INCH-POUND

MIL-DTL-25427/3
08 December 2009

DETAIL SPECIFICATION SHEET

COUPLING HALF, HOSE ATTACHMENT, HYDRAULIC, SELF-SEALING, GROUND SUPPORT, QUICK DISCONNECT, TYPE I AND TYPE II

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-25427.

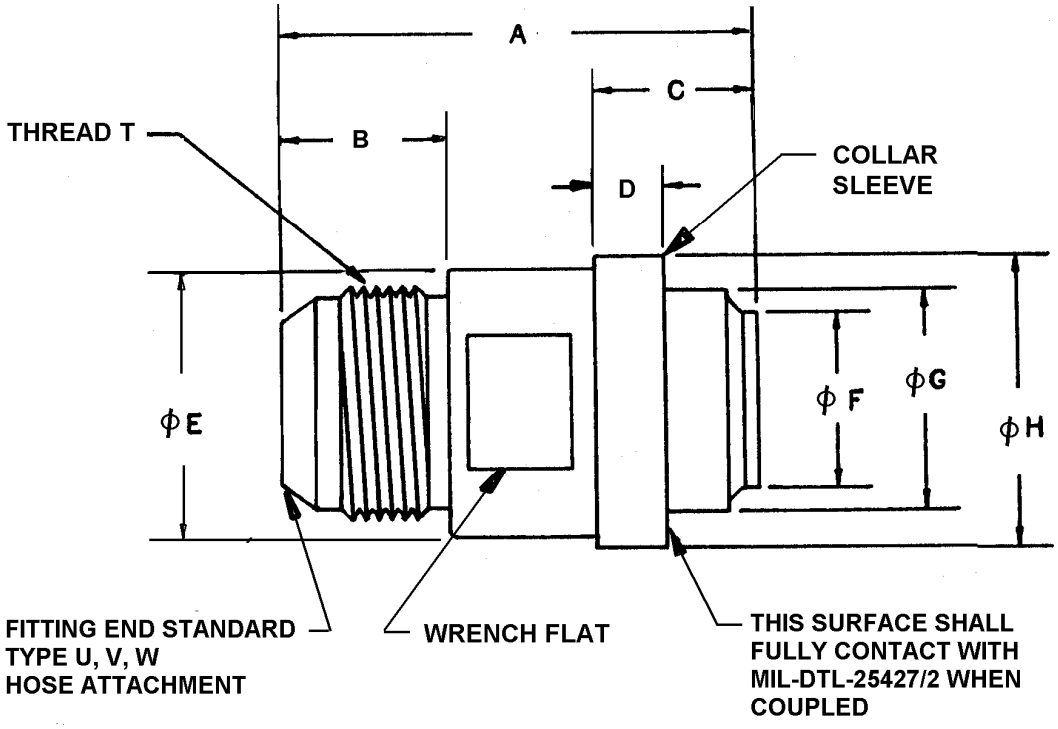


FIGURE 1. Coupling half, hose attachment, dimensions and configuration for type I and type II.

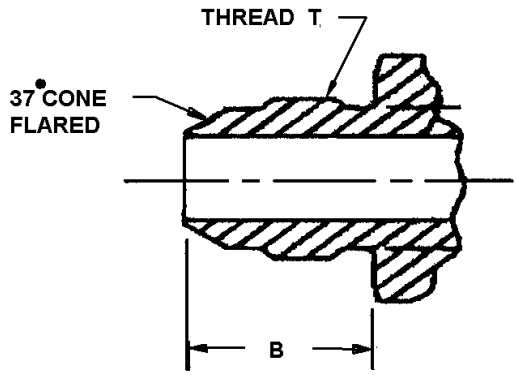


FIGURE 2. Type U fitting end in accordance with SAE-AS4395 style E design standard flared.

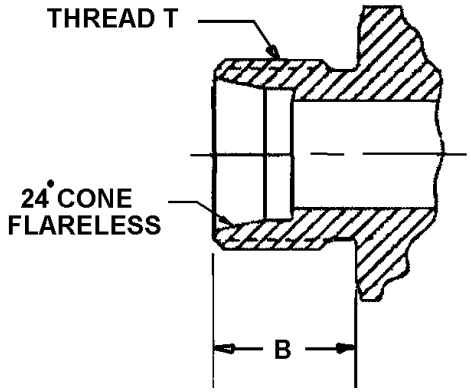


FIGURE 3. Type V, fitting end in accordance with SAE-AS4375 style E design standard flareless.

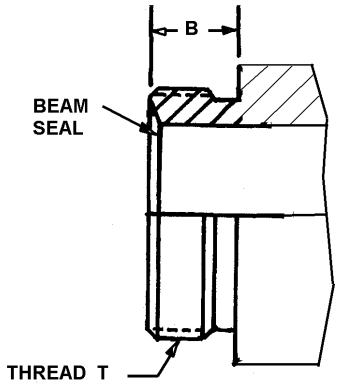


FIGURE 4. Type W fitting end in accordance with SAE-AS85421/1, style 1 design standard beam seal.

