SAE International

SURFACE VEHICLE RECOMMENDED PRACTICE

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Kingpin Wear Limits - Commercial Trailers and Semitrailers

RATIONALE

The Truck and Bus Coupling & Interchangeability Committee which owned this report has been inactivated and the technical expertise for the subject report within the Truck-Bus Council is not available at this time. This standard has been transferred to the Total Vehicle Steering Committee to stabilize the standard.

STABILIZED NOTICE

This document has been declared "Stabilized" by the SAE Truck and Bus Total Vehicle Steering Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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1. ***Scope***—This SAE Recommended Practice applies to upper coupler kingpins for commercial trailers and semitrailers conforming to the dimensional requirements of SAE J700 when new and originally installed. The dimensions of SAE J700 are the frame of reference for this document.

1.1 **Purpose—**The purpose of this document is to establish maximum parameters for kingpin wear and to suggest a gauge configuration for inspecting kingpin wear. Kingpins exceeding the conditions of this specification must be removed from service and replaced.

2. ***References***

2.1 **Applicable Publication—**The following publication forms a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J700—Upper Coupler Kingpin—Commercial Trailers and Semitrailers

3. Figure 1 shows minimum diameters and allowable areas for wear on kingpins. Check diameter at several points around the kingpin in order to detect and measure nonuniform wear conditions. Kingpin wear is restricted to areas shown in Figure 1 in crosshatch. Wear on non-crosshatched areas is not acceptable.

Figure 2 shows areas on kingpin where nicks, burrs, gouges, etc., are allowed. However, no burr, nick, and/or gouge may exceed 3.2 mm (0.12 in) in depth. The maximum number of nicks, burrs, gouges, etc., that exceed 1.5 mm (0.06 in) in length should not exceed 10 on the 50.8 mm (2.00 in) diameter. Nicks, burrs, gouges, etc., should not exceed 6.4 mm (0.25 in) in length when measured at their maximum length.

