

INCH-POUND

MS9769B

27 May 2008

SUPERSEDING

MS9769A

18 October 1999

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.

The requirements for acquiring the product described herein shall consist of this specification sheet.

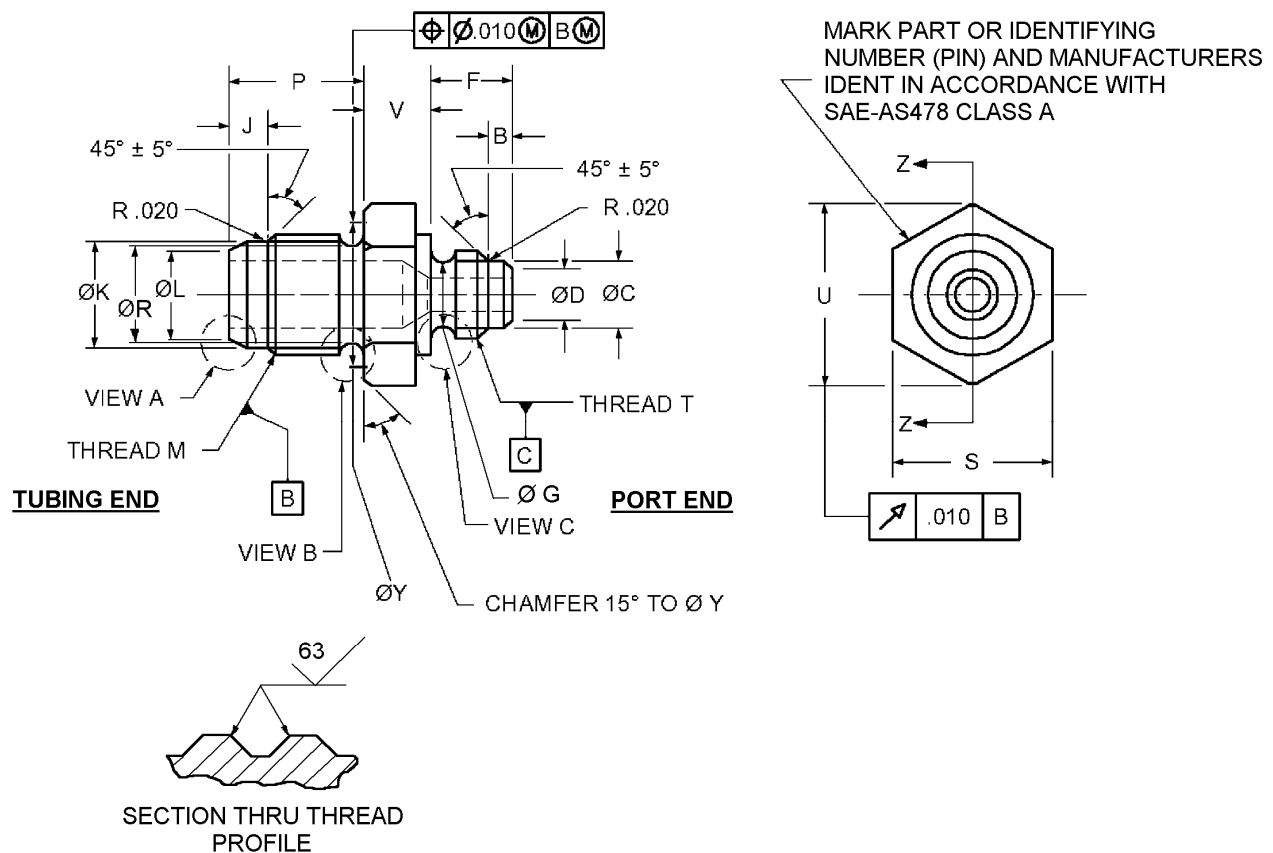
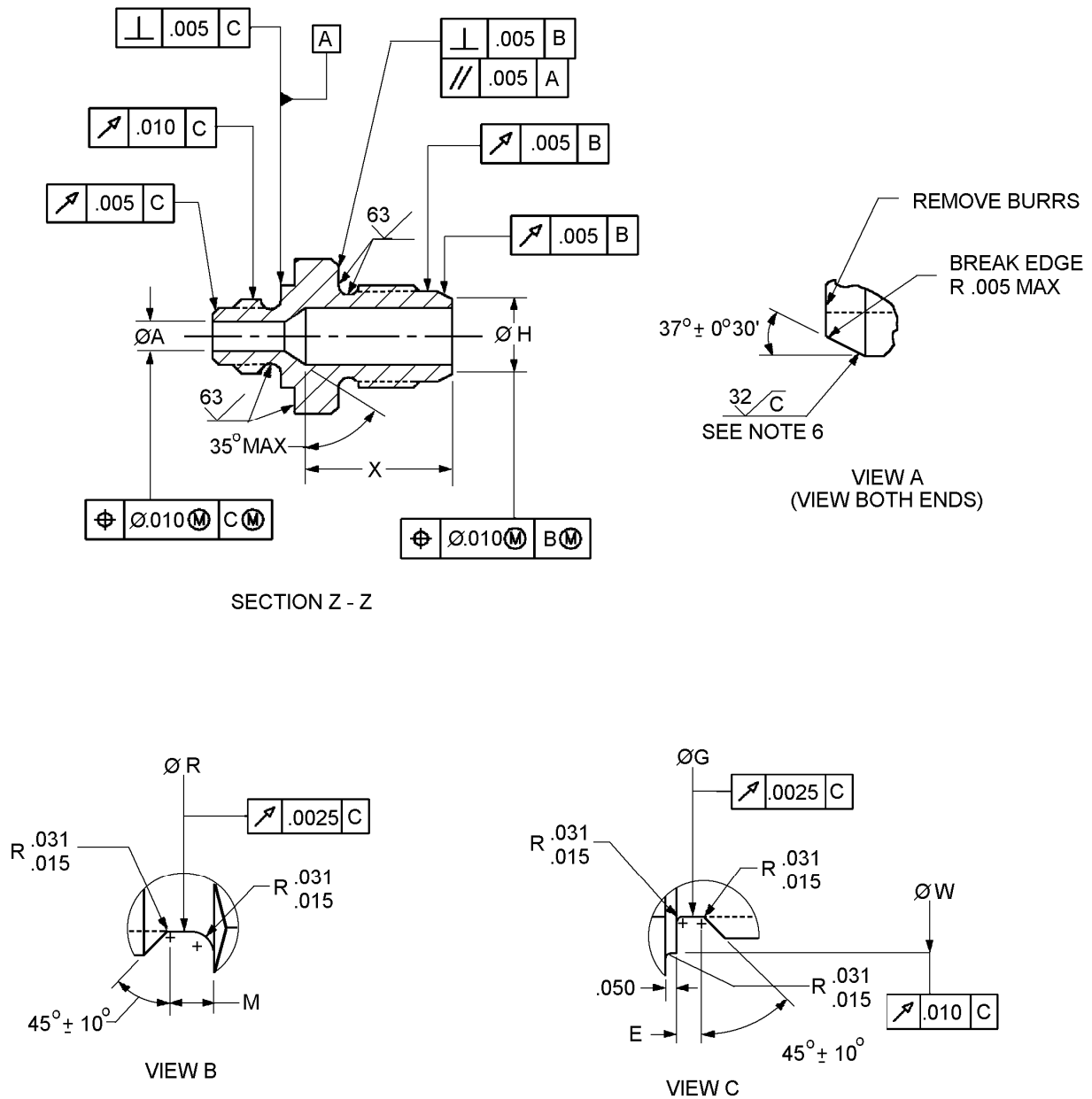


