

REV.  
B

AS896

FEDERAL SUPPLY CLASS  
4730

# RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

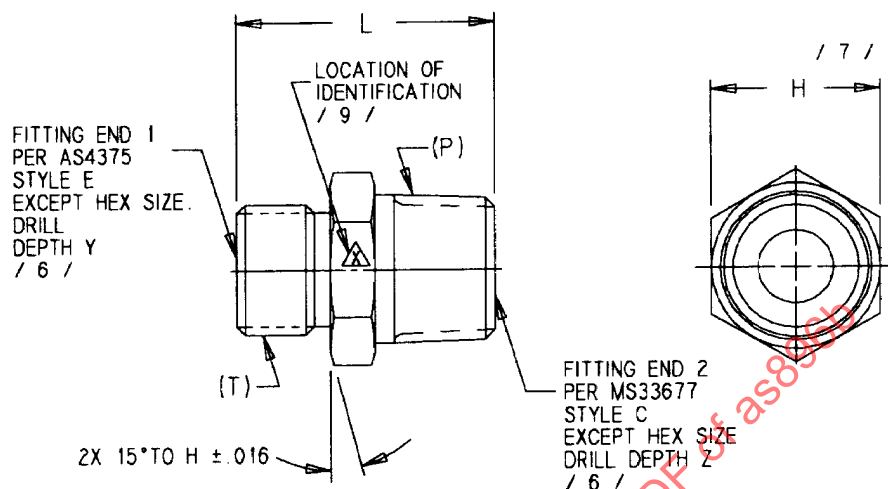
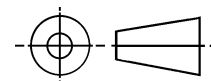


FIGURE 1 - FITTING, NIPPLE, REDUCER,  
FLARELESS TUBE TO PIPE,  
EXTERNAL THREAD

TABLE 1 - OVERALL LENGTH L

| SIZE OF<br>END 2 | SIZE OF<br>END 1<br>02 | SIZE OF<br>END 1<br>03 | SIZE OF<br>END 1<br>04 | SIZE OF<br>END 1<br>05 | SIZE OF<br>END 1<br>06 | SIZE OF<br>END 1<br>08 | SIZE OF<br>END 1<br>10 | SIZE OF<br>END 1<br>12 | SIZE OF<br>END 1<br>16 | SIZE OF<br>END 1<br>20 | SIZE OF<br>END 1<br>24 | SIZE OF<br>END 1<br>32 |
|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 02               | .938                   | .984                   | 1.031                  | 1.062                  | 1.094                  | 1.188                  | 1.266                  | 1.344                  | 1.375                  | 1.406                  | 1.469                  | 1.578                  |
| 04               | 1.156                  | 1.219                  | 1.250                  | 1.250                  | 1.281                  | 1.406                  | 1.469                  | 1.562                  | 1.594                  | 1.625                  | 1.688                  | 1.781                  |
| 06               | 1.203                  | 1.250                  | 1.281                  | 1.281                  | 1.281                  | 1.406                  | 1.516                  | 1.594                  | 1.625                  | 1.656                  | 1.703                  | 1.812                  |
| 08               | 1.391                  | 1.438                  | 1.469                  | 1.469                  | 1.469                  | 1.594                  | 1.688                  | 1.781                  | 1.799                  | 1.828                  | 1.875                  | 1.969                  |
| 12               | 1.438                  | 1.500                  | 1.531                  | 1.531                  | 1.547                  | 1.609                  | 1.719                  | 1.781                  | 1.812                  | 1.844                  | 1.891                  | 1.984                  |
| 16               | 1.656                  | 1.703                  | 1.734                  | 1.734                  | 1.750                  | 1.844                  | 1.906                  | 2.000                  | 2.000                  | 2.094                  | 2.094                  | 2.156                  |
| 20               | 1.750                  | 1.797                  | 1.828                  | 1.828                  | 1.844                  | 1.938                  | 2.000                  | 2.094                  | 2.094                  | 2.094                  | 2.125                  | 2.203                  |
| 24               | 1.812                  | 1.859                  | 1.891                  | 1.891                  | 1.906                  | 2.000                  | 2.062                  | 2.188                  | 2.188                  | 2.188                  | 2.187                  | 2.219                  |
| 32               | 1.838                  | 1.894                  | 2.016                  | 2.016                  | 2.031                  | 2.125                  | 2.218                  | 2.250                  | 2.250                  | 2.250                  | 2.250                  | 2.656                  |

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /8/ MIL-F-18280

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**  
FITTING, NIPPLE, REDUCER,  
FLARELESS TUBE TO PIPE, EXTERNAL THREAD

