

RATIONALE

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

AS4408

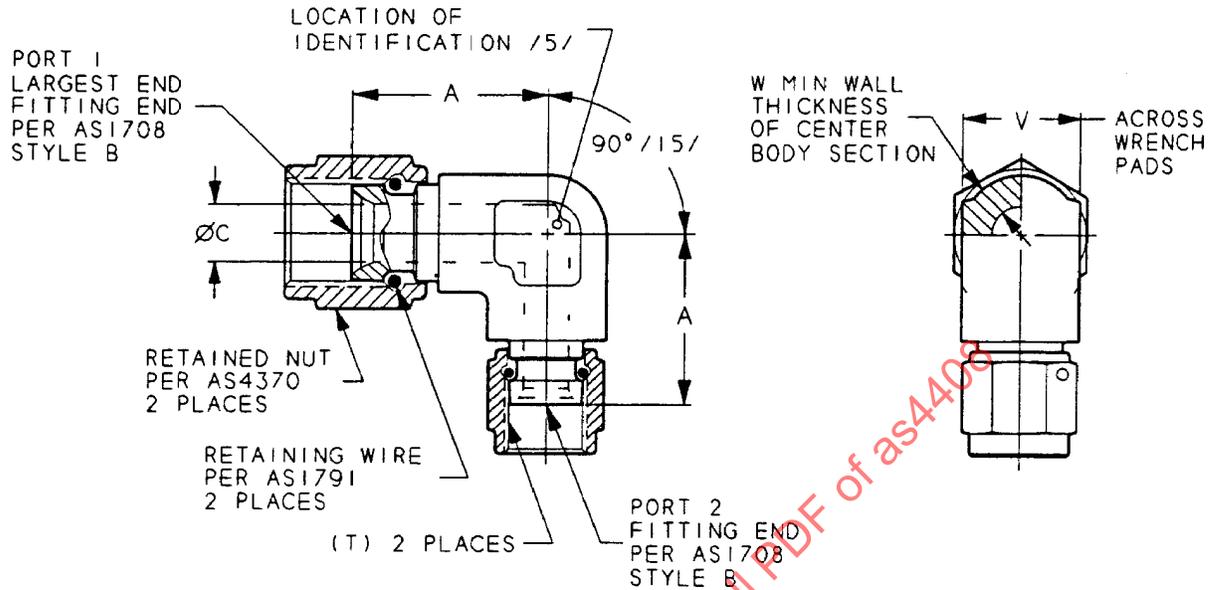


FIGURE 1 - FITTING ASSEMBLY, ELBOW 90°

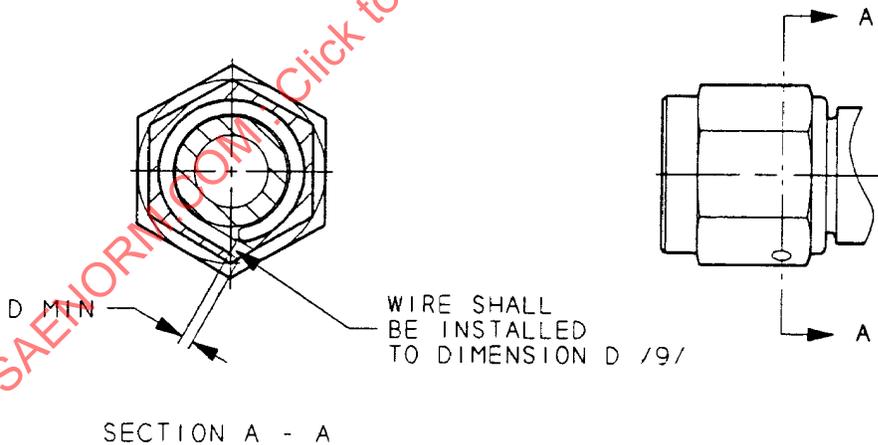
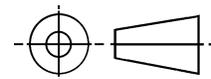