FIGURE 1. Reducer, tube dimensions and configurations.

MS9769B



Inches	mm
.0025	0.064
.005	0.13
.010	0.25
.015	0.38
.020	0.51
.031	0.79
.050	1.27

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

MS9769B

PIN	Nom tube size inches (mm)	Port size inches (mm)	Thread M SAE-AS8879	Thread T SAE-AS8879
MS9769-021	.125 (3.18)	.188 (4.78)	.375-24UNJF-3A	.3125-24UNJF-3A
MS9769-022	.125 (3.18)	.250 (6.35)	.4375-20UNJF-3A	.3125-24UNJF-3A
MS9769-023	.125 (3.18)	.375 (9.53)	.5625-18UNJF-3A	.3125-24UNJF-3A
MS9769-024	.125 (3.18)	.500 (12.70)	.750-16UNJF-3A	.3125-24UNJF-3A
MS9769-031	.188 (4.78)	.250 (6.35)	.4375-20UNJF-3A	.375-24UNJF-3A
MS9769-032	.188 (4.78)	.312 (7.92)	.500-20UNJF-3A	.375-24UNJF-3A
MS9769-033	.188 (4.78)	.375 (9.53)	.5625-18UNJF-3A	.375-24UNJF-3A
MS9769-034	.188 (4.78)	.500 (12.70)	.750-16UNJF-3A	.375-24UNJF-3A
MS9769-035	.188 (4.78)	.625 (15.88)	.875-14UNJF-3A	.375-24UNJF-3A
MS9769-036	.188 (4.78)	.750 (19.05)	1.0625-12UNJ-3A	.375-24UNJF-3A
MS9769-037	.188 (4.78)	1.000 (25.40)	1.3125-12UNJ-3A	.375-24UNJF-3A
MS9769-041	.250 (6.35)	.312 (7.92)	.500-20UNJF-3A	.4375-20UNJF-3A
MS9769-042	.250 (6.35)	.375 (9.53)	.5625-18UNJF-3A	.4375-20UNJF-3A
MS9769-043	.250 (6.35)	.438 (11.13)	.625-18UNJF-3A	.4375-20UNJF-3A
MS9769-044	.250 (6.35)	.500 (12.70)	.750-16UNJF-3A	.4375-20UNJF-3A
MS9769-045	.250 (6.35)	.625 (15.88)	.875-14UNJF-3A	.4375-20UNJF-3A
MS9769-046	.250 (6.35)	.750 (19.05)	1.0625-12UNJ-3A	.4375-20UNJF-3A
MS9769-051	.312 (7.92)	.375 (9.53)	.5625-18UNJF-3A	.500-20UNJF-3A
MS9769-052	.312 (7.92)	.438 (11.13)	.625-18UNJF-3A	.500-20UNJF-3A
MS9769-061	.375 (9.53)	.438 (11.13)	.625-18UNJF-3A	.5625-18UNJF-3A
MS9769-062	.375 (9.53)	.500 (12.70)	.750-16UNJF-3A	.5625-18UNJF-3A
MS9769-063	.375 (9.53)	.562 (14.27)	.8125-16UNJ-3A	.5625-18UNJF-3A
MS9769-064	.375 (9.53)	.625 (15.88)	.875-14UNJF-3A	.5625-18UNJF-3A
MS9769-065	.375 (9.53)	.750 (19.05)	1.0625-12UNJ-3A	.5625-18UNJF-3A
MS9769-071	.438 (11.13)	.500 (12.70)	.750-16UNJF-3A	.625-18UNJF-3A
MS9769-081	.500 (12.70)	.562 (14.27)	.8125-16UNJ-3A	.750-16UNJF-3A
MS9769-082	.500 (12.70)	.625 (15.88)	.875-14UNJF-3A	.750-16UNJF-3A
MS9769-083	.500 (12.70)	.688 (17.48)	1.000-12UNJ-3A	.750-16UNJF-3A
MS9769-084	.500 (12.70)	.750 (19.05)	1.0625-12UNJ-3A	.750-16UNJF-3A
MS9769-085	.500 (12.70)	1.000 (25.40)	1.3125-12UNJ-3A	.750-16UNJF-3A
MS9769-121	.750 (19.05)	1.000 (25.40)	1.3125-12UNJ-3A	1.0625-12UNJF-3A
MS9769-122	.750 (19.05)	1.250 (31.75)	1.625-12UNJ-3A	1.0625-12UNJF-3A
MS9769-161	1.000 (25.40)	1.250 (31.75)	1.625-12UNJ-3A	1.3125-12UNJF-3A

