

INCH-POUND

AN839 Rev 8  
 7 June 2011  
 SUPERSEDING  
 AN839 Rev 7  
 30 August 1982

DETAIL SPECIFICATION SHEET

ELBOW, TUBE TO HOSE, 45°

Reinstated after 7 June 2011. Inactive for new design.  
 For new design, use SAE-AS5182.

This specification is approved for use by all Departments and  
 Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet  
 and SAE-AS4843/1.

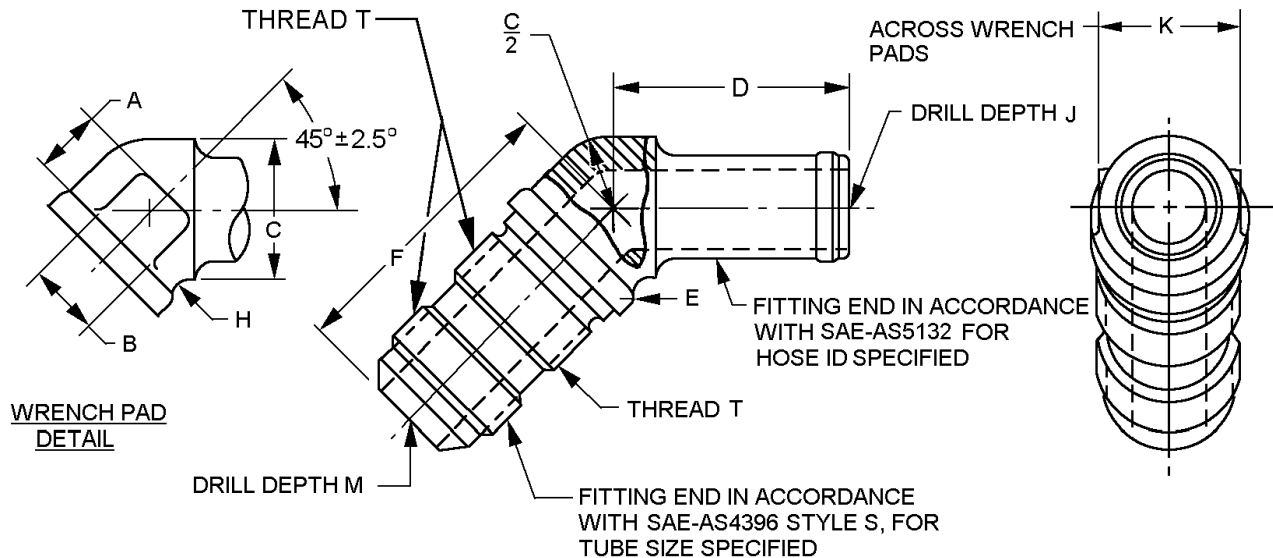


FIGURE 1. 45° Elbow dimensions and configurations.

## AN839 Rev 8

Dash number	Hose ID inches (mm)	Tube OD inches (mm)	Thread T SAE-AS8879	A Approx inches (mm)	B Approx inches (mm)
4	.250 (6.35)	.250 (6.35)	.4375-20UNJF-3A	.219 (5.56)	.250 (6.35)
6	.375 (9.53)	.375 (9.53)	.5625-18UNJF-3A	.281 (7.14)	.375 (9.53)
8	.500 (12.70)	.500 (12.70)	.7500-16UNJF-3A	.344 (8.74)	.438 (11.13)
10	.625 (15.88)	.625 (15.88)	.8750-14UNJF-3A	.438 (8.84)	.500 (12.70)
12	.750 (19.05)	.750 (19.05)	1.0625 -12UNJF-3A	.500 (12.70)	.566 (14.38)
16	1.000 (25.40)	1.000 (25.40)	1.3125 -12UNJ-3A	.563 (14.30)	.688 (17.48)
20	1.250 (31.75)	1.250 (31.75)	1.6250 -12UNJF-3A	.688 (17.48)	1.000 (25.40)
24	1.500 (38.10)	1.500 (38.10)	1.8750 -12UNJF-3A	.750 (19.05)	1.125 (28.58)

