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SAE AS4691

FEDERAL SUPPLY CLASS
4730

RATIONALE

PROCUREMENT SPECIFICATION CHANGED FROM AS4444 TO AS18280 AND PROCUREMENT NOTE UPDATED. WARNING NOTICE FOR CADMIUM PLATING HAS BEEN INSERTED. UPDATES: MIL-S-8879 CLASS B TO AS8879 CLASS 3B. MATERIAL AND FINISH: FINISH SPECIFICATIONS UPDATED.

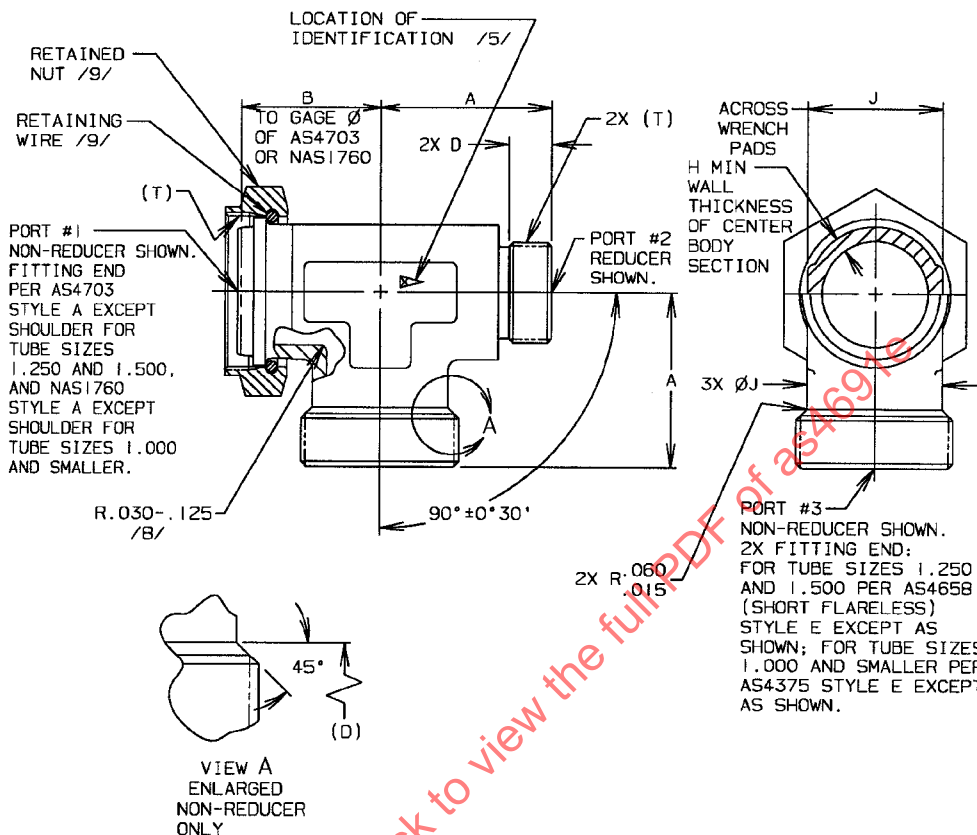


FIGURE 1 - TEE ASSEMBLY

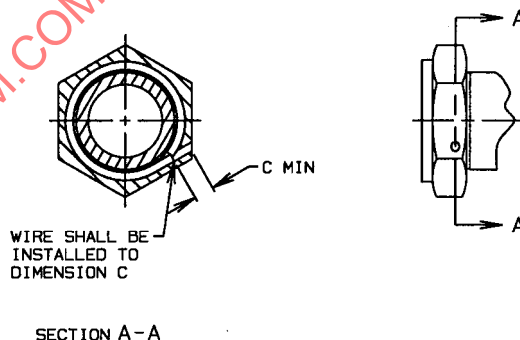
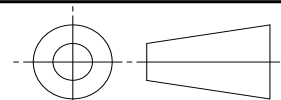


FIGURE 2 - INSTALLATION, RETAINED NUT AND RETAINING WIRE

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS4691E>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

SAE Aerospace
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AEROSPACE STANDARD
FITTING ASSEMBLY, TEE, FLARELESS AND SHORT
FLARELESS, REDUCER, RETAINED NUT ON RUN

SAE AS4691
SHEET 1 OF 6

REV.
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TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4691 /10/ /18/ SIZE CODE	D	H	J +.005/- .020	LB/EA APPROX REF ALUM	LB/EA APPROX REF CRES	LB/EA APPROX REF TI
20	.517	.124	1.375	.395	1.146	.666
24	.614	.156	1.688	.570	1.651	.954