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

MS9769B

PIN	A inches (mm)	B +.015 (0.38) -.000 inches (mm)	C +.000 -.010 (0.25) inches (mm)	D ±.003 (0.08) inches (mm)
MS9769-021	.058 - .065 (1.47 - 1.65)	.144 (3.66)	.245 (6.22)	.132 (3.35)
MS9769-022	.058 - .065 (1.47 - 1.65)	.144 (3.66)	.245 (6.22)	.132 (3.35)
MS9769-023	.058 - .065 (1.47 - 1.65)	.144 (3.66)	.245 (6.22)	.132 (3.35)
MS9769-024	.058 - .065 (1.47 - 1.65)	.144 (3.66)	.245 (6.22)	.132 (3.35)
MS9769-031	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-032	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-033	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-034	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-035	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-036	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-037	.121 - .128 (3.07 - 3.25)	.144 (3.66)	.307 (7.80)	.195 (4.95)
MS9769-041	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-042	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-043	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-044	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-045	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-046	.168 - .175 (4.27 - 4.45)	.160 (4.06)	.359 (9.12)	.242 (6.15)
MS9769-051	.230 - .237 (5.84 - 6.02)	.160 (4.06)	.421 (10.69)	.304 (7.72)
MS9769-052	.230 - .237 (5.84 - 6.02)	.160 (4.06)	.421 (10.69)	.304 (7.72)
MS9769-061	.293 - .301 (7.44 - 7.65)	.165 (4.19)	.476 (12.09)	.368 (9.35)
MS9769-062	.293 - .301 (7.44 - 7.65)	.165 (4.19)	.476 (12.09)	.368 (9.35)
MS9769-063	.293 - .301 (7.44 - 7.65)	.165 (4.19)	.476 (12.09)	.368 (9.35)
MS9769-064	.293 - .301 (7.44 - 7.65)	.165 (4.19)	.476 (12.09)	.368 (9.35)
MS9769-065	.293 - .301 (7.44 - 7.65)	.165 (4.19)	.476 (12.09)	.368 (9.35)
MS9769-071	.355 - .363 (9.02 - 9.22)	.165 (4.19)	.539 (13.69)	.430 (10.92)
MS9769-081	.387 - .395 (9.83 - 10.03)	.229 (5.82)	.654 (16.61)	.462 (11.73)
MS9769-082	.387 - .395 (9.83 - 10.03)	.229 (5.82)	.654 (16.61)	.462 (11.73)
MS9769-083	.387 - .395 (9.83 - 10.03)	.229 (5.82)	.654 (16.61)	.462 (11.73)
MS9769-084	.387 - .395 (9.83 - 10.03)	.229 (5.82)	.654 (16.61)	.462 (11.73)
MS9769-085	.387 - .395 (9.83 - 10.03)	.229 (5.82)	.654 (16.61)	.462 (11.73)
MS9769-121	.604 - .614 (15.34 - 15.60)	.304 (7.72)	.938 (23.83)	.681 (17.30)
MS9769-122	.604 - .614 (15.34 - 15.60)	.304 (7.72)	.938 (23.83)	.681 (17.30)
MS9769-161	.839 - .851 (21.31 - 21.62)	.312 (7.92)	1.188 (30.18)	.918 (23.32)

FIGURE 1. Reducer, tube dimensions and configuration - Continued.

