

DETAIL SPECIFICATION SHEET

NIPPLE, FLARED, TUBE TO HOSE - SWIVEL NUT

This specification sheet 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-27272.

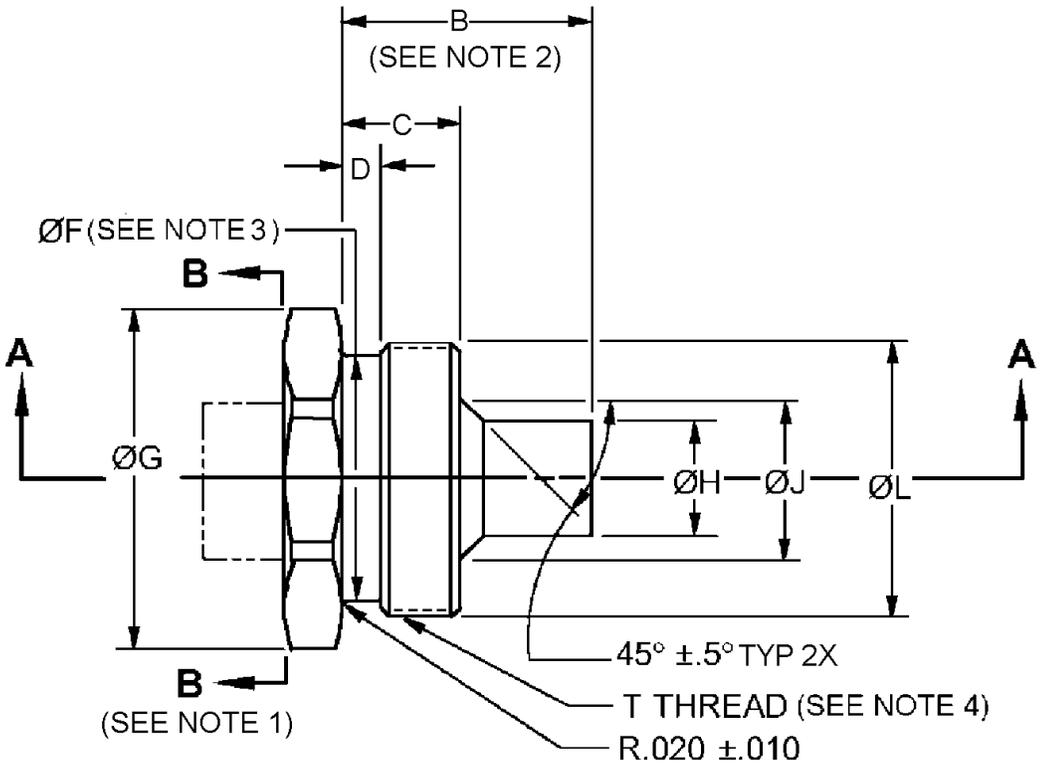
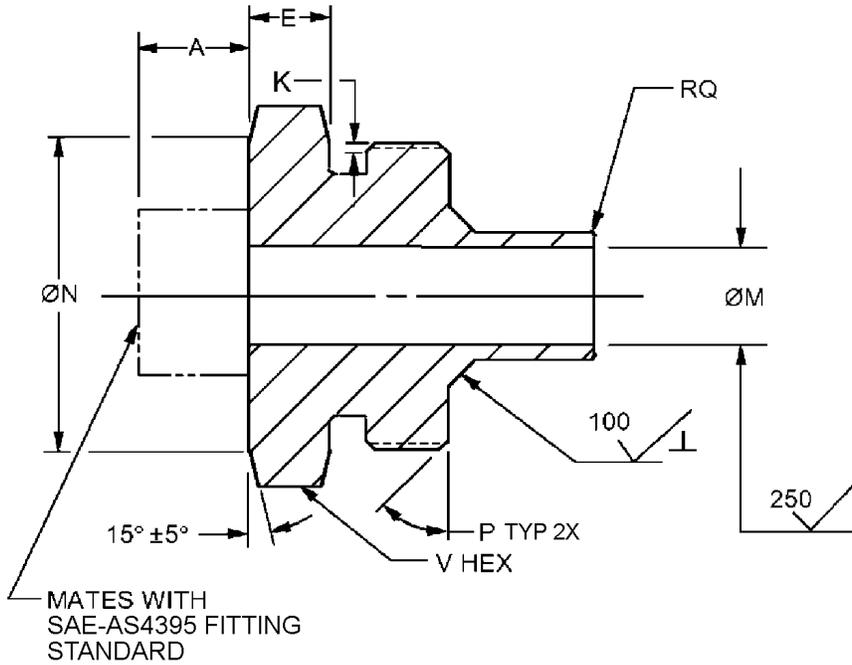


