

INCH-POUND

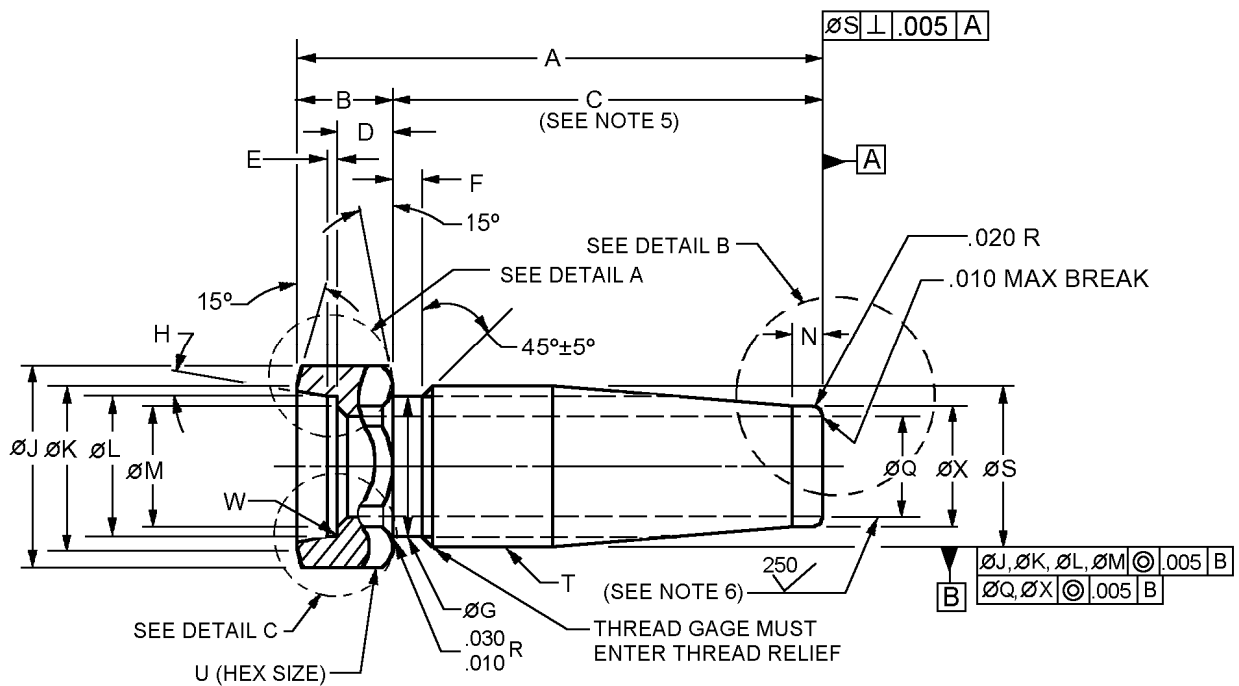
MS27239E
14 May 2007
SUPERSEDING
MS27239D
22 September 2000

DETAIL SPECIFICATION SHEET

NIPPLE, STRAIGHT, ADAPTER, HOSE TO TUBE, REUSABLE, HYDRAULIC, FUEL AND OIL LINES, 1/4 THROUGH 4 INCH TUBE SIZES

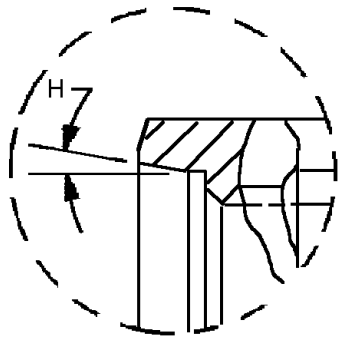
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-5070.

