

REV.
B

SAE AS4409

RATIONALE

FEDERAL SUPPLY CLASS
4730

AS4409B CORRECTS TYPOGRAPHICAL ERROR OF THE ANGLE CALLOUT BETWEEN FITTING LEGS IN AS4409A.

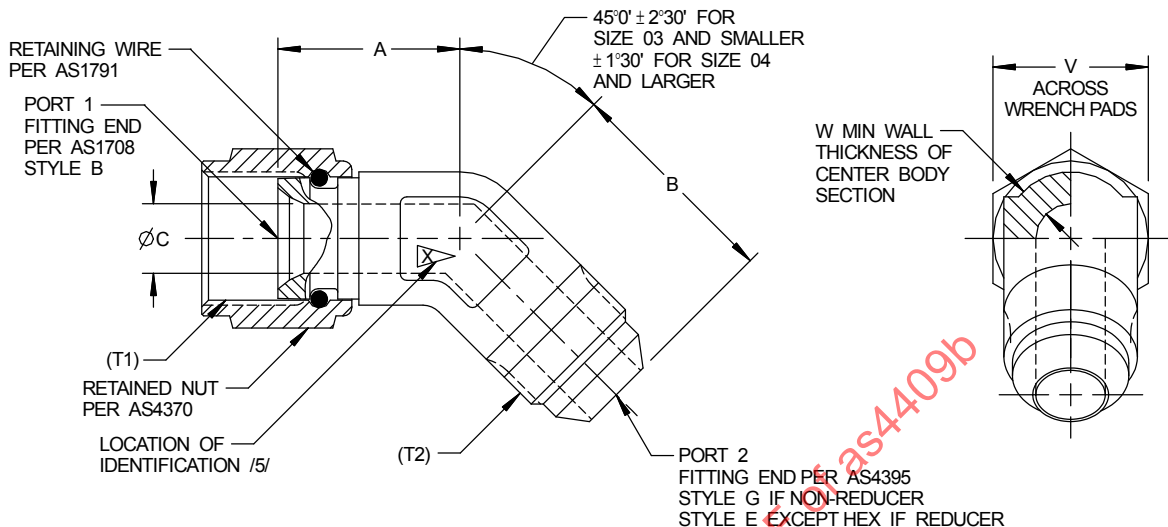


FIGURE 1 - FITTING ASSEMBLY, ELBOW 45°

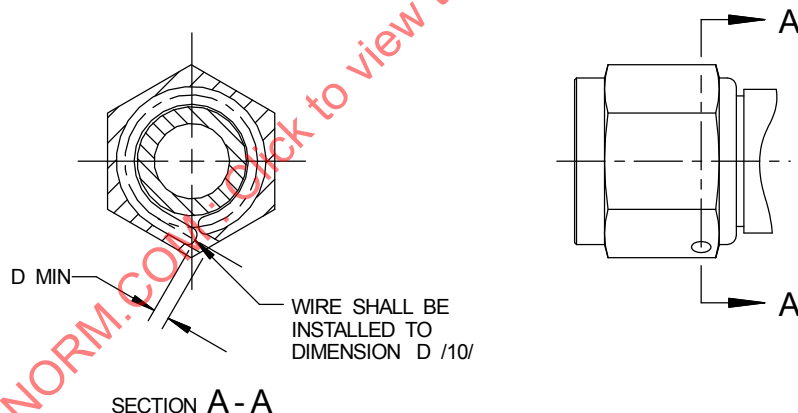
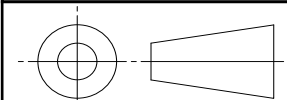


FIGURE 2 - INSTALLATION, RETAINED NUT AND RETAINING WIRE

INACTIVE IN PART /18/

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS4409B>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4841

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING ASSEMBLY, ELBOW 45°, REDUCER AND
NONREDUCER, INTERNAL FLARE TO FLARED TUBE