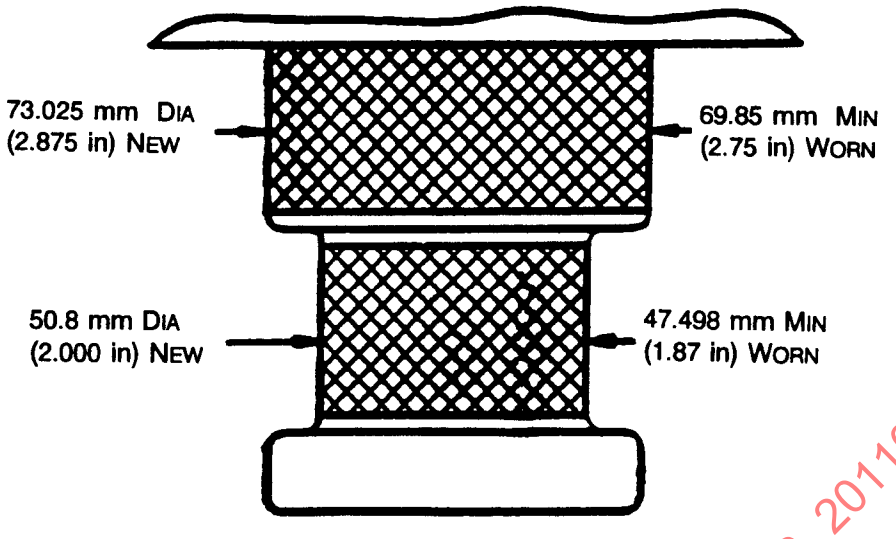

FIGURE 1—KINGPIN WEAR LIMITS

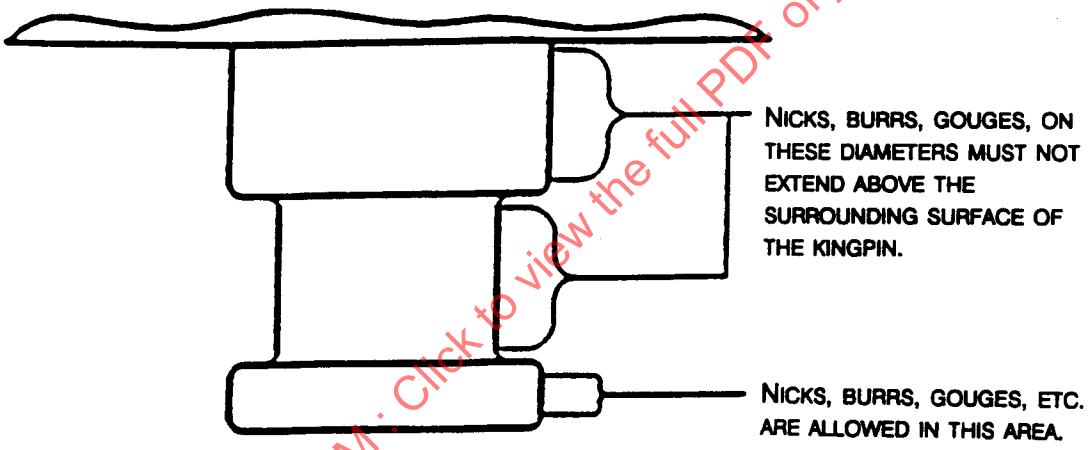

FIGURE 2—KINGPIN NICKS, BURRS, GOUGES

Figures 3 and 4 show a recommended gauge to inspect:

a. Wear on 50.8 mm (2.000 in) diameter
b. Wear on 73.02 mm (2.875 in) diameter
c. Kingpin length
d. Kingpin squareness to bolster plate

The gauge shown is of a “No Go” design so any engagement of the gauge on the appropriate diameter indicates the kingpin is worn and must be removed from service and replaced.