FIGURE 1. Nipple illustration.

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SECTION A-A ENLARGED

Size and material code		A ±.005	B (see note 2) ±.005		C ±.005		D ±.005	
Corrosion resistant steel (CRES)	Aluminum (AL)		CRES	CRES	CRES	AL	CRES	AL
-3/-4C	---	.275	.735	---	.255	---	.075	---
-4C	---	.290		---		---		
-5C	---	.325	.730	---	.250	---	.085	---
-6C	---	.360		---		---		
-8C	-8D	.440	.870	.865	.270	.265	.085	.080
-10C	-10D	.485	.950	.957	.300	.307	.100	.107
-12C	-12D	.465	1.035	1.018	.360	.343		.083
-16C	-16D	.545	1.120	1.100	.390	.370	.110	.090
-20C	-20D	.600	1.335	1.341	.400	.406	.085	.091
-24C	-24D	.695	1.480	1.480	.500	.500	.100	.100

FIGURE 1. Nipple illustration - Continued.

Size and material code		E ±.005		F (see note 3)		G		H +.000 -.005	J ±.005	K	
CRES	AL	CRES	AL								
-3C/4C	---	.125	---	.400	±.005	.620	±.005	.210	.295	.031	±.005
-4C	---		---	.430		.675		.273	.360		
-5C	---		---	.495		.750	+.015 -.000	.335	.425	.015	max
-6C	---	.135	---	.600	.960	.431		.530	.031	±.005	
-8C	-8D	.150	.155	.785	1.105	.531		.625	.035		
-10C	-10D	.170	.163	.910	1.385	.655		.760			
-12C	-12D	.190	.207	1.277	1.680	.905		1.040	.038		
-16C	-16D	.220	.240	1.589	1.979	1.156		1.275			
-20C	-20D	.280	.274	1.828	2.340	1.406		1.550	.043		
-24C	-24D		.280	1.828	2.340	1.406	1.550	.043			

Size and material code		L		M		N ±.02	P ±5°		Q	
CRES	AL						Steel	Alum		
-3C/-4C	---	.500	+ .000	.161	+.005 -.000	.53	45°	---	.015	+.005 -.000
-4C	---		-.006	.224		.59		---		
-5C	---		.562	.261		.66		30°		
-6C	---	.625	+ .000	.345	+.006 -.000	.84	45°	30°	.020	±.005
-8C	-8D	.750	-.007	.440		.97				
-10C	-10D	.875	+ .000	.560		1.22				
-12C	-12D	1.000	-.008	.828		1.47				
-16C	-16D	1.375	+ .000	1.058		1.78				
-20C	-20D	1.688	-.009	1.282	2.09			.030		
-24C	-24D	1.938	+ .000	1.282	2.09			.035		

FIGURE 1. Nipple illustration - Continued.