**AS896**  
SHEET 1 OF 4

**REV.  
B**

TABLE 2 - HEX SIZE H //

| LARGEST<br>END<br>SIZE | SIZE OF<br>END 1<br>TUBE | SIZE OF<br>END 2<br>PIPE |
|------------------------|--------------------------|--------------------------|
| 02                     | .428-.440                | .428-.440                |
| 03                     | .428-.440                | —                        |
| 04                     | .490-.502                | .552-.565                |
| 05                     | .552-.565                | —                        |
| 06                     | .615-.628                | .740-.753                |
| 08                     | .802-.815                | .865-.878                |
| 10                     | .928-.941                | —                        |
| 12                     | 1.113-1.128              | 1.113-1.128              |
| 16                     | 1.363-1.380              | 1.363-1.380              |
| 20                     | 1.676-1.693              | 1.676-1.693              |
| 24                     | 1.988-2.005              | 1.988-2.005              |
| 32                     | 2.609-2.635              | 2.609-2.635              |

TABLE 3 - DRILL DEPTH Y, END 1

| SIZE OF<br>END 2 | SIZE OF<br>END 1<br>02 | SIZE OF<br>END 1<br>03 | SIZE OF<br>END 1<br>04 | SIZE OF<br>END 1<br>05 | SIZE OF<br>END 1<br>06 | SIZE OF<br>END 1<br>08 | SIZE OF<br>END 1<br>10 | SIZE OF<br>END 1<br>12 | SIZE OF<br>END 1<br>16 | SIZE OF<br>END 1<br>20 | SIZE OF<br>END 1<br>24 | SIZE OF<br>END 1<br>32 |
|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 02               | THRU                   | THRU                   | THRU                   | .516                   | .531                   | .578                   | .656                   | .622                   | .641                   | .609                   | .594                   | .562                   |
| 04               | THRU                   | THRU                   | THRU                   | THRU                   | .516                   | .609                   | .641                   | .688                   | .656                   | .625                   | .625                   | .578                   |
| 06               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .625                   | .703                   | .766                   | .703                   | .672                   | .656                   | .625                   |
| 08               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .766                   | .734                   | .688                   | .672                   | .625                   |
| 12               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .766                   | .734                   | .703                   | .672                   |
| 16               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .844                   | .766                   | .688                   |
| 20               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .844                   | .781                   |
| 24               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | .859                   |
| 32               | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   |

TABLE 4 - DRILL DEPTH Z, END 2

| SIZE OF<br>END 2 | SIZE OF<br>END 1<br>02 | SIZE OF<br>END 1<br>03 | SIZE OF<br>END 1<br>04 | SIZE OF<br>END 1<br>05 | SIZE OF<br>END 1<br>06 | SIZE OF<br>END 1<br>08 | SIZE OF<br>END 1<br>10 | SIZE OF<br>END 1<br>12 | SIZE OF<br>END 1<br>16 | SIZE OF<br>END 1<br>20 | SIZE OF<br>END 1<br>24 | SIZE OF<br>END 1<br>32 |
|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 02               | .422                   | .406                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   |
| 04               | .609                   | .625                   | .641                   | .656                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   |
| 06               | .625                   | .625                   | .641                   | .641                   | .656                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   |
| 08               | .766                   | .766                   | .797                   | .797                   | .797                   | .844                   | .875                   | THRU                   | THRU                   | THRU                   | THRU                   | THRU                   |
| 12               | .766                   | .781                   | .797                   | .797                   | .812                   | .797                   | .859                   | .891                   | THRU                   | THRU                   | THRU                   | THRU                   |
| 16               | .922                   | .906                   | .938                   | .938                   | .969                   | .969                   | .984                   | 1.047                  | 1.094                  | THRU                   | THRU                   | THRU                   |
| 20               | .922                   | .922                   | .938                   | .953                   | .969                   | .984                   | .984                   | 1.047                  | 1.094                  | 1.109                  | THRU                   | THRU                   |
| 24               | .906                   | .906                   | .938                   | .938                   | .953                   | .969                   | .969                   | 1.078                  | 1.125                  | 1.141                  | 1.203                  | THRU                   |
| 32               | .906                   | .906                   | .922                   | .938                   | .953                   | .969                   | 1.031                  | 1.000                  | 1.062                  | 1.078                  | 1.141                  | 1.609                  |

