

REV.
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SAE AS1003

RATIONALE

FEDERAL SUPPLY CLASS
4730

CORRECTIONS:

- (1) SUGGESTED REPLACEMENT IS AS6043 IN NOTE BELOW.
- (2) TYPOGRAPHICAL ERROR IN TABLE 3 THE LENGTH "D" FOR FORGING SIZE 12 AND TUBE SIZE 06 IS CHANGED TO 1.430.
- (3) TYPOGRAPHICAL ERROR UNDER /21/ EXAMPLE FOR PART NUMBER, SECOND LAST ROW HAS BEEN CORRECTED.

NOTE: THE NEW AS6043 FITTING IS SUGGESTED REPLACEMENT BECAUSE OF IMPROVED LENGTH TOLERANCES AND IMPROVED FINISH OF THE CONICAL SEAL AREA.

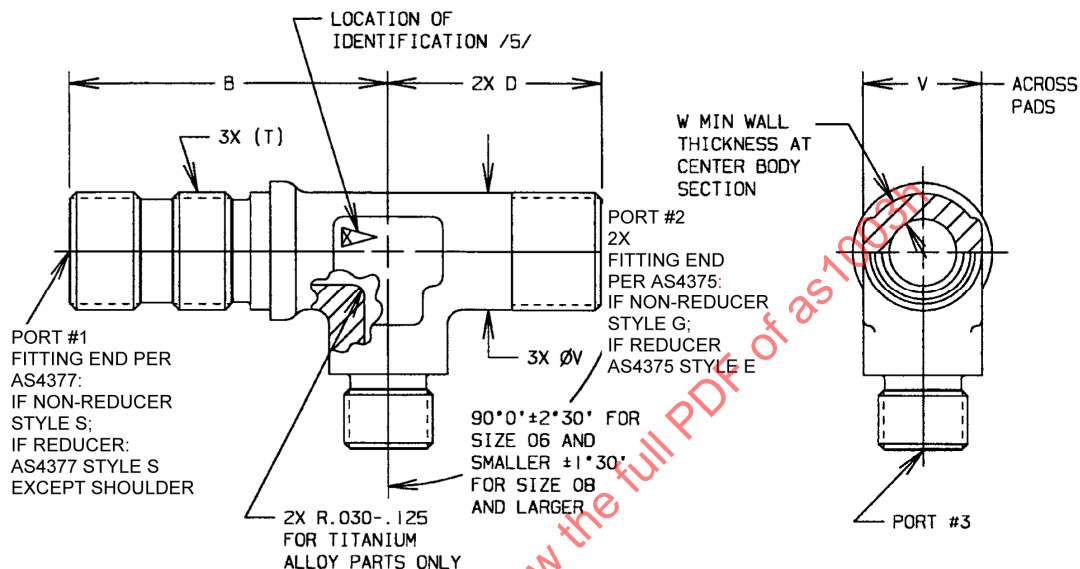


FIGURE 1 - FITTING, TEE, BULKHEAD END FOR OPTIONAL USE IN PORT INSTALLATION, PORT #3 SHOWN AS REDUCER

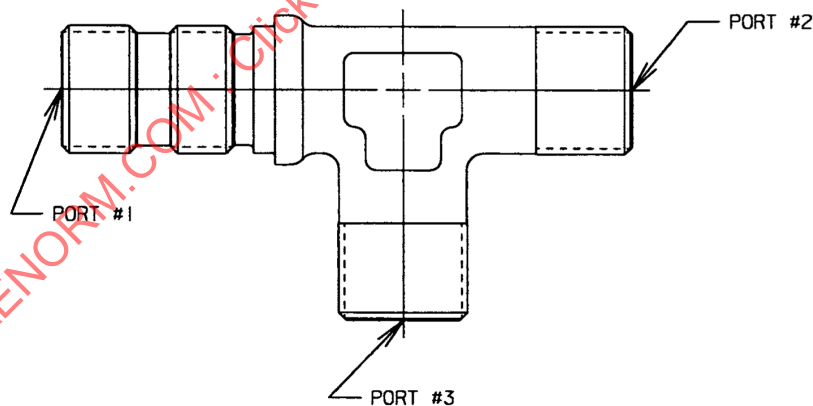
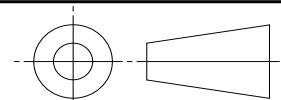


FIGURE 2 - FITTING, TEE, BULKHEAD END FOR OPTIONAL USE IN PORT INSTALLATION, NON-REDUCER SHOWN, SAME AS FIGURE 1 EXCEPT AS SHOWN

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS1003H>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

