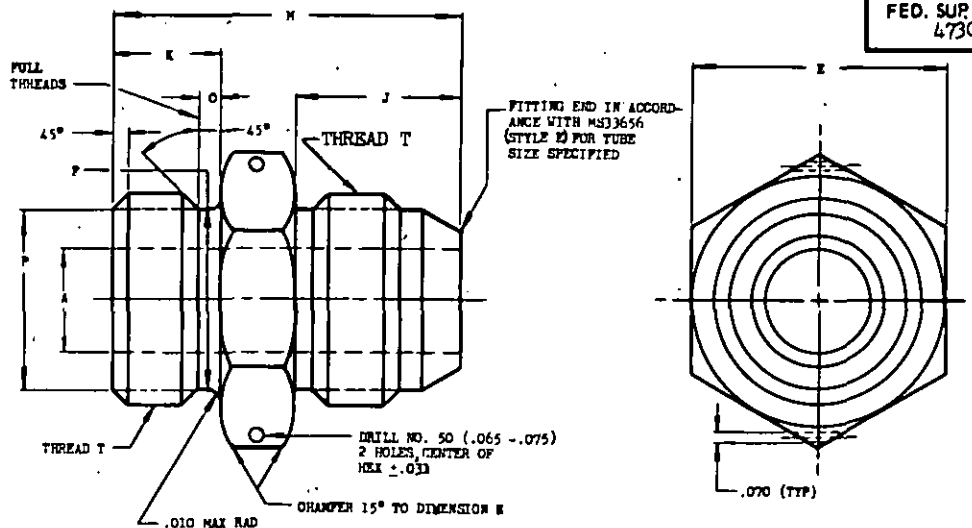


User Activities: Army-ME,AV  
Navy-AS  
Air Force-99

Review activities: Army-ME,AV  
Navy-AS  
Air Force-99  
DLA-CS

This standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.



CONCENTRICITY: P AND T (PITCH DIAMETER) SHALL BE CONCENTRIC WITHIN .005 TOTAL INDICATOR READING. SQUARENESS BETWEEN THREAD T AND FACE OF HEX SHALL NOT EXCEED .005 WHEN MEASURED AT DIAMETER E.

MATERIAL: STEEL, ALUMINUM ALLOY; BARS OR SHAPES.  
TITANIUM ALLOY; BARS, SHAPES, OR FORGINGS.  
SEE PROCUREMENT SPECIFICATION.

FINISH: SEE PROCUREMENT SPECIFICATION.

ADD L TO PART NUMBER TO INDICATE NIPPLE WITH LOCKWIRE HOLES.

NO CODE LETTER IN PART NUMBER FOR STEEL.

- Ⓒ ADD D IN PLACE OF DASH FOR ALUMINUM ALLOY (EXCEPT 7075-T73).
- ADD T IN PLACE OF DASH FOR TITANIUM ALLOY. TITANIUM IS NOT RECOMMENDED FOR USE IN OXYGEN SYSTEMS.
- Ⓒ ADD W IN PLACE OF DASH FOR 7075-T73 ALUMINUM ALLOY.

#### EXAMPLE OF PART NUMBERS:

- MS24487-4 - NIPPLE, 1/4 TUBING, STEEL, WITHOUT LOCKWIRE HOLES.
  - Ⓒ MS24487DL - NIPPLE, 1/4 TUBING, ALUMINUM ALLOY (EXCEPT 7075-T73), WITH LOCKWIRE HOLES.
  - MS24487T8L - NIPPLE, 1/2 TUBING, TITANIUM ALLOY, WITH LOCKWIRE HOLES.
  - Ⓒ MS24487W8L - NIPPLE, 1/2 TUBING, 7075-T73 ALUMINUM ALLOY, WITH LOCKWIRE HOLES.
- BREAK ALL SHARP EDGES AND REMOVE ALL HANGING BURRS AND SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE.

DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: FRACTIONS  $\pm 1/64$ , DECIMALS  $\pm .005$ , ANGLES  $\pm 1/2^\circ$ .

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

Ⓒ denotes changes

|   |                           |  |                   |
|---|---------------------------|--|-------------------|
| P.A.<br>Air Force-99<br>Other Cust      | International<br>Interest | TITLE<br><br>NIPPLE, TUBE, 37° TO 45° SEAT | MILITARY STANDARD |
|   |                           |  | MS24487           |
| Procurement Specification<br>MIL-F-5509 |                           | SUPERSEDES:                                | PAGE 1 OF 2       |

DD FORM 672  
1 MAY 73

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

4730-1013

APPROVED 11 APR 58  
REVISED (A) 10 FEB 67 (B) 16 JUN 78 (C) 22 MAR 79

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

Review activities: Army-ME, AV  
Navy-AS  
Air Force-99  
DLA-CS

User Activities: Army-ME, AV  
Navy-AS  
Air Force-99  
DLA-CS

FED. SUP. CLASS  
4730

| DASH NO. | TUBING OD | THREAD T (REF)   | A DIA (REF) | E (REF) | F +.002 - .003 DIA | J (REF) | K                | M       | O +.015 - .000 | P DIA  | WEIGHT MAX (LBS.) |       |               |
|----------|-----------|------------------|-------------|---------|--------------------|---------|------------------|---------|----------------|--------|-------------------|-------|---------------|
|          |           |                  |             |         |                    |         |                  |         |                |        | STEEL             | ALLOY | TI CRES ALLOY |
| 2        | 1/8       | 5/16-24UNJF-3A   | .062        | .563    | .250               | .448    | 5/16             | 63/64   | .063           | 7/32   |                   |       |               |
| 3        | 3/16      | 3/8-24UNJF-3A    | .125        | .625    | .312               | .479    | 21/64            | 1-1/32  |                | 9/32   |                   |       |               |
| 4        | 1/4       | 7/16-20UNJF-3A   | .172        | .688    | .364               | .550    | 3/8              | 1-7/32  | .075           | 11/32  |                   |       |               |
| 5        | 5/16      | 1/2-20UNJF-3A    | .234        | .750    | .426               | .556    | 27/64            | 1-5/16  | .083           | 13/32  |                   |       |               |
| 6        | 3/8       | 9/16-18UNJF-3A   | .297        | .813    | .481               | .657    | 15/32            | 1-1/2   | .094           | 5/8    |                   |       |               |
| 8        | 1/2       | 3/4-16UNJF-3A    | .391        | 1.000   | .660               | .758    | 17/32            | 1-13/64 | .107           | 3/4    |                   |       |               |
| 10       | 5/8       | 7/8-14UNJF-3A    | .484        | 1.125   | .773               | .864    | 19/32            | 1-29/32 | .125           | 15/16  |                   |       |               |
| 12       | 3/4       | 1-1/16-12UNJF-3A | .609        | 1.375   | .945               | .911    | 1-5/16-12UNJF-3A | 1-61/64 |                | 1-3/16 |                   |       |               |
| 16       | 1         |                  | .844        | 1.825   | 1.195              |         |                  |         |                |        |                   |       |               |

|   |                        |  |                                   |
|---|------------------------|--|-----------------------------------|
| P.A.<br>Air Force-99<br>Other Cust      | International Interest | TITLE<br><br>NIPPLE, TUBE, 37° TO 45° SEAT | MILITARY STANDARD<br><br>MS 24487 |
| Procurement Specification<br>MIL-F-5509 | SUPERSEDES:            |  | PAGE 2 OF 2                       |

DD FORM 672 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

4730-1013

APPROVED 11 APR 58 REVISED For changes see page 1. 22 MAR 79