

INCH-POUND

MS27069G  
 5 February 2009  
 SUPERSEDING  
 MS27069F  
 24 September 2003

## DETAIL SPECIFICATION SHEET

## SOCKET, HOSE COUPLING

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

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The requirements for acquiring the product described herein shall consist of this specification sheet  
 and MIL-DTL-27272.

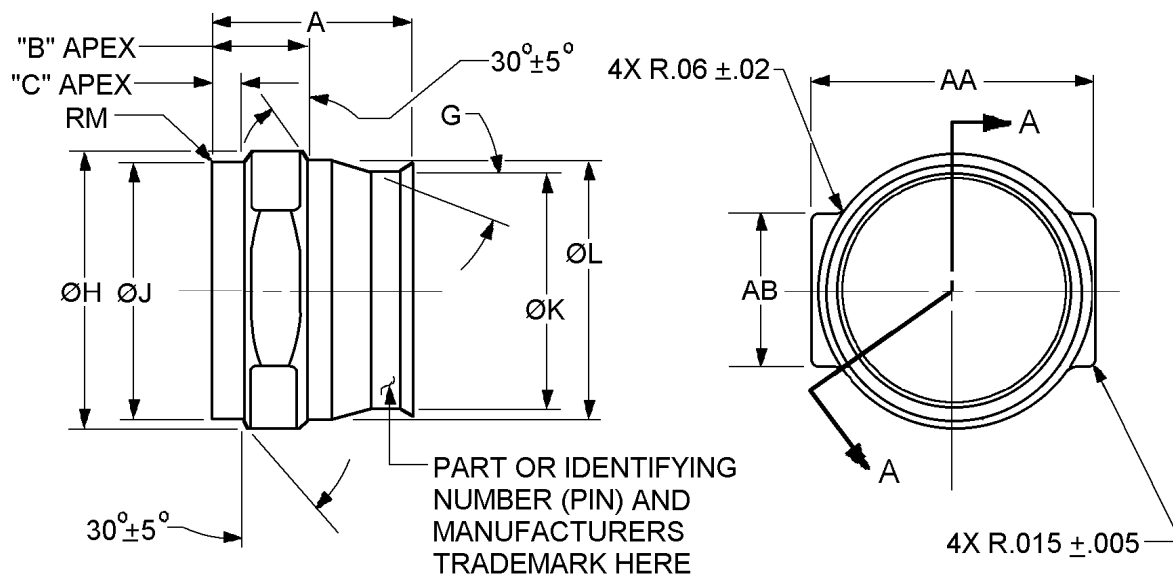
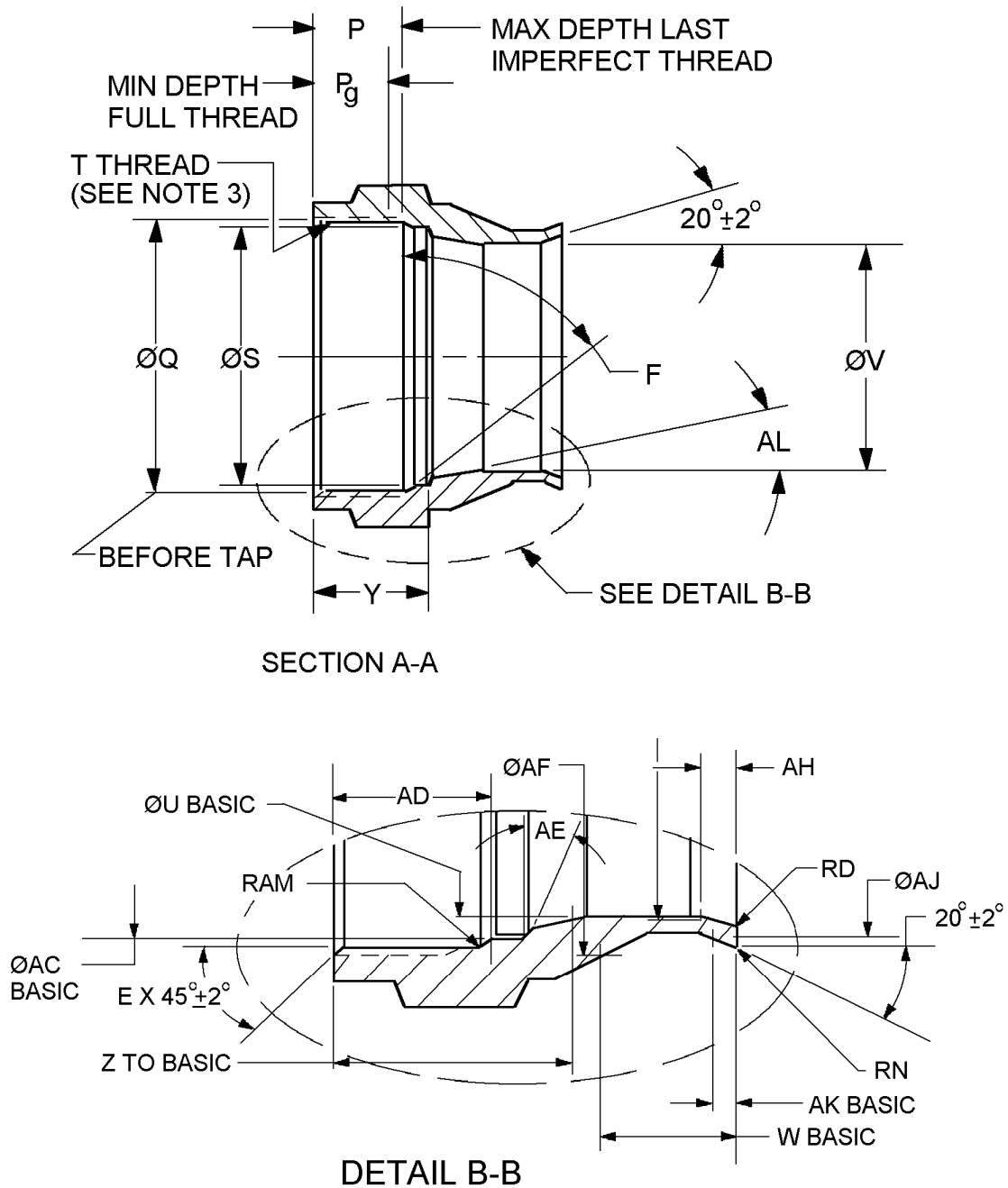


