

RATIONALE

THIS SAE AEROSPACE STANDARD (AS) ESTABLISHES THE REQUIREMENTS FOR THE BOLT FITTING WITH 37 DEGREE SPHERICAL FLARED TUBE.

SAE AS6075

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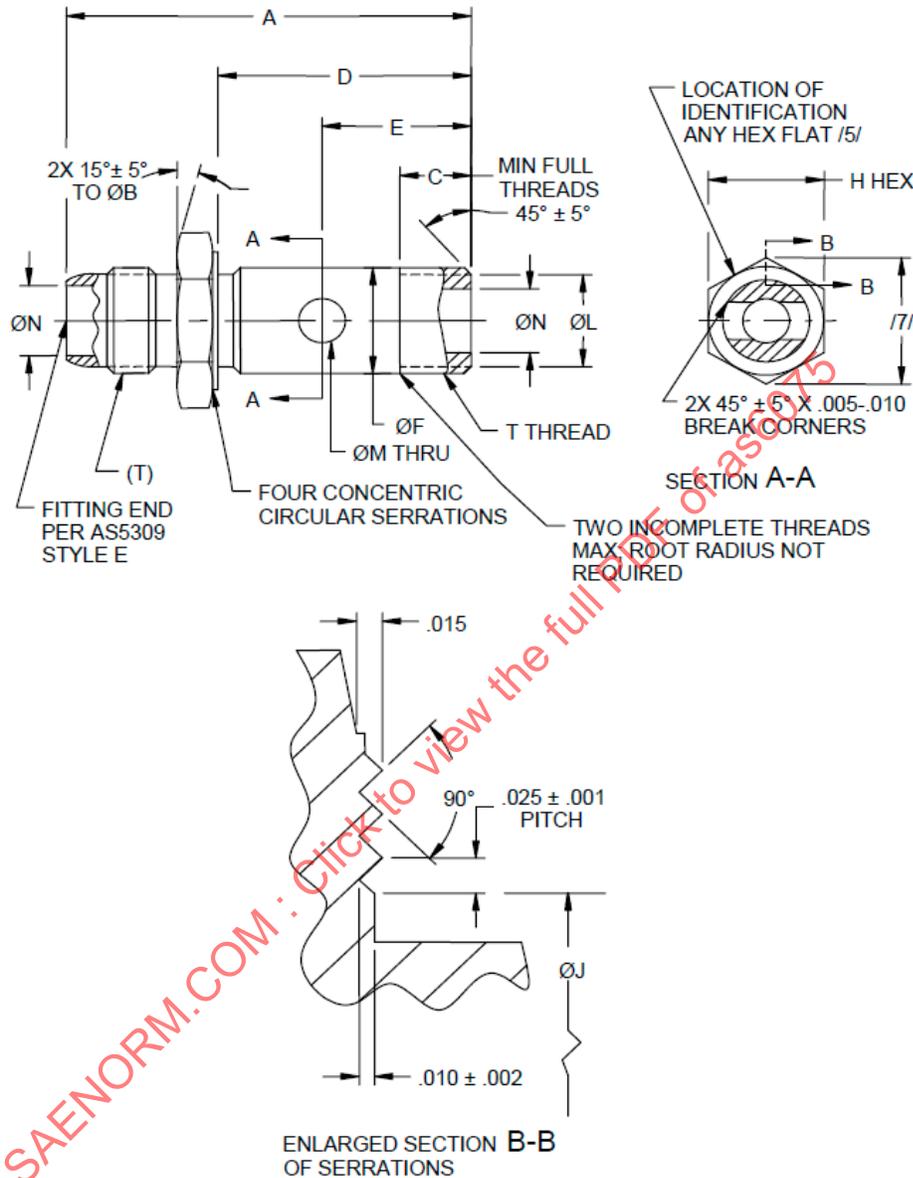
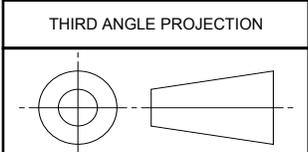


FIGURE 1 - FITTING, BOLT

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CUSTODIAN: SAE G3/G3B

PROCUREMENT SPECIFICATION: /4/ AS6076

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

FITTING, BOLT, FLARED,  
37° SPHERICAL

**SAE AS6075**  
SHEET 1 OF 4

TABLE 1A - DIMENSIONS

| BASIC NO.<br>AS6075<br>/13/<br>SIZE CODE | (NOMINAL<br>TUBE<br>SIZE) | T THREAD<br>PER AS8879<br>CLASS 3A | A     | B<br>±.010 | C    | D     | E<br>±.010 | F<br>±.002 |
|--|---------------------------|------------------------------------|-------|------------|------|-------|------------|------------|
| 04                                       | .250                      | .4375-20 UNJF                      | 1.922 | .668       | .438 | 1.188 | .781       | .433       |
| 05                                       | .312                      | .5000-20 UNJF                      | 1.922 | .730       | .438 | 1.188 | .781       | .496       |
| 06                                       | .375                      | .5625-18 UNJF                      | 2.125 | .792       | .469 | 1.344 | .875       | .558       |
| 08                                       | .500                      | .7500-16 UNJF                      | 2.594 | .980       | .562 | 1.688 | 1.094      | .746       |
| 10                                       | .625                      | .8750-14 UNJF                      | 3.000 | 1.103      | .594 | 1.969 | 1.250      | .871       |
| 12                                       | .750                      | 1.0625-12 UNJ                      | 3.484 | 1.352      | .656 | 2.312 | 1.468      | 1.058      |
| 16                                       | 1.000                     | 1.3125-12 UNJ                      | 4.094 | 1.603      | .656 | 2.812 | 1.687      | 1.308      |

