

INCH-POUND

MS39322B  
 20 January 2017  
 SUPERSEDING  
 MS39322A  
 25 June 2015

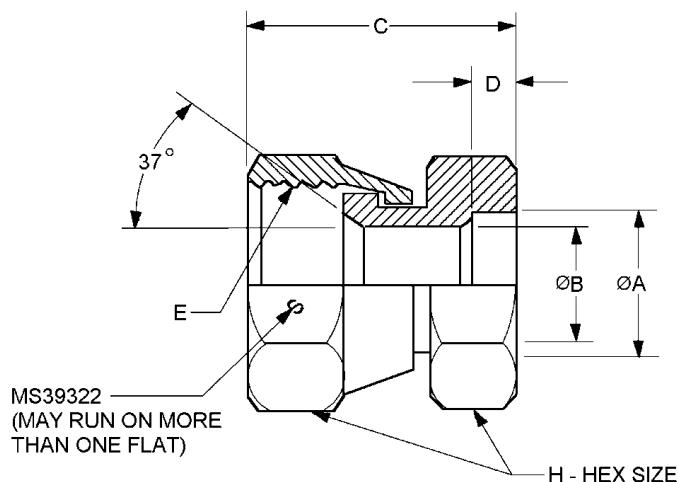
## DETAIL SPECIFICATION SHEET

ADAPTER: 37 DEGREE FLARE, FEMALE SWIVEL TO WELD SOCKET,  
 3/4 INCH TO 1 INCH

Reactivated after 20 January 2017 and may be used for  
 new and existing designs and acquisitions.

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-18866.



Dash number	A dia. inches (mm) +.003 (0.08) -.000	B dia. Min inches (mm)	C Inches (mm) ±.06 (1.5)	D inches (mm) ±.010 (0.25)	E Straight thread	H Hex size
-12-16	1.003 (25.48)	.064 (1.63)	1.66 (40.6)	.310 (7.87)	1.063 - 12 UN-28	1 1/4

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Break all sharp edges and remove all burrs and slivers.
4. Dimensions and tolerances not shown shall be in accordance with SAE-J514 for 37 degree flared fittings.
5. The drawing is for identification purposes only and is not intended to restrict designs and shapes not dimensioned.

FIGURE 1. Adapter.

AMSC N/A

FSC 4730



## MS39322B

## REQUIREMENTS:

Fittings shall be as specified on figure 1 and in table I.

Materials shall be in accordance with MIL-DTL-18866.

Finish. Finishes shall be in accordance with table I. All plating's shall be capable of meeting 96-hour salt spray test in accordance with ASTM B117. The fittings shall show no evidence of red corrosion after 96 hours of salt spray. Fluid passages, other openings, and internal threads shall not be subject to the plating thickness requirement and may have bare areas provided they are protected with a light film of oil.

TABLE I. Material and finish identification codes.

PIN code material/plating finish	Material	Plating finish
Blank	Steel	Cadmium plating in accordance with SAE-AMS-C-81562, type II, class 3 or SAE-AMS-QQ-P-416, type II, class 2. <u>1/</u>
H	Steel	Zinc-Aluminum in accordance with ASTM F1136/F1136M, grade 3, NC.
J	Steel	Zinc-nickel in accordance with SAE-AMS2417, type 2, grade B. <u>2/</u>
M	Nickel-copper alloy UNS N04400	No additional finish.
N	High-chromium nickel alloy UNS N06690	No additional finish.
P	Steel	Zinc phosphate finish in accordance MIL-DTL-16232 type Z, class 1. <u>3/ 4/</u>
R	Steel	Zinc plating in accordance with ASTM B633; type III or V, Fe/Zn 8. <u>4/</u>
S	Corrosion resistant steel	No additional finish. Passivation in accordance with SAE-AMS2700, method 1, type 6 or 7.
T	Titanium	Anodize in accordance with SAE-AMS2488 type 2. <u>5/</u>
TF	Titanium	Fluoride phosphate in accordance with SAE-AMS2486. <u>5/</u>
Z	Steel	Zinc plating in accordance with ASTM B695, type II, class 8. <u>4/</u>
ZC	Steel	Zinc may be any zinc plating from PIN codes J, R, and Z with a colored chromate coating. <u>4/</u>

1/ Embrittlement test need not be run. Cadmium shall not be used in oxygen or potable water systems.

