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SAE J133 DEC84

**Fifth Wheel Kingpin
Performance —
Commercial Trailers
and Semitrailers**

**SAE Recommended Practice
Completely Revised December 1984**

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An American National Standard

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φ **FIFTH WHEEL KINGPIN PERFORMANCE—
COMMERCIAL TRAILERS AND SEMITRAILERS—
SAE J133 DEC84**

SAE Recommended Practice

Report of the Truck and Bus Technical and Transportation and Maintenance Technical Committees, approved March 1970, completely revised by the Truck and Bus Chassis Committee December 1984.

Purpose—The purpose of this recommended practice is to establish test procedures and minimum performance standards for kingpins and their supporting structure manufactured to SAE specifications. The dimensions shown in SAE J700 will permit the establishment of standard clearances in the installed condition which, in turn, will permit fifth wheel manufacturers to design their products to establish interchangeability with any kingpin made and installed to the SAE specification.

Definition—GVW = Gross Vehicle Weight, including payload and vehicle weight. TVW = Total Weight of Towed Vehicles.

The kingpin when completely installed, shall fit within the tolerances and dimensions shown in SAE J700.

The kingpin, when installed, shall meet the following performance requirements:

1. Withstand a force "A" of 1.15 TVW in a fore or aft direction. (See Fig. 1.)
2. Withstand a cycling force "B" of 0.4 TVW in a fore and aft direction for 500 000 cycles. (See Fig. 1.)

3. Withstand a cycling force "C" of 7000 lb (31.1 kN) for 100 000 cycles applied by a typical fixture illustrated in Fig. 2. Force "C" is to be applied horizontally to a point 90 deg to the plane of forces "A" and "B."

4. Withstand a cycling force "D" of +0.667 to +1.34 times the vertical load rating of the coupler for 1 000 000 cycles applied to the upper coupler plate and kingpin through a plate 36 in (914 mm) wide by 24 in (610 mm) long, shaped like Fig. 2.

5. Withstand a single application of force "E" of 1.0 GVW up and down through the fixture described in Fig. 2, with the kingpin locked to that plate by its 2.8125 in (71.44 mm) dia. lip.

6. Kingpin and supporting structure should withstand these conditions without deformation that will prevent compliance with the installation dimensions of SAE J700.

Trailers intended for "Trailer on Flat Car" operation shall withstand force "A" of 3.5 GVW and other requirements specified in Association of American Railroads M931.

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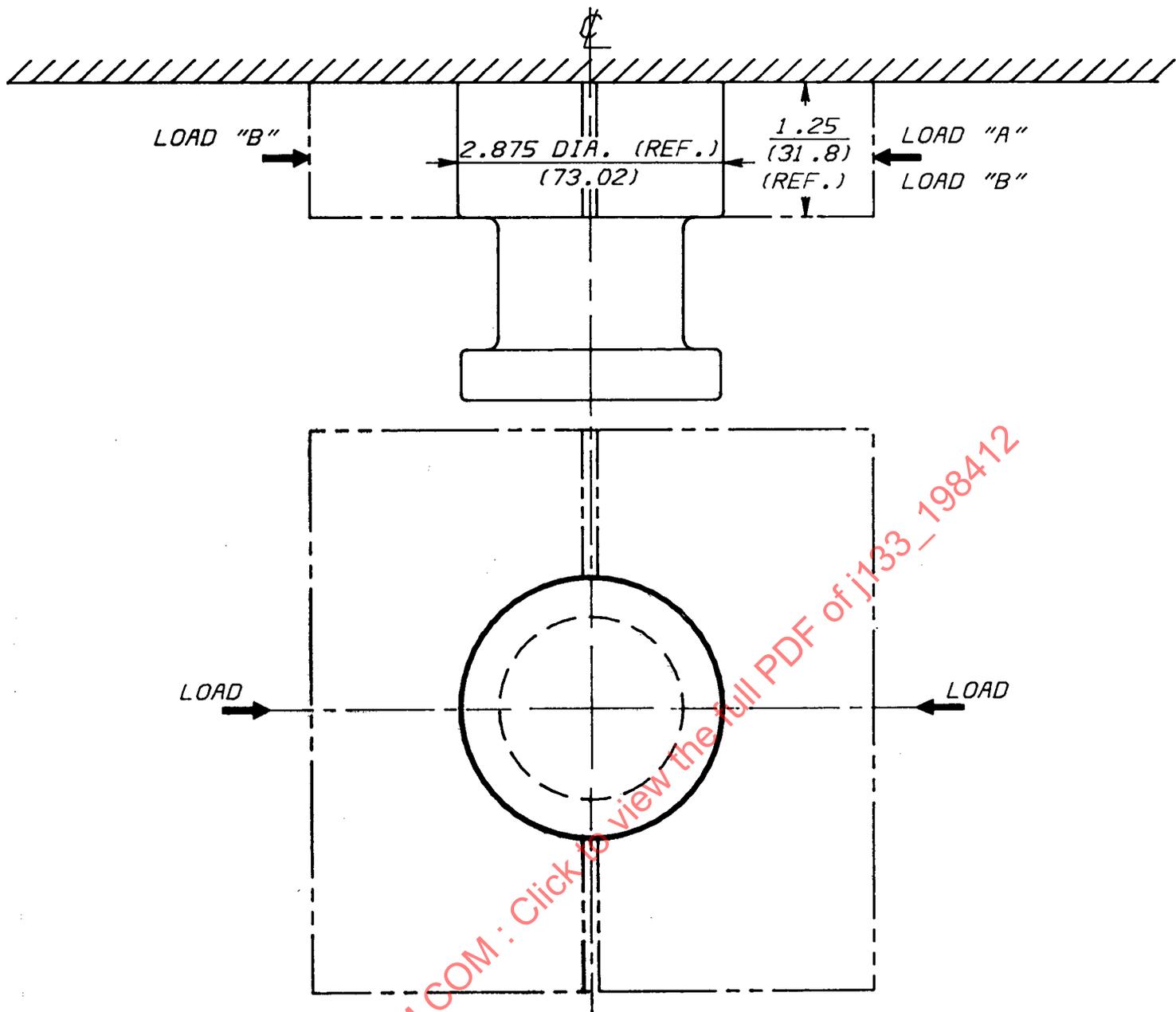


FIG. 1

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