

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 revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

REV.
A

AS6159

FEDERAL SUPPLY CLASS
4730

RATIONALE

ADDED STANDARD CONFIGURATION 242424.

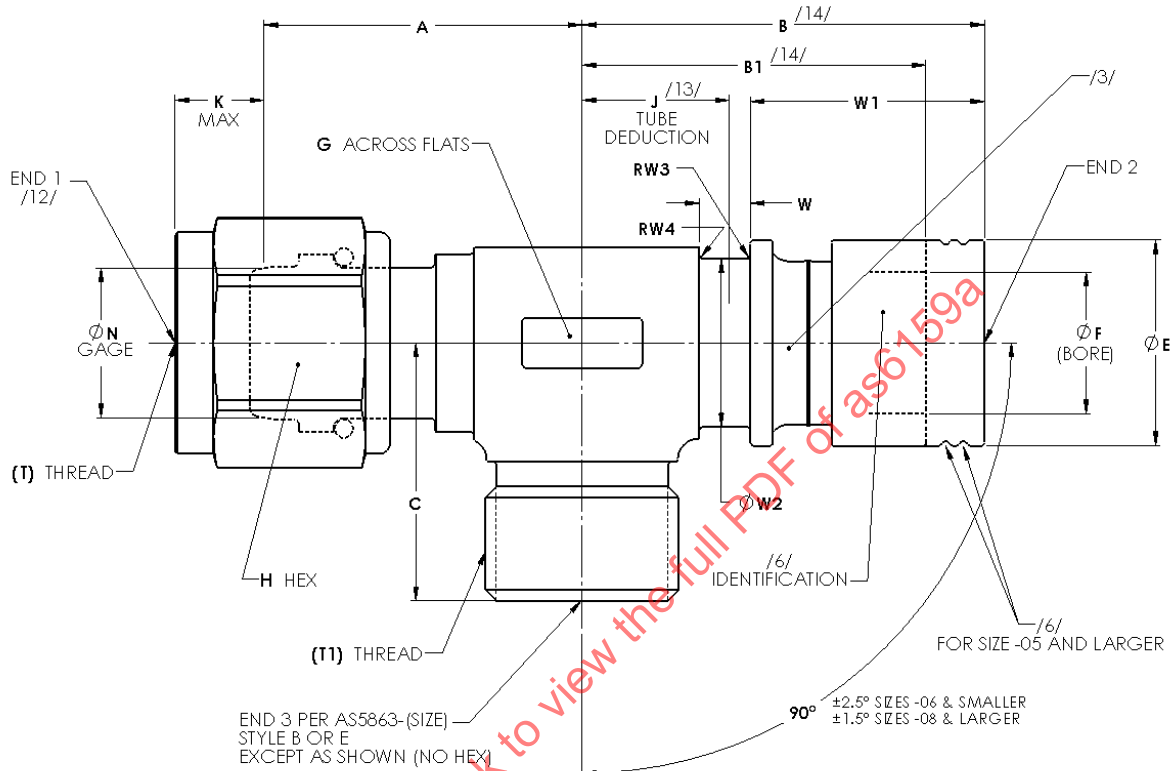
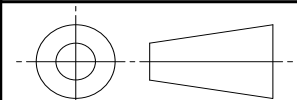


FIGURE 1 - TEE, AXIALLY SWAGED TO FEMALE FLARELESS ON THE RUN,
MALE FLARELESS ON THE SIDE

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS6159A>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS6116



AEROSPACE STANDARD

FITTING ASSEMBLY, TEE, AXIALLY SWAGED TO
FEMALE FLARELESS ON THE RUN, MALE FLARELESS
ON THE SIDE, HYDRAULIC, UP TO 1500 PSI

AS6159
SHEET 1 OF 4

REV.
A

Copyright 2015 SAE International
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Fax: 724-776-0790

Tel: +1 724-776-4970 (outside USA)
Email: CustomerService@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

