

REV.
C

AS4691

FEDERAL SUPPLY CLASS
4730

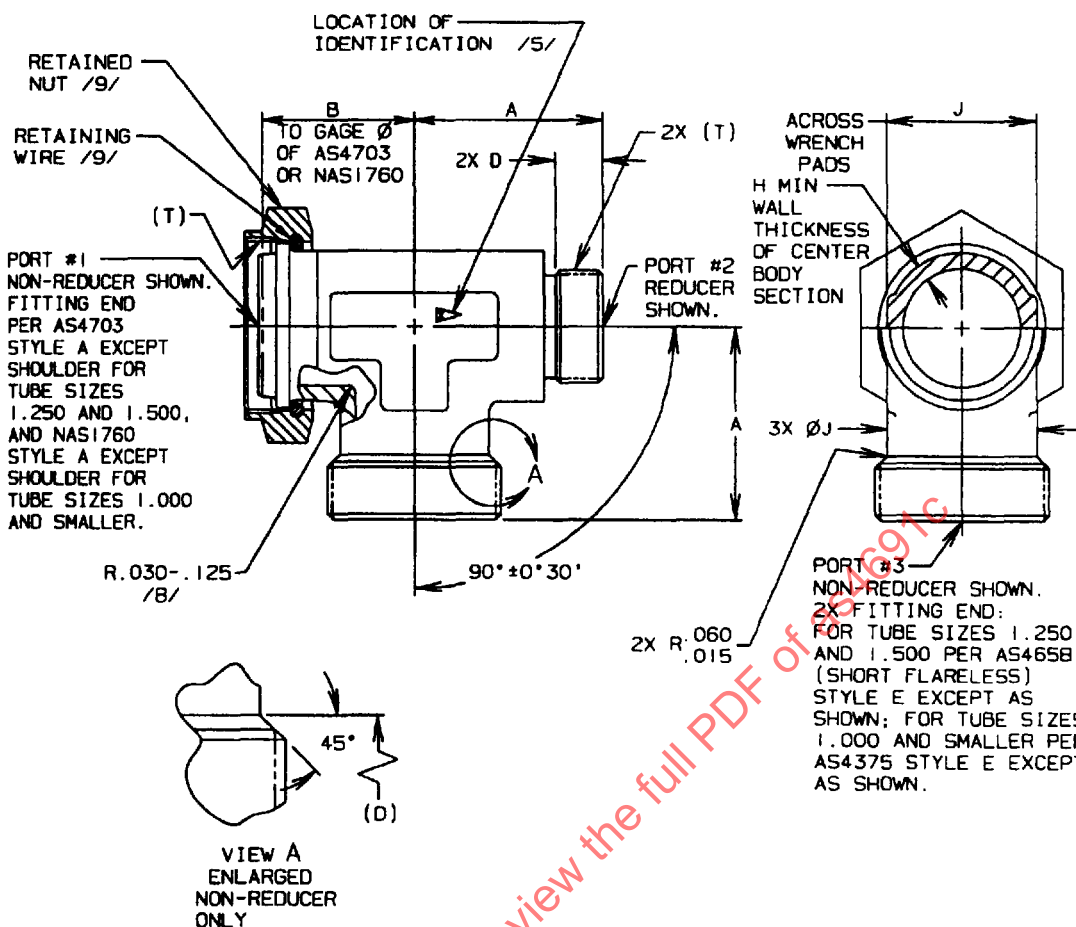
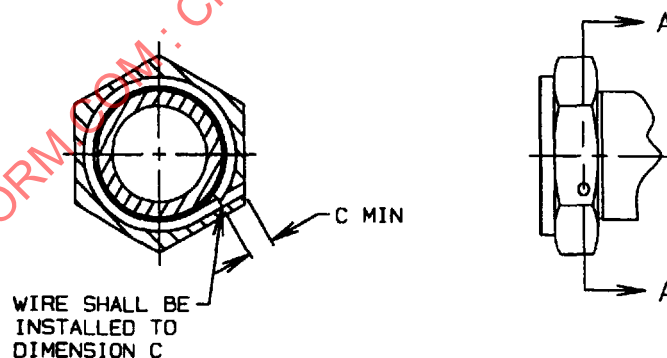


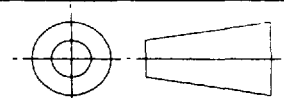
FIGURE 1 - TEE ASSEMBLY



SECTION A-A

FIGURE 2 - INSTALLATION, RETAINED NUT AND RETAINING WIRE

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4444

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space
INTERNATIONAL

400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

FITTING ASSEMBLY, TEE, FLARELESS AND SHORT
FLARELESS, REDUCER, RETAINED NUT ON RUN

AS4691

SHEET 1 OF 4

REV.

C

Copyright 1997 by Society of Automotive Engineers, Inc.
All rights reserved.

QUESTIONS REGARDING THIS DOCUMENT:
TO PLACE A DOCUMENT ORDER:

(412) 772-8510
(412) 776-4970

FAX (412) 776-0040
Distributed under license from the IHS Archive
FAX (412) 776-0790

Printed in the U.S.A.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

ISSUED 1992-07 REVISED 1997-03

REV.
C

AS4691

TABLE 1 - DIMENSIONS AND WEIGHTS

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

(R) 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

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

AS4691
SHEET 2 OF 4

REV.
C

REV.
C

AS4691

(R) TABLE 5 - TUBE SIZE AND CORRESPONDING THREADS

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER MIL-S-8879 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	.875	1.3125-12 UNJ
20	1.000	1.5625-12 UNJ
24	1.500	1.8125-12 UNJ

NOTES:

/1/ MATERIAL:

a. CODE LETTER T:

- (1) BODY: TYPE 6AL-4V TITANIUM ALLOY PER AMS 4928
- (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 AMS 5659
- (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 AMS 4141 OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124
- (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 AMS 2759/3
- (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 AMS 2486
- (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 QQ-P-35, TYPE II OR VIII.
 - (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 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)