2/ The zinc-nickel alloy plate shall contain 12% to 16% nickel. The coating thickness shall be 315µ inches (8µm) minimum.

3/ Hexavalent chromium free. Finish shall be ROHS compliant.

4/ Not for use in aircraft. Requires approval from the Program Office for all applications.

5/ A pretreatment, a modification of the fluoride treatment, or a post treatment shall be applied so the final color of the fittings shall be similar to FED-STD-595 colors 36076 through 36293. Titanium shall not be used in oxygen or potable water systems.

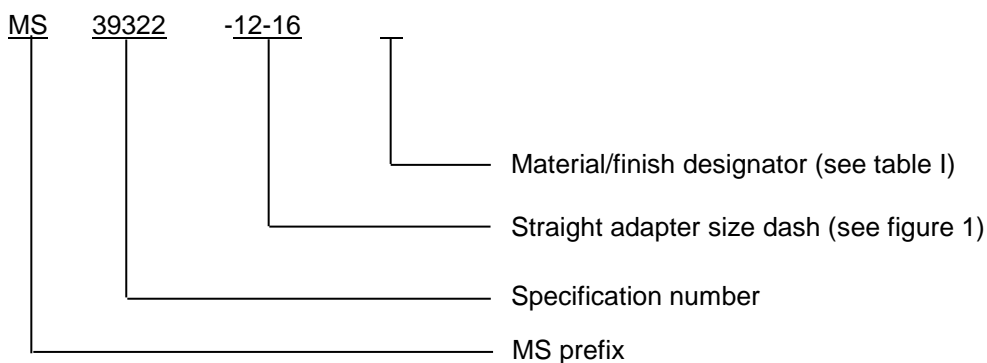
## MS39322B

Trivalent wrenchability. When the finish has been damaged due to poor wrenchability, the surface of the connector shall be touched up using one of the brush plating processes below as appropriate to primary finish. The term "trivalent wrenchability" is used to evaluate the ability of the finish to withstand abrasion from an excessive amount of wrenching.

- a. Brush plating of hard chromium by electrodeposition shall be in accordance with SAE-AMS-2451/5.
- b. Brush plating of medium-hardness, low stress nickel by electrodeposition shall be in accordance with SAE-AMS-2451/9.

Maximum operating pressure. Maximum operating pressure shall be in accordance with SAE-J514.

PIN: The PIN consists of the letters "MS", the specification number, a dash, number for reducer size, and a letter for material/finish designator.



PIN example: MS393221-12-16 indicates an adapter nipple, -12 of the PIN indicates a 3/4 inch (19.05 mm) swivel nut with 1.063 - 12 UN-28 threads: -16 of the PIN indicates weld socket to accommodate 1-inch tubing, steel with cadmium plate.

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

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.

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.

MS39322B

Referenced documents. In addition to MIL-DTL-18866, this document references the following:

FED-STD-595/36076	FED-STD-595/36173	MIL-DTL-16232	SAE-AMS2417
FED-STD-595/36081	FED-STD-595/36176	ASTM B117	SAE-AMS2451/5
FED-STD-595/36099	FED-STD-595/36231	ASTM B633	SAE-AMS2451/9
FED-STD-595/36118	FED-STD-595/36251	ASTM B695	SAE-AMS2486
FED-STD-595/36134	FED-STD-595/36270	ASTM F1136/F1136M	SAE-AMS2488
FED-STD-595/36152	FED-STD-595/36280	SAE-AMS-C-81562	SAE-AMS2700
FED-STD-595/36170	FED-STD-595/36293	SAE-AMS-QQ-P-416	SAE-J514

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 4730-2017-002)

Review activities:

Army - AR, MI  
Navy - CG, MC, SA  
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>.