MS9769B

PIN	E +.015 (0.38) -.000 inches (mm)	F inches (mm)	G +.002 (0.05) -.003 (0.08) inches (mm)	H dia. inches (mm)
MS9769-021	.063 (1.60)	.415 (10.54)	.250 (6.35)	.121 - .128 (3.07 - 3.25)
MS9769-022	.063 (1.60)	.415 (10.54)	.250 (6.35)	.168 - .175 (4.27 - 4.45)
MS9769-023	.063 (1.60)	.415 (10.54)	.250 (6.35)	.293 - .301 (7.44 - 7.65)
MS9769-024	.063 (1.60)	.415 (10.54)	.250 (6.35)	.387 - .395 (9.83 - 10.03)
MS9769-031	.063 (1.60)	.446 (11.33)	.312 (7.92)	.168 - .175 (4.27 - 4.45)
MS9769-032	.063 (1.60)	.446 (11.33)	.312 (7.92)	.230 - .237 (5.84 - 6.02)
MS9769-033	.063 (1.60)	.446 (11.33)	.312 (7.92)	.293 - .301 (7.44 - 7.65)
MS9769-034	.063 (1.60)	.446 (11.33)	.312 (7.92)	.387 - .395 (9.83 - 10.03)
MS9769-035	.063 (1.60)	.446 (11.33)	.312 (7.92)	.480 - .488 (12.19 - 12.40)
MS9769-036	.063 (1.60)	.446 (11.33)	.312 (7.92)	.604 - .614 (15.34 - 15.60)
MS9769-037	.063 (1.60)	.446 (11.33)	.312 (7.92)	.839 - .851 (21.31 - 21.62)
MS9769-041	.075 (1.91)	.517 (13.13)	.364 (9.25)	.230 - .237 (5.84 - 6.02)
MS9769-042	.075 (1.91)	.517 (13.13)	.364 (9.25)	.293 - .301 (7.44 - 7.65)
MS9769-043	.075 (1.91)	.517 (13.13)	.364 (9.25)	.355 - .363 (9.02 - 9.22)
MS9769-044	.075 (1.91)	.517 (13.13)	.364 (9.25)	.387 - .395 (9.83 - 10.03)
MS9769-045	.075 (1.91)	.517 (13.13)	.364 (9.25)	.480 - .488 (12.19 - 12.40)
MS9769-046	.075 (1.91)	.517 (13.13)	.364 (9.25)	.604 - .614 (15.34 - 15.60)
MS9769-051	.075 (1.91)	.517 (13.13)	.426 (10.82)	.293 - .301 (7.44 - 7.65)
MS9769-052	.075 (1.91)	.517 (13.13)	.426 (10.82)	.355 - .363 (9.02 - 9.22)
MS9769-061	.083 (2.11)	.523 (13.28)	.481 (12.22)	.355 - .363 (9.02 - 9.22)
MS9769-062	.083 (2.11)	.523 (13.28)	.481 (12.22)	.387 - .395 (9.83 - 10.03)
MS9769-063	.083 (2.11)	.523 (13.28)	.481 (12.22)	.434 - .442 (11.02 - 11.23)
MS9769-064	.083 (2.11)	.523 (13.28)	.481 (12.22)	.480 - .488 (12.19 - 12.40)
MS9769-065	.083 (2.11)	.523 (13.28)	.481 (12.22)	.604 - .614 15.34 - 15.60)
MS9769-071	.083 (2.11)	.523 (13.28)	.544 (13.82)	.387 - .395 (9.83 - 10.03)
MS9769-081	.094 (2.39)	.633 (16.08)	.660 (16.76)	.434 - .442 (11.02 - 11.23)
MS9769-082	.094 (2.39)	.633 (16.08)	.660 (16.76)	.480 - .488 (12.19 - 12.40)
MS9769-083	.094 (2.39)	.633 (16.08)	.660 (16.76)	.542 - .552 (13.77 - 14.02)
MS9769-084	.094 (2.39)	.633 (16.08)	.660 (16.76)	.604 - .614 15.34 - 15.60)
MS9769-085	.094 (2.39)	.633 (16.08)	.660 (16.76)	.839 - .851 (21.31 - 21.62)
MS9769-121	.125 (3.18)	.853 (21.67)	.945 (24.00)	.839 - .851 (21.31 - 21.62)
MS9769-122	.125 (3.18)	.853 (21.67)	.945 (24.00)	1.073 - 1.086 (27.25 - 27.54)
MS9769-161	.125 (3.18)	.908 (23.06)	1.195 (30.35)	1.073 - 1.086 (27.25 - 27.54)

