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REV.  
A

AS4689

FEDERAL SUPPLY CLASS  
4730

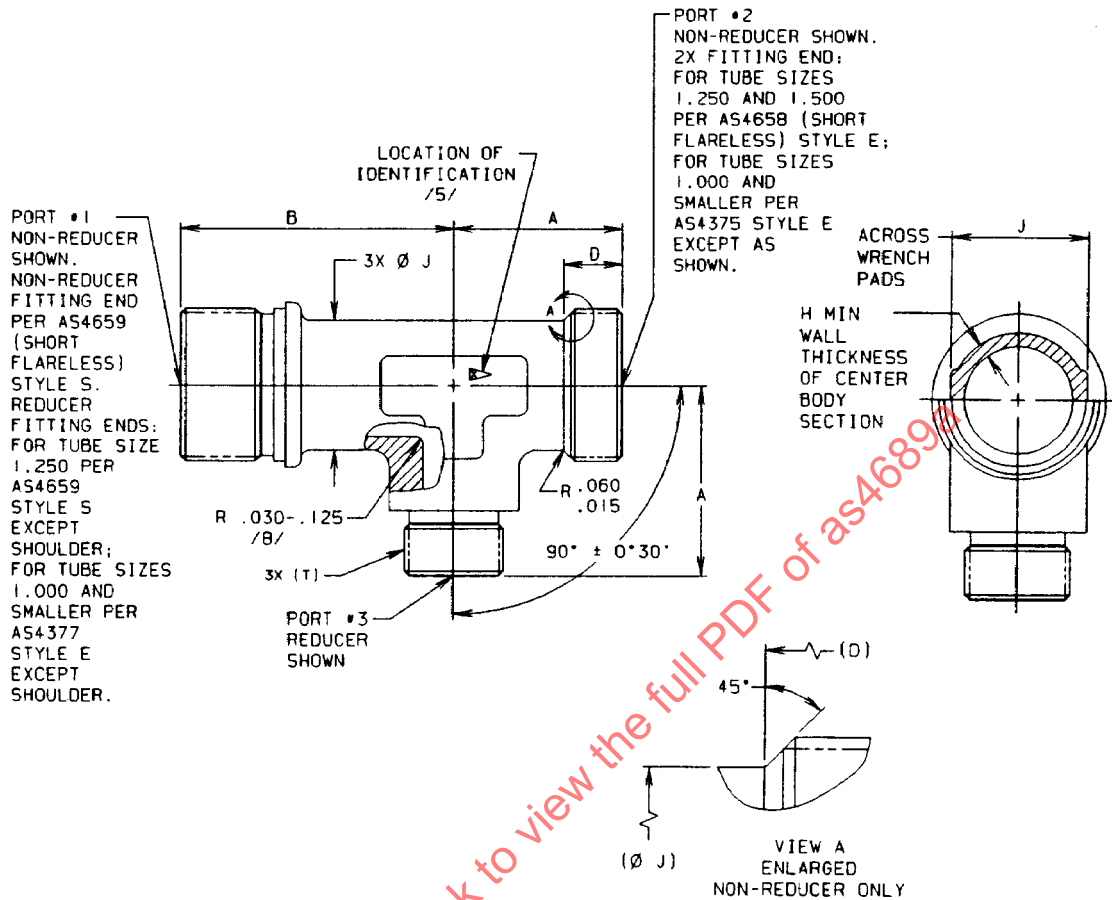
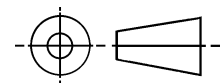


FIGURE 1 - FITTING, TEE, REDUCER

TABLE 1 - DIMENSIONS AND WEIGHTS

| BASIC NO. |      |      |      |               | LB/EA | LB/EA | LB/EA |
|-----------|------|------|------|---------------|-------|-------|-------|
| AS4689    |      |      |      |               | MAX   | MAX   | MAX   |
| /9/       | /17/ | J    |      |               |       |       |       |
| SIZE      | CODE | D    | H    | + .005/- .020 | ALUM  | CRES  | TI    |
| 20        |      | .517 | .124 | 1.375         | .474  | 1.316 | .712  |
| 24        |      | .614 | .156 | 1.688         | .700  | 1.941 | 1.109 |

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ MIL-F-18280

**SAE** The Engineering Society  
For Advancing Mobility  
Land Sea Air and Space®  
INTERNATIONAL  
400 Commonwealth Drive, Warrendale, PA 15096-0001

