

INCH-POUND

MS27394B
24 September 2003
SUPERSEDING
MS27394A
30 June 1972

DETAIL SPECIFICATION SHEET

ELBOW, FLARELESS, TUBE TO HOSE - 90° 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 and MIL-DTL-27272.

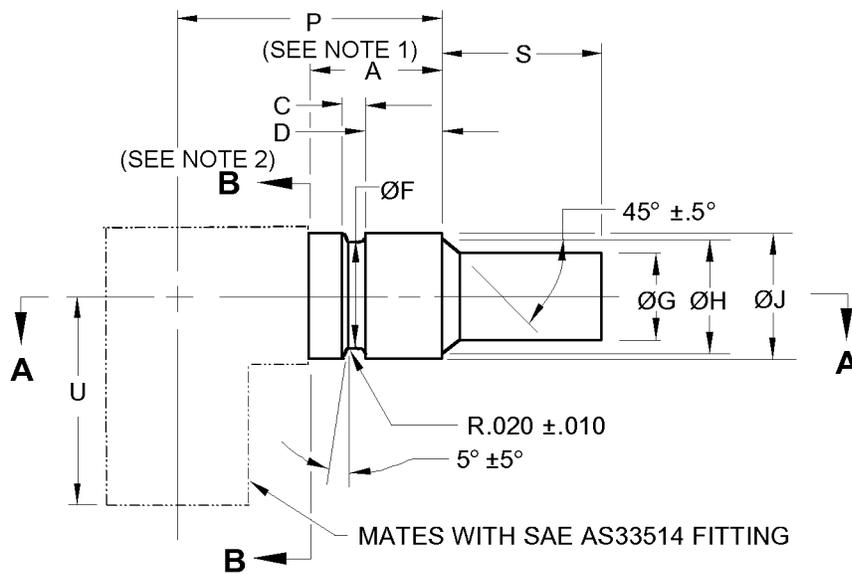
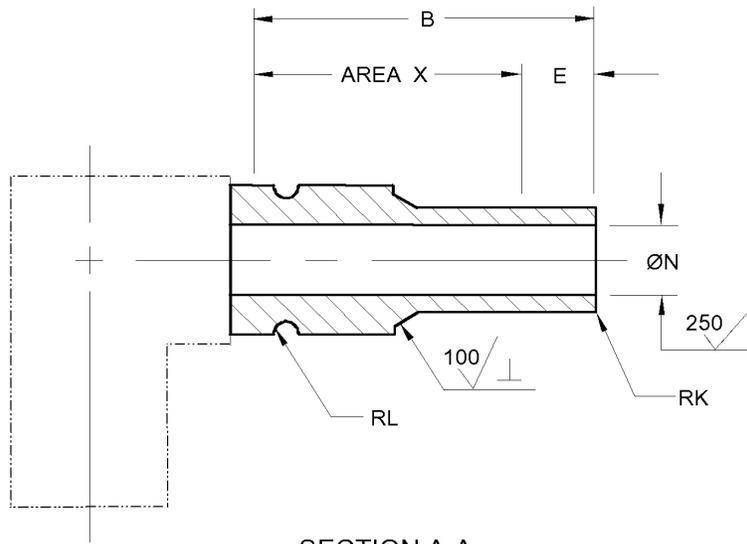
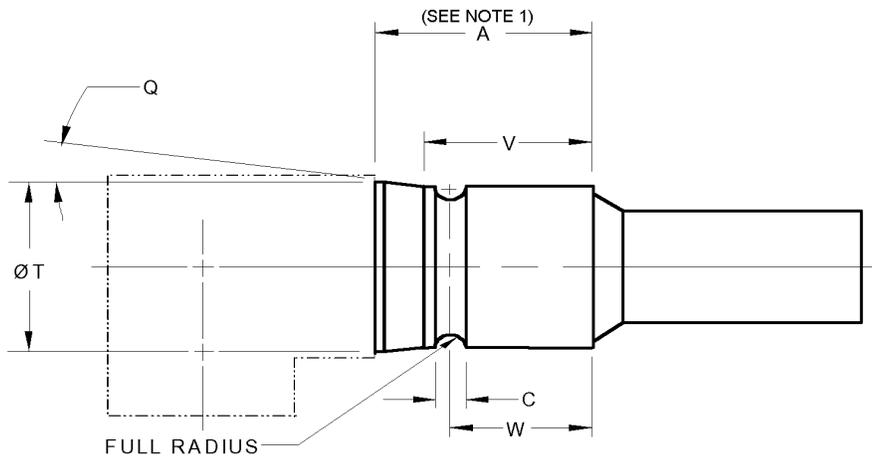


FIGURE 1. Elbow illustration.

