

INCH-POUND

MIL-DTL-25427/6
08 December 2009

DETAIL SPECIFICATION SHEET

COUPLING NUT, AIRCRAFT 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.

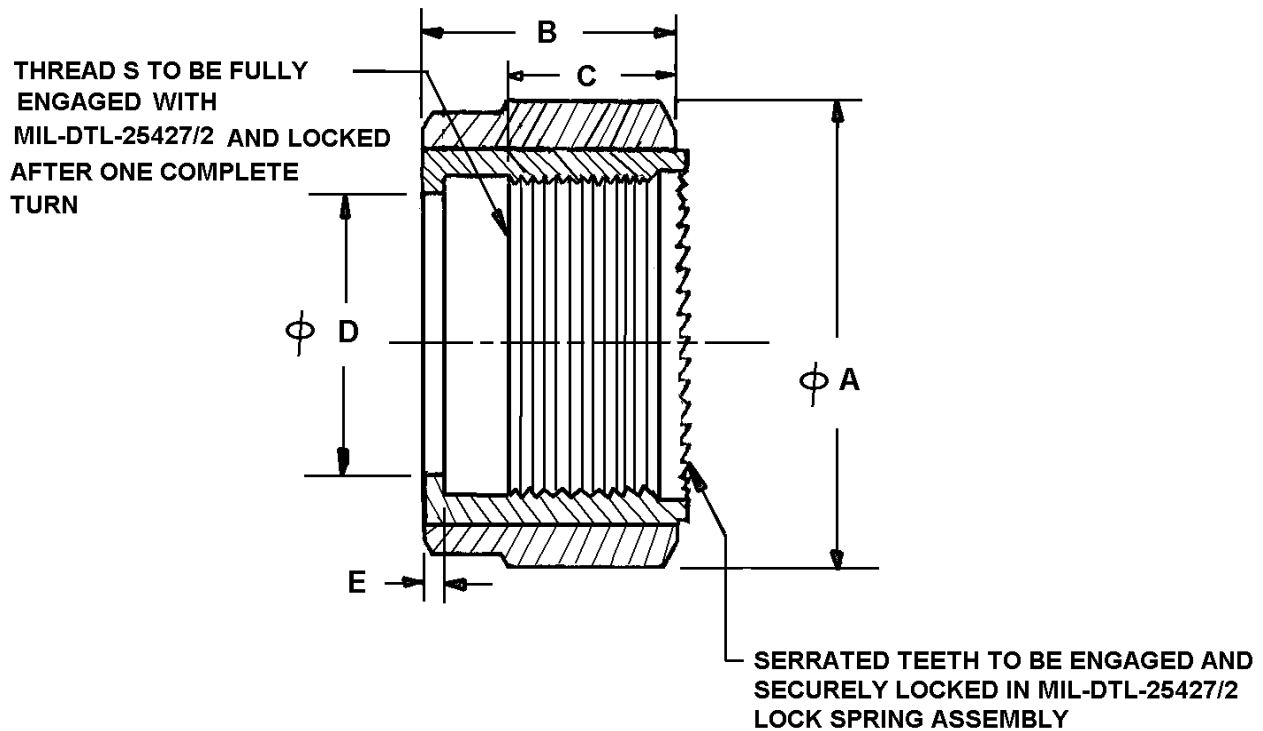


FIGURE 1. Coupling nut, dimensions and configuration for type I and II.

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TABLE I. Coupling nut dimensions for type I.

Dash No.	Tube OD	Thread S FED-STD-H28/2		A (max)	B (max)	C $\pm .020$	D (max)	E (max)
		Size Class 3B	Leads					
-4	0.250	0.9375-20UN	10	1.57	0.87	0.410	0.762	0.16
-6	0.375	1.125-18UN	8	1.78	1.00	0.550	0.972	0.16
-8	0.500	1.1250-18UN	8	1.78	1.00	0.700	0.972	0.16
-10	0.625	1.6250-12UN	6	2.43	1.21	0.820	1.382	0.14
-12	0.750	1.6250-12UN	6	2.43	1.21	1.006	1.385	0.14
-16	1.000	1.8750-12UN	6	2.71	1.47	1.203	1.642	0.14
-20	1.250	2.1250-12UN	8	3.13	1.02	0.930	1.907	0.13
-24	1.500	2.3750-12UN	8	3.42	1.14	0.660	2.159	0.13

TABLE II. Coupling nut dimensions for type II.

Dash No.	Tube OD	Thread S FED-STD-H28/2		A (max)	B (max)	C $\pm .020$	D (max)	E (max)
		Size Class 3B	leads					
-8	0.500	1.1250-18UN	8	1.341	.809	0.700	0.972	0.16
-10	0.625	1.6250-12UN	6	2.43	1.21	0.986	1.385	0.12
-12	0.750	1.6250-12UN	6	1.945	1.146	1.006	1.385	0.12
-16	1.000	1.8750-12UN	6	2.208	1.303	1.203	1.642	0.12
-20	1.250	2.1250-12UN	8	2.505	1.05	0.930	1.894	0.11

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NOTES:

1. Dimensions are in inches, unless otherwise specified, tolerances decimals $\pm .010$.
2. Thread "S" shall have a multiple lead and a blunt start as specified in FED-STD-H28/2.
3. Break all sharp edges and remove all hanging burrs and slivers.
4. Serrated teeth of the nut must engage and ensure positive locking with the serrated teeth of MIL-DTL-25427/2 bulkhead half lock spring assembly and MIL-DTL-25427/5 coupling plug lock spring assembly.
5. Thread length to cover male thread of MIL-DTL-25427/2 bulkhead coupling half and MIL-DTL-25427/5 coupling plug with no interference.
6. Type I nuts are designed to be used with MIL-DTL-25427/3 type I hose attaching halves and type II nuts are designed to be used with MIL-DTL-25427/3 type II hose attaching halves only. Type I nuts and type II nuts are dimensionally not interchangeable. However, MIL-DTL-25427/3 type I hose attaching half assembly with nut installed and MIL-DTL-25427/3 type II hose attaching half assembly with nut installed interchange with the aircraft bulkhead coupling half of the same sizes and pressure classes. Users are cautioned to check type I or type II before ordering the nut for their specific application.
7. For design feature purposes, this specification sheet takes precedence over procurement document.
8. Referenced documents shall be of the issue in effect on date of contract award.