**AEROSPACE STANDARD**

FITTING, TEE, REDUCER, BULKHEAD ON RUN,  
FLARELESS AND SHORT FLARELESS

**AS4689**  
SHEET 1 OF 4

**REV.**  
**A**

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TABLE 2 - LEG LENGTH A

| SIZE<br>OF<br>PORT | FORGING SIZE /9/<br>20 | FORGING SIZE /9/<br>24 |
|--------------------|------------------------|------------------------|
| 02                 | 1.710                  | 1.898                  |
| 03                 | 1.757                  | 1.945                  |
| 04                 | 1.788                  | 1.976                  |
| 05                 | 1.788                  | 1.976                  |
| 06                 | 1.804                  | 1.992                  |
| 08                 | 1.897                  | 2.085                  |
| 10                 | 1.960                  | 2.148                  |
| 12                 | 2.023                  | 2.211                  |
| 14                 | 2.023                  | 2.211                  |
| 16                 | 2.023                  | 2.211                  |
| 20                 | 1.798                  | 1.986                  |
| 24                 | --                     | 1.986                  |

TABLE 3 - LEG LENGTH B

| SIZE<br>OF<br>PORT | FORGING SIZE /9/<br>20 | FORGING SIZE /9/<br>24 |
|--------------------|------------------------|------------------------|
| 02                 | 2.320                  | 2.602                  |
| 03                 | 2.367                  | 2.649                  |
| 04                 | 2.430                  | 2.712                  |
| 05                 | 2.430                  | 2.712                  |
| 06                 | 2.476                  | 2.758                  |
| 08                 | 2.648                  | 2.930                  |
| 10                 | 2.789                  | 3.071                  |
| 12                 | 2.989                  | 3.180                  |
| 14                 | 2.989                  | 3.180                  |
| 16                 | 2.989                  | 3.180                  |
| 20                 | 2.686                  | 2.968                  |
| 24                 | --                     | 2.968                  |

**AEROSPACE STANDARD**FITTING, TEE, REDUCER, BULKHEAD ON RUN,  
FLARELESS AND SHORT FLARELESS**AS4689**  
SHEET 2 OF 4**REV.**  
**A**

TABLE 4 - TUBE SIZE AND CORRESPONDING THREADS

| PORT<br>SIZE | (NOMINAL<br>TUBE<br>SIZE) | (R)<br>T THREAD<br>PER MIL-S-8879 |
|--------------|---------------------------|-----------------------------------|
| 02           | .125                      | .3125-24UNJF                      |
| 03           | .188                      | .3750-24UNJF                      |
| 04           | .250                      | .4375-20UNJF                      |
| 05           | .312                      | .5000-20UNJF                      |
| 06           | .375                      | .5625-18UNJF                      |
| 08           | .500                      | .7500-16UNJF                      |
| 10           | .625                      | .8750-14UNJF                      |
| 12           | .750                      | 1.0625-12UNJ                      |
| 14           | .875                      | 1.1875-12UNJ                      |
| 16           | 1.000                     | 1.3125-12UNJ                      |
| 20           | 1.250                     | 1.5625-12UNJ                      |
| 24           | 1.500                     | 1.8125-12UNJ                      |

## NOTES:

## /1/ MATERIAL:

- a. CODE LETTER T: TYPE 6AL-4V TITANIUM ALLOY PER AMS 4928
- b. CODE LETTER V: TYPE 15-5PH CORROSION RESISTANT STEEL PER AMS 5659
- c. CODE LETTER W: TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS 4141 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124

## 2. HEAT TREATMENT:

- a. MATERIAL CODE LETTER T: NONE
- b. MATERIAL CODE LETTER V: HEAT TREAT TO CONDITION H-1075 PER AMS 2759/3
- c. MATERIAL CODE LETTER W: NONE

## /3/ FINISH:

- a. MATERIAL CODE LETTER T - FLUORIDE PHOSPHATE CONVERSION COAT PER AMS 2486
  - b. MATERIAL CODE LETTER V:
    - (1) V CODE PARTS TO BE PASSIVATED ONLY WILL HAVE NO FINISH CODE LETTER AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: PASSIVATE PER QQ-P-35, TYPE II OR VIII.
    - (2) V CODE PARTS TO BE CADMIUM PLATED ONLY WILL HAVE THE FINISH CODE LETTER "P" AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2.
  - c. MATERIAL CODE LETTER W: ANODIZE PER AMS 2472 OR PER MIL-A-8625, TYPE II, CLASS 2 DYED BROWN SIMILAR TO COLOR 10080 OF FED-STD-595
- /4/ PROCUREMENT SPECIFICATION: MIL-F-18280 EXCEPT AS SPECIFIED ON THIS STANDARD. THIS PART SHALL BE QUALIFIED TO THE PROCUREMENT SPECIFICATION IN A COMPLETE ASSEMBLY. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.
- /5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B. MANUFACTURER'S NAME, TRADEMARK OR CAGE CODE, BASIC PART NUMBER, AND MATERIAL CODE LETTER.
6. THIS PART IS DESIGNED FOR USE IN SYSTEMS WITH OPERATING PRESSURES AS FOLLOWS:
- a. SIZES -20 AND -24 TITANIUM ALLOY AND CORROSION RESISTANT STEEL AT 3000 psi
  - b. SIZES -20 AND -24 ALUMINUM ALLOY AT 600 psi

LARGEST PORT DETERMINES PRESSURE RATING.