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INCH-POUND

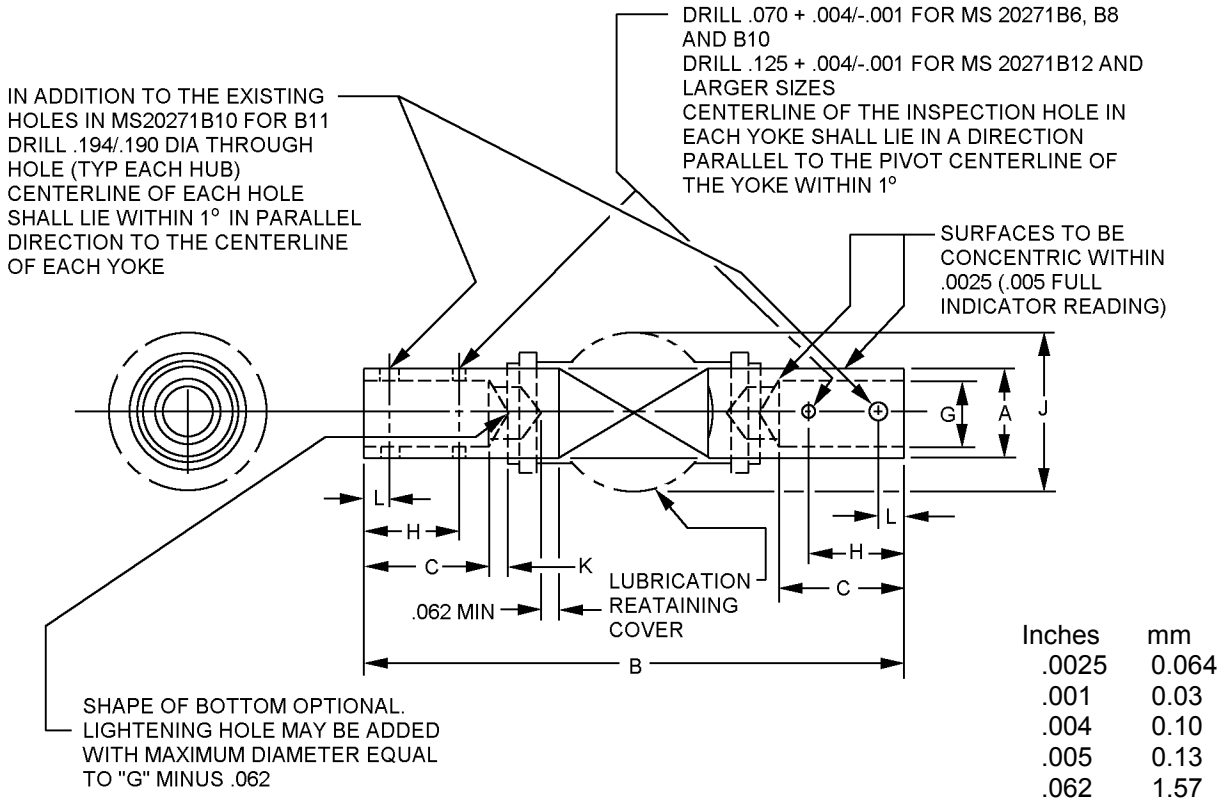
MS20271E
14 April 2011
SUPERSEDING
MS20271D
2 March 2006

DETAIL SPECIFICATION SHEET

JOINT-UNIVERSAL, PLAIN, HEAVY DUTY, WITH LUBRICATION COVER

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.



Inches	mm
.0025	0.064
.001	0.03
.004	0.10
.005	0.13
.062	1.57
.070	1.78
.125	3.18
.190	4.83
.194	4.93

FIGURE 1. Universal joint dimensions and configurations.

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MS PIN	Nominal size		A +.000 -.002 (0.05 mm) Diameter		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 Diameter		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 ± .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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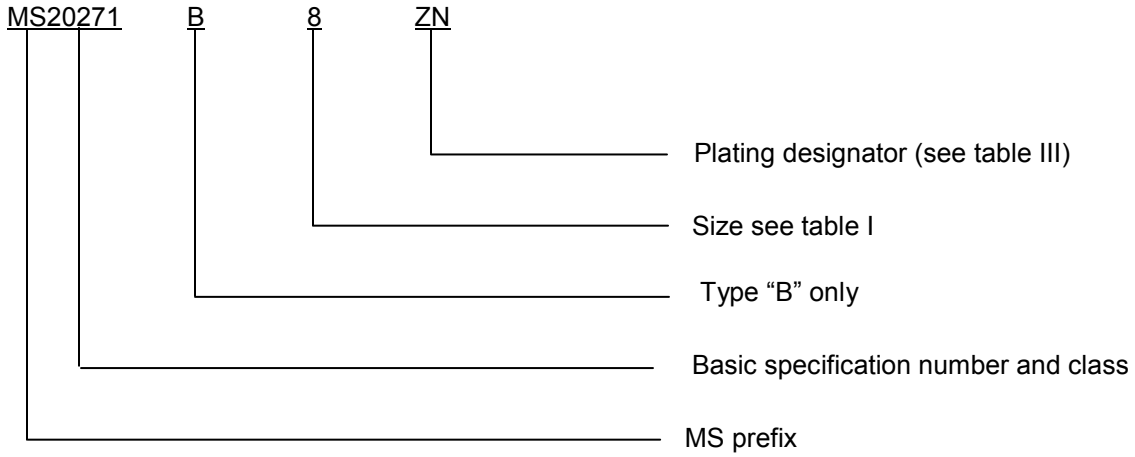
REQUIREMENTS

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, see table II.

TABLE II. Plating designators.

Designator	Plating
Blank	Cadmium
P	Zinc phosphate
Z	Zinc
N	Cadmium with TCP
PN	Zinc phosphate with TCP
ZN	Zinc with TCP

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.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue, due to the extent of the changes.

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

CONCLUDING MATERIAL

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

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

Industry association:
SAE - A6

Preparing activity:
DLA - CC

(Project 3010-2011-003)

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 https://assist.daps.dla.mil.