FIGURE 2 - INSTALLATION, RETAINED NUT AND RETAINING WIRE

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ MIL-F-5509

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING ASSEMBLY, ELBOW 90°, REDUCER AND
NONREDUCER, INTERNAL FLARE

AS4408
SHEET 1 OF 4

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AS4408

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4408 /16/ SIZE CODE	(NOMINAL TUBE SIZE)	T THREAD PER MIL-S-8879	C	D	V	W	LB/EA MAX ALUM	LB/EA MAX CRES	LB/EA MAX TI	
02	.125	.3125-24 UNJF	.065	.058	.045	.313	.090	.023	.068	.039
03	.187	.3750-24 UNJF	.128	.121	.045	.375	.100	.031	.088	.051
04	.250	.4375-20 UNJF	.175	.168	.045	.438	.110	.034	.099	.057
05	.312	.5000-20 UNJF	.237	.230	.045	.500	.120	.044	.129	.074
06	.375	.5625-18 UNJF	.301	.293	.045	.563	.120	.058	.167	.096
08	.500	.7500-16 UNJF	.395	.387	.055	.750	.150	.103	.300	.172
10	.625	.8750-14 UNJF	.488	.480	.063	.875	.170	.156	.451	.259
12	.750	1.0625-12 UNJ	.614	.604	.095	1.063	.185	.253	.732	.419
16	1.000	1.3125-12 UNJ	.851	.839	.125	1.313	.205	.388	1.126	.645
20	1.250	1.6250-12 UNJ	1.086	1.073	.155	1.625	.240	.812	2.355	1.349
24	1.500	1.8750-12 UNJ	1.320	1.307	.180	1.875	.250	1.055	3.060	1.753
32	2.000	2.5000-12 UNJ	1.791	1.776	.180	2.563	.350	1.940	5.630	3.225

TABLE 2 - LEG LENGTH A

PORT SIZE	FORG. SIZE /8/ 02	FORG. SIZE /8/ 03	FORG. SIZE /8/ 04	FORG. SIZE /8/ 05	FORG. SIZE /8/ 06	FORG. SIZE /8/ 08	FORG. SIZE /8/ 10	FORG. SIZE /8/ 12	FORG. SIZE /8/ 16	FORG. SIZE /8/ 20	FORG. SIZE /8/ 24	FORG. SIZE /8/ 32
02	.658	.686	.743	.767	.884	.924	1.100	1.157	1.268	1.521	1.521	2.031
03	--	.672	.555	.587	.649	.743	.838	.931	1.056	1.213	1.338	2.015
04	--	--	.602	.633	.695	.789	.883	.976	1.101	1.258	1.383	1.890
05	--	--	--	.675	.737	.831	.925	1.018	1.143	1.300	1.425	1.937
06	--	--	--	--	.821	.915	1.009	1.102	1.227	1.384	1.509	1.968
08	--	--	--	--	--	1.023	1.117	1.210	1.334	1.491	1.616	2.130
10	--	--	--	--	--	--	1.167	1.260	1.383	1.540	1.665	2.098
12	--	--	--	--	--	--	--	1.224	1.348	1.505	1.630	2.098
16	--	--	--	--	--	--	--	--	1.387	1.524	1.649	2.150
20	--	--	--	--	--	--	--	--	--	1.571	1.696	2.243
24	--	--	--	--	--	--	--	--	--	--	1.776	2.286
32	--	--	--	--	--	--	--	--	--	--	--	2.442

NOTES:

/1/ MATERIAL:

- a. NO CODE LETTER:
 (1) BODY: TYPE 4130 STEEL FORGING OR BAR PER AMS 6370 OR MIL-S-6758
 (2) NUT: CODE LETTER NONE OF AS4370 (TYPE 4130 STEEL)
 (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL)
- b. CODE LETTER D:
 (1) BODY: 2014T6 ALUMINUM ALLOY FORGING PER AMS 4133 OR QQ-A-367; OR
 2024T6 ALUMINUM ALLOY BAR PER ANS4112 OR QQ-A-225/6; OR
 2024T851 ALUMINUM ALLOY BAR PER QQ-A-225/6
 (2) NUT: CODE LETTER D OF AS4370 (TYPE 2024 ALUMINUM ALLOY)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)
- c. CODE LETTER J:
 (1) BODY: 30304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5639 OR
 304 CORROSION RESISTANT STEEL PER QQ-S-763
 (2) NUT: CODE LETTER J OF AS4370 (TYPE 304 CORROSION RESISTANT STEEL)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)
- d. CODE LETTER K:
 (1) BODY: 30316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5648 OR
 316 CORROSION RESISTANT STEEL PER QQ-S-763
 (2) NUT: CODE LETTER K OF AS4370 (TYPE 316 CORROSION RESISTANT STEEL)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)