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

MS9769B

PIN	J +.015 (0.38) -.000 inches (mm)	K +.000 -.010 (0.25) inches (mm)	L ±.003 (0.08) inches (mm)	M +.015 (0.38) -.000 inches (mm)	P
MS9769-021	.144 (3.66)	.307 (7.80)	.195 (4.95)	.063 (1.60)	.446 (11.33)
MS9769-022	.160 (4.06)	.359 (9.12)	.242 (6.15)	.075 (1.91)	.517 (13.13)
MS9769-023	.165 (4.19)	.476 (12.09)	.368 (9.35)	.083 (2.11)	.523 (13.28)
MS9769-024	.229 (5.82)	.654 (16.61)	.462 (11.73)	.094 (2.39)	.633 (16.08)
MS9769-031	.160 (4.06)	.359 (9.12)	.242 (6.15)	.075 (1.91)	.517 (13.13)
MS9769-032	.160 (4.06)	.421 (10.69)	.304 (7.72)	.075 (1.91)	.517 (13.13)
MS9769-033	.165 (4.19)	.476 (12.09)	.368 (9.35)	.083 (2.11)	.523 (13.28)
MS9769-034	.229 (5.82)	.654 (16.61)	.462 (11.73)	.094 (2.39)	.633 (16.08)
MS9769-035	.255 (6.48)	.767 (19.48)	.555 (14.10)	.107 (2.72)	.747 (18.97)
MS9769-036	.304 (7.72)	.938 (23.83)	.681 (17.30)	.125 (3.18)	.853 (21.67)
MS9769-037	.312 (7.92)	1.188 (30.18)	.918 (23.32)	.125 (3.18)	.908 (23.06)
MS9769-041	.160 (4.06)	.421 (10.69)	.304 (7.72)	.075 (1.91)	.517 (13.13)
MS9769-042	.165 (4.19)	.476 (12.09)	.368 (9.35)	.083 (2.11)	.523 (13.28)
MS9769-043	.165 (4.19)	.539 (13.69)	.430 (10.92)	.083 (2.11)	.523 (13.28)
MS9769-044	.229 (5.82)	.654 (16.61)	.462 (11.73)	.094 (2.39)	.633 (16.08)
MS9769-045	.255 (6.48)	.767 (19.48)	.555 (14.10)	.107 (2.72)	.747 (18.97)
MS9769-046	.304 (7.72)	.938 (23.83)	.681 (17.30)	.125 (3.18)	.853 (21.67)
MS9769-051	.165 (4.19)	.476 (12.09)	.368 (9.35)	.083 (2.11)	.523 (13.28)
MS9769-052	.165 (4.19)	.539 (13.69)	.430 (10.92)	.083 (2.11)	.523 (13.28)
MS9769-061	.165 (4.19)	.539 (13.69)	.430 (10.92)	.083 (2.11)	.523 (13.28)
MS9769-062	.229 (5.82)	.654 (16.61)	.462 (11.73)	.094 (2.39)	.633 (16.08)
MS9769-063	.229 (5.82)	.716 (18.19)	.509 (12.93)	.094 (2.39)	.633 (16.08)
MS9769-064	.255 (6.48)	.767 (19.48)	.555 (14.10)	.107 (2.72)	.747 (18.97)
MS9769-065	.304 (7.72)	.938 (23.83)	.681 (17.30)	.125 (3.18)	.853 (21.67)
MS9769-071	.229 (5.82)	.654 (16.61)	.462 (11.73)	.094 (2.39)	.633 (16.08)
MS9769-081	.229 (5.82)	.716 (18.19)	.509 (12.93)	.094 (2.39)	.633 (16.08)
MS9769-082	.255 (6.48)	.767 (19.48)	.555 (14.10)	.107 (2.72)	.747 (18.97)
MS9769-083	.304 (7.72)	.875 (22.23)	.619 (15.72)	.125 (3.18)	.853 (21.67)
MS9769-084	.304 (7.72)	.938 (23.83)	.681 (17.30)	.125 (3.18)	.853 (21.67)
MS9769-085	.312 (7.92)	1.188 (30.18)	.918 (23.32)	.125 (3.18)	.908 (23.06)
MS9769-121	.312 (7.92)	1.188 (30.18)	.918 (23.32)	.125 (3.18)	.908 (23.06)
MS9769-122	.363 (9.22)	1.500 (38.10)	1.513 (38.43)	.125 (3.18)	.954 (24.23)
MS9769-161	.363 (9.22)	1.500 (38.10)	1.513 (38.43)	.125 (3.18)	.954 (24.23)

