

REV.
A

AS5803™

FEDERAL SUPPLY CLASS
4730

RATIONALE

ADDED SIZE CODE 2016. REVISED NOTE 14 FOR DEFINITION CORRECTION OF DIMENSION "A1" (FITTING BODY LENGTH). ADDED SUFFIX CODE "B" FOR FITTING ASSEMBLIES WITH BLUE ANODIZED RINGS AND NOTE 16 AS AN OPTION FOR FUTURE REPLACEMENT OF "NO CODE" BLUE COATING OR PAINT. CORRECTED "K" FOR 1008, 1010, 1012, 1612, 1616, AND 1620. UPDATED FIGURE AND WEIGHTS. REVISED NOTES 1, 3, 7, AND 15. ADDED NOTES 13 AND 17 AND AS6449 AS A NEW LUBRICANT TYPE.

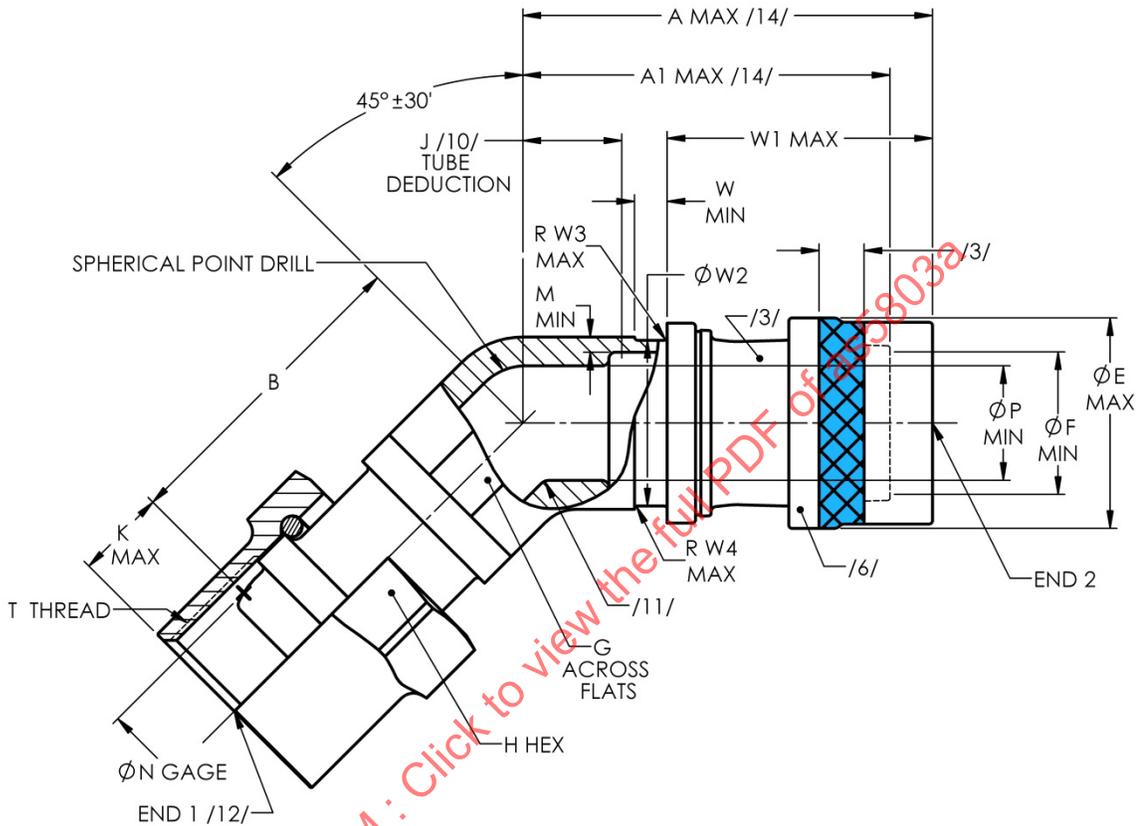
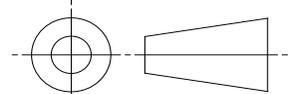


FIGURE 1 - ELBOW, 45°, FEMALE FLARELESS, AXIALLY SWAGED

(SEE TABLES 1A AND 1B FOR DIMENSIONS AND WEIGHTS)

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS5803A>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS5958 /4/



AEROSPACE STANDARD

(R) FITTING ASSEMBLY, ELBOW, 45°, FEMALE FLARELESS, AXIALLY SWAGED, HYDRAULIC, 3,000 PSI

AS5803™
SHEET 1 OF 4

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

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 2008-06 REAFFIRMED 2015-04 REVISED 2015-12