Dash number	C dia. inches (mm)	D +.047 (1.19) - .000 inches (mm)	E Radius inches (mm)	F +.047 (1.19) - .000 inches (mm)
4	.438 (11.13)	1.688 (42.88)	.063 (1.60)	1.047 (26.59)
6	.566 (14.38)	1.719 (43.66)		1.563 (39.70)
8	.750 (19.05)	1.750 (44.45)	.094 (2.39)	1.828 (46.43)
10	.875 (22.23)	1.797 (45.64)		2.047 (51.99)
12	1.063 (27.00)	1.828 (46.43)		2.281 (57.94)
16	1.313 (33.35)	1.890 (48.01)	.125 (3.18)	2.391 (60.73)
20	1.625 (41.28)	1.969 (50.01)		2.547 (64.69)
24	1.875 (47.63)	2.031 (51.59)		2.672 (67.87)

Dash number	H Radius inches (mm)	J +.047 (1.19) - .000 inches (mm)	K inches (mm)	M +.047 (1.19) - .000 inches (mm)
4	.063 (1.57)	1.750 (44.45)	.438 (11.13)	1.468 (37.29)
6	.094 (2.39)	1.797 (45.64)	.563 (14.30)	1.609 (40.87)
8		1.813 (46.05)	.750 (19.05)	1.938 (49.23)
10	.125 (3.18)	1.875 (47.63)	.875 (22.23)	2.172 (55.17)
12		1.953 (49.61)	1.063 (27.00)	2.422 (61.52)
16		2.047 (51.99)	1.313 (33.35)	2.593 (65.86)
20	.188 (4.78)	2.172 (55.17)	1.625 (41.28)	2.797 (71.04)
24		2.281 (57.94)	1.875 (47.63)	2.969 (75.41)

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances are  $\pm 0.016$  inch (0.41 mm).
4. Break sharp edges and remove all hanging burrs and slivers
5. Machined surfaces shall be finished to  $125\mu$  in Ra, forged surfaces shall be  $250\mu$  inches Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
6. For design features purposes, this standard takes precedence over documents referenced herein.

FIGURE 1. 45° Elbow dimensions and configurations - Continued.

## AN839 Rev 8

## REQUIREMENTS:

Dimensions and configuration shall be in accordance with figure 1.

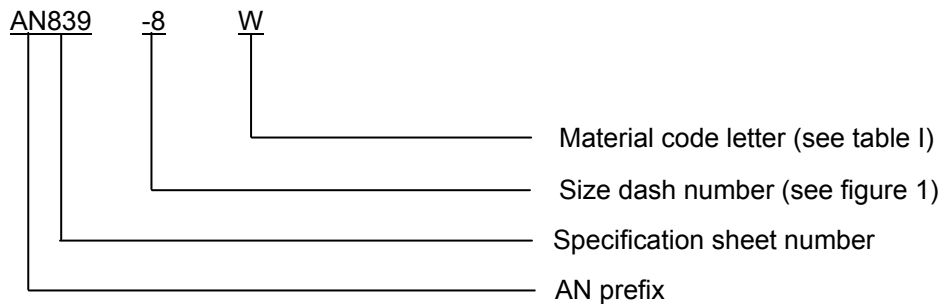
Installation shall be in accordance with MS21344.

Materials and finishes shall be in accordance with SAE-AS4843/1, see table I for material code.

TABLE I. Material and code letters.

Code letter	Material
Blank	Copper alloy
J	Corrosion resistant steel (CRES), type 304
K	CRES, type 316
R	CRES. Type 321
S	CRES, type 347
W	Aluminum alloy 7075-T73

Part or Identifying Number (PIN): The PIN consists of the letter "AN" the specification sheet number, a dash number for tube and hose size, and a material code letter for material type. Unassigned PIN's shall not be used.



PIN example: AN839-8WP indicates a 45° elbow, tube to hose, .500 inches (12.70 mm), aluminum alloy 7075-T73.

Supersession data. The aluminum "D" designator has been replaced by the "W" designator.

Marking: Part shall be permanently marked with the AN PIN, and include the manufacturers CAGE, name, or trademark.

Table II provides a detailed cross-reference of AN839 PINs and replacement SAE-AS5182 PINs. Users are cautioned to evaluate replacements for their particular application.

**CAUTION:** The superseding information is valid as of the date of this specification and may be superseded by subsequent revisions of the superseding document.

