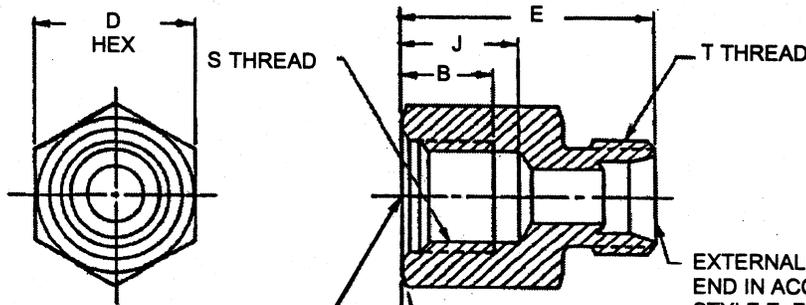


RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

REV.  
B

AS21915



INTERNALLY THREADED END  
IN ACCORDANCE WITH AS33649,  
FOR TUBE SIZE SPECIFIED  
EXCEPT AS OTHERWISE NOTED

15° ± 5° TO DIMENSION D +.000/-.015  
(TYP BOTH ENDS)

EXTERNALLY THREADED FITTING  
END IN ACCORDANCE WITH AS33514,  
STYLE E, FOR TUBE SIZE SPECIFIED  
EXCEPT HEX AS NOTED.

FIGURE 1 - ADAPTER, STRAIGHT, TUBE TO BOSS

TABLE 1A - DIMENSIONS B AND J

DASH NO. /9/	INTERNALLY THREADED END		EXTERNALLY THREADED END		B FULL THREAD MIN	J +.032 -0.000
	NOMINAL TUBE SIZE	S THREAD AS8879	NOMINAL TUBE SIZE	T THREAD AS8897		
-3-2	.188	.3750-24 UNJF-3B	.125	.3125-24 UNJF-3A	.406	.500
-4-2	.250	.4375-20 UNJF-3B	.125	.3125-24 UNJF-3A	.438	.594
-4-3	.250	.4375-20 UNJF-3B	.188	.3750-24 UNJF-3A	.438	.594
-5-4	.313	.5000-20 UNJF-3B	.250	.4375-20 UNJF-3A	.438	.594
-6-4	.375	.5625-18 UNJF-3B	.250	.4375-20 UNJF-3A	.469	.594
-6-5	.375	.5625-18 UNJF-3B	.313	.5000-20 UNJF-3A	.469	.594
-8-4	.500	.7500-16 UNJF-3B	.250	.4375-20 UNJF-3A	.562	.718
-8-5	.500	.7500-16 UNJF-3B	.313	.5000-20 UNJF-3A	.562	.718
-8-6	.500	.7500-16 UNJF-3B	.375	.5625-18 UNJF-3A	.562	.718
-10-4	.625	.8750-14 UNJF-3B	.250	.4375-20 UNJF-3A	.625	.781
-10-5	.625	.8750-14 UNJF-3B	.313	.5000-20 UNJF-3A	.625	.781
-10-6	.625	.8750-14 UNJF-3B	.375	.5625-18 UNJF-3A	.625	.781
-10-8	.625	.8750-14 UNJF-3B	.500	.7500-18 UNJF-3A	.625	.781
-12-6	.750	1.0625-12 UNJ-3B	.375	.5625-18 UNJF-3A	.688	.906
-12-8	.750	1.0625-12 UNJ-3B	.500	.7500-16 UNJF-3A	.688	.906
-12-10	.750	1.0625-12 UNJ-3B	.625	.8750-14 UNJF-3A	.688	.906
-16-6	1.000	1.3125-12 UNJ-3B	.375	.5625-18 UNJF-3A	.688	.938
-16-8	1.000	1.3125-12 UNJ-3B	.500	.7500-16 UNJF-3A	.688	.938
-16-10	1.000	1.3125-12 UNJ-3B	.625	.8750-14 UNJF-3A	.688	.938
-16-12	1.000	1.3125-12 UNJ-3B	.750	1.0625-12 UNJ-3A	.688	.938
-20-8	1.250	1.6250-12 UNJ-3B	.500	.7500-16 UNJF-3A	.688	.984
-20-10	1.250	1.6250-12 UNJ-3B	.625	.8750-14 UNJF-3A	.688	.984
-20-12	1.250	1.6250-12 UNJ-3B	.750	1.0625-12 UNJ-3A	.688	.984
-20-16	1.250	1.6250-12 UNJ-3B	1.000	1.3125-12 UNJ-3A	.688	.984

CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: AS18280

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**AEROSPACE STANDARD**  
(R) ADAPTER, STRAIGHT, TUBE TO BOSS

**AS21915**  
SHEET 1 OF 4

**REV. B**

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 1998-03 REVISED 2003-06 REAFFIRMED 2007-07