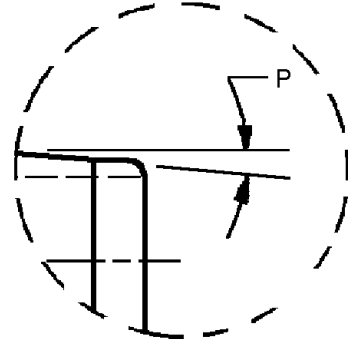


Inch	mm
.010	0.25
.020	0.51
.030	0.76

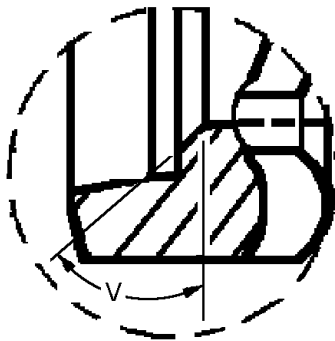
FIGURE 1. Nipple dimensions and configuration.



DETAIL A



DETAIL B



DETAIL C

FIGURE 1. Nipple dimensions and configuration - Continued.

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Dash number	A (ref) inches (mm)	B ±.010 (0.25) inches (mm)	C (see note 5) ±.010 (0.25) inches (mm)	D inches (mm)	E inches (mm)	F inches (mm)	G Dia inches (mm)	H max	J inches (mm)	K Dia ±.02 (0.51) inches (mm)	L Dia inches (mm)	M Dia inches (mm)	N inches (mm)
-4	1.310 (33.27)	.250 (6.35)	1.060 (26.92)	.097 (2.46) .092 (2.34)	.135 (3.43) .070 (1.78)	.093 (2.36)	.250 (6.35) .245 (6.22)	30°	.450 (11.43) .430 (10.92)	.34 (8.64)	.254 (6.45) .251 (6.38)	.175 (4.45)	.125 (3.18)
-5	1.491 (37.87)	.312 (7.92)	1.179 (29.95)	.159 (4.04) .154 (3.91)		.107 (2.72)	.329 (8.36) .324 (8.23)		.510 (12.95) .490 (12.45)	.41 (10.41)	.316 (8.03) .313 (7.95)	.235 (5.97)	
-6	1.666 (42.32)		1.354 (34.39)				.388 (9.86) .383 (9.73)		.580 (14.73) .560 (14.22)	.47 (11.94)	.379 (9.63) .376 (9.55)	.272 (6.91)	
-8	2.000 (50.80)	.375 (9.53)	1.625 (41.28)	.222 (5.64) .217 (5.51)	.046 (1.17) .031 (.79)	.126 (3.20)	.520 (13.21) .510 (12.95)	10°	.719 (18.26) .688 (17.48)	.59 (14.99)	.504 (12.80) .501 (12.73)	.420 (10.67)	.150 (3.81)
-10	2.175 (55.25)		1.800 (45.72)	.128 (3.25) .123 (3.12)			.645 (16.38) .635 (16.13)		.859 (21.82) .828 (21.03)	.72 (18.29)	.629 (15.98) .626 (15.90)	.545 (13.84)	.097 (2.46)
-12	2.469 (62.71)		2.094 (53.19)			.150 (3.81)	.765 (19.43) .755 (19.18)		.984 (24.99) .953 (24.21)	.84 (21.34)	.754 (19.15) .751 (19.08)	.670 (17.02)	.150 (3.81)
-16	1.973 (50.11)		1.598 (40.59)	.077 (1.96) .062 (1.57)			.990 (25.15) .980 (24.89)		1.266 (32.16) 1.234 (31.34)	1.09 (27.69)	1.004 (25.50) 1.001 (25.43)	.920 (23.37)	.200 (5.08)
-20	2.271 (57.68)	.500 (12.70)	1.771 (44.98)		.253 (6.43) .248 (6.30)	.137 (3.48)	1.239 (31.47) 1.219 (30.96)		1.515 (38.48) 1.485 (37.72)	1.34 (34.04)	1.254 (31.85) 1.251 (31.78)	1.170 (29.72)	
-24	2.373 (60.27)	.562 (14.27)	1.811 (46.00)		.315 (8.00) .310 (7.87)		.046 (1.17) .031 (.79)		1.485 (37.72) 1.465 (37.21)	1.765 (44.83) 1.735 (44.07)	1.59	1.504 (38.20) 1.501 (38.13)	1.295 (32.89)
-32	2.891 (73.43)	.625 (15.88)	2.266 (57.56)	.378 (9.60) .373 (9.47)	.132 (3.35)	1.926 (48.92) 1.906 (48.41)			2.317 (58.85) 2.297 (58.34)	2.09	2.004 (50.90) 2.001 (50.83)	1.795 (45.59)	.200 (5.08)
-40	3.219 (81.76)	.750 (19.05) .875 (22.23)	2.469 (62.71)	.503 (12.78) .498 (12.65)		.250 (6.35)			2.389 (60.68) 2.369 (60.17)	2.827 (71.81) 2.797 (71.04)	2.59	2.379 (60.43) 2.376 (60.35)	2.295 (58.29)
-48	3.344 (84.94)			.628 (15.95) .623 (15.82)	3.014 (76.56) 2.994 (76.05)		3.515 (89.28) 3.485 (88.52)		3.22	3.004 (76.30) 3.001 (76.23)	2.920 (74.17)		