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Size and material code		T (see notes 3 and 4)		V ±.02
CRES	AL	Thread	Pitch diameter	
-3C/-4C	---	.5000 - 28 UNEF - 3A	.4768/.4740	.56
-4C	---			
-5C	---	.5625 - 24 UNEF -3A	.5354/.5325	.62
-6C	---	.6250 - 24 UNEF -3A	.5979/.5949	.69
-8C	-8D	.7500 - 24 UNS -3A	.7229/.7198	.88
-10C	-10D	.8750 - 20 UNEF -3A	.8425/.8392	1.00
-12C	-12D	1.0000 - 20 UNEF -3A	.9675/.9641	1.25
-16C	-16D	1.3750 - 18 UNEF - 3A	1.3389/1.3353	1.50
-20C	-20D	1.6875 - 18 UNEF - 3A	1.6514/1.6476	1.81
-24C	-24D	1.9375 - 16 UN - 3A	1.8969/1.8929	2.12

NOTES:

1. Any design to the left of plane B-B is acceptable provided A dimension and the requirements of this specification sheet and the procurement specification are met.
2. All diameters within B dimension shall be concentric within .005 full indicator movement.
3. Thread gauge must enter thread relief (-10 through -24 sizes only).
4. Threads shall be in accordance with MIL-S-7742. Threads shall be rolled on corrosion-resistant steel only.
5. Unless otherwise specified, break or radius all corners .005, +.005, -.000. All diameters must be concentric within .010 full indicator movement.
6. Surface roughness. Unless otherwise specified, maximum surface roughness shall not exceed 125 μin. R_a in accordance with ASME B46.1.
7. Remove all burrs and slivers.

FIGURE 1. Nipple illustration - Continued.

REQUIREMENTS

Nipple illustration, see figure 1.

Intended use. This part is a component of MS27061. This is a design standard for manufacturing purposes. The item is only procured as an integral part of adapter assemblies.

Materials. Material and material codes, see table I.

TABLE I. Material codes.

Material code	Material
C	CRES, class 304, condition A, in accordance with SAE-AMS-QQ-S-763. 304 or 321 cold drawn or cold rolled, in accordance with SAE-AMS5639 or SAE-AMS5645.
D	Aluminum alloy, 6061-T6 or T651, in accordance with SAE-AMS4117 or alloy 7075-T73, 7075-T7351 in accordance with SAE-AMS-QQ-A-225/9 or alloy 7055-T7351 in accordance with SAE-AMS4124.

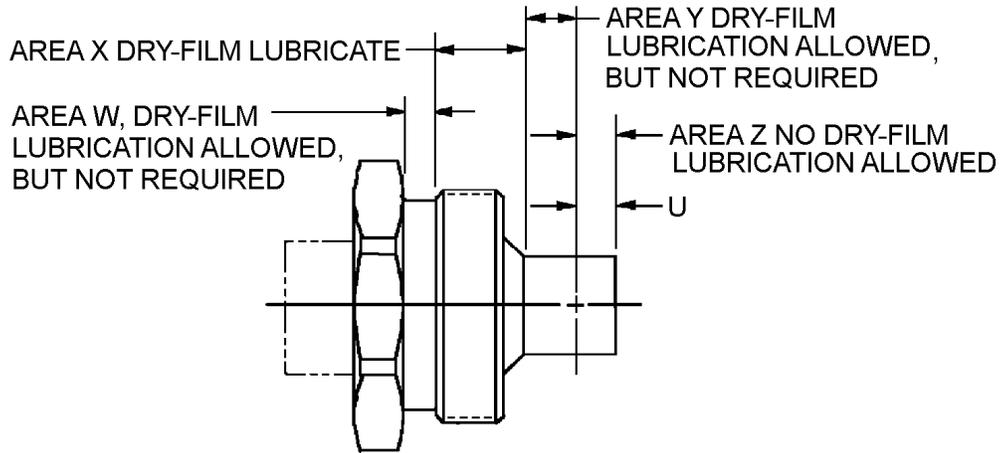
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Finish. Corrosion-resistant steel, passivated in accordance with SAE-AMS2700 method 1, type 6 or 7.

Aluminum alloy. Anodize in accordance with MIL-A-8625, type II, dye blue.

NOTE: Avoid using graphite dry-film lubes with aluminum nipples because in a wet environment, graphite becomes corrosive to the aluminum.

Dry film lubricant. Dry-film lubricate CRES nipples in accordance with figure 2 and table II.



