

INCH-POUND  
 MS28755E  
 5 June 2012  
 SUPERSEDING  
 MS28755D  
 6 August 2010

DETAIL SPECIFICATION SHEET

FITTING END, SELF-SEALING FUEL HOSE, SWIVEL, DETACHABLE, FLANGED, 90°

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.

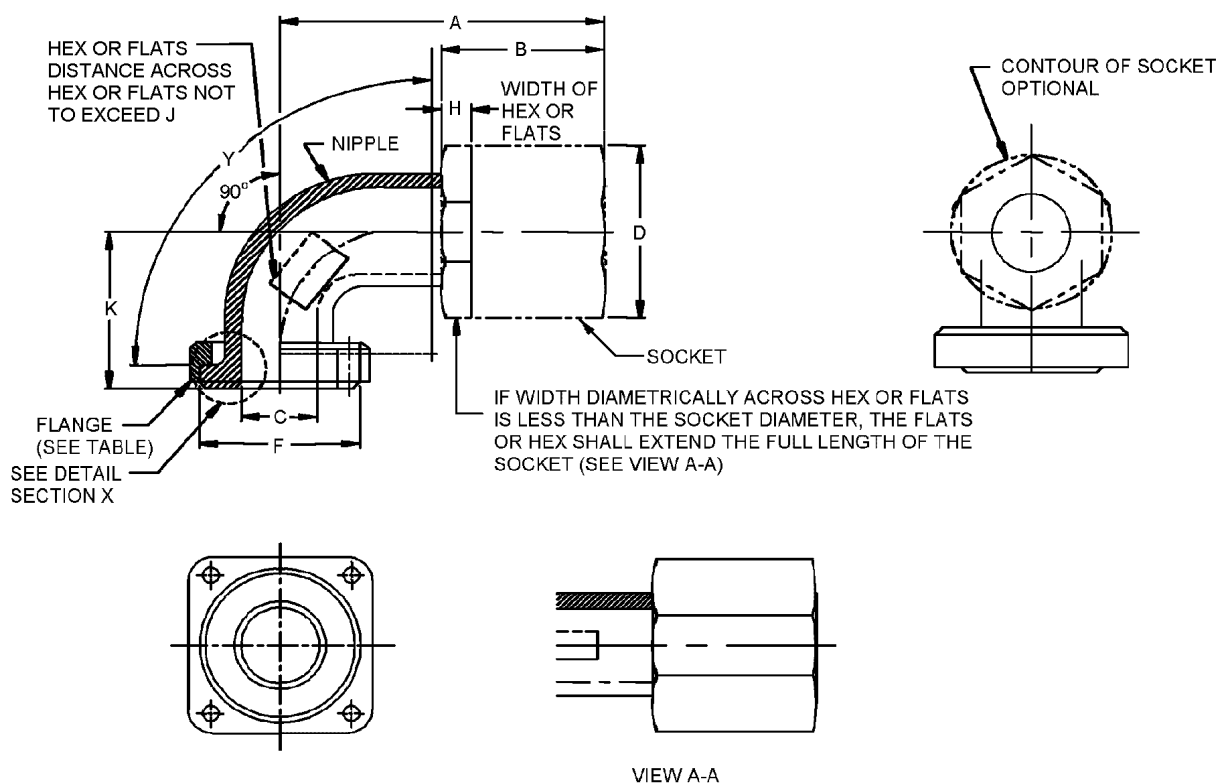
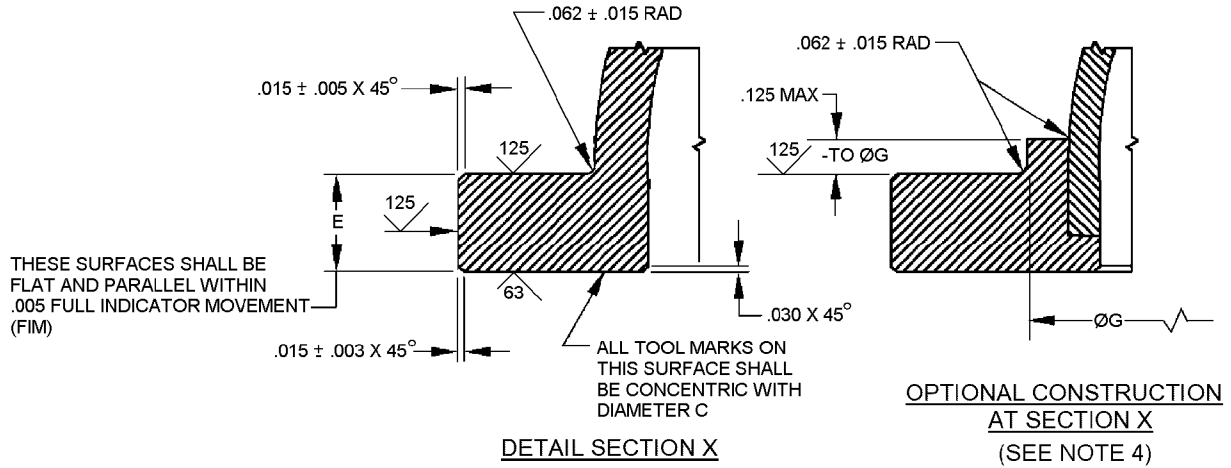