FIGURE 1. Nipple dimensions and configuration - Continued.

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Dash number	P ±.25°	Q (see note 6) Dia inches (mm)	S Dia inches (mm)	T	PD	U inches (mm)	V ±2°	W	X Dia inches (mm)
-4	8°	.128 (3.25) .123 (3.12)	.281 (7.14) .275 (6.99)	.281-32 UNS-2 (see note 8)	.2597 .2565	.378 (9.60) .371 (9.42)	45°	.015 max X 45° break (0.38 max X 45° break)	.172 (4.37) .167 (4.24)
-5		.175 (4.45) .170 (4.32)	.365 (9.27) .357 (9.07)	.365-28 UNS-2 (see note 8)	.3398 .3365	.440 (11.18) .433 (11.00)			.225 (5.72) .220 (5.59)
-6	7°	.237 (6.02) .232 (5.89)	.421 (10.69) .414 (10.52)	.421-28 UNS-2 (see note 8)	.3968 .3932	.503 (12.78) .496 (12.60)			.292 (7.42) .287 (7.29)
-8	6°	.360 (9.14) .355 (9.02)	.562 (14.27) .555 (14.10)	.563-24 UNEF - 2A (see note 7)	---	.628 (15.95) .621 (15.77)	34°	.015 (0.38) .010 (0.25) radius	.415 (10.54) .410 (10.41)
-10	5°	.460 (11.68) .450 (11.43)	.688 (17.48) .680 (17.27)	.688-24 UNEF - 2A (see note 7)	---	.753 (19.13) .746 (18.95)			.520 (13.21) .510 (12.95)
-12	4.5°	.582 (14.78) .576 (14.63)	.812 (20.62) .804 (20.42)	.813-20 UNEF - 2A (see note 7)	---	.878 (22.30) .871 (22.12)			.650 (16.51) .640 (16.26)
-16	5°	.820 (20.83) .810 (20.57)	1.062 (26.97) 1.054 (26.77)	.063-18 UNEF - 2A (see note 7)	---	1.128 (28.65) 1.121 (28.47)			.900 (22.86) .890 (22.61)
-20		1.052 (26.72) 1.042 (26.47)	1.312 (33.32) 1.304 (33.12)	1.313-18 UNEF - 2A (see note 7)	---	1.378 (35.00) 1.371 (34.82)	1.125 (28.58) 1.115 (28.32)		
-24		1.286 (32.66) 1.276 (32.41)	1.562 (39.67) 1.554 (39.47)	1.688-18 UNEF - 2A (see note 7)	---	1.766 (44.86) 1.734 (44.04)	1.360 (34.54) 1.350 (34.29)		
-32	4°	1.755 (44.58) 1.745 (44.32)	2.000 (50.80) 1.991 (50.57)	2.000 - 18 UNS - 2A (see note 8)	1.9600 1.9639	2.270 (57.66) 2.230 (56.64)	34°		1.830 (46.48) 1.820 (46.23)
-40		2.219 (56.36) 2.199 (55.85)	2.500 (63.50) 2.489 (63.22)	2.500 - 12 UN - 2A (see note 7)	---	2.645 (67.18) 2.605 (66.17)			--
-48		2.823 (71.70) 2.803 (71.20)	3.125 (79.38) 3.114 (79.10)	3.125 - 12 UN - 2A (see note 7)	---	3.270 (83.06) 3.230 (82.04)			--

FIGURE 1. Nipple dimensions and configuration - Continued.

