

INCH-POUND

MS9769A
18 October 1999
SUPERSEDING
MS9769
22 December
1971

DETAIL SPECIFICATION SHEET

REDUCER, TUBE - STRAIGHT, TUBE TO BOSS

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

REQUIREMENTS:

1. Sealing surface shall be free of flaws, nicks, chatter marks, or low spots. Unbroken line of contact to show all around at other than extremities of surface when rotated in contact with $74^{\circ}0' \pm 0^{\circ}1'$ included angle gage lightly coated by rubbing with carbon paper.
2. Material: corrosion and heat resistant steel: SAE AMS 5646.
3. Machined surfaces shall be finished to 125μ in R_a , unless other specified on the figures. Surface finish shall be in accordance with ASME B46.1..
4. Fluorescent penetrant inspection per AMS 2644.

NOTES:

1. Dimensions are in inches. Unless otherwise specified, tolerances: Linear dimensions: ± 0.010 ; Angular Dimensions: $\pm 5^{\circ}$.
2. Break sharp edges .003 to .015 unless otherwise specified.
3. Unassigned part numbers shall not be used.

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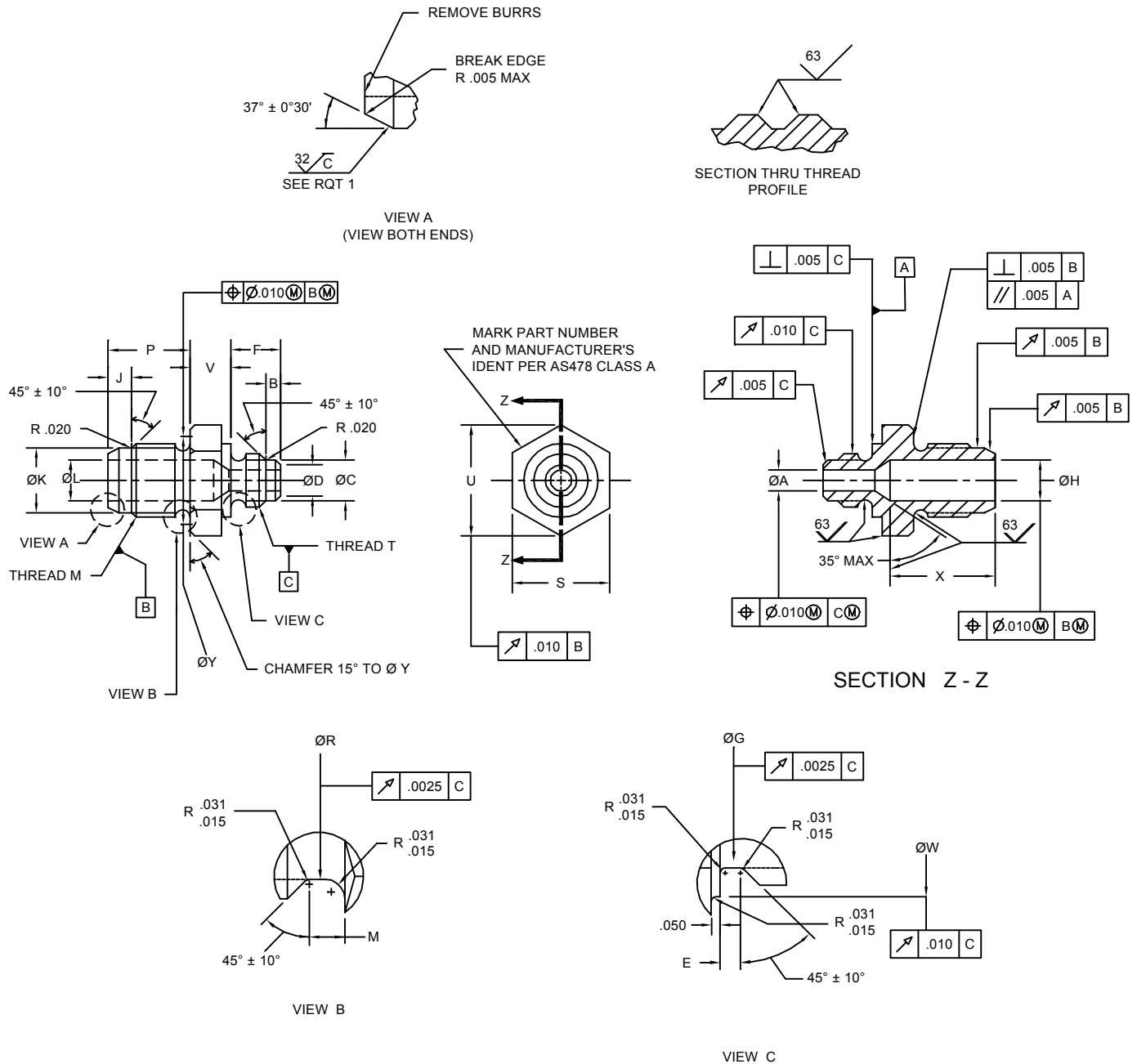


