

INCH-POUND

A-A-52531

November 27, 1995

SUPERSEDING

MS53038E

9 October 1987

COMMERCIAL ITEM DESCRIPTION

KINGPIN, FIFTH WHEEL, 2 INCH AND 3.5 INCH, UNIVERSAL

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. **SCOPE.** This CID covers the requirements for a universal kingpin used in coupling military trailer to a truck-tractor or a trailer converter dolly fifth wheel. It also includes the requirements for kingpins used in trailers when transported on flat cars.

2. SALIENT CHARACTERISTICS.

2.1 **Materials.** Unless otherwise specified herein, the materials used shall be in accordance with manufacturer's specifications/drawings. The use of recovered materials made in compliance with regulatory requirements is acceptable providing that all requirements of this CID are met (see 3.1).

2.2 **Steel forging.** The kingpins shall be made of steel forgings of carbon content 0.35% max. with sufficient alloy content to be oil quenched and tempered to 443-512 BHN at the surface.

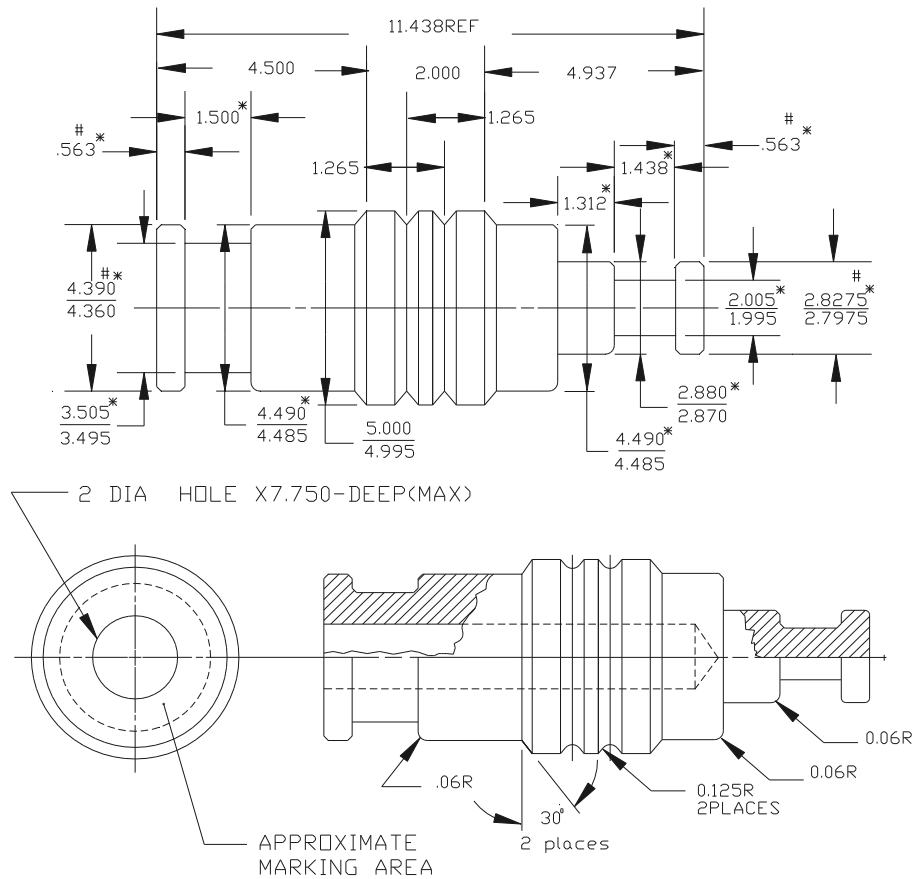
2.3 **Design and construction.** Unless otherwise specified herein (see figure 1), the kingpin shall be designed and constructed to the form and dimensions in accordance with SAE J700 and SAE J848.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data which may improve this document should be sent by letter to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/BLUE, Warren, MI 48397-5000.

