

INCH-POUND

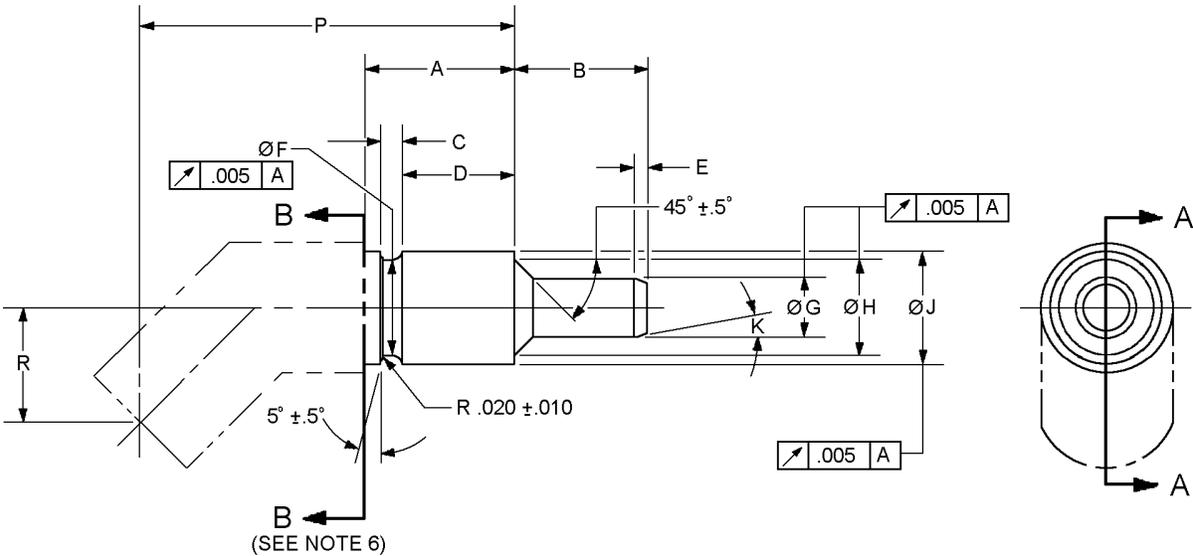
MS27637C
 22 October 2009
 SUPERSEDING
 MS27637B
 29 September 2000

DETAIL SPECIFICATION SHEET

ELBOW, FLARELESS, TUBE TO HOSE, 45°, SWIVEL NUT

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

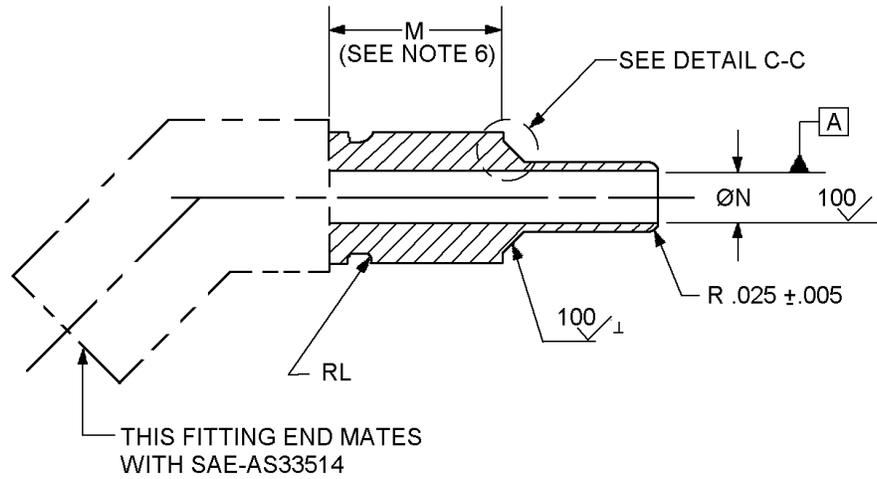
The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-83296.



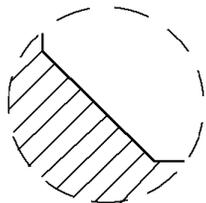
Inches	mm
.005	0.13
.010	0.25
.020	0.51

FIGURE 1. Flareless, 45°, elbow, dimensions and configuration.

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SECTION A-A



DETAIL C-C

-6 SIZE ONLY

Inches	mm
.005	0.13
.025	0.62

FIGURE 1. Flareless, 45°, elbow, dimensions and configuration – Continued.