FIGURE 1. Reducer, tube

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TABLE I. Part numbers and dimensions

PART NUMBER	NOM TUBE SIZE	THREAD T SAE AS8879	A	B +.015 -.000	C + .000 -.010	D ± .003	E +.015 -.000	F
MS9769-021	.125 x .188	.3125-24UNJF-3A	.058 - .065	.144	.245	.132	.063	.415
MS9769-022	.125 x .250	.3125-24UNJF-3A	.058 - .065	.144	.245	.132	.063	.415
MS9769-023	.125 x .375	.3125-24UNJF-3A	.058 - .065	.144	.245	.132	.063	.415
MS9769-024	.125 x .500	.3125-24UNJF-3A	.058 - .065	.144	.245	.132	.063	.415
MS9769-031	.188 x .250	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-032	.188 x .312	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-033	.188 x .375	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-034	.188 x .500	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-035	.188 x .625	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-036	.188 x .750	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-037	.188 x 1.000	.375-24UNJF-3A	.121 - .128	.144	.307	.195	.063	.446
MS9769-041	.250 x .312	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-042	.250 x .375	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-043	.250 x .438	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-044	.250 x .500	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-045	.250 x .625	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-046	.250 x .750	.4375-20UNJF-3A	.168 - .175	.160	.359	.242	.075	.517
MS9769-051	.312 x .375	.500-20UNJF-3A	.230 - .237	.160	.421	.304	.075	.517
MS9769-052	.312 x .438	.500-20UNJF-3A	.230 - .237	.160	.421	.304	.075	.517
MS9769-061	.375 x .438	.5625-18UNJF-3A	.293 - .301	.165	.476	.368	.083	.523
MS9769-062	.375 x .500	.5625-18UNJF-3A	.293 - .301	.165	.476	.368	.083	.523
MS9769-063	.375 x .562	.5625-18UNJF-3A	.293 - .301	.165	.476	.368	.083	.523
MS9769-064	.375 x .625	.5625-18UNJF-3A	.293 - .301	.165	.476	.368	.083	.523
MS9769-065	.375 x .750	.5625-18UNJF-3A	.293 - .301	.165	.476	.368	.083	.523
MS9769-071	.438 x .500	.625-18UNJF-3A	.355 - .363	.165	.539	.430	.083	.523
MS9769-081	.500 x .562	.750-16UNJF-3A	.387 - .395	.229	.654	.462	.094	.633
MS9769-082	.500 x .625	.750-16UNJF-3A	.387 - .395	.229	.654	.462	.094	.633
MS9769-083	.500 x .688	.750-16UNJF-3A	.387 - .395	.229	.654	.462	.094	.633
MS9769-084	.500 x .750	.750-16UNJF-3A	.387 - .395	.229	.654	.462	.094	.633
MS9769-085	.500 x 1.000	.750-16UNJF-3A	.387 - .395	.229	.654	.462	.094	.633
MS9769-121	.750 x 1.000	1.0625-12UNJ-3A	.604 - .614	.304	.938	.681	.125	.853
MS9769-122	.750 x 1.250	1.0625-12UNJ-3A	.604 - .614	.304	.938	.681	.125	.853
MS9769-161	1.000 x 1.250	1.3125-12UNJ-3A	.839 - .851	.312	1.188	.918	.125	.908

