

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

REV.
E

AS5194™

FEDERAL SUPPLY CLASS
4730

RATIONALE

"NOT RECOMMENDED" NOTE ADDED TO SHEET 1. ALTERNATE MATERIALS ADDED TO NOTE 1. QML STATEMENT REVISED. "INTENDED USE" NOTE REVISED. TABLE 2 REMOVED. NOTE 18 ADDED.

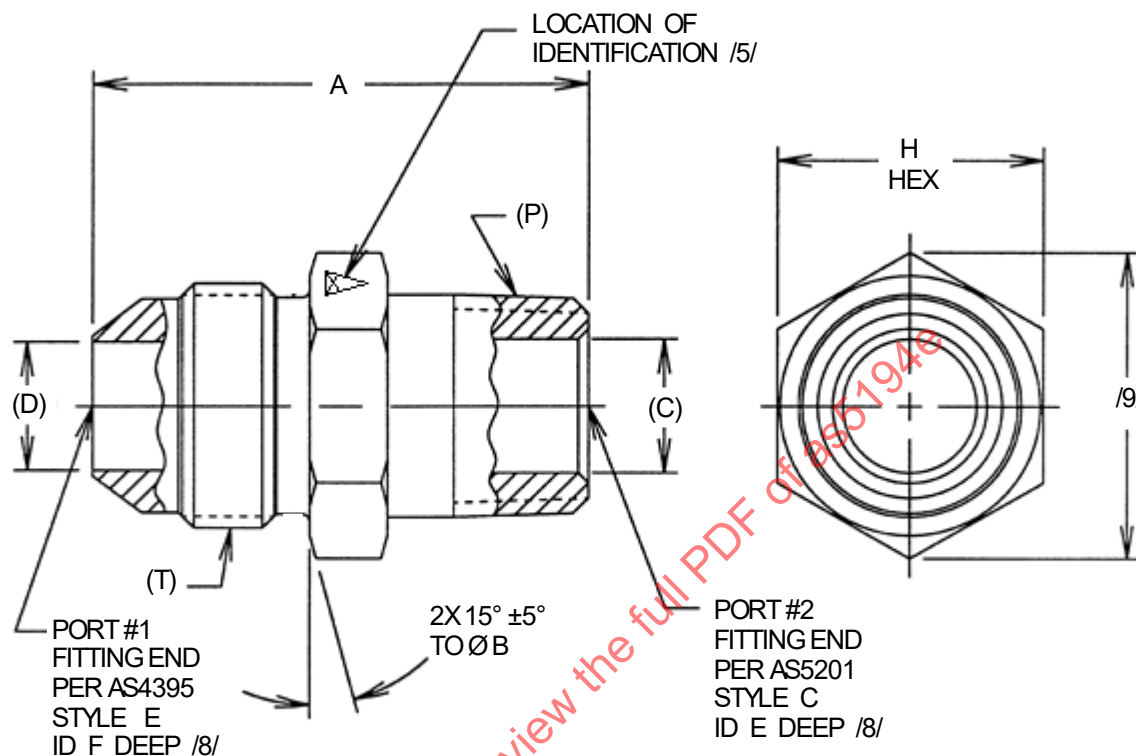
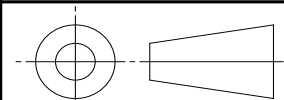


FIGURE 1 - FITTING, ADAPTER

NOT RECOMMENDED IN PART /18/

For more information on this standard, visit
<https://www.sae.org/standards/content/AS5194E>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS4842/1 /4/



AEROSPACE STANDARD

(R) FITTING, ADAPTER, STRAIGHT PIPE TO FLARED

AS5194™
SHEET 1 OF 5

REV.
E

TABLE 1A - DIMENSIONS A THRU D

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	1/4-18	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 E THRU H AND WEIGHTS

BASIC NO. AS5194 /16/ SIZE CODE	E	F	H	LB/EA APPROX REF AL	LB/EA APPROX REF COPPER	LB/EA APPROX REF STEEL
0202	.469	—	.428-.440	.00800	.0243	.0230
0302	.469	—	.428-.440	.00898	.0273	.0258
0402	.469	—	.490-.502	.0111	.0338	.0320
0404	.688	—	.552-.565	.0177	.0538	.0508
0502	—	.625	.552-.565	.0140	.0426	.0402
0504	.688	—	.552-.565	.0185	.0562	.0531
0602	—	.687	.615-.628	.0178	.0543	.0513
0604	.688	—	.615-.628	.0203	.0619	.0585
0606	.688	—	.740-.753	.0272	.0826	.0780
0608	.875	—	.865-.878	.0422	.129	.122
0804	—	.844	.802-.815	.0464	.141	.133
0806	.688	—	.802-.815	.0368	.112	.105
1008	.906	—	.928-.941	.0583	.177	.167
1012	.906	—	1.113-1.128	.0751	.228	.215
1208	—	1.062	1.113-1.128	.0843	.256	.242



