

INCH-POUND

MS20271D
w/AMENDMENT 1
12 July 2006
SUPERSEDING
MS20271D
2 March 2006

DETAIL SPECIFICATION SHEET

JOINT-UNIVERSAL, PLAIN, HEAVY DUTY

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-6193.

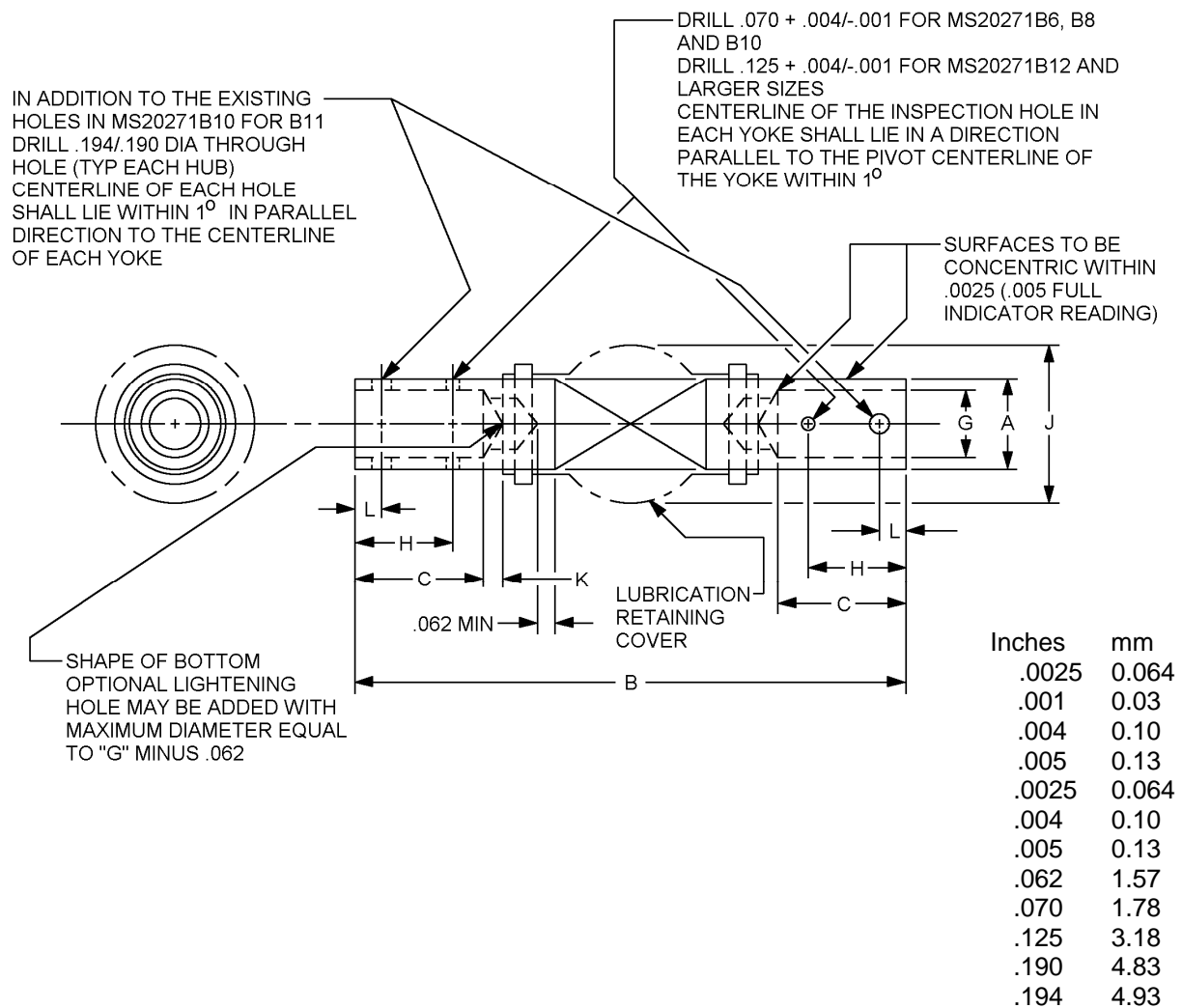


FIGURE 1. Universal joint dimensions and configurations.

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| MS PIN | Nominal size | | A +.000 -.002 (0.05 mm) Dia | | B | | C +.031 (0.79 mm) -.000 | |
|------------|--------------|-------|--------------------------------------|-------|--------|--------|-------------------------------|-------|
| | Inches | mm | Inches | mm | Inches | mm | Inches | mm |
| MS20271B6 | .375 | 9.53 | .372 | 9.45 | 2.000 | 50.80 | .500 | 12.70 |
| MS20271B8 | .500 | 12.70 | .495 | 12.57 | 2.312 | 58.72 | .625 | 15.88 |
| MS20271B10 | .625 | 15.88 | .620 | 15.75 | 2.750 | 69.85 | .750 | 19.05 |
| MS20271B11 | | | | | | | | |
| MS20271B12 | .750 | 19.05 | .745 | 18.93 | 3.187 | 80.95 | .875 | 22.23 |
| MS20271B14 | .875 | 22.23 | .870 | 22.10 | 3.625 | 92.08 | 1.000 | 25.40 |
| MS20271B16 | 1.0000 | 25.40 | .995 | 25.27 | 4.062 | 103.17 | 1.125 | 28.58 |
| MS20271B20 | 1.250 | 31.75 | 1.245 | 31.62 | 4.625 | 117.48 | 1.187 | 20.15 |
| MS20271B24 | 1.500 | 38.10 | 1.495 | 37.97 | 5.250 | 133.35 | 1.312 | 33.32 |