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TABLE I. Part numbers and dimensions - (Continued)

PART NUMBER	G +.002 -.003	H DIA	J +.015 -.000	K +.000 -.010	L ±.003	THREAD N SAE AS8879	M +.015 -.000	P
MS9769-021	.250	.121 - .128	.144	.307	.195	.375-24UNJF-3A	.063	.446
MS9769-022	.250	.168 - .175	.160	.359	.242	.4375-20UNJF-3A	.075	.517
MS9769-023	.250	.293 - .301	.165	.476	.368	.5625-18UNJF-3A	.083	.523
MS9769-024	.250	.387 - .395	.229	.654	.462	.750-16UNJF-3A	.094	.633
MS9769-031	.312	.168 - .175	.160	.359	.242	.4375-20UNJF-3A	.075	.517
MS9769-032	.312	.230 - .237	.160	.421	.304	.500-20UNJF-3A	.075	.517
MS9769-033	.312	.293 - .301	.165	.476	.368	.5625-18UNJF-3A	.083	.523
MS9769-034	.312	.387 - .395	.229	.654	.462	.750-16UNJF-3A	.094	.633
MS9769-035	.312	.480 - .488	.255	.767	.555	.875-14UNJF-3A	.107	.747
MS9769-036	.312	.604 - .614	.304	.938	.681	1.0625-12UNJ-3A	.125	.853
MS9769-037	.312	.839 - .851	.312	1.188	.918	1.3125-12UNJ-3A	.125	.908
MS9769-041	.364	.230 - .237	.160	.421	.304	.500-20UNJF-3A	.075	.517
MS9769-042	.364	.293 - .301	.165	.476	.368	.5625-18UNJF-3A	.083	.523
MS9769-043	.364	.355 - .363	.165	.539	.430	.625-18UNJF-3A	.083	.523
MS9769-044	.364	.387 - .395	.229	.654	.462	.750-16UNJF-3A	.094	.633
MS9769-045	.364	.480 - .488	.255	.767	.555	.875-14UNJF-3A	.107	.747
MS9769-046	.364	.604 - .614	.304	.938	.681	1.0625-12UNJ-3A	.125	.853
MS9769-051	.426	.293 - .301	.165	.476	.368	.5625-18UNJF-3A	.083	.523
MS9769-052	.426	.355 - .363	.165	.539	.430	.625-18UNJF-3A	.083	.523
MS9769-061	.481	.355 - .363	.165	.539	.430	.625-18UNJF-3A	.083	.523
MS9769-062	.481	.387 - .395	.229	.654	.462	.750-16UNJF-3A	.094	.633
MS9769-063	.481	.434 - .442	.229	.716	.509	.8125-16UNJ-3A	.094	.633
MS9769-064	.481	.480 - .488	.255	.767	.555	.875-14UNJF-3A	.107	.747
MS9769-065	.481	.604 - .614	.304	.938	.681	1.0625-12UNJ-3A	.125	.853
MS9769-071	.544	.387 - .395	.229	.654	.462	.750-16UNJF-3A	.094	.633
MS9769-081	.660	.434 - .442	.229	.716	.509	.8125-16UNJ-3A	.094	.633
MS9769-082	.660	.480 - .488	.255	.767	.555	.875-14UNJF-3A	.107	.747
MS9769-083	.660	.542 - .552	.304	.875	.619	1.000-12UNJ-3A	.125	.853
MS9769-084	.660	.604 - .614	.304	.938	.681	1.0625-12UNJ-3A	.125	.853
MS9769-085	.660	.839 - .851	.312	1.188	.918	1.3125-12UNJ-3A	.125	.908
MS9769-121	.945	.839 - .851	.312	1.188	.918	1.3125-12UNJ-3A	.125	.908
MS9769-122	.945	1.073 - 1.086	.363	1.500	1.513	1.625-12UNJ-3A	.125	.954
MS9769-161	1.195	1.073 - 1.086	.363	1.500	1.153	1.625-12UNJ-3A	.125	.954