TABLE 1A - DIMENSIONS A THROUGH K

BASIC NO. AS5803 /15/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	A MAX.	A1 MAX.	B ±.015	E MAX.	F MIN.	G	(H)	J /10/ TUBE DEDUCT	K MAX.
0404	.2500	.2500	.934	.847	.898	.466	.253	.348 - .380	.563	.352 ±.150	.325
0604	.3750	.2500	1.013	.926	1.055	.466	.253	.477 - .509	.688	.431 ±.150	.337
0406	.2500	.3750	1.230	1.114	.977	.609	.378	.477 - .509	.563	.431 ±.150	.325
0606	.3750	.3750	1.230	1.114	1.055	.609	.378	.477 - .509	.688	.431 ±.150	.337
0806	.5000	.3750	1.269	1.153	1.208	.609	.378	.615 - .647	.875	.470 ±.150	.380
0608	.3750	.5000	1.477	1.331	1.097	.783	.504	.615 - .647	.688	.478 ±.175	.337
0808	.5000	.5000	1.477	1.331	1.208	.783	.504	.615 - .647	.875	.478 ±.175	.380
1008	.6250	.5000	1.556	1.410	1.412	.783	.504	.751 - .783	1.000	.557 ±.175	.418
0810	.5000	.6250	1.850	1.646	1.287	.939	.629	.751 - .783	.875	.557 ±.175	.380
1010	.6250	.6250	1.850	1.646	1.412	.939	.629	.751 - .783	1.000	.557 ±.175	.418
1210	.7500	.6250	1.929	1.725	1.538	.939	.629	.893 - .925	1.250	.636 ±.175	.433
1012	.6250	.7500	2.080	1.875	1.491	1.122	.754	.893 - .925	1.000	.643 ±.175	.418
1212	.7500	.7500	2.080	1.875	1.538	1.122	.754	.893 - .925	1.250	.643 ±.175	.433
1612	1.0000	.7500	2.198	1.993	1.766	1.122	.754	1.181 -1.213	1.500	.761 ±.175	.447
1216	.7500	1.0000	2.496	2.282	1.656	1.495	1.004	1.181 -1.213	1.250	.768 ±.200	.433
1616	1.0000	1.0000	2.496	2.282	1.766	1.495	1.004	1.181 -1.213	1.500	.768 ±.200	.447
2016	1.2500	1.0000	2.673	2.459	2.036	1.495	1.004	1.609 -1.641	2.000	.945 ±.200	.460
1620	1.0000	1.2500	2.965	2.741	1.943	1.758	1.255	1.609 -1.641	1.500	.954 ±.200	.447
2020	1.2500	1.2500	2.965	2.741	2.036	1.758	1.255	1.609 -1.641	2.000	.954 ±.200	.460

TABLE 1B - DIMENSIONS M THROUGH W4 AND WEIGHTS

BASIC NO. AS5803 /15/ SIZE CODE	NOMINAL TUBE SIZE END 1	NOMINAL TUBE SIZE END 2	M MIN.	N GAGE	P MIN.	T THREAD PER AS8879	W MIN.	W1 MAX.	W2 ±.0015	W3 MAX.	W4 MAX.	WEIGHT LB/EA APPROX. REF.
0404	.2500	.2500	.043	.2930	.198	.4375-20 UNJF-3B	.123	.488	.3005	.018	.065	.032
0604	.3750	.2500	.045	.4160	.198	.5625-18 UNJF-3B	.123	.488	.3005	.018	.065	.049
0406	.2500	.3750	.045	.2930	.302	.4375-20 UNJF-3B	.153	.675	.4475	.033	.065	.050
0606	.3750	.3750	.045	.4160	.302	.5625-18 UNJF-3B	.153	.675	.4475	.033	.065	.056
0806	.5000	.3750	.052	.5600	.302	.7500-16 UNJF-3B	.153	.675	.4475	.033	.065	.096
0608	.3750	.5000	.052	.4160	.401	.5625-18 UNJF-3B	.165	.871	.5945	.033	.129	.085
0808	.5000	.5000	.052	.5600	.401	.7500-16 UNJF-3B	.165	.871	.5945	.033	.129	.105
1008	.6250	.5000	.057	.6860	.401	.8750-14 UNJF-3B	.165	.871	.5945	.033	.129	.153
0810	.5000	.6250	.057	.5600	.507	.7500-16 UNJF-3B	.140	1.190	.7365	.021	.078	.144
1010	.6250	.6250	.057	.6860	.507	.8750-14 UNJF-3B	.140	1.190	.7365	.021	.078	.165
1210	.7500	.6250	.065	.8100	.507	1.0625-12 UNJ-3B	.140	1.190	.7365	.021	.078	.235
1012	.6250	.7500	.065	.6860	.604	.8750-14 UNJF-3B	.154	1.327	.8805	.024	.089	.230
1212	.7500	.7500	.065	.8100	.604	1.0625-12 UNJ-3B	.154	1.327	.8805	.024	.089	.255
1612	1.0000	.7500	.084	1.0620	.604	1.3125-12 UNJ-3B	.154	1.327	.8805	.024	.089	.415
1216	.7500	1.0000	.084	.8100	.802	1.0625-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.435
1616	1.0000	1.0000	.084	1.0620	.802	1.3125-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.480
2016	1.2500	1.0000	.174	1.3160	.802	1.6250-12 UNJ-3B	.167	1.612	1.1725	.027	.099	.905
1620	1.0000	1.2500	.174	1.0620	1.011	1.3125-12 UNJ-3B	.185	1.886	1.4345	.030	.113	.775
2020	1.2500	1.2500	.174	1.3160	1.011	1.6250-12 UNJ-3B	.185	1.886	1.4345	.030	.113	.945

