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REV.
B

AS5194

FEDERAL SUPPLY CLASS
4730

RATIONALE

AS5194B HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

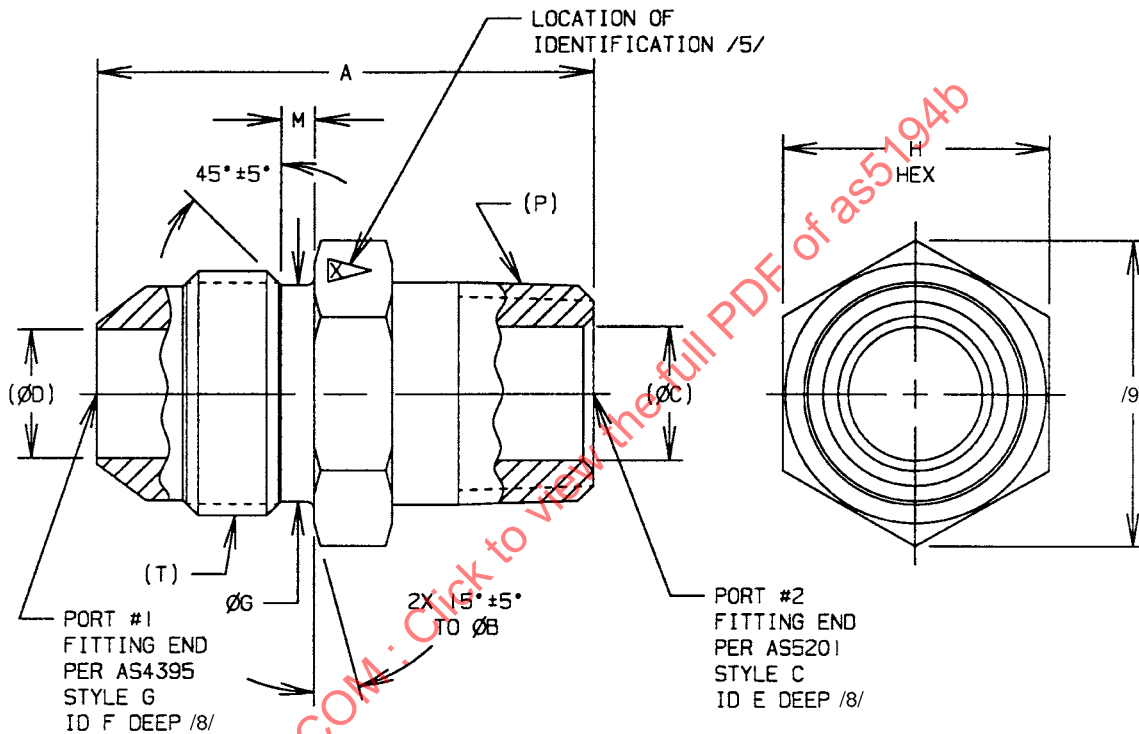
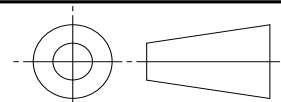


FIGURE 1 - FITTING, ADAPTER

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS5194B>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4842/1



AEROSPACE STANDARD

FITTING, ADAPTER, STRAIGHT PIPE TO FLARED

AS5194
SHEET 1 OF 5

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TABLE 1A - DIMENSIONS

BASIC NO. AS5194 /16/ SIZE CODE	(NOMINAL TUBE SIZE) PORT #1	(NOMINAL PIPE SIZE) PORT #2	T THREAD PER AS8879 CLASS 3A	P THREAD PER AS71051 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 /16/ SIZE CODE	E	F	G +.002/- .003	H	M +.015/- .000	LB/EA APPROX REF AL	LB/EA APPROX REF COPPER	LB/EA APPROX REF STEEL
0202	.469	—	.250	.428- .440	.063	.00800	.0243	.0230
0302	.469	—	.312	.428- .440	.063	.00898	.0273	.0258
0402	.469	—	.364	.490- .502	.075	.0111	.0338	.0320
0404	.688	—	.364	.552- .565	.075	.0177	.0538	.0508
0502	—	.625	.426	.552- .565	.075	.0140	.0426	.0402
0504	.688	—	.426	.552- .565	.075	.0185	.0562	.0531
0602	—	.687	.481	.615- .628	.083	.0178	.0543	.0513
0604	.688	—	.481	.615- .628	.083	.0203	.0619	.0585
0606	.688	—	.481	.740- .753	.083	.0272	.0826	.0780
0608	.875	—	.481	.865- .878	.083	.0422	.129	.122
0804	—	.844	.660	.802- .815	.094	.0464	.141	.133
0806	.688	—	.660	.802- .815	.094	.0368	.112	.105
1008	.906	—	.773	.928- .941	.107	.0583	.177	.167
1012	.906	—	.773	1.113-1.128	.107	.0751	.228	.215
1208	—	1.062	.945	1.113-1.128	.125	.0843	.256	.242



AEROSPACE STANDARD

FITTING, ADAPTER, STRAIGHT PIPE TO FLARED

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TABLE 1C - DIMENSIONS

BASIC NO. AS5194 /16/ SIZE CODE	(NOMINAL TUBE SIZE) PORT #1	(NOMINAL TUBE SIZE) PORT #2	T THREAD PER AS8879 CLASS 3A	P THREAD PER AS71051 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	2.328	1.666	.940	1.080
2020	1.250	1.250	1.6250-12 UNJ	1-1/4-11.5	2.359	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 /16/ SIZE CODE	E	F	G +.002/- .003	H	M +.015/- .000	LB/EA APPROX REF AL	LB/EA APPROX REF COPPER	LB/EA APPROX REF STEEL
1212	.906	—	.945	1.113-1.128	.125	.0873	.266	.250
1216	1.062	—	.945	1.362-1.380	.125	.130	.393	.371
1612	—	1.031	1.195	1.362-1.380	.125	.122	.373	.352
1616	1.125	—	1.195	1.362-1.380	.125	.136	.413	.390
2016	—	1.250	1.507	1.676-1.693	.125	.213	.648	.612
2020	1.187	—	1.507	1.676-1.693	.125	.207	.629	.594
2420	—	1.344	1.756	1.988-2.005	.125	.294	.894	.844
2824	—	1.437	2.131	2.359-2.385	.125	.454	1.38	1.30
3232	1.437	—	2.381	2.609-2.635	.125	.872	2.65	2.50

NOTES:

/1/ MATERIAL:

- DASH AS CODE LETTER - TYPE 4130 CARBON STEEL BAR PER AMS-S-6758 OR AMS 6370 OR TYPE 4140 PER 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 AMS-QQ-A-225/6 OR AMS 4112 OR TYPE 2024-T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6.
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS 5639.
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS 5648.
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS 5645.
- CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124.

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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 AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
- d. CODE LETTERS J, K, AND R - PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII.
- e. CODE LETTER W - ANODIZE PER AMS 2472 OR 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. USERS OF THIS STANDARD SHALL PROCURE THIS PRODUCT FROM ACCREDITED MANUFACTURER(S) OR ACCREDITED DISTRIBUTOR(S) AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED MANUFACTURERS LIST (QML) FOR THIS TYPE PRODUCT.

/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. INVENTORIED PARTS CONFORMING TO THE PREVIOUS "LETTER CHANGE" MAY BE USED TO DEPLETION.

7. 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.

/8/ 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.

/9/ THE HEX CORNERS MAY BE ROUNDED PER ARP1942.

10. THE CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT.

11. INTERPRETATION OF DRAWING PER ARP4296.

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

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