

REV. C

AS4137

FEDERAL SUPPLY CLASS
4730

RATIONALE

CORRECTED PASSIVATION TYPES FOR 304 CRES BODIES.

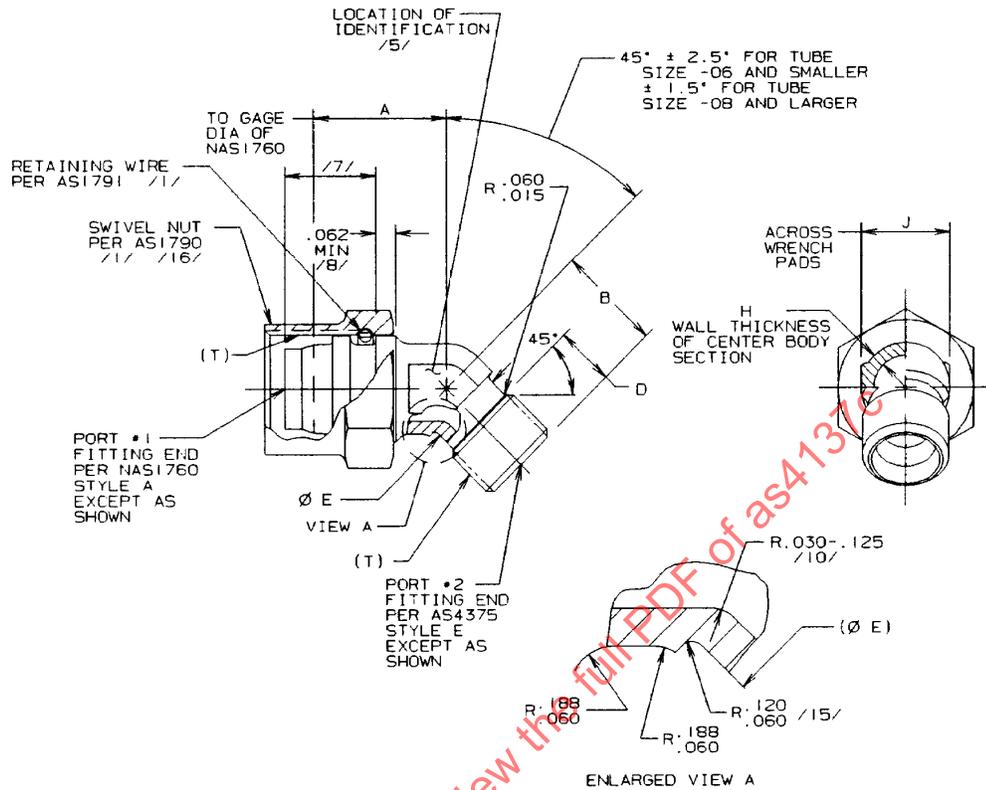


FIGURE 1 - FITTING ASSY, ELBOW, REDUCER, 45°, SWIVEL, REDUCED BODY, FLARELESS

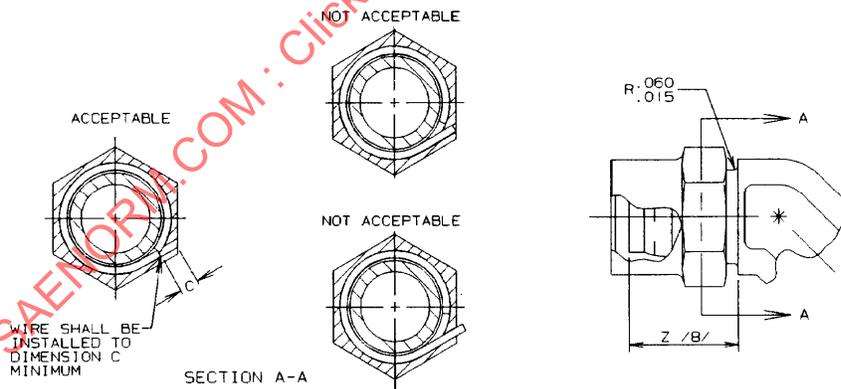
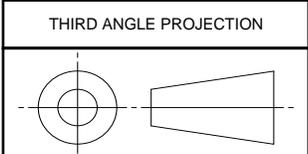


FIGURE 2 - INSTALLATION, SWIVEL NUT RETAINING WIRE

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CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280



AEROSPACE STANDARD
FITTING ASSY, ELBOW, REDUCER,
45°, SWIVEL, REDUCED BODY,
FLARELESS

AS4137
SHEET 1 OF 5

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ISSUED 1992-11 REVISED 2014-07

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4137 /21/ SIZE CODE	H MIN	J	LB/EA APPROX REF CRES	LB/EA APPROX REF TI
04	.050	.390	.050	.028
05	.050	.453	.064	.036
06	.050	.453	.076	.043
08	.050	.577	.134	.075
10	.070	.702	.208	.117
12	.080	.890	.326	.183
16	.090	1.140	.492	.276
20	.110	1.390	.794	.446
24	.130	1.640	1.148	.645