ISSUED 2011-07 REVISED 2015-06

TABLE 1A - DIMENSIONS A THROUGH F

BASIC NO. AS6159 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	A ±.015	B MAX	B1 MAX	C ±.015	ØE MAX	ØF MIN
040404	.250	.250	.250	.874	1.112	.959	.767	.435	.253
050505	.3125	.3125	.3125	.949	1.258	1.110	.786	.503	.3155
060606	.375	.375	.375	1.047	1.464	1.237	.846	.580	.378
080808	.500	.500	.500	1.230	1.765	1.505	1.032	.755	.503
101010	.625	.625	.625	1.434	1.843	1.603	1.158	.929	.629
121212	.750	.750	.750	1.598	2.103	1.823	1.346	1.150	.754
121612	.750	1.000	.750	1.760	2.618	2.238	1.449	1.474	1.004
161616	1.000	1.000	1.000	1.864	2.618	2.238	1.505	1.474	1.004
202020	1.250	1.250	1.250	2.093	3.069	2.654	1.627	1.768	1.255
242424	1.500	1.500	1.500	2.437	3.600	3.105	1.747	2.070	1.505

TABLE 1B - DIMENSIONS G THROUGH J

BASIC NO. AS6159 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	G ±.015	(H)	J /13/ TUBE DEDUCTION
040404	.250	.250	.250	.438	.562	.419 +.150/- .180
050505	.3125	.3125	.3125	.465	.625	.435 +.150/- .180
060606	.375	.375	.375	.563	.688	.492 +.150/- .195
080808	.500	.500	.500	.750	.875	.590 +.150/- .210
101010	.625	.625	.625	.875	1.000	.663 +.150/- .200
121212	.750	.750	.750	1.063	1.250	.783 +.150/- .245
121612	.750	1.000	.750	1.304	1.250	.928 +.150/- .330
161616	1.000	1.000	1.000	1.304	1.500	.928 +.150/- .330
202020	1.250	1.250	1.250	1.618	1.812	1.104 +.150/- .375
242424	1.500	1.500	1.500	1.806	2.125	1.275 +.150/- .425

TABLE 1C - DIMENSIONS K THROUGH T1

BASIC NO. AS6159 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	K MAX	ØN GAGE	(T) THREAD PER AS8879	(T1) THREAD PER AS8879
040404	.250	.250	.250	.248	.2930	.4375-20 UNJF-3B	.4375-20 UNJF-3A
050505	.3125	.3125	.3125	.331	.3500	.5000-20 UNJF-3B	.5000-20 UNJF-3A
060606	.375	.375	.375	.302	.4120	.5625-18 UNJF-3B	.5625-18 UNJF-3A
080808	.500	.500	.500	.316	.5600	.7500-16 UNJF-3B	.7500-16 UNJF-3A
101010	.625	.625	.625	.424	.6730	.8750-14 UNJF-3B	.8750-14 UNJF-3A
121212	.750	.750	.750	.388	.8100	1.0625-12 UNJ-3B	1.0625-12 UNJ-3A
121612	.750	1.000	.750	.388	.8100	1.0625-12 UNJ-3B	1.0625-12 UNJ-3A
161616	1.000	1.000	1.000	.454	1.0620	1.3125-12 UNJ-3B	1.3125-12 UNJ-3A
202020	1.250	1.250	1.250	.465	1.3160	1.6250-12 UNJ-3B	1.6250-12 UNJ-3A
242424	1.500	1.500	1.500	.460	1.5650	1.8750-12 UNJ-3B	1.8750-12 UNJ-3A

TABLE 1D - DIMENSIONS W THROUGH W4 AND WEIGHTS

BASIC NO. AS6159 /16/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	NOMINAL TUBE SIZE END 3	W MIN	W1 MAX	ØW2 ±.002	W3 MAX	W4 MAX	WEIGHT APPROX LB/EA
040404	.250	.250	.250	.185	.604	.320	.020	.020	.030
050505	.3125	.3125	.3125	.180	.724	.371	.020	.020	.040
060606	.375	.375	.375	.195	.883	.463	.020	.020	.050
080808	.500	.500	.500	.210	1.076	.595	.020	.020	.095
101010	.625	.625	.625	.225	1.076	.758	.020	.020	.140
121212	.750	.750	.750	.235	1.201	.903	.025	.025	.235
121612	.750	1.000	.750	.260	1.566	1.196	.035	.035	.340
161616	1.000	1.000	1.000	.260	1.566	1.196	.035	.035	.375
202020	1.250	1.250	1.250	.285	1.829	1.460	.035	.035	.615
242424	1.500	1.500	1.500	.310	2.178	1.704	.035	.035	.850



AEROSPACE STANDARD

FITTING ASSEMBLY, TEE, AXIALLY SWAGED TO
FEMALE FLARELESS ON THE RUN, MALE FLARELESS
ON THE SIDE, HYDRAULIC, UP TO 1500 PSI

AS6159
SHEET 2 OF 4

REV.
A

NOTES:

/1/ MATERIALS:

CODE LETTER "D"

BODY - TYPE 6061-T6 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/8.