NOTES:

/1/ MATERIALS:

CODE LETTER "T"

RING - AMS4965 TITANIUM ALLOY, 6.0Al - 4.0V SOLUTION HEAT TREATED AND AGED OR AMS4928 TITANIUM ALLOY 6.0Al - 4.0V ANNEALED WITH HIGH STRENGTH CARBON FIBER/EPOXY RESIN COMPOSITE REINFORCEMENT.

BODY - AMS4928 TITANIUM ALLOY, 6.0Al - 4.0V ANNEALED.

NUT - AMS4965 TITANIUM ALLOY, 6.0Al - 4.0V SOLUTION HEAT TREATED AND AGED OR AMS4928 TITANIUM ALLOY, 6.0Al - 4.0V ANNEALED.

WIRE - AMS5637 STEEL, CORROSION RESISTANT, BARS AND WIRE, 18Cr - 9.0Ni (SAE 30302), SOLUTION HEAT TREATED, COLD DRAWN AND STRESS RELIEVED, 125 KSI TENSILE STRENGTH.

- AS5685 STEEL, CORROSION RESISTANT, SAFETY WIRE 18Cr - 11.5Ni (UNS S30500), SOLUTION HEAT TREATED, COLD FINISHED.

- ASTM A580 STEEL, CORROSION RESISTANT, WIRE, TYPE 302 OR 305 CONDITION A, COLD FINISHED.

2. FINISH:

TITANIUM - NONE

CRES - PASSIVATION PER AMS2700, TYPE 6 OR 7.

/3/ COATINGS/LUBRICANTS /16/:

a. NO SUFFIX CODE LETTER

- (1) RING - THE OUTER SURFACE SHALL HAVE A .125 INCH MINIMUM WIDTH BLUE COLORED RING OR SHALL BE COMPLETELY COLORED BLUE TO MATCH THE SWAGE TOOL COLOR CODE SPECIFIED IN THE AS5959 INSTALLATION PROCEDURE. BLUE PTFE COATING OR PAINT SHALL BE RESISTANT TO AS1241 FLUID WHEN USED. MARKING METHODS SHALL BE IN ACCORDANCE WITH AS5958.
- (2) BODY - LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV, PTFE OR PETROLEUM-BASED LUBRICANT SHALL BE APPLIED TO PORTIONS OF THE ID AND OD. THE PETROLEUM-BASED LUBRICANT AND/OR AS5272 LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.
- (3) NUT - LUBRICATE ID THREADS AND WIRE GROOVE LOAD BEARING SHOULDER OR MATING WIRE GROOVE LOAD BEARING SHOULDER WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV.
- (4) WIRE - LUBRICATE THE WIRE WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV.

b. SUFFIX CODE LETTER "B"

- (1) RING - THE OUTER SURFACE SHALL HAVE A .125 INCH MINIMUM WIDTH BLUE ANODIZED RING OR SHALL BE COMPLETELY ANODIZED BLUE TO MATCH THE SWAGE TOOL COLOR CODE SPECIFIED IN THE AS5959 INSTALLATION PROCEDURE. MARKING METHODS SHALL BE IN ACCORDANCE WITH AS5958.
- (2) BODY - LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV, PTFE OR PETROLEUM-BASED LUBRICANT SHALL BE APPLIED TO PORTIONS OF THE ID AND OD. THE PETROLEUM-BASED LUBRICANT AND/OR AS5272 LUBRICANT SHALL NOT BE IN CONTACT WITH THE SYSTEM FLUID.
- (3) NUT - LUBRICATE ID THREADS AND WIRE GROOVE LOAD BEARING SHOULDER OR MATING WIRE GROOVE LOAD BEARING SHOULDER WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV.
- (4) WIRE - LUBRICATE THE WIRE WITH LEAD FREE SOLID FILM LUBRICANT PER AS5272 TYPE I OR II, OR PER AS6449 TYPE III OR IV.

	AEROSPACE STANDARD	AS5803™ SHEET 3 OF 4	REV. A
	(R) FITTING ASSEMBLY, ELBOW, 45°, FEMALE FLARELESS, AXIALLY SWAGED, HYDRAULIC, 3,000 PSI		