Size and material code	U	
CRES		
-3C/-4C	.25	±.05
-4C		
-5C		
-6C		
-8C	.32	±.12
-10C	.35	±.15
-12C		
-16C	.39	±.19
-20C	.48	±.28
-24C	.50	±.30

FIGURE 2. Dry film application areas.

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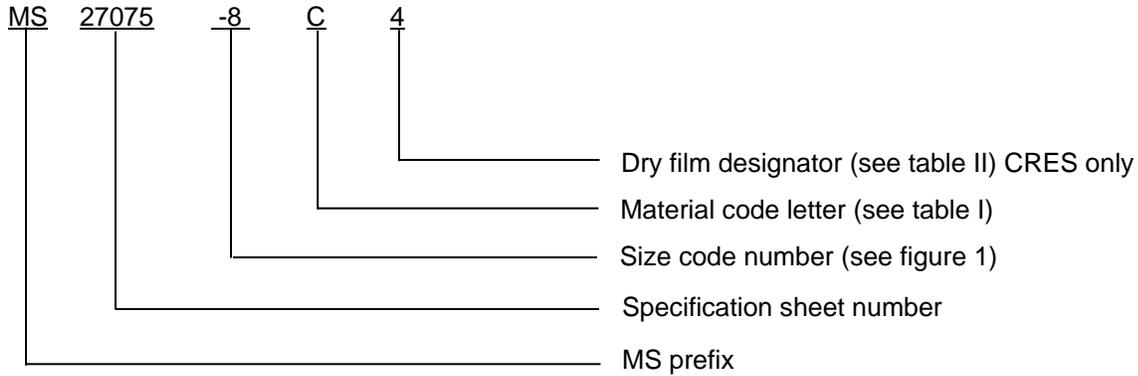
TABLE II. Dry film designator.

Dry film PIN code	SAE class or type designator	Dry film characteristics
Blank	Any SAE class or type below	N/A
SAE-AS1701	SAE-AS1701 class	SAE-AS1701 temperature ranges °F (°C)
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)
SAE-AS5272	SAE-AS5272 type	SAE-AS5272 temperature ranges. °F (°C)
7	Type I	-90° to 400°F (-68 to 204°C) endurance life of 250 min minimum
8	Type II	-90° to 400°F (-68° to 204°C) endurance life of 450 min minimum
9	Type III	Color 1 - Natural product color -90° to 400°F (-68 to 204°C) low Volatile organic compound with an endurance life of 450 min minimum
10	Type III	Color 2 - Black color -90° to 400°F (-68 to 204°C) low Volatile organic compound with an endurance life of 450 min minimum
Dry film designator	MIL classification	Dry film characteristics
MIL-PRF-46010 <u>1/</u>	---	MIL-PRF-46010 temperature ranges. °F (°C)
11	1	Color 1 natural product color, -90° to 400°F (-68 to 204°C) solvent resisting
12	2	Color 2 - Black color -90° to 400°F (-68 to 204°C) solvent resisting

1/ Not for aerospace usage.

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Part or Identifying Number (PIN): The PIN consists of prefix "MS", the specification sheet number, dash number for nipple size, letter for material, and a blank or number for dry film lubricant. Unassigned PIN's shall not be used.



PIN examples:

MS27075-8C indicates a nipple size 8, CRES with dry film class designator "blank".
MS27075-8C4 indicates a nipple size 8, CRES with dry film class designator 4.

Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

Referenced documents shall be of the issue in effect on date of invitations for bid.

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:

MIL-PRF-46010	SAE-AMS2700
MIL-A-8625	SAE-AMS4117
MIL-S-7742	SAE-AMS4124
MS27061	SAE-AMS5639
ASME B46.1	SAE-AMS5645
SAE-AMS-QQ-A-225/9	SAE-AS4395
SAE-AMS-QQ-S-763	SAE-AS5272
	SAE-AS1701

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CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 4730-2013-026)

Review activities:

Army - AR, AT, MI
Navy - MC, SA, SH
Air Force - 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 <https://assist.dla.mil>.