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Part or Identifying number (PIN)	A Min inch (mm)	B ± 0.010 (0.25) inch (mm)	C inch (mm)		D $+0.005$ -0.000 (+0.13) inch (mm)	E ± 0.005 (0.13) inch (mm)	F $+0.000$ -0.005 (-0.13) inch (mm)
			.116 (2.95)	.010 (0.25)			
MS27637-4C	.633 (16.08)	.550 (13.97)	.116 (2.95)	.010 (0.25)	.413 (10.49)	—	.346 (8.79)
MS27637-6C	.709 (18.01)	.620 (15.75)	.140 (3.56)	.020 (0.51)	.442 (11.23)	—	.395 (10.03)
MS27637-8C	.779 (19.79)	.737 (18.72)			.472 (11.99)	—	.564 (14.33)
MS27637-10C	.660 (16.76)	1.050 (26.67)	.170 (4.32)		.405 (10.29)	.150 (3.81)	.679 (17.25)

PIN	G $+0.000$ -0.005 (-0.13) inch (mm)	H ± 0.005 (0.13) inch (mm)	J ± 0.003 (0.08) inch (mm)	K $\pm 50^\circ$	L ± 0.004 (0.10) inch (mm)
MS27637-4C	.250 (6.35)	.420 (10.67)	.443 (11.25)	—	.040 (1.02)
MS27637-6C	.343 (8.71)	—	.497 (12.62)	—	.047 (1.19)
MS27637-8C	.445 (11.30)	.610 (15.49)	.680 (17.27)	—	
MS27637-10C	.588 (14.94)	.762 (19.35)	.823 (20.90)	10°	.062 (1.57)

PIN	M Min inch (mm)	N ± 0.005 (0.13) inch (mm)	P inch (mm)		R inch (mm)	
			1.519 (38.58)	± 0.020 (0.51)	.515 (13.08)	± 0.020 (.51)
MS27637-4C	.578 (14.68)	.161 (4.09)	1.519 (38.58)	± 0.020 (0.51)	.515 (13.08)	± 0.020 (.51)
MS27637-6C	.654 (16.61)	.271 (6.88)	1.840 (46.74)		.663 (16.84)	
MS27637-8C	.692 (17.58)	.375 (9.53)	2.179 (55.35)		.761 (19.33)	
MS27637-10C	.606 (15.39)	.465 (11.81)	1.824 (46.33)	± 0.035 (0.89)	.756 (19.20)	± 0.062 (1.57)

FIGURE 1. Flareless, 45°, elbow, dimensions and configuration - Continued.

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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances shall be ± 0.005 inch (0.13 mm).
4. Unless otherwise specified, radius or break all corners to $.005 + .005/-0.000$ inch (0.13 +0.13/-0.00 mm).
5. Unless otherwise specified, surface roughness, in accordance with ASME B46.1, shall not exceed $125 \mu\text{in } R_a$.
6. On -4, -6, and -8 size use dimension A when the adjacent diameter to the left of plane B-B is greater than dimension J. When the adjacent diameter is equal to or less than dimension J, dimension M may be used in place of dimension A.
7. All burrs and slivers shall be removed.
8. On -10 size, the bent tube before forming shall not be less than the nipple ID. Ovality of all bent tube fittings shall not exceed 7.5% of nominal tubing OD.
9. Dimensioning and tolerancing are in accordance with ASME Y14.5M.

FIGURE 1. Flareless, 45°, elbow, dimensions and configuration - Continued.

REQUIREMENTS:

Dimensions and configurations: The design, construction, and physical dimensions shall be in accordance with MIL-DTL-83296 and figure 1, in case of conflict between this specification sheet and MIL-DTL-83296, this specification sheet shall govern.

This is a design specification sheet for manufacturing purposes. The item is only procured as an integral part of adapter assembly MS27633.

This part for use with MIL-DTL-83298 hose and hose assemblies in accordance with MIL-DTL-32330.

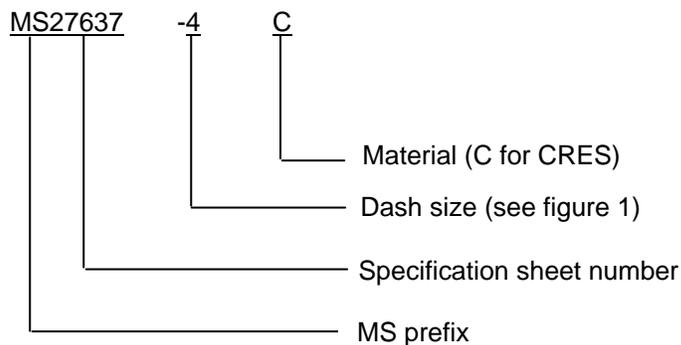
Material: Material shall be a corrosion resistant steel (CRES), class 304 in accordance with SAE-AMS5639, 304L in accordance with SAE-AMS5647, 316 in accordance with SAE-AMS5648, or 321 in accordance with SAE-AMS5646, or condition A (accepted classes only), as specified in ASTM A276.

Any forged design fitting is acceptable for -4, -6, and -8 sizes. Any bent tube design fitting is acceptable for -10 size.

Finish: Finish shall be passivated in accordance with MIL-DTL-83296.

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PIN example:



PIN example: MS27637-4C indicates a 45° elbow 1/4 inch, CRES.

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

Referenced documents. In addition to MIL-DTL-83296, this document references the following:

MIL-DTL-32330	SAE-AMS5639
MIL-DTL-83298	SAE-AMS5646
MS27633	SAE-AMS5647
ASME B46.1	SAE-AMS5648
ASME Y14.5M	SAE-AS33514
ASTM A276	

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 4730-2008-067)

Review activities:

Navy - MC, 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 <http://assist.daps.dla.mil>.