FIGURE 1. 90° fuel hose fitting.

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inch	mm
.003	0.08
.005	0.13
.015	0.38
.062	1.58
.125	3.18

Size designator	Nominal tubing and hose size (REF)	Flange PIN (see notes 5 and 6)	A Max inch (mm)	B Max inch (mm)	C Min (see note 7) inch (mm)	D Max inch (mm)
16	1 (1.000)	MS20756*16	3.891 (98.83)	2.000 (50.80)	.813 (20.65)	1.953 (49.61)
20	1 ¼ (1.250)	MS20756*20	4.016 (100.01)	2.000 (50.80)	1.047 (26.59)	2.313 (58.75)
24	1 ½ (1.500)	MS20756*24	4.578 (116.28)	2.000 (50.80)	1.281 (32.54)	2.563 (65.10)
32	2 (2.000)	MS20756*32	5.391 (162.33)	2.250 (57.15)	1.750 (44.45)	3.125 (79.38)
40	2 ½ (2.500)	MS20756*40	6.016 (152.81)	2.500 (63.50)	2.219 (56.36)	3.625 (92.08)
48	3 (3.000)	MS20756*48	7.281 (184.94)	2.500 (63.50)	2.828 (71.83)	4.438 (112.73)

Size designator	E +.000 -.005 (0.13) inch (mm)	F (see note 7) +.000 -.005 (0.13) inch (mm)	G Max (see note 7) inch (mm)	H Min inch (mm)	J Min inch (mm)	K Max inch (mm)
16	.156 (3.96)	1.500 (38.10)	1.188 (30.18)	.375 (9.53)	1.343 (34.11)	1.813 (46.05)
20	.156 (3.96)	1.844 (46.84)	1.500 (38.10)	.500 (12.70)	1.656 (42.06)	1.813 (46.05)
24	.188 (4.48)	2.125 (53.98)	1.750 (44.45)	.500 (12.70)	1.906 (48.41)	2.313 (58.75)
32	.188 (4.48)	2.750 (69.85)	2.375 (60.33)	.625 (15.88)	2.531 (64.29)	2.813 (71.45)
40	.188 (4.48)	3.281 (83.34)	2.875 (73.03)	1.000 (25.40)	3.031 (76.99)	3.063 (77.80)
48	.188 (4.48)	3.781 (96.04)	3.375 (85.73)	1.250 (31.75)	3.250 (82.55)	4.313 (109.55)

FIGURE 1. 90° fuel hose fitting - Continued.