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TABLE I. Part numbers and dimensions - (Continued)

PART NUMBER	R +.002 -.003	S	U MIN	V	W	X	Y	APPROX WEIGHT LB/100
MS9769-021	.312	.616 - .627	.694	.240	.565	.585	.625	5.05
MS9769-022	.364	.679 - .690	.766	.270	.565	.670	.688	6.31
MS9769-023	.481	.803 - .814	.907	.300	.565	.665	.812	7.70
MS9769-024	.660	.990 - 1.002	1.121	.300	.565	.740	1.000	11.14
MS9769-031	.364	.679 - .690	.766	.270	.625	.690	.688	6.94
MS9769-032	.426	.741 - .752	.837	.270	.625	.670	.750	7.53
MS9769-033	.481	.803 - .814	.907	.300	.625	.685	.812	8.40
MS9769-034	.660	.990 - 1.002	1.121	.300	.625	.765	1.000	11.87
MS9769-035	.773	1.115 - 1.127	1.262	.360	.625	.895	1.125	16.91
MS9769-036	.945	1.301 - 1.314	1.475	.360	.625	.965	1.312	20.42
MS9769-037	1.195	1.614 - 1.627	1.833	.410	.625	.985	1.625	29.52
MS9769-041	.426	.741 - .752	.837	.270	.690	.690	.750	8.29
MS9769-042	.481	.803 - .814	.907	.300	.690	.710	.812	9.16
MS9769-043	.544	.865 - .877	.978	.300	.690	.705	.875	9.78
MS9769-044	.660	.990 - 1.002	1.121	.300	.690	.770	1.000	12.57
MS9769-045	.773	1.115 - 1.127	1.262	.360	.690	.910	1.125	17.64
MS9769-046	.945	1.301 - 1.314	1.475	.360	.690	.985	1.312	21.18
MS9769-051	.481	.803 - .814	.907	.300	.750	.725	.812	9.49
MS9769-052	.544	.865 - .877	.978	.300	.750	.700	.875	10.09
MS9769-061	.544	.865 - .877	.978	.300	.815	.725	.875	10.26
MS9769-062	.660	.990 - 1.002	1.121	.300	.815	.825	1.000	12.97
MS9769-063	.722	1.052 - 1.064	1.191	.300	.815	.808	1.062	13.80
MS9769-064	.773	1.115 - 1.127	1.262	.360	.815	.955	1.125	17.98
MS9769-065	.945	1.301 - 1.314	1.475	.360	.815	1.028	1.312	21.43
MS9769-071	.660	.990 - 1.002	1.121	.300	.875	.845	1.000	13.12
MS9769-081	.722	1.052 - 1.064	1.191	.300	1.000	.818	1.062	15.91
MS9769-082	.773	1.115 - 1.127	1.262	.360	1.000	.965	1.125	20.09
MS9769-083	.882	1.301 - 1.314	1.475	.360	1.000	1.060	1.312	23.84
MS9769-084	.945	1.301 - 1.314	1.475	.360	1.000	1.035	1.312	23.57
MS9769-085	1.195	1.614 - 1.627	1.833	.410	1.000	1.060	1.625	32.31
MS9769-121	1.195	1.614 - 1.627	1.833	.410	1.375	1.120	1.625	35.93
MS9769-122	1.507	1.863 - 1.877	2.117	.410	1.375	1.085	1.875	43.74
MS9769-161	1.507	1.863 - 1.877	2.117	.410	1.625	1.163	1.875	42.27

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Custodians:
Air Force - 99
Navy - AS
DLA - CC

Preparing activity:
DLA - CC

(Project 4730-0091)

Review activities:
Air Force -82
Navy - MC