NOTES (CONTINUED):

- e. CODE LETTER S:
 (1) BODY: 30347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5646 OR 347 CORROSION RESISTANT STEEL PER QQ-S-763
 (2) NUT: CODE LETTER S OF AS4370 (TYPE 347 CORROSION RESISTANT STEEL)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)
- f. CODE LETTER T:
 (1) BODY: 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS 4928
 (2) NUT: CODE LETTER T OF AS4370 (TYPE 6AL4V TITANIUM)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)
- g. CODE LETTER W:
 (1) BODY: 7075T73 ALUMINUM ALLOY FORGING PER AMS 4141 OR QQ-A-367; OR 7075T7351 ALUMINUM ALLOY BAR PER AMS 4124; OR 7075T73 ALUMINUM ALLOY BAR PER QQ-A-225/9
 (2) NUT: CODE LETTER W OF AS4370 (TYPE 7075 ALUMINUM ALLOY)
 (3) WIRE: PER AS1791 (TYPE 302 OR 305 CORROSION RESISTANT STEEL)
2. HEAT TREAT PER PROCUREMENT SPECIFICATION.
- 13/ FINISH:
- a. NO CODE LETTER:
 (1) BODY: CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2, DYE BLACK
 (2) NUT: NO CODE LETTER OF AS4370 (CADMIUM PLATE, DYE BLACK)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- b. CODE LETTER D:
 (1) BODY: ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL
 (2) NUT: CODE LETTER D OF AS4370 (ANODIC COATING, DYE BLUE)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- c. CODE LETTER J:
 (1) BODY: PASSIVATE PER QQ-P-35, TYPE VI OR TYPE VII
 (2) NUT: CODE LETTER J OF AS4370 (PASSIVATED)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- d. CODE LETTER K:
 (1) BODY: PASSIVATE PER QQ-P-35, TYPE VI OR TYPE VII
 (2) NUT: CODE LETTER K OF AS4370 (PASSIVATED)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- e. CODE LETTER S:
 (1) BODY: PASSIVATE PER QQ-P-35, TYPE VI OR TYPE VII
 (2) NUT: CODE LETTER S OF AS4370 (PASSIVATED)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- f. CODE LETTER T:
 (1) BODY: FLUORIDE PHOSPHATE CONVERSION COAT PER AMS 2486
 (2) NUT: CODE LETTER T OF AS4370 (FLUORIDE PHOSPHATE CONVERSION COAT)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- g. CODE LETTER W:
 (1) BODY: ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL
 (2) NUT: CODE LETTER W OF AS4370 (ANODIC COATING, DYE BROWN)
 (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)
- h. CODE LETTER U:
 IVD PER MIL-C-83488, CLASS 3, TYPE II WITH A MAXIMUM THICKNESS OF .0005. CHROMATE TREATMENT SHALL BE AFTER GLASS BEAD PEENING AT A MAXIMUM PEEN PRESSURE OF 25 psi, BODY ONLY
- i. CODE LETTER N:
 (1) NUT: CODE LETTER N OF AS4370 (COAT WITH DRY FILM LUBRICANT)
- 14/ PROCUREMENT SPECIFICATION: MIL-F-5509 EXCEPT AS SPECIFIED ON THIS STANDARD. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.
- 15/ IDENTIFICATION : MARK PER AS478-7A3, -15A3, -15B, CLASS C OR CLASS D
- a. FOR SIZES 06 (.375 OD TUBE SIZE) AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTERS "AS", AND MATERIAL CODE LETTER
- b. FOR SIZES 08 (.500 OD TUBE SIZE) AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER, AND MATERIAL CODE LETTER
6. THIS PART IS DESIGNED FOR USE AS SPECIFIED IN THE PROCUREMENT SPECIFICATION FOR REDUCER CONFIGURATION. PRESSURE RATING IS DETERMINED BY THE LARGEST PORT.
7. WHEN MACHINING FROM BAR STOCK OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 1.
- 18/ FORGING SIZE AND PORT 1 IS DETERMINED BY LARGEST PORT SIZE.
- 19/ THE RETAINED NUT SHALL BE FREE TO ROTATE AFTER ASSEMBLY.
- 110/ SAFETYWIRE HOLES PER CODE LETTER L OF AS4370.
11. INTERPRETATION OF DRAWING PER ARP4296.