RING - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9.

NUT - TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9.

WIRE - TYPE 302 OR 305, CONDITION A CORROSION RESISTANT STEEL WIRE PER ASTM A580 (SIZES -.04 AND .05).

- TYPE 2024-T4 OR 2024-T351 ALUMINUM ALLOY WIRE PER AMS-QQ-A-225/6 (SIZES -.06 AND LARGER).

2. FINISH:

BODY - CHEMICAL CONVERSION COATED PER MIL-DTL-5541 TYPE I CLASS 3.

RING - ANODIZE PER MIL-A-8625, TYPE II, CLASS 2, DYED GREEN, SIMILAR TO NO. 14187, 14193, OR 14223 OF FED-STD-595 AND SHALL BE DUPLEX SEALED.

NUT - ANODIZED PER MIL-A-8625 TYPE II, CLASS 2, DYED BROWN SIMILAR TO NO. 10080, OF FED-STD-595 AND SHALL BE DUPLEX SEALED.

WIRE - PASSIVATED PER AMS2700. (SIZES -.04 AND -.05)

- ANODIZED PER MIL-A-8625 TYPE II, CLASS 2 (YELLOW) WITH DUPLEX SEAL (SIZES -.06 AND LARGER).

/3/ COATINGS/LUBRICANTS:

BODY

- a. DRY FILM LUBRICANT PER AS5272 TYPE I SHALL BE APPLIED TO THE OD OF THE AXIALLY SWAGED FITTING END. ADDITIONAL LUBRICANT APPLIED SHALL BE SPECIFIED BY MANUFACTURER. THE LUBRICANTS SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.
- b. POLYTETRAFLUOROETHYLENE (PTFE) COAT, LIGHT GREEN, SHALL BE APPLIED TO PORTIONS OF ID (BORE) UP TO THE FIRST GROOVE. OVERSPRAY IN GROOVE IS NOT PERMITTED.
- c. A MINIMUM OF TWO GROOVES (END SIZE -.05 AND LARGER) SHALL BE FILLED WITH ELASTOMERIC DIMETHYL SILOXANE COMPOUND. FOR SMALLER SIZE ENDS, A MINIMUM OF ONE GROOVE SHALL BE FILLED WITH THE COMPOUND.

WIRE - SOLID FILM LUBRICANT PER AS5272, TYPE I.

/4/ PROCUREMENT SPECIFICATION: AS6116 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS6116 FOR THIS STANDARD. SEE www.eAuditNet.com FOR THE CURRENT QPL ON-LINE.

5. DIMENSIONS AND TOLERANCES NOT DEFINED ON THIS STANDARD SHALL BE SPECIFIED AND CONTROLLED BY THE MANUFACTURER. THE MANUFACTURER IS RESPONSIBLE TO ENSURE COMPLIANCE WITH THE PROCUREMENT SPECIFICATION.

/6/ IDENTIFICATION SHALL BE IN ACCORDANCE WITH AS6116 AND SHALL BE IDENTIFIED ON THE RING IN THE AREA SHOWN. FOR SIZE -.05 AND LARGER, THE RING OD SHALL HAVE TWO GROOVES INDICATING DUAL SEALING BACK UP FEATURE.

7. FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH AS6124.

8. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M. REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, THE MAXIMUM MACHINED SURFACES SHALL BE 125 MICROINCHES Ra.

9. BREAK ALL EDGES .003 TO .010 INCHES UNLESS OTHERWISE SPECIFIED.

10. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.

11. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS $\pm .015$, ANGULAR DIMENSIONS $\pm 0^{\circ}30'$.

	AEROSPACE STANDARD	AS6159 SHEET 3 OF 4	REV. A
	FITTING ASSEMBLY, TEE, AXIALLY SWAGED TO FEMALE FLARELESS ON THE RUN, MALE FLARELESS ON THE SIDE, HYDRAULIC, UP TO 1500 PSI		