FIGURE 1. Socket dimensions and configuration.

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FIGURE 1. Socket dimensions and configuration - Continued.

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Dash number	Tube size inches (mm)	A inches (mm) ±.010 (0.25)	B inches (mm) ±.010 (0.25)	C inches (mm) ±.010 (0.25)	D inches (mm) ±.005 (0.13)	E inches (mm)		F ±2°	G ±.5°	
-4	.250 (6.35)	.806 (20.47)	.385 (9.78)	.120 (3.05)	.015 (0.38)	.030 (0.76)	±.005 (0.13)	30°	15.5°	
-5	.313 (7.95)	.834 (21.18)				.031 (.79)	±.015 (0.38)		14.5°	
-6	.375 (9.53)	.853 (21.67)							14.0°	
-8	.500 (12.70)	.979 (24.87)							17.0°	
-10	.625 (15.88)	1.080 (27.43)	.505 (12.83)	.190 (4.83)	.020 (0.51)	.035 (0.89)	±.005 (0.13)		18.0°	
-12	.750 (19.05)	1.152 (29.26)						60°	16.0°	
-16	1.000 (25.40)	1.255 (31.88)				.040 (1.02)		45°	20.0°	
-20	1.250 (31.75)	1.510 (38.35)							30°	23.0°
-24	1.500 (38.10)	1.582 (40.18)							45°	22.0°

