

Submitted for recognition as an American National Standard

FEDERAL SUPPLY CLASS
4730

AS5194

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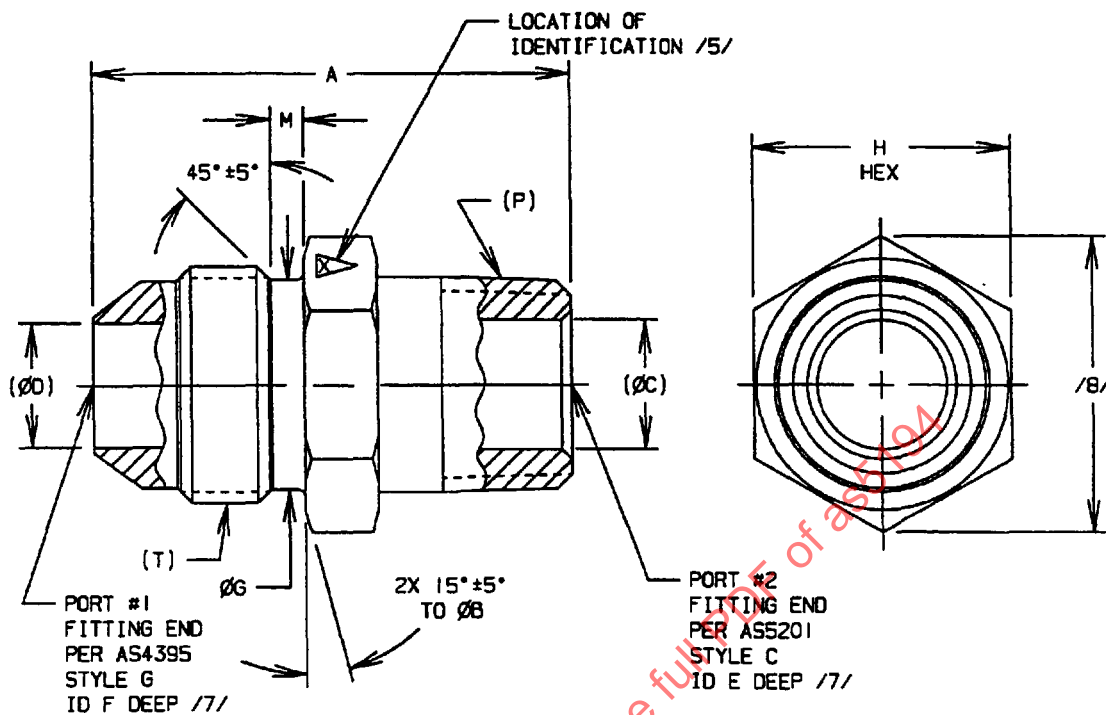
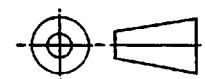


FIGURE 1 - FITTING, ADAPTER

THIRD ANGLE PROJECTION



ISSUED 1998-03

CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: AS4842/1 /4/

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

AEROSPACE STANDARD

FITTING, ADAPTER, STRAIGHT PIPE TO FLARED

AS5194
SHEET 1 OF 5

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QUESTIONS REGARDING THIS DOCUMENT:
TO PLACE A DOCUMENT ORDER:

