INCH-POUND

MS28781E
24 April 2007
SUPERSEDING
MS28781D
6 April 2001

DETAIL SPECIFICATION SHEET

FITTING END, 90° ELBOW, ATTACHABLE, HYDRAULIC, HIGH PRESSURE HOSE (3,000 PSI), FLARED TUBE

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-8789.

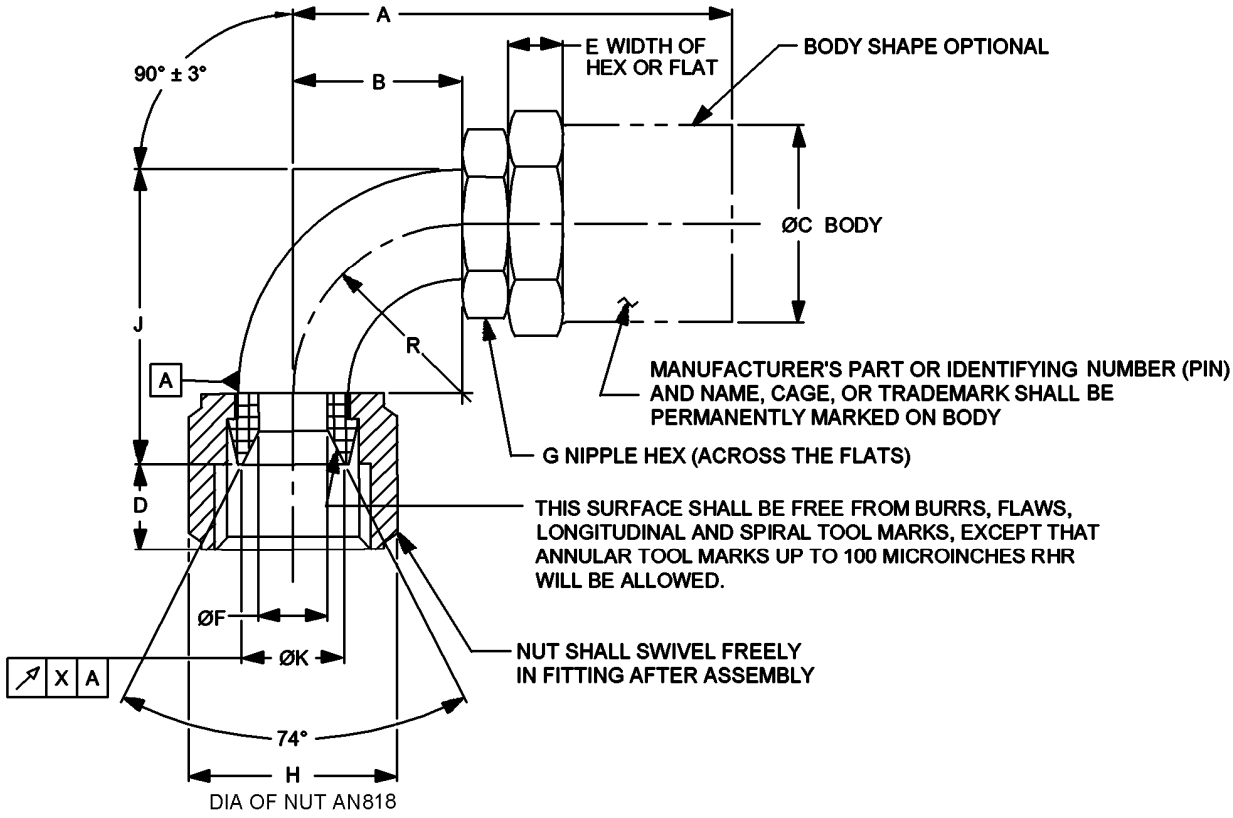


FIGURE 1. Fitting end, 90° elbow, flared tube dimensions and configuration.

