

REV.
B

AS4138

RATIONALE

THE PRI-QPL NOTE AND CADMIUM WARNING NOTE HAVE BEEN REVISED. UPDATES OR CLARIFICATIONS TO PASSIVATION NOTE AND INTENDED USE NOTE HAVE BEEN ADDED.

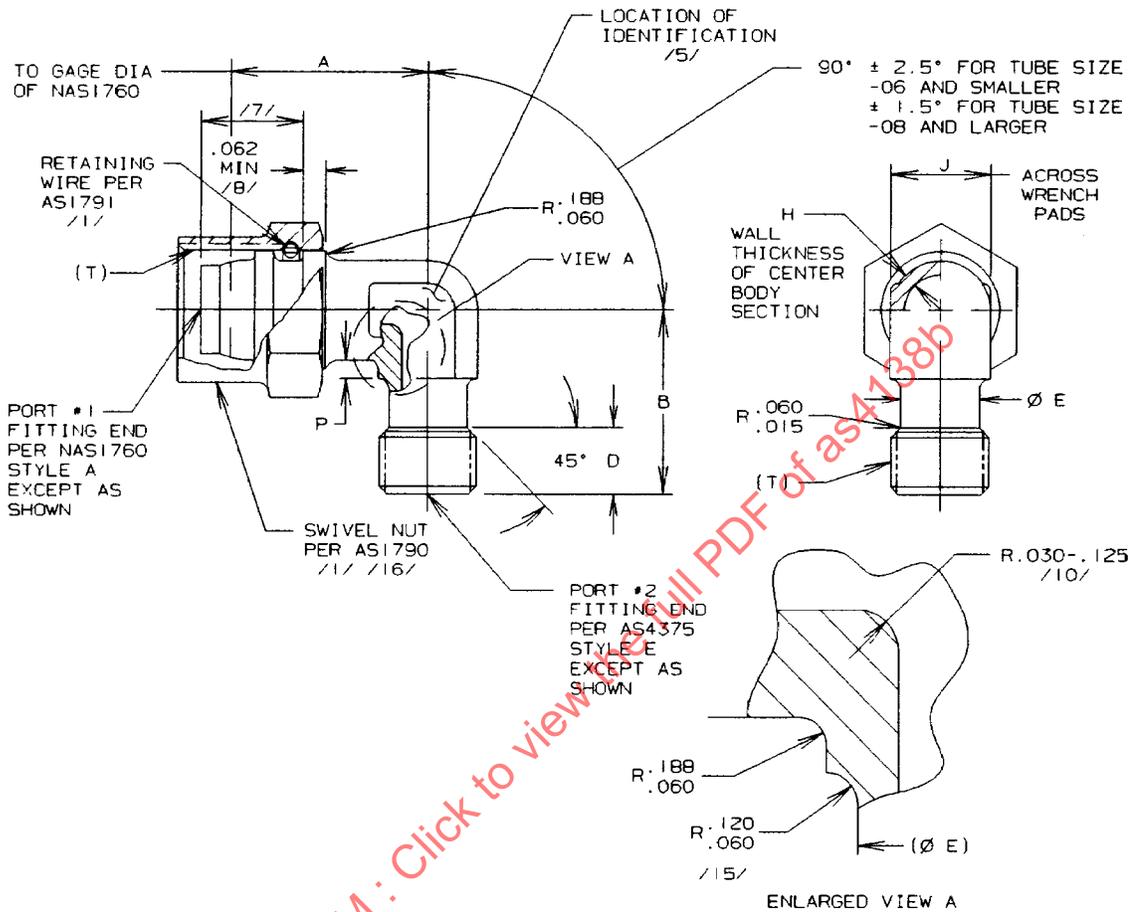
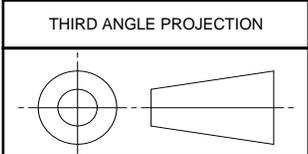


FIGURE 1 - FITTING ASSY, ELBOW, REDUCER, 90°, SWIVEL, REDUCED BODY, FLARELESS

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CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280