TABLE 2 - FITTING END

SIZE CODE	TUBE OD	T THREAD PER AS8879	C /16/	D	E	Z
04	.250	.4375-20UNJF	.075	.371	.350	.600
05	.313	.5000-20UNJF	.076	.371	.412	.660
06	.375	.5625-18UNJF	.084	.379	.453	.730
08	.500	.7500-16UNJF	.095	.461	.577	.845
10	.625	.8750-14UNJF	.115	.511	.702	.940
12	.750	1.0625-12UNJ	.149	.556	.890	.975
16	1.000	1.3125-12UNJ	.178	.556	1.140	1.160
20	1.250	1.6250-12UNJ	.221	.556	1.390	1.190
24	1.500	1.8750-12UNJ	.291	.556	1.640	---

TABLE 3 - LEG LENGTH A

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	.581	---	---	---	---	---	---	---	---
05	.607	.659	---	---	---	---	---	---	---
06	.629	.681	.742	---	---	---	---	---	---
08	.658	.710	.771	.869	---	---	---	---	---
10	.715	.767	.828	.926	1.006	---	---	---	---
12	.723	.775	.836	.934	1.014	1.002	---	---	---
16	.788	.840	.901	.998	1.077	1.066	1.114	---	---
20	.853	.905	.966	1.063	1.142	1.131	1.179	1.262	---
24	.950	.957	1.018	1.115	1.194	1.183	1.231	1.314	1.491

TABLE 4 - LEG LENGTH B

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	.703	---	---	---	---	---	---	---	---
05	.616	.719	---	---	---	---	---	---	---
06	.643	.659	.770	---	---	---	---	---	---
08	.681	.697	.697	.916	---	---	---	---	---
10	.707	.723	.723	.816	1.026	---	---	---	---
12	.746	.762	.762	.855	.918	1.148	---	---	---
16	.811	.811	.827	.920	.983	1.046	1.213	---	---
20	.876	.876	.892	.985	1.048	1.111	1.111	1.278	---
24	.928	.928	.944	1.037	1.100	1.163	1.163	1.163	1.330

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)

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 6 OR 7 AND COAT WITH DRY FILM LUBRICANT PER AS5272 TYPE I /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 I /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)

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- c. MATERIAL CODE LETTER V:
- (1) BODY:
 - (a) NO SUFFIX FINISH CODE LETTER: PASSIVATE PER AMS2700 TYPE 2 OR 8 AND DRY FILM LUBRICANT PER AS5272 TYPE I
 - (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; MATERIAL CODE LETTER V AND SUFFIX CODE LETTER N OF AS1790 (PASSIVATE AND COAT WITH DRY FILM LUBRICANT ON ID)
 - (b) SUFFIX FINISH CODE LETTER P; MATERIAL CODE LETTER V AND 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
6. THIS PART IS INTENDED FOR USE IN SYSTEMS WITH OPERATING PRESSURES AS FOLLOWS:
- a. SIZES -04 THRU -16 AT 3000 PSI
 - b. SIZES -20 AND -24 AT 1500 PSI
- NOTE: OPERATING PRESSURES HAVE BEEN CHANGED FROM 4000 PSI AND 2000 PSI TO 3000 PSI AND 1500 PSI TO COMPLY WITH AS18280 SYSTEM PRESSURE REQUIREMENTS. USERS OF THIS STANDARD FOR 4000 PSI SYSTEM APPLICATIONS ARE ADVISED TO TO CONTROL SOURCE APPROVAL BY STANDARD PAGE SUPPLEMENT OR SIMILAR MEANS.
- /7/ THIS AREA SHALL BE DRY FILM LUBRICATED ON EXTERNAL SURFACES /3/.
- /8/ THIS DIMENSION APPLIES TO SIZE 06 AND LARGER NONREDUCER SWIVELS. ALL OTHERS, MACHINE "L1" DIAMETER OF NAS1760 TO WITHIN P DIMENSION OF ADJACENT FORGING DIAMETER.
9. WHEN MACHINED FROM BAR OR OVERSIZED FORGING, THE CENTER BODY SECTION SHALL CONFORM TO AS1376, TABLE 2.
- /10/ RADIUS APPLICABLE TO TITANIUM PARTS ONLY.
11. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.
12. THIS PART IS A REDUCED BODY VERSION OF NAS1764.
- /13/ SPECIFY END SIZES IN THIS ORDER: SWIVEL NUT END FIRST – PORT #1, REMAINING END SECOND – PORT #2.
14. LARGEST END DETERMINES FORGING SIZE.
- /15/ APPLICABLE ONLY TO REDUCERS AND SIZE 04 AND 05 NONREDUCERS.
- /16/ ASSEMBLE NUT TO THE BODY OF THE FITTING WITH RETAINING WIRE PER FIGURE 2. NUT SHALL BE FREE TO SWIVEL AFTER ASSEMBLY.
17. INTERPRETATION OF DRAWING PER ARP4296.
18. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M. REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 MICROINCHES Ra.

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