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

MS9769B

PIN	R +.002 (0.05) -.003 (0.08) inches (mm)	S inches (mm)	U Min inches (mm)	V inches (mm)
MS9769-021	.312 (7.92)	.616 - .627 (15.65 - 15.93)	.694 (17.63)	.240 (6.10)
MS9769-022	.364 (9.25)	.679 - .690 (17.25 - 17.53)	.766 (19.46)	.270 (6.86)
MS9769-023	.481 (12.22)	.803 - .814 (20.40-20.68)	.907 (23.04)	.300 (7.62)
MS9769-024	.660 (16.76)	.990 - 1.002 (25.15 - 25.45)	1.121 (28.47)	.300 (7.62)
MS9769-031	.364 (9.25)	.679 - .690 (17.25 - 17.53)	.766 (19.46)	.270 (6.86)
MS9769-032	.426 (10.82)	.741 - .752 (18.82 - 19.10)	.837 (21.26)	.270 (6.86)
MS9769-033	.481 (12.22)	.803 - .814 (20.40-20.68)	.907 (23.04)	.300 (7.62)
MS9769-034	.660 (16.76)	.990 - 1.002 (25.15 - 25.45)	1.121 (28.47)	.300 (7.62)
MS9769-035	.773 (19.63)	1.115 - 1.127 (28.32 - 28.63)	1.262 (32.05)	.360 (9.14)
MS9769-036	.945 (24.00)	1.301 - 1.314 (33.05 - 33.38)	1.475 (37.47)	.360 (9.14)
MS9769-037	1.195 (30.35)	1.614 - 1.627 (41.00 - 41.33)	1.833 (46.56)	.410 (10.41)
MS9769-041	.426 (10.82)	.741 - .752 (18.82 - 19.10)	.837 (21.26)	.270 (6.86)
MS9769-042	.481 (12.22)	.803 - .814 (20.40-20.68)	.907 (23.04)	.300 (7.62)
MS9769-043	.544 (13.82)	.865 - .877 (21.97 - 22.28)	.978 (24.84)	.300 (7.62)
MS9769-044	.660 (16.76)	.990 - 1.002 (25.15 - 25.45)	1.121 (28.47)	.300 (7.62)
MS9769-045	.773 (19.63)	1.115 - 1.127 (28.32 - 28.63)	1.262 (32.05)	.360 (9.14)
MS9769-046	.945 (24.00)	1.301 - 1.314 (33.05 - 33.38)	1.475 (37.47)	.360 (9.14)
MS9769-051	.481 (12.22)	.803 - .814 (20.40-20.68)	.907 (23.04)	.300 (7.62)
MS9769-052	.544 (13.82)	.865 - .877 (21.97 - 22.28)	.978 (24.84)	.300 (7.62)
MS9769-061	.544 (13.82)	.865 - .877 (21.97 - 22.28)	.978 (24.84)	.300 (7.62)
MS9769-062	.660 (16.76)	.990 - 1.002 (25.15 - 25.45)	1.121 (28.47)	.300 (7.62)
MS9769-063	.722 (18.34)	1.052 - 1.064 (26.72 - 27.03)	1.191 (30.25)	.300 (7.62)
MS9769-064	.773 (19.63)	1.115 - 1.127 (28.32 - 28.63)	1.262 (32.05)	.360 (9.14)
MS9769-065	.945 (24.00)	1.301 - 1.314 (33.05 - 33.38)	1.475 (37.47)	.360 (9.14)
MS9769-071	.660 (16.76)	.990 - 1.002 (25.15 - 25.45)	1.121 (28.47)	.300 (7.62)
MS9769-081	.722 (18.34)	1.052 - 1.064 (26.72 - 27.03)	1.191 (30.25)	.300 (7.62)
MS9769-082	.773 (19.63)	1.115 - 1.127 (28.32 - 28.63)	1.262 (32.05)	.360 (9.14)
MS9769-083	.882 (22.40)	1.301 - 1.314 (33.05 - 33.38)	1.475 (37.47)	.360 (9.14)
MS9769-084	.945 (24.00)	1.301 - 1.314 (33.05 - 33.38)	1.475 (37.47)	.360 (9.14)
MS9769-085	1.195 (30.35)	1.614 - 1.627 (41.00 - 41.33)	1.833 (46.56)	.410 (10.41)
MS9769-121	1.195 (30.35)	1.614 - 1.627 (41.00 - 41.33)	1.833 (46.56)	.410 (10.41)
MS9769-122	1.507 (38.28)	1.863 - 1.877 (47.32 - 47.68)	2.117 (53.77)	.410 (10.41)
MS9769-161	1.507 (38.28)	1.863 - 1.877 (47.32 - 47.68)	2.112 (53.64)	.410 (10.41)