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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are for information only.
3. Unless otherwise specified, tolerances are as follows: Angles $\pm 5^\circ$; decimals $\pm .005$ inch (0.13 mm).
4. Unless otherwise specified, maximum surface roughness shall be 125 μin R_a in accordance with ASME B46.1.
5. Unless otherwise specified, all outside diameters within this length shall be concentric within .005 inch (0.13 mm) total indicator reading.
6. Hole shall be concentric with external taper within .005 inch (0.13 mm) total indicator reading for a depth of .12 inch (3.0 mm) for a depth of .12 inch (3.05 mm).
7. Threads shall be in accordance with MIL-S-7742.
8. Threads shall be in accordance with ASME B1.1 (UNS).
9. Break all sharp edges and remove all burrs and slivers.

FIGURE 1. Nipple dimensions and configuration - Continued.

REQUIREMENTS:

Dimensions and configurations: The design, construction, and physical dimensions shall be in accordance with MIL-DTL-5070 and figure 1 in case of conflict between this drawing and MIL-DTL-5070, this drawing shall govern.

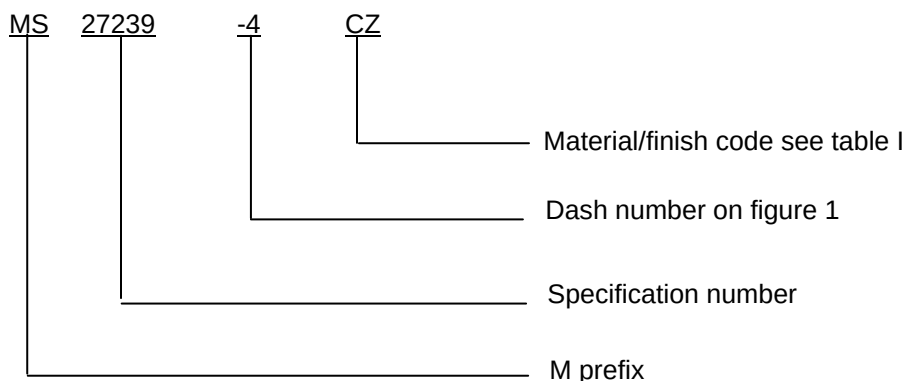
Intended use. This item shall not be procured for stocking purposes. This part is a component of MS27223, MS27225, MS27227, and MS27229.

Materials: Materials shall be in accordance with MIL-DTL-5070.

Finish: Finish shall be in accordance with MIL-DTL-5070.

Color identification: Color identification shall be in accordance with MIL-DTL-5070.

Part or Identifying Number (PIN) example:



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TABLE I. Code for material and finish.

Code	Dash size	Material/finish
CC	-3 thru -6	Carbon Steel – cadmium plating
CZ	-3 thru -6	Carbon steel – zinc plating
SS	-3 through -6	Corrosion resistant steel - N/A
AA	-8 through -48	Aluminum – anodic coating
TA	-3 through -48	Titanium - Anodized or fluoride phosphated.

To the users of this document, it is recommended that the use of carbon steel material with cadmium plating be used only when the other materials and finishes specified in this document cannot meet performance requirements.

Identification of product. The PIN and the manufacturer's Commercial and Government Entity (CAGE) Code or trademark shall be permanently marked on the nipple or on a removable tag securely attached to the part.

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. In addition to MIL-DTL-5070, this document references the following:

MIL-S-7742
MS27223
MS27225
MS27227
MS27229
ASME B1.1
ASME B46.1

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 4730-2005-057)

Review activities:

Army - AV
Navy - MC, SA
Air Force - 11, 70, 71

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>.