TABLE I. Coupling half, hose attachment dimensions for type I and type II.

Dash No.	Tube OD	Thread T SAE-AS8879 Class 3A		
		SAE-AS4395 flared	SAE-AS4375 flareless	SAE-AS85421/1 beam seal
-04	0.250	0.4375-20UNJF	0.4375-20UNJF	0.4375-24UNJS
-06	0.375	0.5625-18UNJF	0.5625-18UNJF	0.5625-20UNJS
-08	0.500	0.7500-16UNJF	0.7500-16UNJF	0.7188-20UNJS
-10	0.625	0.8750-14UNJF	0.8750-14UNJF	0.8438-18UNJS
-12	0.750	1.0625-12UNJ	1.0625-12UNJ	1.0000-16UNJ
-16	1.000	1.3125-12UNJ	1.3125-12UNJ	1.2500-14UNJS
-20	1.250	1.6250-12UNJ	1.6250-12UNJ	1.5781-14UNJS
-24	1.500	1.8750-12UNJ	1.8750-12UNJ	1.8438-14UNJS

TABLE I. Coupling half, hose attachment dimensions for type I and type II - Continued.

Dash No.	A (max)			B (max)		
	Type U	Type V	Type W	Type U	Type V	Type W
-04	1.660	1.560	1.367	0.565	0.463	0.290
-06	1.824	1.732	1.563	0.571	0.479	0.310
-08	1.940	1.825	1.576	0.672	0.572	0.323
-10	2.570	2.430	2.111	0.773	0.635	0.387
-12	2.450	2.270	1.983	0.879	0.698	0.427
-16	2.650	2.600	2.180	0.926	0.698	0.475
-20	2.550	2.640	2.020	0.973	0.698	0.475
-24	2.729	2.735	2.188	1.098	0.698	0.557

TABLE I. Coupling half, hose attachment dimensions for type I and type II – Continued.

Dash No.	C (max)	D		E	F	G	H
		Type I	Type II				
-04	0.403	0.28	0.28	0.74	0.37	0.56	0.87
-06	0.515	0.29	0.28	0.95	0.54	0.75	1.06
-08	0.515	0.29	0.100	0.95	0.54	0.75	1.06
-10	0.820	0.40	0.263	1.37	0.76	1.00	1.53
-12	0.820	0.40	0.263	1.37	0.76	1.00	1.53
16	0.905	0.38	0.160	1.62	0.99	1.24	1.77
-20	0.546	0.16	0.110	1.87	1.24	1.50	2.00
-24	0.736	0.23	---	2.12	1.49	1.74	2.25

NOTES:

1. Dimensions are in inches, unless otherwise specified, tolerances decimals ± .010.

2. The surface of shoulder sleeve must fully contact with MIL-DTL-25427/2 bulkhead coupling half male surface when coupled with body nut.

3. MIL-DTL-25427/3 type I hose attaching halves are designed to be used with MIL-DTL-25427/6 type I coupling nuts only and MIL-DTL-25427/3 type II hose attaching halves are designed to be used with MIL-DTL-25427/6 type II coupling nuts only. Type I and type II hose attaching coupling halves or coupling nuts are not interchangeable with each other. However, type I or type II hose attaching half assemblies with nuts installed are interchangeable with the aircraft bulkhead halves of the same sizes and pressure classes.

4. For design feature purposes, this specification sheet takes precedence over the procurement document.

5. Referenced documents shall be of the issue in effect on date of contract award.

REQUIREMENTS:

1. Material -for material requirements, see procurement specification MIL-DTL-25427.

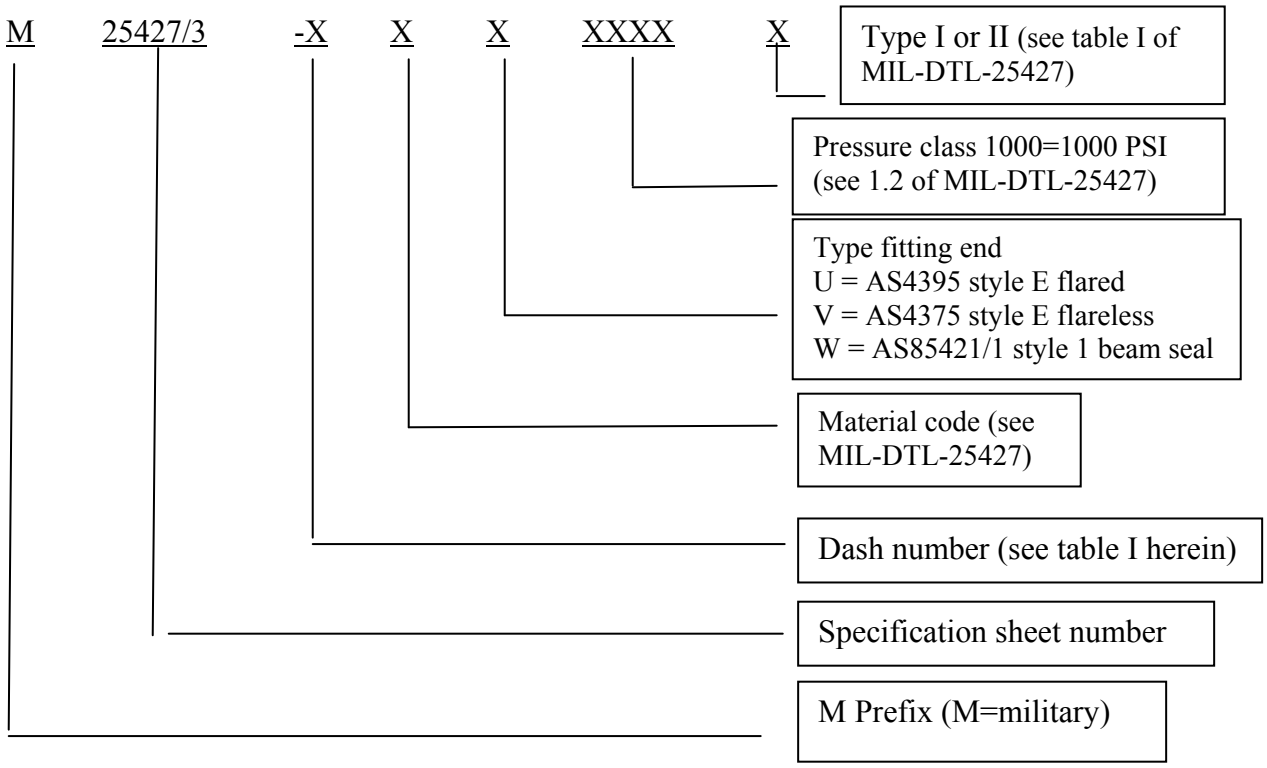
2. Finish -for finish requirements, see procurement specification MIL-DTL-25427.

3. The surface of the aluminum alloy parts, after anodizing, sealing and surface treatment, shall be free of pits, powder coatings, discontinuities (such as scratches or breaks) and shall be uniform in appearance.

4. External threads shall be produced by die cutting or machining by the single point method.

5. The coupling body shall have wrench flats for wrenching of end fitting connectors.

6. The part or identification number (PIN) consists of the letter M, the specification sheet number, a dash number from table I, material code, end fitting type and pressure class.



Example: M25427/3-16DV1000 type I represents 1 inch tube hose attaching coupling half, 2024 aluminum,1000 PSI flareless fitting end, type I

7. Marking. Marking shall consist of the complete specification sheet part number and manufacturer's name, trademark, or CAGE code and shall be impression stamped or laser etched and shall be protected from corrosion.

8. Interchangeability. Coupling, coupling halves, or coupling parts shall be interchangeable having the same tube size and pressure class. This coupling half configuration is known to be similar to Stratoflex coupling half 13901, Eaton coupling half 155-S5, and Hydraulic International coupling half HL-A-XF-B. Parker coupling half 4400 has a smaller collar (D

diameter) and will not interchange with other coupling halves. Suppliers seeking to be on QPL-25427 are responsible for interchangeability and shall perform the manual operation test to ensure a manufactured coupling is interchangeable with other suppliers' couplings and coupling halves and vice versa.

9. Operation. Connection and disconnection of the coupling half with MIL-DTL-25427/2 bulkhead mounting half and MIL-DTL-25427/5 coupling plug shall be easily accomplished using a simple turning motion. The coupling halves when assembled shall function satisfactorily as required in MIL-DTL-25427. When connecting the coupling halves, the coupling assembly may have a partially coupled and unlocked position, but shall remain stable and permit fluid flow.

10. Test requirements. The test shall be performed in accordance with the applicable test requirements of MIL-DTL-25427. Suppliers seeking qualification of new couplings are responsible for interchangeability of their coupling halves with the existing qualified couplings. The qualifying activity will perform the manual operation tests of the coupling halves provided by manufacturers whenever necessary to ensure interchangeability and leakage within the allowable limit.

11. Intended use. This hose attaching coupling half is intended for use in ground support equipment delivering hydraulic fluid from ground cart to aircraft operating at 3000 and 5000 PSI and returning at 1000 PSI. Type II system fluid is capable of operating at temperature ranging from -65 °F to +275 °F. These couplings halves are intended for use in military and aerospace hydraulic ground support equipment where the bulkhead mounting half and protective cap are part of the aircraft and the hose attaching half and protective plug are part of the ground support equipment.

CONCLUDING MATERIAL

Custodians:
Army-AV
Navy-AS
Air Force-99

Preparing activity:
Navy-AS

(Project 4730-2008-126)

Review activities:
Army-AT, MI
Navy-SA
Air Force-11
DLA-CC

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.