TABLE 2 - WIRE INSERTION DEPTH

PORT SIZE	(NOMINAL TUBE SIZE)	C
04	.250	.076
05	.312	.076
06	.375	.084
08	.500	.095
10	.625	.114
12	.750	.150
16	1.000	.176
20	1.250	.247
24	1.500	.287

TABLE 3 - LEG LENGTH A

SIZE OF PORT #2 & #3	FORGING SIZE /10/ 20	FORGING SIZE /10/ 24
04	1.424	1.549
05	1.424	1.549
06	1.440	1.565
08	1.533	1.658
10	1.596	1.721
12	1.659	1.784
16	1.659	1.784
20	1.678	1.577
24	---	1.803

TABLE 4 - LEG LENGTH B

SIZE OF PORT #1	FORGING SIZE /10/ 20	FORGING SIZE /10/ 24
04	1.401	1.526
05	1.453	1.578
06	1.514	1.639
08	1.611	1.736
10	1.690	1.815
12	1.679	1.850
16	1.727	1.852
20	1.603	1.728
24	---	1.756

TABLE 5 - TUBE SIZE AND CORRESPONDING THREADS

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS 3B
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-18 UNJF
08	.500	.7500-16 UNJF
10	.625	.8750-14 UNJF
12	.750	1.0625-12 UNJ
16	1.000	1.3125-12 UNJ
20	1.250	1.5625-12 UNJ
24	1.500	1.8125-12 UNJ

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 T:

- (1) BODY: TYPE 6AL-4V TITANIUM ALLOY PER AMS4928
- (2) NUT: CODE LETTER T OF AS4702 OR AS1790 REFERENCE (TYPE 6AL-4V TITANIUM ALLOY)
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

b. CODE LETTER V:

- (1) BODY: TYPE 15-5PH CORROSION RESISTANT STEEL PER AMS5659
- (2) NUT: CODE LETTER V OF AS4702 OR AS1790 REFERENCE (TYPE 15-5PH CORROSION RESISTANT STEEL)
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

c. CODE LETTER W:

- (1) BODY: TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124
- (2) NUT: CODE LETTER W OF AS4702 OR AS1790 REFERENCE (TYPE 7075-T73 ALUMINUM ALLOY)
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (CLASS 302 OR 305 CORROSION RESISTANT STEEL)

2. HEAT TREAT

a. MATERIAL CODE LETTER T:

- (1) BODY, NUT, AND WIRE: NONE

b. MATERIAL CODE LETTER V:

- (1) BODY: HEAT TREAT TO CONDITION H-1075 PER AMS2759/3
- (2) NUT: MATERIAL CODE LETTER V OF AS4702 OR AS1790 REFERENCE (HEAT TREAT TO CONDITION H-1075)
- (3) WIRE: NONE

c. MATERIAL CODE LETTER W:

- (1) BODY, NUT, AND WIRE: NONE

/3/ FINISH:

a. MATERIAL CODE LETTER T:

- (1) BODY: FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486
- (2) NUT: CODE LETTER T OF AS4702 OR AS1790 WITH SUFFIX N REFERENCE (FLUORIDE PHOSPHATE CONVERSION COAT AND COAT WITH SOLID FILM LUBRICANT ON ID)
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (PASSIVATE AND COAT WITH SOLID FILM LUBRICANT)

b. MATERIAL CODE LETTER V:

- (1) BODY:
 - (a) V CODE PARTS TO BE PASSIVATED ONLY WILL HAVE NO FINISH CODE LETTER AFTER THE PART NUMBER. THE FINISH WILL BE: PASSIVATE PER AMS2700 PER PROCUREMENT SPECIFICATION.
 - (b) V CODE PARTS TO BE CADMIUM PLATED ONLY WILL HAVE THE FINISH CODE LETTER "P" AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2
- (2) NUT: CODE LETTER V OF AS4702 OR AS1790 REFERENCE
 - (a) NO FINISH CODE LETTER AT END OF PART NUMBER: PASSIVATE AND COAT WITH SOLID FILM LUBRICANT ON ID
 - (b) FINISH CODE LETTER P AT END OF PART NUMBER: CADMIUM PLATE
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (PASSIVATE AND COAT WITH SOLID FILM LUBRICANT)

c. MATERIAL CODE LETTER W:

- (1) BODY: ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2 DYED BROWN, SIMILAR TO COLOR 10080 OF FED-STD-595
- (2) NUT: CODE LETTER W OF AS4702 OR AS1790 WITH SUFFIX N REFERENCE (ANODIZE DYED BROWN AND COAT WITH SOLID FILM LUBRICANT)
- (3) WIRE: PER AS4701 OR AS1791 REFERENCE (PASSIVATE AND COAT WITH SOLID FILM LUBRICANT)

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