AEROSPACE STANDARD

(R) FITTING, ADAPTER, STRAIGHT PIPE TO FLARED

AS5194™
SHEET 2 OF 5

**REV.
E**

TABLE 1C - DIMENSIONS A THRU D

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 E THRU H AND WEIGHTS

BASIC NO. AS5194 /16/ SIZE CODE	E	F	H	LB/EA APPROX REF AL	LB/EA APPROX REF COPPER	LB/EA APPROX REF STEEL
1212	.906	—	1.113-1.128	.0873	.266	.250
1216	1.062	—	1.362-1.380	.130	.393	.371
1612	—	1.031	1.362-1.380	.122	.373	.352
1616	1.125	—	1.362-1.380	.136	.413	.390
2016	—	1.250	1.676-1.693	.213	.648	.612
2020	1.187	—	1.676-1.693	.207	.629	.594
2420	—	1.344	1.988-2.005	.294	.894	.844
2824	—	1.437	2.359-2.385	.454	1.38	1.30
3232	1.437	—	2.609-2.635	.872	2.65	2.50

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:

- DASH AS CODE LETTER - TYPE 4130 ALLOY STEEL BAR PER AMS-S-6758 OR AMS6370 OR TYPE 4140 PER AMS6349 OR AMS6382.
- CODE LETTER B - TYPE 360 COPPER ALLOY BAR PER AMS4610 OR ASTM B16/B16M, HALF HARD OR TYPE 675 PER ASTM B138/B138M.
- CODE LETTER D - TYPE 2024-T6 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR TYPE 2024-T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR AMS4339. /18/
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5639.
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5648.
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER AMS-QQ-S-763 OR AMS5645.
- CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124.

	AEROSPACE STANDARD		AS5194™ SHEET 3 OF 5	REV. E
	(R) FITTING, ADAPTER, STRAIGHT PIPE TO FLARED			

2. HEAT TREATMENT:

- a. DASH AS CODE LETTER - SEE HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTERS D AND W - SEE ELECTRICAL CONDUCTIVITY AND HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- c. OTHER MATERIAL CODE LETTERS - NONE.

3. FINISH:

- a. DASH AS CODE LETTER - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK, AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION.
 - b. MATERIAL CODE LETTER B - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3 OR NONE.
 - c. MATERIAL CODE LETTER D:
 - 1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
 - 2. MATERIAL CODE D PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER "V" PLACED AFTER THE SIZE CODE IN THE PART NUMBER. HIGH PURITY ALUMINUM COAT PER PROCUREMENT SPECIFICATION. /16/
 - d. MATERIAL CODE LETTERS J, K, AND R - PASSIVATE PER AMS2700, TYPE 6 OR 7.
 - e. MATERIAL CODE LETTER W:
 - 1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
 - 2. MATERIAL CODE W PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER "V" PLACED AFTER THE SIZE CODE IN THE PART NUMBER. HIGH PURITY ALUMINUM COAT PER PROCUREMENT SPECIFICATION. /16/
- /4/ PROCUREMENT SPECIFICATION: AS4842/1 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT MANUFACTURED TO THIS STANDARD SHALL MEET THE REQUIREMENTS SPECIFIED HEREIN AND THE PROCUREMENT SPECIFICATION. ORIGINAL COMPONENT MANUFACTURERS (OCM) AND VALUE ADDED DISTRIBUTORS (VAD) SHALL BE LISTED IN THE NADCAP QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT www.eAuditNet.com.
- /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 SPECIFIED IN THE PROCUREMENT SPECIFICATION.
- /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. THIS STANDARD IS THE FUNCTIONAL EQUIVALENT OF AN816 AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.
11. INTERPRETATION OF DRAWING PER AS4296.
12. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M. REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 MICROINCHES Ra. SURFACES OF HEX FLATS MAY BE 250 MICROINCHES Ra.
13. BREAK EDGES .003 TO .015, UNLESS OTHERWISE SPECIFIED.

	AEROSPACE STANDARD		AS5194™ SHEET 4 OF 5	REV. E
	(R) FITTING, ADAPTER, STRAIGHT PIPE TO FLARED			