(724) 772-8510
(724) 776-4970

FAX: (724) 776-0243
FAX: (724) 776-0790

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TABLE 1A - DIMENSIONS

BASIC NO. AS5194 /14/ SIZE CODE	(NOMINAL TUBE SIZE) PORT #1	(NOMINAL PIPE SIZE) PORT #2	T THREAD PER MIL-S-8879 CLASS 3A	P THREAD PER MIL-P-7105 ANPT	A	B ±.010	C	D
0202	.125	.125	.3125-24 UNJF	1/8-27	1.016	.418	.188	.062
0302	.188	.125	.3750-24 UNJF	1/8-27	1.047	.418	.188	.124
0402	.250	.125	.4375-20 UNJF	1/8-27	1.109	.480	.188	.172
0404	.250	.250	.4375-20 UNJF	1/4-18	1.375	.542	.282	.172
0502	.312	.125	.5000-20 UNJF	1/8-27	1.141	.542	.188	.234
0504	.312	.250	.5000-20 UNJF	1/4-18	1.375	.542	.282	.234
0602	.375	.125	.5625-18 UNJF	1/8-27	1.187	.605	.188	.297
0604	.375	.250	.5625-18 UNJF	1/4-18	1.375	.605	.282	.297
0606	.375	.375	.5625-18 UNJF	3/8-18	1.406	.730	.406	.297
0608	.375	.500	.5625-18 UNJF	1/2-14	1.625	.855	.532	.297
0804	.500	.250	.7500-16 UNJF	1/4-27	1.500	.792	.282	.391
0806	.500	.375	.7500-16 UNJF	3/8-18	1.500	.792	.406	.391
1008	.625	.500	.8750-14 UNJF	1/2-14	1.828	.918	.532	.484
1012	.625	.750	.8750-14 UNJF	3/4-14	1.844	1.103	.720	.484
1208	.750	.500	1.0625-12 UNJ	1/2-14	1.953	1.103	.532	.609

TABLE 1B - DIMENSIONS AND WEIGHTS

BASIC NO. AS5194 /14/ SIZE CODE	E	F	G +.002/- .003	H	M +.015/- .000	LB/EA MAX AL	LB/EA MAX COPPER	LB/EA MAX STEEL
0202	.469	-	.250	.428- .440	.063	.00889	.0270	.0255
0302	.469	-	.312	.428- .440	.063	.00998	.0303	.0287
0402	.469	-	.364	.490- .502	.075	.0123	.0375	.0355
0404	.688	-	.364	.552- .565	.075	.0197	.0598	.0565
0502	-	.625	.426	.552- .565	.075	.0156	.0473	.0447
0504	.688	-	.426	.552- .565	.075	.0206	.0625	.0590
0602	-	.687	.481	.615- .628	.083	.0198	.0603	.0570
0604	.688	-	.481	.615- .628	.083	.0226	.0688	.0650
0606	.688	-	.481	.740- .753	.083	.0302	.0918	.0867
0608	.875	-	.481	.865- .878	.083	.0469	.143	.135
0804	-	.844	.660	.802- .815	.094	.0515	.157	.148
0806	.688	-	.660	.802- .815	.094	.0409	.124	.117
1008	.906	-	.773	.928- .941	.107	.0648	.197	.186
1012	.906	-	.773	1.113-1.128	.107	.0834	.253	.239
1208	-	1.062	.945	1.113-1.128	.125	.0937	.285	.269

AS5194

TABLE 1C - DIMENSIONS

BASIC NO. AS5194 /14/ SIZE CODE	(NOMINAL TUBE SIZE) PORT #1	(NOMINAL TUBE SIZE) PORT #2	T THREAD PER MIL-S-8879 CLASS 3A	P THREAD PER MIL-P-7105 ANPT	A	B ±.010	C	D
1212	.750	.750	1.0625-12 UNJ	3/4-14	1.953	1.103	.720	.609
1216	.750	1.000	1.0625-12 UNJ	1-11.5	2.187	1.352	.940	.609
1612	1.000	.750	1.3125-12 UNJ	3/4-14	2.031	1.352	.720	.845
1616	1.000	1.000	1.3125-12 UNJ	1-11.5	2.219	1.352	.940	.845
2016	1.250	1.000	1.6250-12 UNJ	1-11.5	2.359	1.666	.940	1.080
2020	1.250	1.250	1.6250-12 UNJ	1-1/4-11.5	2.328	1.666	1.253	1.080
2420	1.500	1.250	1.8750-12 UNJ	1-1/4-11.5	2.547	1.978	1.253	1.314
2824	1.750	1.500	2.2500-12 UNJ	1-1/2-11.5	2.828	2.349	1.503	1.550
3232	2.000	2.000	2.5000-12 UNJ	2-11.5	3.109	2.599	1.941	1.784