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SECTION A-A



-10 THRU -24 SIZE ONLY

NOTES:

1. Use A dimension when the adjacent diameter to the left of plane B-B is greater than J dimension. When the adjacent diameter is equal to or less than J dimension, M dimension may be used in place of A dimension.
2. Any design of the elbow to the left of plane B-B is acceptable provided the dimensions P and U and the requirements of this specification sheet and the procurement specification are met. Any forged design is acceptable for -3/-4 through -8 size. Any bent tube design is acceptable for -10 through -24 size. The inside diameter (ID) of the elbow for the -10 through -24 size shall not be less than the ID of the nipple end of the fitting. Ovality shall not exceed 7.5 percent of nominal tubing outside diameter (OD).
3. Dimensions are in inches. Metric equivalent is given for general information only.

FIGURE 1. Elbow illustration - Continued.

TABLE I. Elbow requirements.

PIN MS27394 Steel Alum	A $\frac{1}{4}$ min	B min	C		D +0.005 -0.000	E		F		G +0.005 -0.000	H ± 0.005	J +0.005 -0.000
			.106	± 0.010		.25	± 0.05	.288	+0.005 -0.000			
-3/-4C	.515	.870	.106	± 0.010	.307	.25	± 0.05	.288	+0.005 -0.000	.205	.295	.373
-4C	.520	.890	.116		.322			.316		.268	.360	.416
-5C	.555							.391		.330	.425	.491
-6C	.630	1.030	.140	± 0.020	.335	.32	± 0.12	.497		.426	.530	.616
-8C	.654	1.130	.098	+0.004 -0.000	-	.35	± 0.15	.586		.526	.625	.706
-10C	.755	1.240	.128	+0.005 -0.000	-			.674		.650	.760	.826
-12C	.831	1.340			-	.39	± 0.19	1.001	+0.008 -0.000	.900	1.040	1.150
-16C	.881	1.570			-	.48	± 0.28	1.255	+0.005	1.151	1.275	1.405
-20C	1.035	1.720			-	.50	± 0.30	1.490	-0.000	1.401	1.550	1.635

PIN MS27394 Steel Alum	K	L ± 0.004	M $\frac{1}{4}$ min	N		P	Q max	S
				Steel	Alum			
-3/-4C	.015	.036	.485	.161	-	.845	-	± 0.10
-4C	+0.005 -0.000				-			
-5C		.040	.501	.224	-	.900	-	
-6C			.521	.261	-	.965	-	
-8C	.020	.047	.583	.345	.345	1.235	-	.600
-10C			.620	.440	.440	1.315	-	.650
-12C	.030		.720	.560	.560	1.808	15.5°	.675
-16C			.796	.828	.828	1.901	10.5°	.730
-20C			.846	1.058	1.058	2.180	15.5°	.935
-24C	.035		1.000	1.253	1.282	2.500		.980

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TABLE I. Elbow requirements - Continued.

PIN MS27394		T max	U		V		W	
Steel	Alum						+ .005	-.000
-3/-4C	-	-	.741	±.020	-	-	-	-
-4C	-	-	.725		-	-	-	-
-5C	-	-	.808		-	-	-	-
-6C	-	-	.915		-	-	-	-
-8C	-8D	-	1.052		-	-	-	-
-10C	-10D	-	1.392	±.035	-	-	.420	.427
-12C	-12D	.900	1.626		.625	±.010	.500	.500
-16C	-16D	1.190	1.776		.670		.545	.545
-20C	-20D	1.485	2.056		.695		.565	.571
-24C	-24D	1.750	2.438		.795		.665	.665

1/ Use A dimension when the adjacent diameter to the left of plane B-B is greater than J dimension. When the adjacent diameter is equal to or less than J dimension, M dimension may be used in place of A dimension.

Intended use. The part is a component of MS27390 for sizes -3/-4C through -8, and MS27388 for sizes -10 through -24. This is a design standard for manufacturing purposes. The item is only procured as an integral part of adapter assemblies.

Identification of product. The Part or Identifying Number (PIN) for this part shall be as specified in table I (e.g., MS27394-4C).

Dimensions and tolerances. Unless otherwise specified, break or radius all corners .005, +.005, -.000. All diameters within length A plus S must be concentric within .005 full indicator movement.

Material. PIN suffix C: Corrosion-resistant steel, class 304 or 321, cold finish condition A, in accordance with SAE AMS-QQ-S-763.

PIN suffix D. Aluminum alloy, 6061-T6 or T651, in accordance with SAE AMS-QQ-A-367 or SAE AMS-QQ-A-225/8.

Finish. Corrosion-resistant steel: Passivate in accordance with SAE AMS-QQ-P-35. Dry-film lubricate area X with lubricant conforming to SAE AS1701, dry-film same area for -10 thru -24. No overspray allowed.

Aluminum alloy. Anodize in accordance with MIL-A-8625, type II, dye yellow.

Surface roughness. Unless otherwise specified, maximum surface roughness shall not exceed 125 µin. R_a in accordance with ASME B46.1.

Order of precedence. This specification takes precedence over the documents referenced herein. Unless otherwise specified, referenced documents shall be of the issue in effect on the date of solicitation.

Remove all burrs and slivers.

Elbow illustration. See figure 1.

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

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 4730-0868-075)

Review activities:

Army - AT, MI
Navy - MC, SA, SH
Air Force - 71