| MS PIN | G +.004 (0.10 mm) -.001 (0.03 mm) | | H | | J max Dia | | K min | |
|------------|---|-------|--------|-------|-----------------|-------|----------|------|
| | Inches | mm | Inches | mm | Inches | mm | Inches | mm |
| MS20271B6 | .250 | 6.35 | .437 | 11.10 | .781 | 19.84 | .062 | 1.57 |
| MS20271B8 | .375 | 9.53 | .562 | 14.27 | 1.031 | 26.19 | | |
| MS20271B10 | .500 | 12.70 | .687 | 17.45 | 1.156 | 29.36 | | |
| MS20271B11 | | | | | | | | |
| MS20271B12 | .625 | 15.88 | .812 | 20.62 | 1.437 | 36.50 | | |
| MS20271B14 | .750 | 19.05 | .937 | 23.80 | 1.562 | 39.67 | | |
| MS20271B16 | .812 | 20.62 | 1.062 | 26.97 | 1.906 | 48.41 | | |
| MS20271B20 | 1.062 | 26.97 | 1.125 | 28.58 | 2.187 | 55.55 | .125 | 3.18 |
| MS20271B24 | 1.250 | 31.75 | 1.250 | 31.75 | 2.750 | 69.85 | | |

| MS PIN | L | | Weight Max | |
|------------|--------|------|---------------|--------|
| | Inches | mm | LB | gram |
| MS20271B6 | --- | --- | .07 | 31.75 |
| MS20271B8 | --- | --- | .09 | 40.82 |
| MS20271B10 | --- | --- | .18 | 81.65 |
| MS20271B11 | .312 | 7.92 | | |
| MS20271B12 | --- | --- | .24 | 108.86 |
| MS20271B14 | --- | --- | .35 | 158.76 |
| MS20271B16 | --- | --- | .55 | 249.49 |
| MS20271B20 | --- | --- | .90 | 408.23 |
| MS20271B24 | --- | --- | 1.5 | 680.39 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Tolerances unless otherwise noted are $\pm .015$ inches (0.38 mm).
4. All dimensions to be met after plating.
5. Cover swell shall not exceed 10% J max.
6. Remove all burrs and sharp edges.

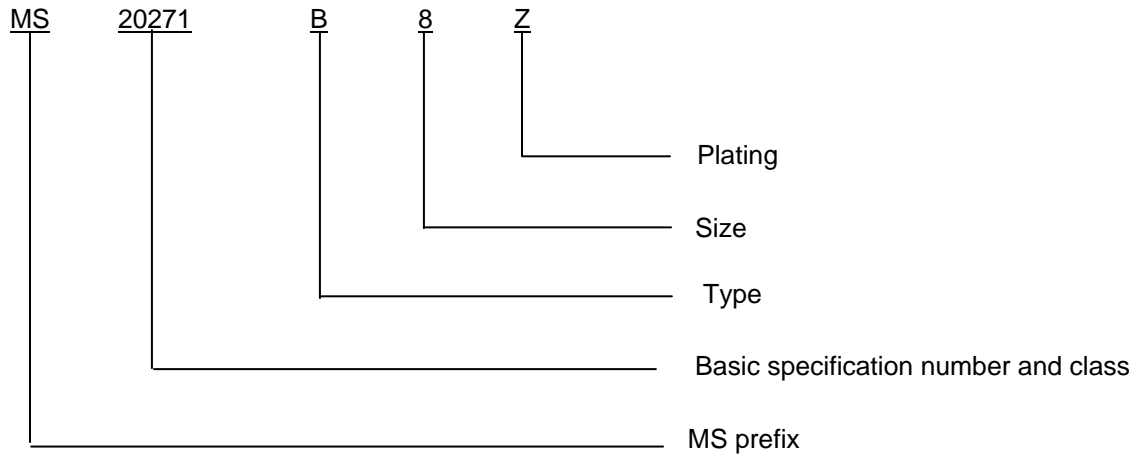
FIGURE 1. Universal joint dimensions and configurations - Continued.

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REQUIREMENTS

Dimensions and configuration, see figure 1.

Part or Identifying Number (PIN):



Classification. The universal joints shall be of the following class and types:

Class 2: Heavy duty.

Type: Type designator:

B - Round end (see figure 1).

Size: See table I and figure 1.

TABLE I. Size designator. 1/

| Size designator | Nominal size of universal joint fraction | Nominal OD of universal joint inch | Nominal size of universal joint mm |
|-----------------|--|------------------------------------|------------------------------------|
| 6 | 3/8 | .375 | 9.53 |
| 8 | 1/2 | .500 | 12.70 |
| 10 | 5/8 | .625 | 15.88 |
| 11 | | | |
| 12 | 3/4 | .750 | 19.05 |
| 14 | 7/8 | .875 | 22.23 |
| 16 | 1 | 1.000 | 25.40 |
| 20 | 1 1/4 | 1.250 | 31.75 |
| 24 | 1 1/2 | 1.500 | 38.10 |

1/ Size designators are SAE convention (16's of an inch).

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Plating designator:

Blank - Cadmium
Z - Zinc

Guidance on use of alternative parts with less hazardous or non-hazardous materials. This specification provides for a number of alternative plating materials via the PIN. Users should select the PIN with the least hazardous material that meets the form, fit, and function requirements of their application.

Amendment notations. The margins of this specification are marked with vertical lines to indicate where modifications from this amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this documents based on the entire content irrespective of the marginal notations.

Referenced documents. This document references MIL-DTL-6193.

CONCLUDING MATERIAL

Custodians:

Army - AR
Navy - AS
Air Force - 99
DLA - CC

Preparing activity:

DLA - CC

(Project 3010-2006-004)

Review activities:

Army - AV, CR4
Navy - CG, MC, SA
Air Force - 71
DLA - GS

Industry association:

SAE - A6

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.