AEROSPACE STANDARD
(R) FITTING ASSY, ELBOW, REDUCER,
90 DEGREES, SWIVEL,
REDUCED BODY, FLARELESS

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ISSUED 1992-11 REVISED 2013-10

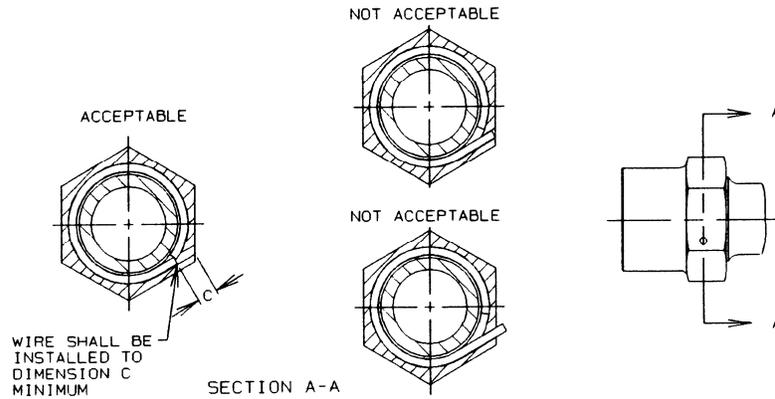


FIGURE 2 - INSTALLATION, SWIVEL NUT RETAINING WIRE

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4138 /21/ SIZE CODE	H MIN	J	P ±.030	LB/EA APPROX REF CRES	LB/EA APPROX REF TI
04	.050	.390	.030	.060	.034
05	.050	.453	.159	.077	.043
06	.050	.453	.137	.091	.051
08	.050	.577	.140	.160	.082
10	.070	.702	.157	.249	.140
12	.080	.890	.166	.390	.219
16	.090	1.140	.174	.588	.330
20	.110	1.390	.071	.949	.533
24	.130	1.640	---	1.372	.770

TABLE 2 - FITTING END

SIZE CODE	TUBE OD	T THREAD PER AS8879	C /16/	D	E
04	.250	.4375-20UNJF	.075	.371	.350
05	.313	.5000-20UNJF	.076	.371	.412
06	.375	.5625-18UNJF	.084	.379	.453
08	.500	.7500-16UNJF	.095	.461	.577
10	.625	.8750-14UNJF	.115	.511	.702
12	.750	1.0625-12UNJ	.149	.556	.890
16	1.000	1.3125-12UNJ	.178	.556	1.140
20	1.250	1.6250-12UNJ	.221	.556	1.390
24	1.500	1.8750-12UNJ	.291	.556	1.640



AEROSPACE STANDARD

(R) FITTING ASSY, ELBOW, REDUCER,
90 DEGREES, SWIVEL,
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TABLE 3 - LEG LENGTH A

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	.745	---	---	---	---	---	---	---	---
05	.790	.842	---	---	---	---	---	---	---
06	.847	.899	.960	---	---	---	---	---	---
08	.932	.984	1.045	1.143	---	---	---	---	---
10	1.026	1.078	1.139	1.237	1.317	---	---	---	---
12	1.088	1.140	1.201	1.299	1.379	1.367	---	---	---
16	1.244	1.296	1.357	1.454	1.533	1.522	1.570	---	---
20	1.401	1.453	1.514	1.611	1.690	1.679	1.727	1.810	---
24	1.526	1.578	1.639	1.736	1.815	1.804	1.852	1.935	2.112

TABLE 4 - LEG LENGTH B

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	.883	---	---	---	---	---	---	---	---
05	.799	.914	---	---	---	---	---	---	---
06	.861	.861	1.003	---	---	---	---	---	---
08	.955	.955	.971	1.204	---	---	---	---	---
10	1.018	1.018	1.034	1.127	1.380	---	---	---	---
12	1.111	1.111	1.127	1.220	1.283	1.560	---	---	---
16	1.267	1.267	1.283	1.376	1.439	1.502	1.684	---	---
20	1.424	1.424	1.440	1.533	1.596	1.659	1.659	1.903	---
24	1.549	1.549	1.565	1.658	1.721	1.784	1.784	1.784	2.028