FSC 2510

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Part Identification Number	Former MS part no.
AA52531-1	MS53038-1

NOTES:

1. Unless otherwise specified, all radii shall be 0.125 inch.
2. Dimensions are in inches. Dimensions indicated by pound sign (#) shall be in accordance with SAE J700 and J848.
3. Heat treat: Oil quench and temper to a surface hardness of 443-512 BHN over all areas of kingpin.
4. The use of asterisks (*) indicates that dimensions are covered by international agreement (see 6.5).
5. Unless otherwise specified, tolerances are ± 0.015 ; $\pm 1^\circ$ on angular dimensions.
6. Unless otherwise specified, machined surfaces shall be 125 or better, according to ANSI/ASME B46.1 (see 6.1.2).

FIGURE 1. Kingpin, fifth wheel, 2 inch and 3.5 inch, universal.

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2.4 Performance. When properly installed, the kingpin shall meet the performance requirements in accordance with SAE J133. When transported on a flat car, the kingpin shall withstand the force of 3.5 gross vehicle weight (GVW) and shall be in accordance with other requirements specified in the Association of American Railroads specification M931.

2.5 Identification markings. Identification markings shall be permanent and legible and shall include, as a minimum, the manufacturer's CAGE code, manufacturer's part number and the part identification number (PIN), AA52531-1. The upper coupler plate thickness shall be specified on the kingpin and heat code of lot control (traceability) shall be specified (see Figure 1 and 6.2).

3. REGULATORY REQUIREMENTS.

3.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4. QUALITY ASSURANCE PROVISIONS.

4.1 Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

4.2 Hardness testing. The kingpin shall receive 100% Brinell Hardness and 100% Magnetic Particle Inspection.

4.3 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID and that the product conforms to the producer's own drawings, specifications, workmanship standards, and quality assurance practices. Items with known defects shall not be submitted for Government acceptance. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

5. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order (see 6.2).

6. NOTES.

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

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6.1 Addresses for obtaining referenced documents.

6.1.1 Government publications. Copies of “The Code of Federal Regulations (CFR)” are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

6.1.2 Non-Government publications. Copies of SAE J133 “Fifth Wheel Kingpin Performance-Commercial Trailers and Semitrailers”, SAE J700 “Upper Coupler Kingpin-Commercial Trailers and Semitrailers”, and SAE J848 “Fifth Wheel Kingpin, Heavy Duty Commercial Trailers and Semitrailers” are available from the Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096. Association of American Railroads document M931-88 “Highway Trailers, All Types, for TOFC Service” is available from the Association of American Railroads (AAR), 50 F Street, N.W., Washington, DC 20001. Copies of ANSI/ASME B46.1 “Surface Texture (Surface Roughness, Waviness, and Lay)” are available from The American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

6.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this CID.
- b. Issue of Department of Defense Index of Specifications and Standards (DODISS) to be cited in the solicitation, and if required, the specific issue of individual documents referenced.
- c. PIN.
- d. Selection of applicable level and packaging requirements.

6.3 Associated fifth wheels. See MS53034 for associated fifth wheel used with this kingpin.

6.3.1 Associated socket. See CID A-A-52532 for associated socket used with this kingpin.

6.4 Cross-reference data. Kingpins conforming to this CID are interchangeable/substitutable with kingpins conforming to MS53038-1.

6.5 International standardization agreement. Certain provisions of this specification (see figure 1) are the subject of international standardization agreement QSTAG 284 and NATO-STANAG 4009. When amendment, revision, or cancellation of this specification is proposed that will modify the international agreement concerned, the preparing activity will take appropriate action through international standardization channels, including departmental standardization offices, to change the agreement or make other appropriate accommodations.

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MILITARY INTERESTS:

Custodians

Army - AT
Navy - YD
Air Force - 99

Review Activities

Army - ME
Navy - MC
Air Force - 84

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Army - AT

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