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AEROSPACE STANDARD

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

SAE AS1003
SHEET 1 OF 7

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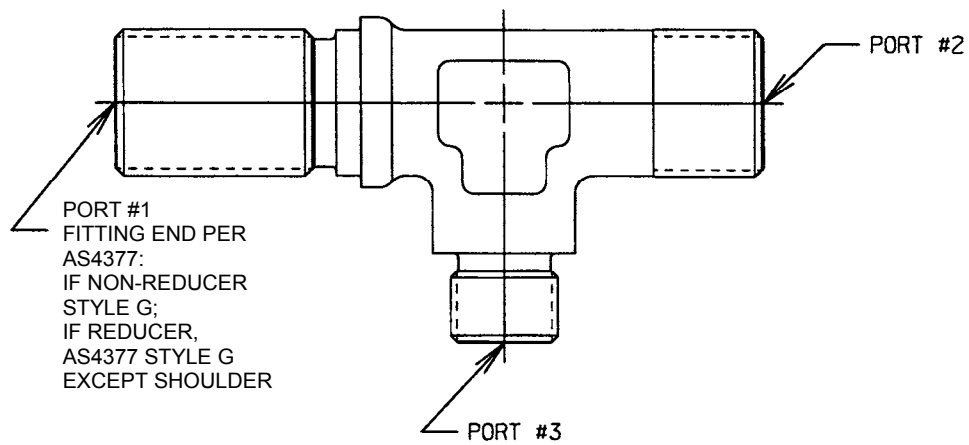


FIGURE 3 - FITTING, TEE, BULKHEAD END NOT FOR USE IN PORT INSTALLATION, PORT #3 SHOWN AS REDUCER, SAME AS FIGURE 1 EXCEPT AS SHOWN

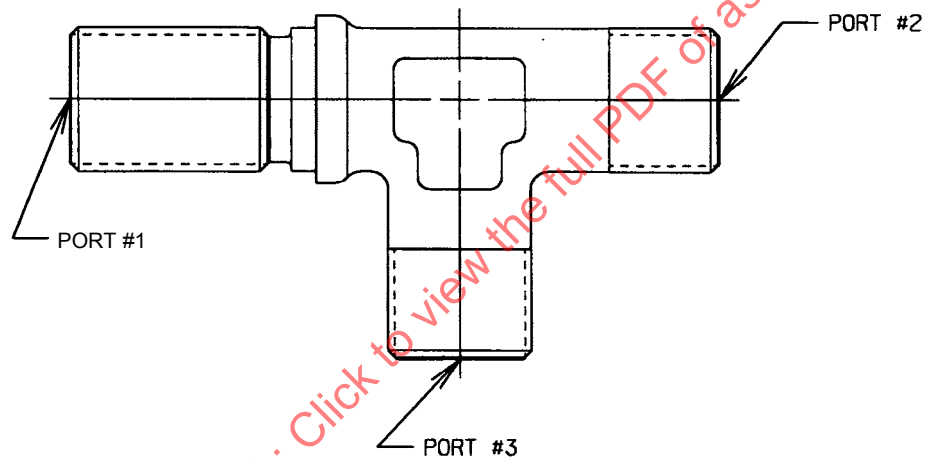


FIGURE 4 - FITTING, TEE, BULKHEAD END NOT FOR USE IN PORT INSTALLATION, NON-REDUCER SHOWN, SAME AS FIGURE 2 EXCEPT AS SHOWN

TABLE 1 - DIMENSIONS AND WEIGHTS /13/

BASIC NO. AS1003 /12/ /21/ SIZE CODE	V	W	LB/EA APPROX REF ALUM	LB/EA APPROX REF STEEL	LB/EA APPROX REF TI
02	.297- .314	.090	.0185	.0531	.0293
03	.360- .377	.100	.0289	.0830	.0458
04	.423- .440	.110	.0373	.107	.0591
05	.485- .502	.120	.0498	.143	.0789
06	.547- .565	.120	.0612	.176	.0969
08	.735- .753	.150	.125	.358	.198
10	.860- .878	.170	.162	.466	.257
12	1.047-1.065	.185	.277	.798	.440
14	1.173-1.191	.200	.372	1.07	.590
16	1.292-1.317	.205	.400	1.15	.634
20	1.605-1.630	.240	.701	2.01	1.11
24	1.855-1.880	.250	.908	2.61	1.44
32	2.542-2.572	.350	1.95	5.60	3.09