Size dash no.	Hose ID ref	Tubing OD	Nut	A max Inch (mm)	B max Inch (mm)	C Diameter max Inch (mm)	D Inch (mm)	
4	7/32	1/4	AN818-4	2.750 (69.85)	.410 (10.41)	.875 (22.23)	.375 (9.53)	±.016 (0.41)
5	9/32	5/16	AN818-5		.473 (12.01)	.937 (23.80)		
6	11/32	3/8	AN818-6	2.875 (73.03)	.535 (13.59)	1.160 (29.46)		
8	7/16	1/2	AN818-8	3.000 (76.20)		1.375 (34.93)	.438 (11.13)	
10	9/16	5/8	AN818-10	3.187 (80.95)	.675 (17.15)	1.550 (39.37)	.515 (13.08)	±.031 (0.79)
12	11/16	3/4	AN818-12	4.000 (101.60)	1.285 (32.64)	1.740 (44.20)	.562 (14.27)	
16	7/8	1	AN818-16	4.750 (120.65)	1.562 (39.67)	2.000 (50.80)	.620 (15.75)	

Size dash no.	E min Inch (mm)	F min Inch (mm)	G (see note 5) min Inch (mm)	H Dia. Inch (mm)	J max Inch (mm)	K diameter Inch (mm)		R ±.031 (0.79) Inch (mm)	X Weight max lbs (kg)	
4	.188 (4.78)	.146 (3.71)	.563 (14.30)	.649 (16.48)	.754 (19.15)	.295 (7.49)	±.010 (0.25)	.375 (9.53)	.005 (0.13)	.13 (59.0)
5		.177 (4.50)	.625 (15.88)	.721 (18.31)	.879 (22.33)	.355 (9.02)		.437 (11.10)		.15 (68.0)
6	.250 (6.35)	.271 (6.88)	.688 (17.48)	.794 (20.17)	.958 (24.33)	.435 (11.05)		.500 (12.70)		.17 (77.1)
8		.365 (9.27)	.875 (22.23)	1.010 (25.65)	.972 (24.69)	.570 (14.48)			.010 (0.25)	.26 (117.9)
10	.312 (7.92)	.455 (11.56)	1.000 (25.40)	1.155 (29.34)	1.160 (29.46)	.680 (17.27)		.625 (15.88)		.40 (181.3)
12	.375 (9.53)	.568 (14.43)	1.250 (31.75)	1.443 (36.65)	1.816 (46.13)	.850 (21.59)		1.250 (31.75)		.54 (244.9)
16		.778 (19.76)	1.500 (38.10)	1.732 (43.99)	2.066 (52.48)	1.103 (28.02)	±.015 (0.38)	1.500 (38.10)		.83 (376.5)

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ±.005 inch (0.13 mm).
4. The fitting identification shall be marked in accordance with MIL-DTL-8789.
5. Hex or flats shall fit standard wrench openings.
6. Threads shall be in accordance with SAE-AS8879.

FIGURE 1. Fitting end, 90° elbow, flared tube dimensions and configuration - Continued.

REQUIREMENTS:

These fittings are for use with MIL-DTL-8788 hose.
See figure 1 for fitting end sizes, dimensions and weight.

Material: Nipples, nuts, and elbows shall be made of steel and the body of aluminum in accordance with MIL-DTL-8789. As an alternate, the elbow may be fabricated from steel tubing in accordance with MIL-DTL-8789.

Finish:

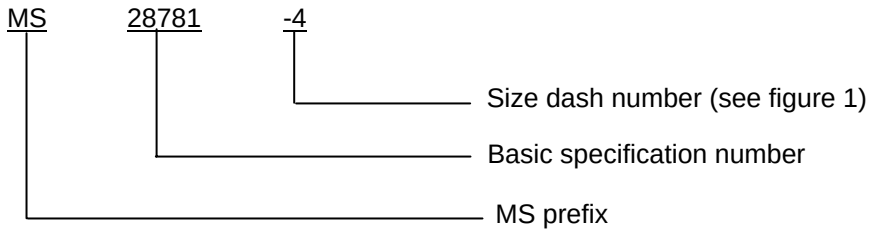
Aluminum alloy, anodic treatment, in accordance with MIL-A-8625, type II.

Steel, cadmium plate, in accordance with SAE AMS-QQ-P-416, type II, class 3, color-black.

A non-standard swivel nut may be used provided the hex and thread dimensions are in accordance with AN818 and the nut shall not be removable from the assembly.

A true circular cross section is not required within angle of bend, however, a ball .031 smaller than “F” diameter (see figure 1) shall pass through the entire fitting.

PIN:



Example of a PIN: MS28781-4

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-8789, this document references the following:

MIL-A-8625
MIL-DTL-8788
AN818
SAE-AS8879
SAE AMS-QQ-P-416

CONCLUDING MATERIAL

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

Review activities:
Army - AV, MI
Navy - CG, MC, SA, SH
Air Force - 71

Preparing activity:
DLA - CC

(Project 4730-2005-034)

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 data at http://assist.daps.dla.mil.