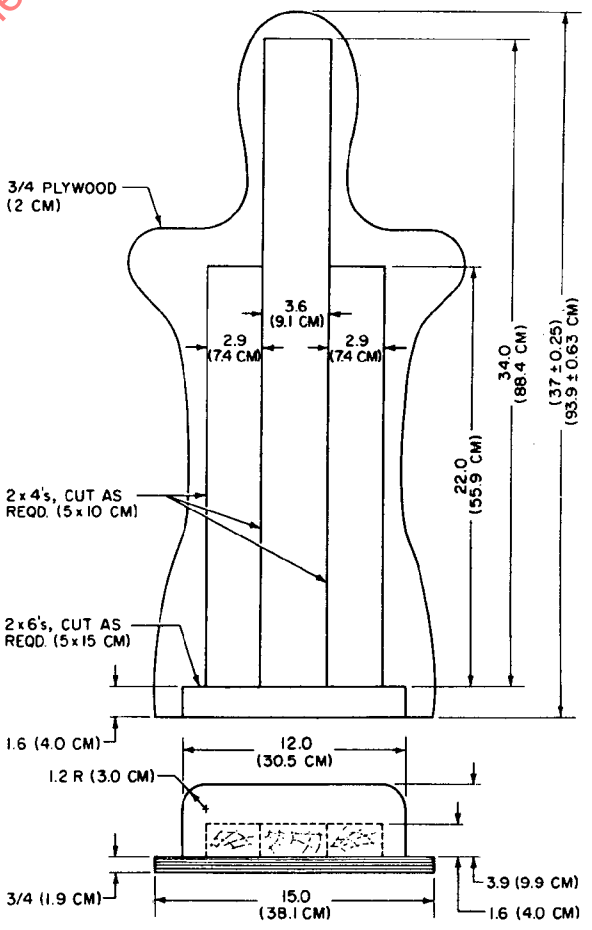

FIG. 3—BACKBOARD AND BASE