

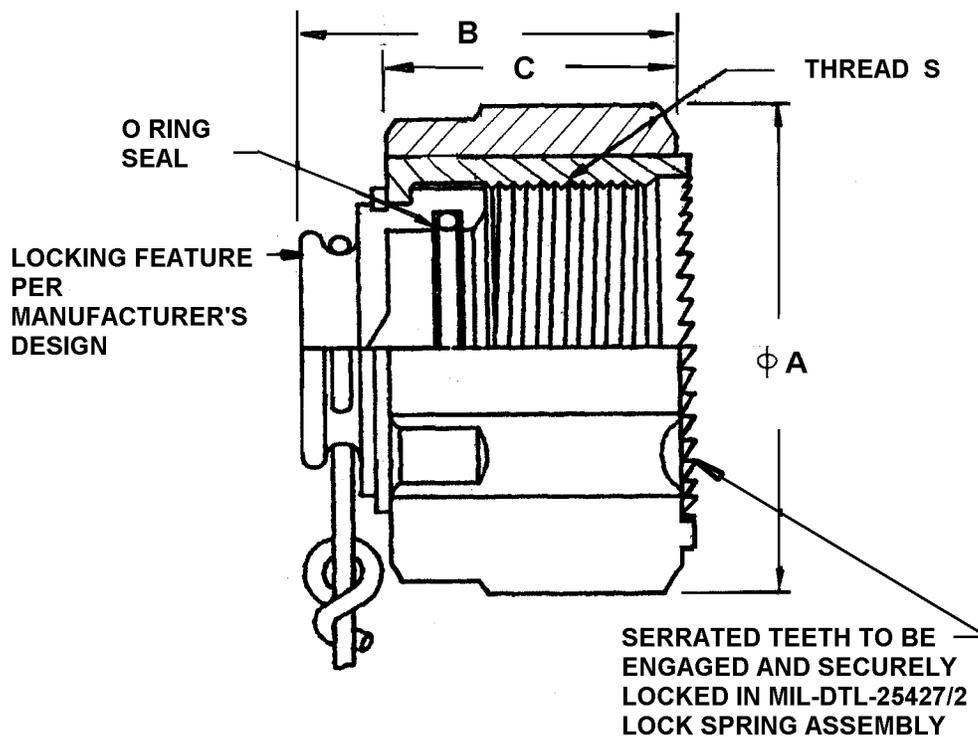
INCH-POUND

MIL-DTL-25427/4  
08 December 2009

## DETAIL SPECIFICATION SHEET

COUPLING CAP, AIRCRAFT HYDRAULIC, SELF-SEALING,  
GROUND SUPPORT, QUICK DISCONNECT

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 cap, dimensions and configuration.

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TABLE I. Coupling cap dimensions.

Dash No.	Tube OD	Thread S FED-STD-H28/2 Class 3B		A (max)	B (max)	C (max)
-4	0.250	0.9375-20UN	10	1.581	1.330	0.930
-6	0.375	1.125-18UN	8	1.801	1.570	1.070
-8	0.500	1.1250-18UN	8	1.801	1.570	1.070
-10	0.625	1.6250-12UN	6	2.445	1.730	1.300
-12	0.750	1.6250-12UN	6	2.445	1.993	1.300
-16	1.000	1.8750-12UN	6	2.720	1.993	1.540
-20	1.250	2.1250-12UN	8	3.142	1.636	1.120
-24	1.500	2.3750-12UN	8	3.430	1.849	1.240