Dash number	H dia inches (mm) ±.005 (0.13)	J dia inches (mm) ±.005 (0.13)	K dia inches (mm) ±.005 (0.13)	L dia inches (mm) ±.005 (0.13)	M inches (mm)	N inches (mm)	P max inches (mm)	P <sub>g</sub> min inches (mm)
-4	.562 (14.27)	.558 (14.17)	.440 (11.18)	.558 (14.17)	.010 (0.25) ±.005 (0.13)	.030 (0.76) max	.310 (7.87)	.210 (5.33)
-5	.625 (15.88)	.620 (15.75)	.514 (13.06)	.620 (15.75)			.335 (8.51)	.235 (5.97)
-6	.688 (17.48)	.683 (17.35)	.582 (14.78)	.683 (17.35)			.320 (8.13)	.215 (5.46)
-8	.875 (22.23)	.870 (22.10)	.700 (17.78)	.870 (22.10)	.030 (0.76) max		.365 (9.27)	.235 (5.97)
-10	1.000 (25.40)	.995 (25.27)	.822 (20.88)	.995 (25.27)		.015 (0.38) ±.005 (0.13)	.410 (10.41)	.270 (6.86)
-12	1.125 (28.58)	1.120 (28.45)	.942 (23.93)	1.120 (28.45)			.435 (11.05)	.360 (9.14)
-16	1.500 (38.10)	1.495 (37.97)	1.270 (32.26)	1.495 (37.97)			.490 (12.45)	.380 (9.65)
-20	1.875 (47.63)	1.870 (47.50)	1.520 (38.61)	1.870 (47.50)			.695 (17.65)	.495 (12.57)
-24	2.125 (53.98)	2.120 (53.85)	1.816 (46.13)	2.120 (53.85)	.782 (19.86)		.607 (15.42)	

FIGURE 1. Socket dimensions and configuration - Continued.

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Dash number	Q dia inches (mm)		S dia +.000 -.005 (0.13) inches (mm)	T (See note 3)	
				Thread	Pitch diameter inches (mm)
-4	.461 (11.71)	.007/-0.000 (+0.18/-0.00)	---	.5000 - 28 UNJEF - 3B	.4804/.4768 (12.202/12.111)
-5	.517 (13.13)		---	.5625 - 24 UNJEF - 3B	.5392/.5354 (13.696/13.599)
-6	.580 (14.73)		---	.6250 - 24 UNJEF - 3B	.6018/.5979 (15.286/15.187)
-8	.705 (17.91)	+.005/-0.000 (+0.13/-0.00)	---	.7500 - 24 UNS - 3B	.7269/.7229 (18.463/18.362)
-10	.821 (20.85)	+.008/-0.000 (+0.20/-0.00)	---	.8750 - 20 UNJEF - 3B	.8468/.8425 (21.509/21.400)
-12	.946 (24.03)		---	1.0000 - 20 UNJEF - 3B	.9719/.9675 (24.686/24.575)
-16	1.315 (33.40)		1.225 (31.12)	1.3750 - 18 UNJEF - 3B	1.3436/1.3389 (34.127/34.008)
-20	1.627 (41.33)	.009/-0.000 (+0.23/-0.00)	1.500 (38.10)	1.6875 - 18 UNJEF - 3B	1.6563/1.6514 (42.070/41.946)
-24	1.870 (47.50)	+.008/-0.000 (+0.20/-0.00)	1.815 (46.10)	1.9375 - 16 UN - 3B	1.9021/1.8969 (48.313/48.181)