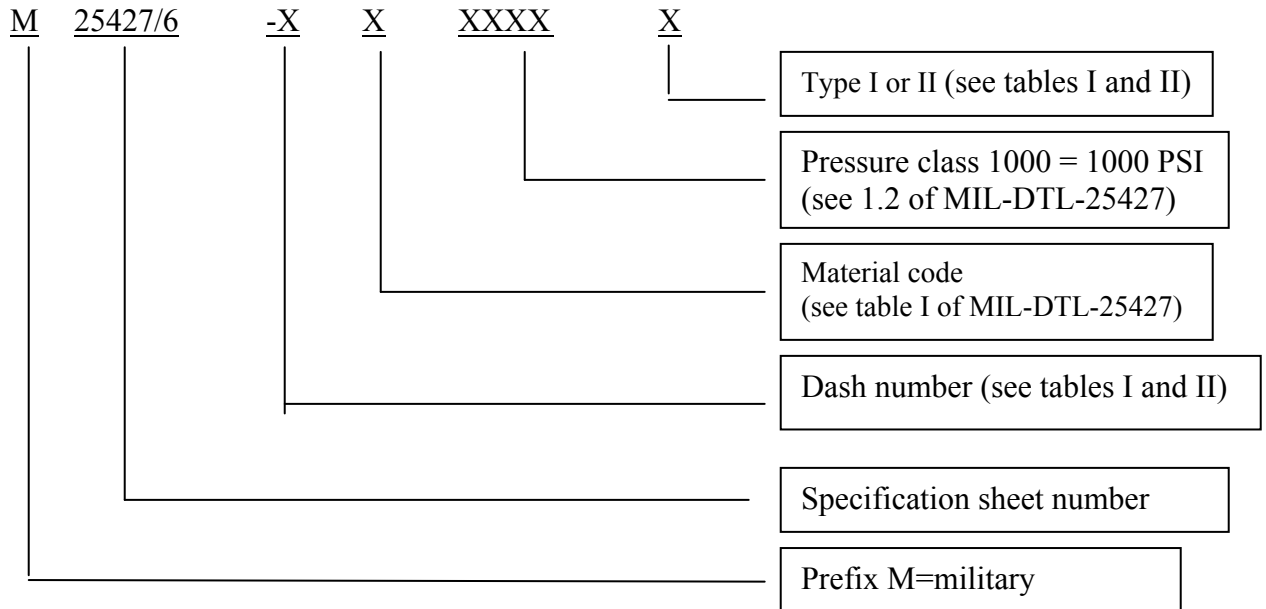
REQUIREMENTS:

1. Material -for material requirements see procurement specification MIL-DTL-25427.
2. Finish -for finish requirements, see procurement specification MIL-DTL-25427.
3. Threads. Threads shall be produced by die cutting or machining by the single point method.
4. Marking. Marking shall consist of the complete military part number, manufacturer's name, trademark or CAGE code and shall be impression stamped or laser etched. The marking shall be protected from corrosion.
5. Operation. This coupling nut shall function as required in MIL-DTL-25427 as a part of the MIL-DTL-25427/3 hose attaching coupling half assembly.
6. Test requirements. The nut shall be tested in accordance with applicable test requirements of MIL-DTL-25427. The nut shall be tested as an assembly coupled with MIL-DTL-25427/3 hose attaching coupling half and MIL-DTL-25427/2 aircraft mounting half. Suppliers seeking qualification of new coupling nuts are responsible for interchangeability of their coupling nuts with the existing qualified couplings or coupling nuts. The qualifying activity shall perform the manual operation tests of

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the coupling nuts provided by manufacturers whenever necessary to ensure interchangeability and leakage within the allowable limit.

7. Part or identification number (PIN). The PIN consists of the specification sheet number, a dash number from table I, material code, and the pressure class.



Example: M25427/6-8D1000 type II means 0.5 inch tube OD aluminum alloy coupling nut 1000 PSI operating pressure, type II.

8. Interchangeability. Coupling nuts having the same type, tube size, and pressure class shall be interchangeable. Type I coupling nut configurations and dimensions are known to be similar to Eaton coupling nut E155-25 and E145-25, and Hydraulic International coupling nut N-L. Type II coupling nut configurations and dimensions are known to be similar to Parker coupling nut N44000. Type I and type II coupling nuts are dimensionally not interchangeable. Suppliers seeking qualification to MIL-DTL-25427 are responsible for interchangeability and shall perform the manual operation test to ensure manufactured coupling nuts are interchangeable with other supplier's coupling nuts and vice versa.

9. Intended use. This nut as part of hose attaching coupling assembly is intended for use in military aircraft and aerospace hydraulic ground support equipment where the bulkhead mounting half and protective cap are a part of the aircraft and the hose attaching half and protective plug are a part of the ground support equipment. The couplings are designed for delivering type II hydraulic fluid having a temperature range -65 °F to +275 °F.

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CONCLUDING MATERIAL

Custodians:

Army-AV
Navy-AS
Air Force-99

Preparing activity:

Navy-AS

(Project 4730-2008-129)

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>.