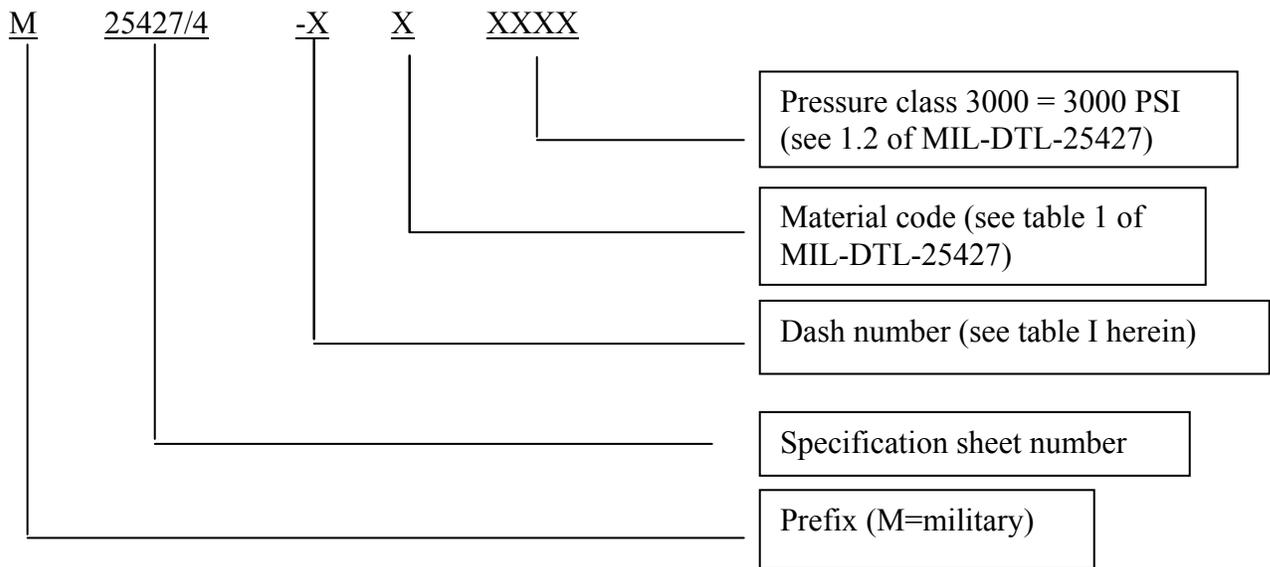
NOTES:

1. Dimensions are in inches, unless otherwise specified, tolerances decimals  $\pm 0.010$ .
2. Thread "S" shall conform to FED-STD-H28/2.
3. Break all sharp edges and remove all hanging burrs and slivers.
4. Serrated teeth of the coupling cap must engage with the serrated teeth of MIL-DTL-25427/2 lock spring assembly and ensuring positive locking.
5. Thread length to cover male thread of MIL-DTL-25427/2 bulkhead coupling half with no interference.
6. For design feature purposes, this specification sheet takes precedence over the procurement document.
7. Referenced documents shall be of the issue in effect on date of contract award.

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REQUIREMENTS:

1. Material -for material requirements, see procurement specification MIL-DTL-25427.
2. Finish -for finish requirements, see procurement specification MIL-DTL-25427.
3. Surface finish. The surface of the aluminum alloy parts, after anodizing, sealing and surface treatment, shall be free from pits, powder coatings, discontinuities, such as scratches or breaks and shall be uniform in appearance.
4. Threads. Threads shall be produced by die cutting or machining by the single point method.
5. Marking. Marking shall consist of the part identification number, manufacturer's name, trademark or CAGE code and shall be impression stamped or laser etched. The marking shall be protected from corrosion.
6. Part or identification number (PIN). The PIN consists of the letter M, the specification sheet number, a dash number from table I, material code, and pressure class.



Example: M25427/4-16W3000 represents 1 inch 7075 aluminum coupling cap 3000 PSI operating pressure.

7. Interchangeability. The coupling cap shall be interchangeable among manufacturers having the same tube size and pressure class. This coupling cap configuration and dimensions are known to be similar to Parker coupling cap C44000, Eaton coupling cap 155-S7, and Hydraulic International coupling cap DC-L-X-B. Suppliers seeking to be on QPL-25427 are responsible for interchangeability and shall

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perform the manual operation test to ensure manufactured coupling cap is interchangeable with other suppliers' couplings and vice versa.

8. Operation. Connection and disconnection of the cap with the MIL-DTL-25427/2 bulkhead coupling half shall be easily accomplished using a one-handed turning motion. After engaging, the cap shall be securely locked in with bulkhead coupling half and shall not become loose due to aircraft vibration.

9. Test requirements. The test shall be performed in accordance with applicable test requirements of MIL-DTL-25427. The cap shall be installed on bulkhead coupling half before tests. Suppliers seeking qualification of new coupling caps are responsible for interchangeability of manufactured coupling caps with the existing qualified coupling caps. The qualifying activity shall perform the manual operation tests of the coupling caps provided by manufacturers whenever necessary to ensure interchangeability and leakage within the allowable limit.

10. Intended use. These coupling caps are intended for use in military aircraft or 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. These coupling caps are operating with type II hydraulic fluid having temperature range -65 °F to +275 °F.

## CONCLUDING MATERIAL

## Custodians:

Army-AV

Navy-AS

Air Force-99

## Preparing activity:

Navy-AS

(Project 4730-2008-127)

## Review activities:

Army-AT, MI

Navy-SA

Air Force-11, 71

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>.