Dash number	U dia inches (mm)	V dia inches (mm)		W inches (mm)	Y inches (mm) ±.005 (0.13)	Z inches (mm)	
-4	.3785 (9.614)	.348 (8.84)	+.005/-0.000 (+0.13/-0.00)	.1826 (4.638)	---	.436 (11.07)	+.013 /-.000 (+0.33/-0.00)
-5	.4410 (11.201)	.411 (10.44)		.2035 (5.169)	---	.447 (11.35)	±.006 (0.15)
-6	.5030 (12.776)	.478 (12.14)	+.006/-0.000 (+0.15/-0.00)	.2403 (6.104)	---	.430 (10.92)	+.013 /-.000 (+0.33/-0.00)
-8	.6195 (15.735)	.590 (14.99)	+.005/-0.000 (+0.13/-0.00)	.2169 (5.509)	---	.527 (13.39)	+.011 /-.000 (+0.28/-0.00)
-10	.7245 (18.406)	.692 (17.58)	+.006/-0.000 (+0.15/-0.00)	.2423 (6.154)	---	.592 (15.04)	.007 /-.000 (+0.18 /-0.00)
-12	.8665 (22.009)	.825 (20.96)	.007/-0.000 (+0.18/-0.00)	.2738 (6.955)	---	.631 (16.03)	±.004 (0.10)
-16	1.1700 (29.718)	1.140 (28.96)	+.005/-0.000 (+0.13/-0.00)	.4009 (10.183)	.648 (16.46)	.756 (19.20)	+.009/-0.000
-20	1.4425 (36.640)	1.390 (35.31)		.4480 (11.379)	.905 (22.99)	.994 (25.25)	±.008 (0.20)
-24	1.7185 (43.650)	1.713 (43.51)	±.005 (0.13) (+0.13/-0.00)	.4538 (11.527)	.942 (23.93)	1.101 (27.97)	±.005 (0.13)

FIGURE 1. Socket dimensions and configuration - Continued.

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Dash number	AA inches (mm) ±.005 (0.13)	AB inches (mm) ±.015	AC dia inches (mm)	AD inches (mm) ±.005 (0.13)	AE	AF dia inches (mm) ±.005 (0.13)
-4	.562 (14.27)	.325 (8.26)	.4362 (11.079)	.328 (8.33)	---	.450 (11.43)
-5	.625 (15.88)	.361 (9.17)	.4928 (12.517)	.353 (8.97)	---	.525 (13.34)
-6	.688 (17.48)	.397 (10.08)	.5560 (14.122)	.338 (8.59)	---	.601 (15.27)
-8	.875 (22.23)	.505 (12.83)	.6832 (17.353)	.385 (9.78)	---	.713 (18.11)
-10	1.000 (25.40)	.578 (14.68)	.8008 (20.340)	.427 (10.85)	---	.844 (21.44)
-12	1.125 (28.58)	.650 (16.51)	.9295 (23.609)	.463 (11.76)	---	.969 (24.61)
-16	1.500 (38.10)	.866 (22.00)	1.2708 (32.278)	.524 (13.31)	3° max	1.397 (35.48)
-20	1.875 (47.63)	1.082 (27.48)	1.5645 (39.738)	.786 (19.96)	3°±2°	1.710 (43.43)
-24	2.125 (53.98)	1.227 (31.17)	1.8432 (46.817)	.827 (21.01)		1.993 (50.62)

Dash number	AG dia inches (mm)	AH inches (mm) ±.010 (0.25)	AJ dia inches (mm) ±.005 (0.13)	AK inches (mm)	AL ±.25°	AM max inches (mm)
-4	.3878 (9.850)	.051 (1.30)	.450 (11.43)	.0545 (1.384)	9°	---
-5	.4568 (11.603)	.059 (1.50)	.525 (13.34)	.0552 (1.402)	8°	---
-6	.5290 (13.437)	.066 (1.68)	.601 (15.27)	.0668 (1.697)		---
-8	.6362 (16.159)	.060 (1.52)	.713 (18.11)	.0579 (1.471)		---
-10	.7500 (19.050)	.075 (1.91)	.844 (21.44)	.0567 (1.440)	9°	---
-12	.8818 (22.397)	.073 (1.85)	.969 (24.61)	.0647 (1.643)	8°	---
-16	1.2038 (30.577)	.084 (2.13)	1.298 (32.97)	.0649 (1.648)	7°	---
-20	1.4488 (36.800)		1.545 (39.24)	.0615 (1.562)	8°	---
-24	1.7424 (44.257)	.079 (2.01)	1.849 (46.96)	.0426 (1.082)	6°	.015 (0.38)

FIGURE 1. Socket dimensions and configuration - Continued.