## AN839 Rev 8

TABLE II. Cross-reference data. 1/

AN PIN	Hose Size	Pipe Size	Replacement AS PIN	New design
AN839-4	0.250	0.250	AS5182B04	
AN839-4D	0.250	0.250	AS5182W04	AS5182W04
AN839-4J	0.250	0.250	AS5182J04	
AN839-4K	0.250	0.250	AS5182K04	
AN839-4R	0.250	0.250	AS5182R04	
AN839-4S	0.250	0.250	AS5182R04	AS5182R04
AN839-4W	0.250	0.250	AS5182W04	
AN839-6	0.375	0.375	AS5182B06	
AN839-6D	0.375	0.375	AS5182W06	AS5182W06
AN839-6J	0.375	0.375	AS5182J06	
AN839-6K	0.375	0.375	AS5182K06	
AN839-6R	0.375	0.375	AS5182R06	
AN839-6S	0.375	0.375	AS5182R06	AS5182R06
AN839-6W	0.375	0.375	AS5182W06	
AN839-8	0.500	0.500	AS5182B08	
AN839-8D	0.500	0.500	AS5182W08	AS5182W08
AN839-8J	0.500	0.500	AS5182J08	
AN839-8K	0.500	0.500	AS5182K08	
AN839-8R	0.500	0.500	AS5182R08	
AN839-8S	0.500	0.500	AS5182R08	AS5182R08
AN839-8W	0.500	0.500	AS5182W08	
AN839-10	0.625	0.625	AS5182B10	
AN839-10D	0.625	0.625	AS5182W10	AS5182W10
AN839-10J	0.625	0.625	AS5182J10	
AN839-10K	0.625	0.625	AS5182K10	
AN839-10R	0.625	0.625	AS5182R10	
AN839-10S	0.625	0.625	AS5182R10	AS5182R10
AN839-10W	0.625	0.625	AS5182W10	

See note at end of table.

## AN839 Rev 8

TABLE II. Cross-reference data - Continued. 1/

AN PIN	Hose Size	Pipe Size	Replacement AS PIN	New design
AN839-12	0.750	0.750	AS5182B12	
AN839-12D	0.750	0.750	AS5182W12	AS5182W12
AN839-12J	0.750	0.750	AS5182J12	
AN839-12K	0.750	0.750	AS5182K12	
AN839-12R	0.750	0.750	AS5182R12	
AN839-12S	0.750	0.750	AS5182R12	AS5182R12
AN839-12W	0.750	0.750	AS5182W12	
AN839-16	1.000	1.000	AS5182B16	
AN839-16D	1.000	1.000	AS5182W16	AS5182W16
AN839-16J	1.000	1.000	AS5182J16	
AN839-16K	1.000	1.000	AS5182K16	
AN839-16R	1.000	1.000	AS5182R16	
AN839-16S	1.000	1.000	AS5182R16	AS5182R16
AN839-16W	1.000	1.000	AS5182W16	
AN839-20	1.250	1.250	AS5182B20	
AN839-20D	1.250	1.250	AS5182W16	AS5182W16
AN839-20J	1.250	1.250	AS5182J20	
AN839-20K	1.250	1.250	AS5182K20	
AN839-20R	1.250	1.250	AS5182R20	
AN839-20S	1.250	1.250	AS5182R20	AS5182R16
AN839-20W	1.250	1.250	AS5181W20	
AN839-24	1.500	1.500	AS5182B24	
AN839-24D	1.500	1.500	AS5182W24	AS5182W24
AN839-24J	1.500	1.500	AS5182J24	
AN839-24K	1.500	1.500	AS5182K24	
AN839-24R	1.500	1.500	AS5182R24	
AN839-24S	1.500	1.500	AS5182R24	AS5182R24
AN839-24W	1.500	1.500	AS5182W24	

1/ For new design use material designators R and W.

Changes from previous issues. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to SAE-AS4843/1, this document references the following:

MS21344  
ASME B46.1  
SAE-AS4396  
SAE-AS5132  
SAE-AS5182  
SAE-AS8879

AN839 Rev 8

CONCLUDING MATERIAL

Custodians:

Army - AV  
Navy - AS  
Air Force - 99  
DLA - CC

Preparing activity:

DLA - CC

(Project 4730-2011-054)

Review activities:

Navy - SA  
Air Force - 71

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.