SAE AS4409
SHEET 1 OF 5

REV.
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TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4409 /17/ SIZE CODE	(NOMINAL TUBE SIZE)	T1, T2 THREAD PER AS8879	C	D	V	W	LB/EA APPROX REF ALUM	LB/EA APPROX REF CRES	LB/EA APPROX REF TI
02	.125	.3125-24 UNJF	.058- .065	.045	.297- .314	.090	.012	.034	.019
03	.188	.3750-24 UNJF	.121- .128	.045	.360- .377	.100	.021	.060	.034
04	.250	.4375-20 UNJF	.168- .175	.045	.423- .440	.110	.025	.072	.041
05	.312	.5000-20 UNJF	.230- .237	.045	.485- .502	.120	.032	.092	.053
06	.375	.5625-18 UNJF	.293- .301	.045	.547- .565	.120	.044	.123	.071
08	.500	.7500-16 UNJF	.387- .395	.055	.735- .753	.150	.077	.224	.140
10	.625	.8750-14 UNJF	.480- .488	.063	.860- .878	.170	.118	.343	.196
12	.750	1.0625-12 UNJ	.604- .614	.095	1.047-1.065	.185	.196	.570	.326
16	1.000	1.3125-12 UNJ	.839- .851	.125	1.292-1.317	.205	.294	.852	.488
20	1.250	1.6250-12 UNJ	1.073-1.086	.155	1.605-1.630	.240	.551	1.600	.916
24	1.500	1.8750-12 UNJ	1.307-1.320	.180	1.855-1.880	.250	.734	2.130	1.220
32	2.000	2.5000-12 UNJ	1.776-1.791	.180	2.542-2.572	.350	.961	2.790	1.598

TABLE 2 - LEG LENGTH A

SIZE OF PORT #1	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	.403	.414	.427	.439	.466	.504	.530	.596	.634	.699	.796	.940
03	--	.416	.430	.442	.469	.507	.533	.572	.637	.702	.799	.943
04	--	--	.438	.450	.477	.515	.541	.580	.645	.710	.807	.951
05	--	--	--	.492	.519	.557	.583	.622	.687	.752	.798	.998
06	--	--	--	--	.603	.641	.667	.706	.771	.836	.888	1.029
08	--	--	--	--	--	.749	.775	.814	.878	.943	.995	1.091
10	--	--	--	--	--	--	.825	.864	.927	.992	1.044	1.139
12	--	--	--	--	--	--	--	.828	.892	.957	1.009	1.139
16	--	--	--	--	--	--	--	--	.911	.976	1.028	1.191
20	--	--	--	--	--	--	--	--	--	1.023	1.075	1.284
24	--	--	--	--	--	--	--	--	--	--	1.155	1.327
32	--	--	--	--	--	--	--	--	--	--	--	1.483

TABLE 3 - LEG LENGTH B

SIZE OF PORT #2	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	.664	.633	.633	.671	.728	.783	.807	.873	1.013	1.091	1.154	1.341
03	--	.664	.655	.702	.759	.814	.838	.904	1.044	1.122	1.185	1.372
04	--	--	.726	.773	.830	.885	.909	.975	1.115	1.193	1.256	1.443
05	--	--	--	.773	.830	.885	.909	.975	1.115	1.193	1.256	1.443
06	--	--	--	--	.836	.891	.915	.981	1.121	1.199	1.262	1.449
08	--	--	--	--	--	.992	1.016	1.082	1.222	1.300	1.363	1.550
10	--	--	--	--	--	--	1.117	1.183	1.323	1.401	1.464	1.651
12	--	--	--	--	--	--	--	1.289	1.429	1.507	1.570	1.757
16	--	--	--	--	--	--	--	--	1.476	1.554	1.617	1.804
20	--	--	--	--	--	--	--	--	--	1.601	1.664	1.851
24	--	--	--	--	--	--	--	--	--	--	1.789	1.976
32	--	--	--	--	--	--	--	--	--	--	--	2.226

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:

A. DASH AS CODE LETTER:

- (1) BODY: TYPE 4130 STEEL FORGING OR BAR PER AMS6370 OR AMS-S-6758.
- (2) NUT: DASH AS CODE LETTER OF AS4370 (TYPE 4130 STEEL).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