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. CODE LETTER J:

- (1) BODY: TYPE 304 CORROSION RESISTANT STEEL PER AMS5639
- (2) NUT: CODE LETTER J OF AS1790 (TYPE 304 CORROSION RESISTANT STEEL)
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

b. CODE LETTER T:

- (1) BODY: TYPE 6AL-4V TITANIUM ALLOY PER AMS4928
- (2) NUT: CODE LETTER T OF AS1790 (TYPE 6AL-4V TITANIUM ALLOY)
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

c. CODE LETTER V:

- (1) BODY: TYPE 15-5PH CORROSION RESISTANT STEEL PER AMS5659
- (2) NUT: CODE LETTER V OF AS1790 (TYPE 15-5PH CORROSION RESISTANT STEEL)
- (3) WIRE: PER AS1791 (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

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	(R) FITTING ASSY, ELBOW, REDUCER, 90 DEGREES, SWIVEL, REDUCED BODY, FLARELESS		

2. HEAT TREATMENT:

a. MATERIAL CODE LETTER J:

(1) BODY, NUT AND WIRE: NONE

b. MATERIAL CODE LETTER T:

(1) BODY, NUT AND WIRE: NONE

c. MATERIAL CODE LETTER V:

(1) BODY: HEAT TREAT TO CONDITION H-1075 PER AMS2759/3

(2) NUT: MATERIAL CODE LETTER V OF AS1790 (HEAT TREAT TO CONDITION H-1075)

(3) WIRE: NONE

/3/ FINISH:

a. MATERIAL CODE LETTER J:

(1) BODY: PASSIVATE PER AMS2700 TYPE 2 OR 8 AND COAT WITH DRY FILM LUBRICANT PER AS5272 TYPE 1 /7/

(2) NUT: CODE LETTER J SUFFIX CODE N OF AS1790 (PASSIVATE WITH DRY FILM LUBRICANT ON ID)

(3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)

b. MATERIAL CODE LETTER T:

(1) BODY: FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 AND DRY FILM LUBRICANT PER AS5272 TYPE 1 /7/

(2) NUT: CODE LETTER T WITH SUFFIX CODE N OF AS1790 (FLUORIDE PHOSPHATE CONVERSION COAT AND DRY FILM LUBRICANT ON ID)

(3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT)

c. MATERIAL CODE LETTER V:

(1) BODY:

(a) NO SUFFIX FINISH CODE LETTER: PASSIVATE PER AMS2700 TYPE 6 OR 7 AND DRY FILM LUBRICANT PER AS5272 TYPE 1 /7/

(b) SUFFIX FINISH CODE LETTER P: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2

(2) NUT:

(a) NO SUFFIX FINISH CODE LETTER; CODE LETTER V AND SUFFIX CODE N OF AS1790 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT ON ID)

(b) SUFFIX FINISH CODE LETTER P; CODE LETTER V SUFFIX CODE LETTER P OF AS1790 (CADIUM PLATE)

(3) WIRE: PER AS1791 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT).

/4/ PROCUREMENT SPECIFICATION: AS18280 UNLESS SPECIFIED OTHERWISE ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS18280 FOR THIS STANDARD. SEE www.eAuditNet.com FOR CURRENT QPL ONLINE.

/5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B.

a. FOR SIZES 06 (.375 OD TUBE SIZE) AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTERS "AS", MATERIAL CODE LETTER AND FORGING MANUFACTURER'S IDENTIFICATION WHEN MADE FROM FORGING

b. FOR SIZES 08 (.500 OD TUBE SIZE) AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER, MATERIAL CODE LETTER AND FORGING MANUFACTURER'S IDENTIFICATION WHEN MADE FROM FORGING

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