TABLE 1D - DIMENSIONS AND WEIGHTS

BASIC NO. AS5194 /14/ SIZE CODE	E	F	G +.002/- .003	H	M +.015/- .000	LB/EA MAX AL	LB/EA MAX COPPER	LB/EA MAX STEEL
1212	.906	—	.945	1.113-1.128	.125	.0970	.295	.278
1216	1.062	—	.945	1.362-1.380	.125	.144	.437	.412
1612	—	1.031	1.195	1.362-1.380	.125	.136	.414	.391
1616	1.125	—	1.195	1.362-1.380	.125	.151	.459	.433
2016	—	1.250	1.507	1.676-1.693	.125	.237	.720	.680
2020	1.187	—	1.507	1.676-1.693	.125	.230	.699	.660
2420	—	1.344	1.756	1.988-2.005	.125	.327	.993	.938
2824	—	1.437	2.131	2.359-2.385	.125	.505	1.53	1.45
3232	1.437	—	2.381	2.609-2.635	.125	.969	2.94	2.78

NOTES:

/1/ MATERIAL:

- DASH AS CODE LETTER - TYPE 1137 CARBON STEEL BAR PER ASTM A 108 OR TYPE 4130 PER MIL-S-6758 OR AMS 6370 OR TYPE 4140 PER MIL-S-5626 OR AMS 6382. /2/
- CODE LETTER B - TYPE 360 COPPER ALLOY BAR PER ASTM B 416, ASTM B 138, OR AMS 4610.
- CODE LETTER D - TYPE 2024-T6 ALUMINUM ALLOY BAR PER QQ-A-225/6 OR AMS 4112 OR TYPE 2024-T851 ALUMINUM ALLOY BAR PER QQ-A-225/6.
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER QQ-S-763 OR AMS 5639.
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER QQ-S-763 OR AMS 5648.
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER QQ-S-763 OR AMS 5645.
- CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY BAR PER QQ-A-225/9 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124.

AS5194

NOTES (CONTINUED):

/2/ HEAT TREATMENT:

- a. DASH AS CODE LETTER - SEE HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- b. OTHER CODE LETTERS - NONE.

3. FINISH:

- a. DASH AS CODE LETTER - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2 AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION.
- b. CODE LETTER B - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 3 OR NONE.
- c. CODE LETTER D - ANODIZE PER MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
- d. CODE LETTERS J, K, AND R - PASSIVATE PER QQ-P-35, TYPE VI OR VII.
- e. CODE LETTER W - ANODIZE PER MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.

/4/ PROCUREMENT SPECIFICATION: AS4842/1 EXCEPT AS SPECIFIED ON THIS STANDARD. THIS PART SHALL BE QUALIFIED TO THE PROCUREMENT SPECIFICATION IN A COMPLETE ASSEMBLY AS APPLICABLE. 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.

- a. SIZE 06 AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTER "AS" AND MATERIAL CODE LETTER.
- b. 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 02 THROUGH 16 IN CARBON STEEL, CORROSION RESISTANT STEEL AND COPPER ALLOY AT 3000 psi.
- b. SIZES 12 THROUGH 20 IN ALUMINUM ALLOY AT 3000 psi.
- c. SIZE 16 IN ALUMINUM ALLOY AND SIZES 20 THROUGH 32 IN CARBON STEEL, CORROSION RESISTANT STEEL AND COPPER ALLOY AT 1500 psi.

THIS STANDARD IS THE FUNCTIONAL EQUIVALENT OF AN816 AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.

/7/ THE INTERNAL DIAMETERS C AND D SHALL END IN A CONICAL END OF 110° MINIMUM INCLUDED ANGLE. AT THE OPTION OF THE MANUFACTURER, THE SMALLER DIAMETER MAY BE MACHINED THROUGH THE FITTING FROM END TO END.

/8/ THE HEX CORNERS MAY BE ROUNDED PER ARP1942.

9. INTERPRETATION OF DRAWING PER ARP4296.

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

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

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

13. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS $\pm$.015, ANGULAR DIMENSIONS $\pm$ 0°30'.