TABLE 1B - DIMENSIONS AND WEIGHTS

| BASIC NO.<br>AS6075<br>/13/<br>SIZE CODE | H           | J<br>±.005 | L     | M    | N         | LB/EA<br>APPROX.<br>REF<br>AL | LB/EA<br>APPROX.<br>REF<br>STEEL | LB/EA<br>APPROX.<br>REF<br>TI |
|--|-------------|------------|-------|------|-----------|-------------------------------|----------------------------------|-------------------------------|
| 04                                       | .678-.691   | .474       | .344  | .188 | .168-.175 | .0287                         | .0825                            | .0455                         |
| 05                                       | .740-.753   | .536       | .406  | .219 | .230-.237 | .0343                         | .0985                            | .0543                         |
| 06                                       | .802-.815   | .599       | .469  | .250 | .293-.301 | .0448                         | .129                             | .0710                         |
| 08                                       | .990-1.003  | .786       | .625  | .312 | .387-.395 | .0937                         | .269                             | .148                          |
| 10                                       | 1.113-1.128 | .911       | .750  | .375 | .480-.488 | .138                          | .397                             | .219                          |
| 12                                       | 1.363-1.380 | 1.099      | .938  | .438 | .604-.614 | .230                          | .662                             | .365                          |
| 16                                       | 1.613-1.630 | 1.349      | 1.188 | .625 | .839-.851 | .359                          | 1.03                             | .569                          |

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

/1/ MATERIAL:

- a. CODE LETTER F - TYPE 4130 PER AMS6370 OR TYPE 4140 PER AMS6382. /2/
- b. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5639.
- c. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5648.
- d. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5645.
- e. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY BAR PER AMS4928.
- f. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124.

|   |   |                                   |  |
|---|---|-----------------------------------|--|
| <br>An SAE International Group | <b>AEROSPACE STANDARD</b>               | <b>SAE AS6075</b><br>SHEET 2 OF 4 |  |
|   | FITTING, BOLT, FLARED,<br>37° SPHERICAL |                                   |  |

12/ HEAT TREATMENT:

- a. MATERIAL CODE LETTER F - SEE HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTER W – SEE ELECTRICAL CONDUCTIVITY AND HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- c. OTHER MATERIAL CODE LETTERS - NONE.

3. FINISH:

- a. MATERIAL CODE LETTER F - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTERS J, K, AND R - PASSIVATE PER AMS2700, TYPE 6 OR 7.
- c. MATERIAL CODE LETTER T - ANODIZE PER AMS2488 OR FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 WITH COLOR PER PROCUREMENT SPECIFICATION.
- d. MATERIAL CODE LETTER W:
  - 1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
  - 2. W CODE PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER "V" AFTER THE SIZE CODE IN THE PART NUMBER. HIGH PURITY ALUMINUM COAT PER PROCUREMENT SPECIFICATION.

14/ PROCUREMENT SPECIFICATION: AS6076 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER LISTED IN THE NATIONAL AEROSPACE AND DEFENSE CONTRACTORS ACCREDITATION PROGRAM (NADCAP) QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT [www.eauditnet.com](http://www.eauditnet.com).

15/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D, OR METHOD 7A3, 15A3, OR 15B.

- a. FOR SIZE 06 AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTER "AS" AND MATERIAL CODE LETTER.
- b. FOR SIZE 08 AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER AND MATERIAL CODE LETTER.

6. INTENDED USE: THIS PART IS DESIGNED FOR USE IN SYSTEMS WITH MAXIMUM OPERATING PRESSURES AS FOLLOWS:

- a. SIZES 04 THROUGH 12 IN ALUMINUM ALLOY AND SIZES 04 THROUGH 16 IN STEEL AND TITANIUM ALLOY AT 3000 psi.
- b. SIZES 04 THROUGH 16 IN ALUMINUM ALLOY AT 1500 psi.

17/ THE HEX CORNERS MAY BE ROUNDED PER ARP1942.

8. INTERPRETATION OF DRAWING PER ARP4296.

9. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125  $\mu$ in Ra. SURFACES OF HEX FLATS MAY BE 250  $\mu$ in Ra.

10. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.

11. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.

12. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS  $\pm$ .016, ANGULAR DIMENSIONS  $\pm$ 0 DEGREES 30'.

|   |   |  |                                   |
|---|---|--|-----------------------------------|
| <br>An SAE International Group | <b>AEROSPACE STANDARD</b>               |  | <b>SAE AS6075</b><br>SHEET 3 OF 4 |
|   | FITTING, BOLT, FLARED,<br>37° SPHERICAL |  |                                   |