B. CODE LETTER D /18/:

- (1) BODY: TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS4133; OR 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.
- (2) NUT: CODE LETTER D OF AS4370 (TYPE 2024 ALUMINUM ALLOY).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

C. CODE LETTER J:

- (1) BODY: TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5639 OR AMS-QQ-S-763.
- (2) NUT: CODE LETTER J OF AS4370 (TYPE 304 CORROSION RESISTANT STEEL).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

D. CODE LETTER K:

- (1) BODY: TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5648 OR AMS-QQ-S-763.
- (2) NUT: CODE LETTER K OF AS4370 (TYPE 316 CORROSION RESISTANT STEEL).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

E. CODE LETTER S:

- (1) BODY: TYPE 347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS5646 OR AMS-QQ-S-763.
- (2) NUT: CODE LETTER S OF AS4370 (TYPE 347 CORROSION RESISTANT STEEL).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

F. CODE LETTER T:

- (1) BODY: TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS4928.
- (2) NUT: CODE LETTER T OF AS4370 (TYPE 6AL-4V TITANIUM ALLOY).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

G. CODE LETTER W:

- (1) BODY: TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141; OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124; OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9.
- (2) NUT: CODE LETTER W OF AS4370 (TYPE 7075 ALUMINUM ALLOY).
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL).

2. HEAT TREATMENT PER PROCUREMENT SPECIFICATION.

 An SAE International Group	AEROSPACE STANDARD FITTING ASSEMBLY, ELBOW 45°, REDUCER AND NONREDUCER, INTERNAL FLARE TO FLARED TUBE	SAE AS4409 SHEET 3 OF 5	REV. B
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3. FINISH:

A. DASH AS MATERIAL CODE LETTER:

- (1) BODY: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK.
- (2) NUT: DASH AS MATERIAL CODE LETTER OF AS4370 (CADMIUM PLATE, DYED BLACK).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

B. MATERIAL CODE LETTER D:

- (1) BODY: ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL.
- (2) NUT: MATERIAL CODE LETTER D OF AS4370 (ANODIC COATING, DYE BLUE).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

C. MATERIAL CODE LETTER J:

- (1) BODY: PASSIVATE PER AMS2700, TYPE 6 OR TYPE 7.
- (2) NUT: MATERIAL CODE LETTER J OF AS4370 (PASSIVATED).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

D. MATERIAL CODE LETTER K:

- (1) BODY: PASSIVATE PER AMS2700, TYPE 6 OR TYPE 7.
- (2) NUT: MATERIAL CODE LETTER K OF AS4370 (PASSIVATED).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

E. MATERIAL CODE LETTER S:

- (1) BODY: PASSIVATE PER AMS2700, TYPE 6 OR TYPE 7.
- (2) NUT: MATERIAL CODE LETTER S OF AS4370 (PASSIVATED).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

F. MATERIAL CODE LETTER T:

- (1) BODY: ANODIZE PER AMS2488 TYPE 2 OR FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486.
- (2) NUT: MATERIAL CODE LETTER T OF AS4370 (FLUORIDE PHOSPHATE CONVERSION COAT).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

G. MATERIAL CODE LETTER W:

- (1) BODY: ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2 DYED BROWN, DUPLEX SEAL.
- (2) NUT: MATERIAL CODE LETTER W OF AS4370 (ANODIC COATING, DYE BROWN).
- (3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

H. SUFFIX CODE LETTER U:

- (1) BODY: HIGH PURITY ALUMINUM COAT PER PROCUREMENT SPECIFICATION.

I. SUFFIX CODE LETTER N:

- (1) NUT: SUFFIX CODE LETTER N OF AS4370 (COAT WITH DRY FILM LUBRICANT).

/4/ PROCUREMENT SPECIFICATION: AS4841 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER LISTED IN THE NATIONAL AEROSPACE AND DEFENSE CONTRACTORS ACCREDITATION PROGRAM (NADCAP) QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT www.eAuditNet.com.

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	FITTING ASSEMBLY, ELBOW 45°, REDUCER AND NONREDUCER, INTERNAL FLARE TO FLARED TUBE		