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## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Threads shall be in accordance with SAE-AS8879 except for -8 and -24 sizes, which shall be in accordance with ASME B1.1.
4. Remove all burrs and slivers.
5. Unless otherwise specified, surface roughness shall not exceed 125 $\mu$  inch (3.18 $\mu$ m)  $R_a$  in accordance with ASME B46.1.
6. Unless otherwise specified, break or radius all corners .005, +.005, -.000 (0.13, +0.13, -0.00 mm).
7. All diameters must be concentric within .005 inch (0.13 mm) full indicator movement.
8. Apex dimension is for the highest point.
9. Basic dimensions are used to designate the critical design dimensions of a part.

FIGURE 1. Socket dimensions and configuration - Continued.

## REQUIREMENTS

Intended use. This part is a component of MS27053 through MS27060 and MS27381 through MS27385.

## Design and construction:

Dimensions and configuration shall be as specified on figure 1.

## Materials:

Corrosion-resistant steel, class 304, condition B, in accordance with ASTM A276.

Minimum yield strength: 60,000 psi (414 MPa) on -4C through -12C  
 50,000 psi (345 MPa) on -16C  
 45,000 psi (310 MPa) on -20C and -24C.

## Finish:

Passivation in accordance with SAE-AMS2700, method 1.

Lubrication: Threads on -8C through -24C shall be lubricated with solid-film lubricate in accordance with SAE-AS1701, class 4, class 5, or class 6, no overspray allowed, see table I.

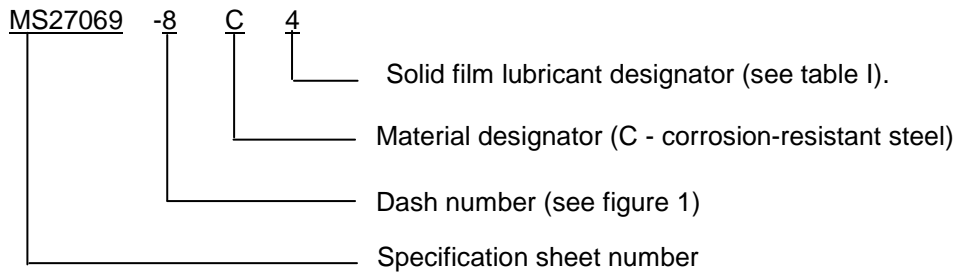
TABLE I. Solid film designator.

Dry film designator	SAE-AS1701 class	SAE-AS1701 temperature ranges °F (°C)
Blank	4, 5, or 6	Any temp range
4	4	-65 to +1400°F (-54 to 760°C)
5	5	-65 to +850°F (-54 to 454°C)
6	6	-375 to +850°F (-226 to 454°C)

Marking: Marking shall be permanent and shall include the PIN and manufacturer's trademark. Marking shall be applied directly to the visible surface, see figure 1, of the fitting by laser, etching or metal stamping. The marking may be applied in any order.

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PIN example:



Example: MS27069-8C4 indicates: .500 inch tube OD, socket to hose coupling fitting, corrosion resistant steel, with dry film lubricant temperature rating -65 to +1400°F (-54 to 760°C).

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-27272, this document references the following:

MS27053	MS27060	ASME B46.1
MS27054	MS27381	ASTM A276
MS27055	MS27382	SAE-AMS2700
MS27056	MS27383	SAE-AS1701
MS27057	MS27384	SAE-AS8879
MS27058	MS27385	
MS27059	ASME B1.1	

## CONCLUDING MATERIAL

## Custodians:

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

## Preparing activity:

DLA - CC

(Project 4730-2008-109)

## Review activities:

Army - AR, AT, MI  
 Navy - MC, SA, SH  
 Air Force - 71

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