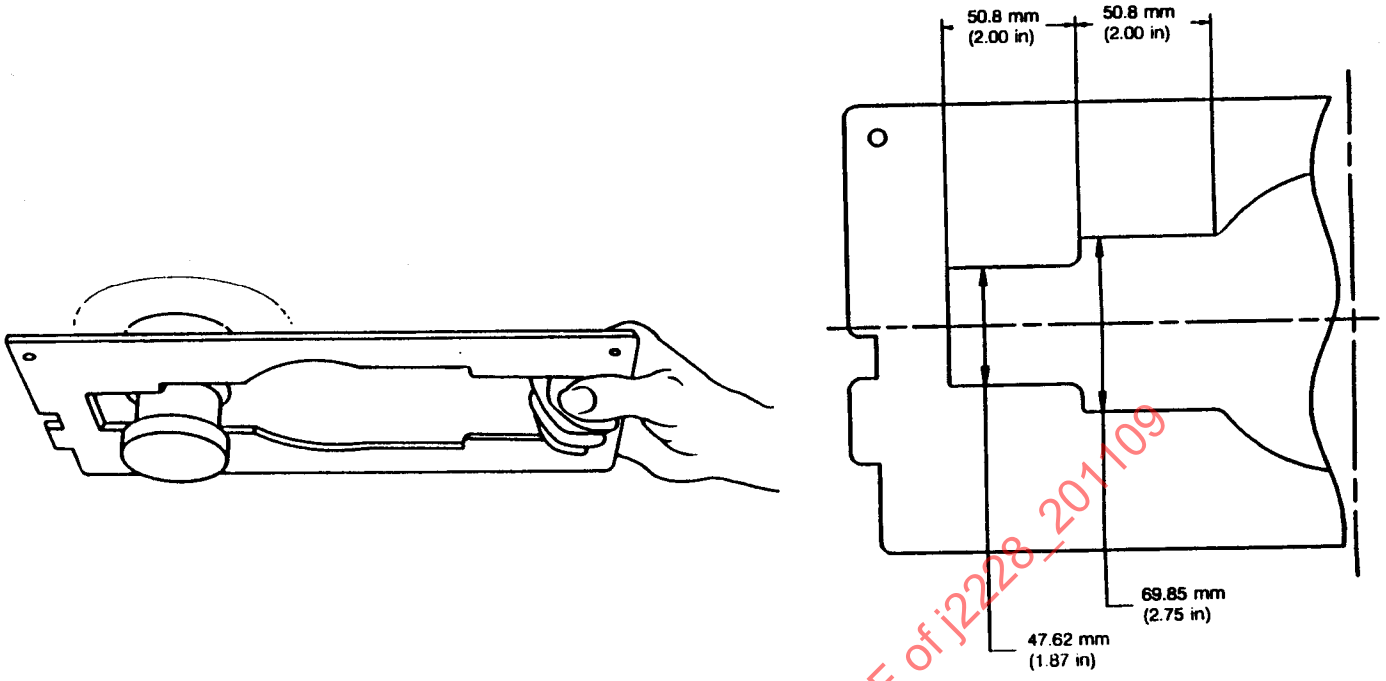

FIGURE 3—INSPECTION OF KINGPIN DIAMETERS USING ONE TYPE OF GAUGE

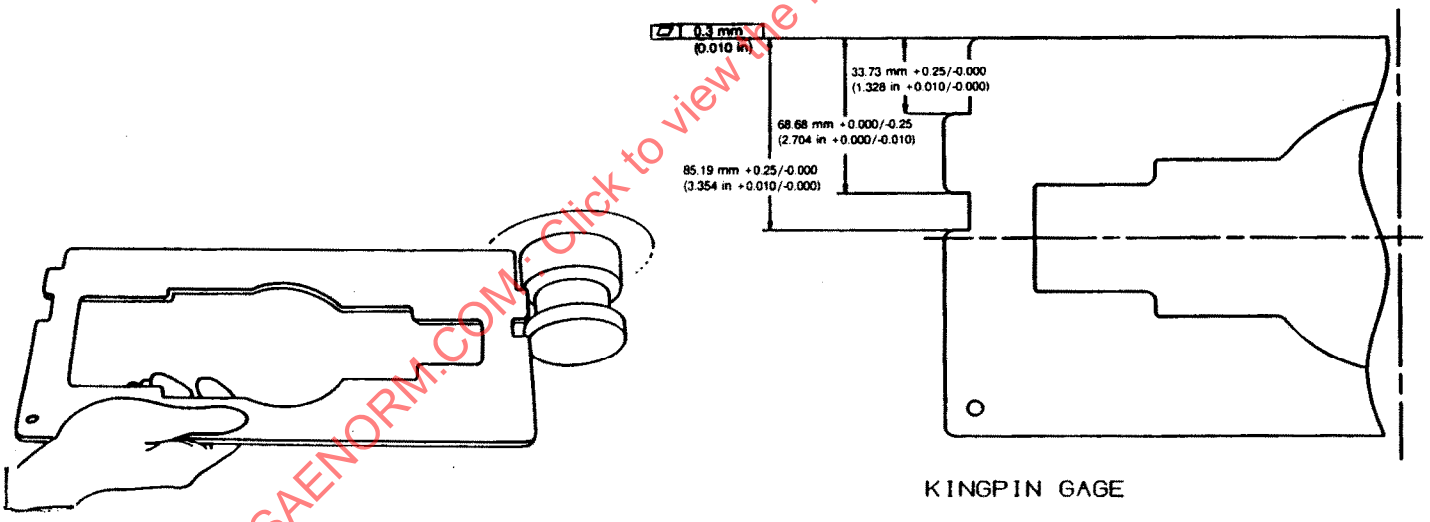

FIGURE 4—KINGPIN LENGTH AND SQUARENESS CHECK USING ONE TYPE OF GAUGE