TABLE 2 - LEG LENGTH B /14/

FORGING SIZE /12/	TUBE SIZE OF PORT #1												
	02	03	04	05	06	08	10	12	14	16	20	24	32
02	1.336	-	-	-	-	-	-	-	-	-	-	-	-
03	1.367	1.414	-	-	-	-	-	-	-	-	-	-	-
04	1.413	1.460	1.523	-	-	-	-	-	-	-	-	-	-
05	1.445	1.492	1.555	1.555	-	-	-	-	-	-	-	-	-
06	1.555	1.602	1.665	1.665	1.711	-	-	-	-	-	-	-	-
08	1.664	1.711	1.774	1.774	1.820	1.992	-	-	-	-	-	-	-
10	1.804	1.851	1.914	1.914	1.960	2.132	2.273	-	-	-	-	-	-
12	1.914	1.961	2.024	2.024	2.070	2.242	2.383	2.492	-	-	-	-	-
14	2.024	2.071	2.134	2.134	2.180	2.352	2.493	2.617	2.543	-	-	-	-
16	2.039	2.086	2.149	2.149	2.195	2.367	2.508	2.617	2.617	2.617	-	-	-
20	2.320	2.367	2.430	2.430	2.476	2.648	2.789	2.898	2.898	2.898	2.898	-	-
24	2.602	2.649	2.712	2.712	2.758	2.930	3.071	3.180	3.180	3.180	3.180	3.180	-
32	2.992	3.039	3.102	3.102	3.148	3.320	3.461	3.570	3.570	3.570	3.570	3.570	3.773

TABLE 3 - LEG LENGTH D /14/

FORGING SIZE /12/	TUBE SIZE OF PORT #2 OR #3												
	02	03	04	05	06	08	10	12	14	16	20	24	32
02	.804	-	-	-	-	-	-	-	-	-	-	-	-
03	.883	.930	-	-	-	-	-	-	-	-	-	-	-
04	.883	.930	.961	-	-	-	-	-	-	-	-	-	-
05	.977	1.024	1.055	1.055	-	-	-	-	-	-	-	-	-
06	.992	1.039	1.070	1.070	1.086	-	-	-	-	-	-	-	-
08	1.149	1.196	1.227	1.227	1.243	1.336	-	-	-	-	-	-	-
10	1.274	1.320	1.352	1.352	1.368	1.461	1.524	-	-	-	-	-	-
12	1.335	1.383	1.414	1.414	1.430	1.523	1.586	1.649	-	-	-	-	-
14	1.398	1.445	1.476	1.476	1.492	1.585	1.648	1.742	2.023	-	-	-	-
16	1.429	1.476	1.507	1.507	1.523	1.616	1.679	1.742	1.742	1.742	-	-	-
20	1.710	1.757	1.788	1.788	1.804	1.897	1.960	2.023	2.023	2.023	2.023	-	-
24	1.898	1.945	1.976	1.976	1.992	2.085	2.148	2.211	2.211	2.211	2.211	2.211	-
32	2.085	2.132	2.163	2.163	2.179	2.272	2.335	2.398	2.398	2.398	2.398	2.398	2.398

TABLE 4 - TUBE SIZE AND CORRESPONDING THREAD

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS 3A
02	.125	.3125-24 UNJF
03	.188	.3750-24 UNJF
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-18 UNJF
08	.500	.7500-16 UNJF
10	.625	.8750-14 UNJF
12	.750	1.0625-12 UNJ
14	.875	1.1875-12 UNJ
16	1.000	1.3125-12 UNJ
20	1.250	1.6250-12 UNJ
24	1.500	1.8750-12 UNJ
32	2.000	2.5000-12 UNJ

NOTES:

NOTICE

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

/1/ MATERIAL:

- CODE LETTER DASH (-) - TYPE 4130 LOW ALLOY STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/
- CODE LETTER D - TYPE 2024-T6 OR -T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS4133. /2/
- CODE LETTER F - TYPE 4130 LOW ALLOY STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/

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- d. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5639 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- e. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5648 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- f. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5645 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- g. CODE LETTER S - TYPE 347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5646 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- h. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS4928.
- i. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141 OR AMS-QQ-A-367; OR 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124; OR 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9. /2/

/2/ HEAT TREATMENT:

- a. MATERIAL CODE LETTER (-) AND F - HARDNESS SHALL BE 92 HRB TO 40 HRC PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTERS D AND W - ELECTRICAL CONDUCTIVITY AND HARDNESS PER PROCUREMENT SPECIFICATION.
- c. MATERIAL CODE LETTERS J, K, R, AND S - HARDNESS SHALL BE 80 HRB MINIMUM PER PROCUREMENT SPECIFICATION.
- d. OTHER MATERIAL CODES - NONE.

3. FINISH:

- a. MATERIAL CODE LETTER (-) AND F - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
- b. MATERIAL CODE LETTER D - ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE GREEN SIMILAR TO COLOR 14187 OF FED-STD-595.
- c. MATERIAL CODE LETTERS J, K, R, AND S - PASSIVATE PER AMS2700 TYPE 6 OR 7.
- d. MATERIAL CODE LETTER T - FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 OR ANODIZE PER AMS2488, TYPE 2.
- e. MATERIAL CODE LETTER W - ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN SIMILAR TO COLOR 10080 OF FED-STD-595.

/4/ PROCUREMENT SPECIFICATION: AS18280 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS18280 FOR THIS STANDARD. SEE <http://www.eAuditNet.com> FOR CURRENT QPL ONLINE.

/5/ 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, LETTERS "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. INVENTORIED PARTS CONFORMING TO THE PREVIOUS ISSUE MAY BE USED TO DEPLETION.

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