REV.  
B

AS21915

TABLE 1B - DIMENSIONS D AND E

DASH NO. /9/	OVERALL		WEIGHT, LB/EA, APPROX, REF.		
	D HEX	E	STEEL	AL ALLOY	TI ALLOY
-3-2	.621-.629	1.125	.070	.025	.040
-4-2	.684-.692	1.234	.078	.027	.045
-4-3	.684-.692	1.250	.079	.028	.045
-5-4	.746-.754	1.281	.086	.032	.049
-6-4	.809-.817	1.313	.104	.037	.060
-6-5	.809-.817	1.281	.110	.038	.063
-8-4	.996-1.004	1.484	.120	.059	.069
-8-5	.996-1.004	1.453	.125	.060	.072
-8-6	.996-1.004	1.469	.130	.061	.075
-10-4	1.120-1.130	1.578	.175	.069	.100
-10-5	1.120-1.130	1.563	.206	.073	.118
-10-6	1.120-1.130	1.563	.210	.076	.121
-10-8	1.120-1.130	1.656	.230	.080	.132
-12-6	1.370-1.380	1.734	.360	.127	.207
-12-8	1.370-1.380	1.828	.370	.133	.213
-12-10	1.370-1.380	1.891	.380	.138	.219
-16-6	1.609-1.641	1.844	.515	.188	.297
-16-8	1.609-1.641	1.938	.496	.182	.286
-16-10	1.609-1.641	1.984	.510	.188	.294
-16-12	1.609-1.641	2.031	.550	.195	.317
-20-8	1.859-1.891	2.078	.655	.240	.377
-20-10	1.859-1.891	2.125	.655	.240	.377
-20-12	1.859-1.891	2.156	.665	.232	.383
-20-16	1.859-1.891	2.078	.625	.224	.360

## NOTES:

## 1. MATERIAL:

SEE PROCUREMENT SPECIFICATION.  
 ALLOY STEEL  
 ALUMINUM ALLOY  
 CORROSION RESISTANT STEEL  
 TITANIUM ALLOY

## 2. FINISH: SEE PROCUREMENT SPECIFICATION.

## 3. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.

4. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm 0.016$ , ANGLES  $\pm 0^{\circ}30'$ .

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**AEROSPACE STANDARD**  
 (R) ADAPTER, STRAIGHT, TUBE TO BOSS

**AS21915**  
 SHEET 2 OF 4

**REV.**  
**B**

REV.  
B

AS21915

5. PART NUMBERS:

DASH “-” IN PART NUMBER FOR 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/  
ADD “V(SIZE)P” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED  
ADD “V” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED  
ADD “D” IN PLACE OF DASH FOR ALUMINUM ALLOY (2024): CANCELLED AND REPLACED, SEE 7 /C/  
ADD “W” IN PLACE OF DASH FOR ALUMINUM ALLOY (7075)  
ADD “J” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 304)  
ADD “K” IN PLACE OF DASH FOR CORROSION RESISTANT STEEL (TYPE 316)  
ADD “R” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 321)  
ADD “S” AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL (TYPE 347): CANCELLED, SEE 7 /D/  
ADD “T” AFTER DASH NUMBER FOR TITANIUM ALLOY (6AL-4V)

EXAMPLES OF PART NUMBERS:

MS21915-8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), 4130 ALLOY STEEL IS CANCELLED AND REPLACED, SEE 7 /A/  
MS21915V8-4P ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (15-5PH), CADMIUM PLATED  
MS21915V8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (15-5PH), NOT CADMIUM PLATED  
MS21915D8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), ALUMINUM ALLOY (2024) IS CANCELLED AND REPLACED, SEE 7 /C/  
MS21915W8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), ALUMINUM ALLOY (7075)  
MS21915J8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (TYPE 304)  
MS21915K8-4 ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (TYPE 316)  
MS21915-8-4R ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (TYPE 321)  
MS21915-8-4S ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), CORROSION RESISTANT STEEL (TYPE 347) IS CANCELLED, SEE 7 /D/  
MS21915-8-4T ADAPTER, .500 TUBING (INTERNAL THD) TO .250 TUBING (EXTERNAL THD), TITANIUM ALLOY (6AL-4V)

6. TITANIUM NOT RECOMMENDED FOR USE IN OXYGEN SYSTEMS.

7. SEE TABLE 2 FOR CANCELLED AND SUPERSEDED DOCUMENT AND PART NUMBERS.

8. THE PART NUMBERS FOR CANCELED DOCUMENT MS21915 AND THE PART NUMBERS FOR THE SUPERSEDING DOCUMENT AS21915 ARE IDENTICAL.

/9/ THE DASH NUMBERS IN THE PART NUMBER ARE CODED FOR THE TWO EQUIVALENT TUBE SIZES, EXPRESSED IN SIXTEENTHS. FOR EXAMPLE: MS21915-4-3 REFERS TO A CARBON STEEL FITTING WITH AN INTERNALLY THREADED END FOR .250 OD TUBE AND AN EXTERNALLY THREADED END FOR .188 OD TUBE.

10. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

11. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.

12. USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS OR ACCREDITED DISTRIBUTORS AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS18280 FOR THIS STANDARD. SEE <http://www.pri.sae.org/QPL/as18280.pdf> FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIALS ON PRI-QPL-AS18280.

13. THE CHANGE BAR ( I ) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT.

14. INTERPRETATION OF DRAWING PER ARP4296.