TABLE 5 - TUBE SIZE AND CORRESPONDING THREAD

| END<br>SIZE | NOMINAL<br>TUBE<br>SIZE | T THREAD<br>PER MIL-S-8879 | P THREAD<br>PER MIL-P-7105 |
|-------------|-------------------------|----------------------------|----------------------------|
| 02          | .125                    | .3125-24 UNJF              | .125-27 ANPT               |
| 03          | .188                    | .3750-24 UNJF              | —                          |
| 04          | .250                    | .4375-20 UNJF              | .250-18 ANPT               |
| 05          | .312                    | .5000-20 UNJF              | —                          |
| 06          | .375                    | .5625-18 UNJF              | .375-18 ANPT               |
| 08          | .500                    | .7500-16 UNJF              | .500-14 ANPT               |
| 10          | .625                    | .8750-14 UNJF              | —                          |
| 12          | .750                    | 1.0625-12 UNJ              | .750-14 ANPT               |
| 16          | 1.000                   | 1.3125-12 UNJ              | 1.000-11.5 ANPT            |
| 20          | 1.250                   | 1.6250-12 UNJ              | 1.250-11.5 ANPT            |
| 24          | 1.500                   | 1.8750-12 UNJ              | 1.500-11.5 ANPT            |
| 32          | 2.000                   | 2.5000-12 UNJ              | 2.000-11.5 ANPT            |

## NOTES:

## /1/ MATERIAL CODE:

- a. “-” = 1137 STEEL BAR PER ASTM A 108
- b. “F” = 4130 STEEL BAR PER MIL-S-6758 OR AMS 6370
- c. “D” = 2024-T6 OR T-851 ALUMINUM ALLOY BAR PER Q-A-225/6 OR AMS 4112
- d. “J” = 304 CRES BAR PER QQ-S-763 OR AMS 5639
- e. “K” = 316 CRES BAR PER QQ-S-763 OR AMS 5648
- f. “R” = 321 CRES BAR PER QQ-S-763 OR AMS 5645
- g. “S” = 347 CRES BAR PER QQ-S-763 OR AMS 5646 /4/
- h. “W” = 7075-T73 OR -T7351 ALUMINUM ALLOY BAR PER QQ-A-225/9 OR AMS 4112

## 2. FINISH:

- a. “-” = CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
- b. “F” = CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
- c. “D” = ANODIZE PER MIL-A-8625 TYPE II, CLASS 2 OR AMS 2472, DYE GREEN, SIMILAR TO COLOR 14187 OF FED-STD-595
- d. “J” = PASSIVATE PER QQ-P-35, TYPE VI OR VII
- e. “K” = PASSIVATE PER QQ-P-35, TYPE VI OR VII
- f. “R” = PASSIVATE PER QQ-P-35, TYPE VI OR VII
- g. “S” = PASSIVATE PER QQ-P-35, TYPE VI OR VII /4/
- h. “W” = ANODIZE PER MIL-A-8625, TYPE II, CLASS 2 OR AMS 2472, DYE BROWN. SIMILAR TO COLOR 10080 OF FED-STD-595

/3/ INTENDED USE: OXYGEN SYSTEMS AND GROUND SUPPORT EQUIPMENT ONLY. PARTS FOR OXYGEN SYSTEMS SHALL BE IDENTIFIED IN THE PART NUMBER AS CODE “A” AND SHALL BE FURNISHED CLEANED, PACKAGED, AND LABELED IN ACCORDANCE WITH AIR1176, TO A PROCESS APPROVED BY THE USER.

/4/ 347 CRES INACTIVE FOR DESIGN AND PROCUREMENT. FOR REPLACEMENT USE PARTS CODED “R”. PARTS CODED “S” MAY BE ISSUED FROM STOCK UNTIL DEPLETED.

5. INVENTORIED PARTS CONFORMING TO THE PREVIOUS “LETTER CHANGE” MAY BE USED TO DEPLETION.

/6/ AT THE OPTION OF MANUFACTURER, THE SMALLER DIAMETER MAY BE DRILLED THROUGH THE FITTING FROM END TO END.

/7/ LARGEST END SIZE IN TABLE 2 SHALL DETERMINE THE HEX SIZE. WHEN ENDS ARE EQUAL, USE LARGEST HEX SPECIFIED FOR APPLICABLE END NUMBER.

/8/ 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.

/9/ IDENTIFICATION: MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B.

- a. FOR SIZES 06 (.375 OD TUBE SIZE) AND SMALLER: MANUFACTURER'S NAME, TRADEMARK OR CAGE CODE, LETTERS “AS” AND MATERIAL CODE LETTER
- b. FOR SIZES 08 (.500 OD TUBE SIZE) AND LARGER: MANUFACTURER'S NAME, TRADEMARK OR CAGE CODE, BASIC PART NUMBER AND MATERIAL CODE LETTER

10. INTERPRETATION OF DRAWING PER ARP4296.

11. SURFACE TEXTURE: SYMBOLS PER ANSI Y14.36; REQUIREMENTS PER ANSI/ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125  $\mu$ in Ra.

12. BREAK ALL SHARP EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.

13. DIMENSIONS AND TOLERANCING: ANSI Y14.5M-1982