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## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances: decimals  $\pm .010$  (0.25 mm); angles  $\pm .01^\circ$ .
4. Dimensions and finishes are the same as detail X unless otherwise noted.
5. Part or Identifying Number (PIN).
6. Material designator D, W or T see MS20756.
7. Diameters C, F and G shall be concentric within .010 inch (0.25 mm) full indicator movement.
8. The true circular cross section is not required within angle Y however, a ball .031 inch (0.79 mm) smaller in diameter than C must pass through.

FIGURE 1. 90° fuel hose fitting - Continued.

## REQUIREMENTS:

Material: Materials shall be in accordance with SAE-AS4841, see table I.

TABLE I. Material and finish designators.

Material designator	Alloy	Finish
D	Aluminum alloy 2014 or 2024	Anodize in accordance with MIL-A-8625, type II. <u>1/</u>
W	Aluminum alloy 7075	Anodize in accordance with MIL-A-8625, type II. <u>1/</u>
Dash (-)	Titanium <u>2/</u>	Fluoride phosphated in accordance with SAE-AMS2486 <u>3/</u>
T	Titanium <u>2/</u>	Anodized in accordance with SAE-AMS2488, type 2

1/ Aluminum alloys 2014 and 2024 aluminum shall be dyed light blue. Aluminum alloy 7075 shall be dyed brown.

2/ Titanium shall not be used in oxygen systems.

3/ Color equivalent to numbers /36076, /36081, /36099, /36118, /36134, /36152, /36170, /36173, and /36176 in accordance with FED-STD-595.

Fittings shall swivel through 360° with sufficient clearance to allow use of standard wrenches on the nut when the axis of the hose is aligned over the stud or capscrew.

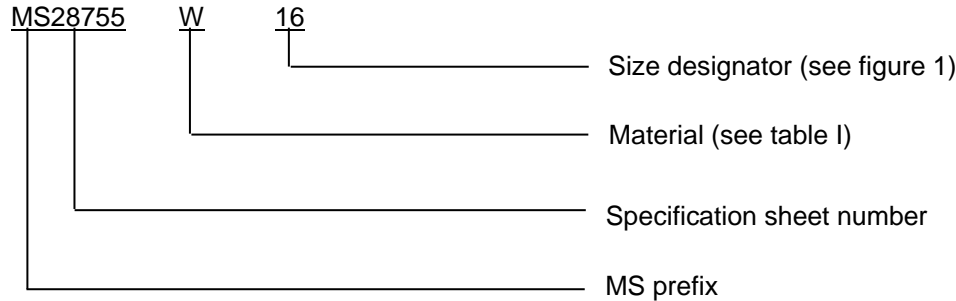
Hex or flats shall fit standard wrench openings.

Surface roughness shall be in accordance with ASME-B46.1.

Remove all burrs and sharp edges. The interior surface of the fitting shall be smooth and free from projections.

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PIN. The PIN shall consist of the prefix MS followed by the specification sheet number, letter for material designator, and a number for the size.



Example of PIN: MS28755W16 indicates a swivel with 90° flange, aluminum, 1 inch hose or tubing size.

Fittings shall be permanently marked with the applicable MS PIN on an unfinished surface of the nipple.

Approximate weights are shown in table II.

TABLE II. Approximate weight.

Size	Weight (Approx) lb (g)	
	Aluminum	Titanium
16	.371 (168.2)	.61 (276.7)
20	.514 (233.1)	.85 (385.5)
24	.848 (384.6)	1.40 (635.0)
32	.947 (429.6)	1.57 (712.1)
40	1.466 (665.0)	2.42 (1097.7)
48	2.000 (907.2)	3.31 (1501.9)

Intended use: Hose assemblies using hose in accordance with MIL-PRF-7061.

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 the following:

FED-STD-595/36076	FED-STD-595/36176
FED-STD-595/36081	MIL-A-8625
FED-STD-595/36099	MIL-PRF-7061
FED-STD-595/36118	MS20756
FED-STD-595/36134	ASME-B46.1
FED-STD-595/36152	SAE-AMS2486
FED-STD-595/36170	SAE-AMS2488
FED-STD-595/36173	SAE-AS4841

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CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 4730-2012-028)

Review activities:

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.daps.dla.mil>.