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

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PIN	W inches (mm)	X inches (mm)	Y inches (mm)	Approx weight lb/100 (kg/100)
MS9769-021	.565 (14.35)	.585 (14.86)	.625 (15.88)	5.05 (2.3)
MS9769-022	.565 (14.35)	.670 (17.02)	.688 (17.48)	6.31 (2.9)
MS9769-023	.565 (14.35)	.665 (16.89)	.812 (20.62)	7.70 (3.5)
MS9769-024	.565 (14.35)	.740 (18.80)	1.000 (25.40)	11.14 (5.1)
MS9769-031	.625 (15.88)	.690 (17.53)	.688 (17.48)	6.94 (3.1)
MS9769-032	.625 (15.88)	.670 (17.02)	.750 (19.05)	7.53 (3.4)
MS9769-033	.625 (15.88)	.685 (17.40)	.812 (20.62)	8.40 (3.8)
MS9769-034	.625 (15.88)	.765 (19.43)	1.000 (25.40)	11.87 (5.4)
MS9769-035	.625 (15.88)	.895 (22.73)	1.125 (28.58)	16.91 (7.7)
MS9769-036	.625 (15.88)	.965 (24.51)	1.312 (33.32)	20.42 (9.3)
MS9769-037	.625 (15.88)	.985 (25.02)	1.625 (41.28)	29.52 (13.4)
MS9769-041	.690 (17.53)	.690 (17.53)	.750 (19.05)	8.29 (3.8)
MS9769-042	.690 (17.53)	.710 (18.03)	.812 (20.62)	9.16 (4.2)
MS9769-043	.690 (17.53)	.705 (17.91)	.875 (22.23)	9.78 (4.4)
MS9769-044	.690 (17.53)	.770 (19.56)	1.000 (25.40)	12.57 (5.7)
MS9769-045	.690 (17.53)	.910 (23.11)	1.125 (28.58)	17.64 (8.0)
MS9769-046	.690 (17.53)	.985 (25.02)	1.312 (33.32)	21.18 (9.6)
MS9769-051	.750 (19.05)	.725 (18.42)	.812 (20.62)	9.49 (4.3)
MS9769-052	.750 (19.05)	.700 (17.78)	.875 (22.23)	10.09 (4.6)
MS9769-061	.815 (20.70)	.725 (18.42)	.875 (22.23)	10.26 (4.7)
MS9769-062	.815 (20.70)	.825 (20.96)	1.000 (25.40)	12.97 (5.9)
MS9769-063	.815 (20.70)	.808 (20.52)	1.062 (26.97)	13.80 (6.3)
MS9769-064	.815 (20.70)	.955 (24.26)	1.125 (28.58)	17.98 (8.2)
MS9769-065	.815 (20.70)	1.028 (26.11)	1.312 (33.32)	21.43 (9.7)
MS9769-071	.875 (22.23)	.845 (21.46)	1.000 (25.40)	13.12 (6.0)
MS9769-081	1.000 (25.40)	.818 (20.78)	1.062 (26.97)	15.91 (7.2)
MS9769-082	1.000 (25.40)	.965 (24.51)	1.125 (28.58)	20.09 (9.1)
MS9769-083	1.000 (25.40)	1.060 (26.92)	1.312 (33.32)	23.84 (10.8)
MS9769-084	1.000 (25.40)	1.035 (26.29)	1.312 (33.32)	23.57 (10.7)
MS9769-085	1.000 (25.40)	1.060 (26.92)	1.625 (41.28)	32.31 (14.7)
MS9769-121	1.375 (34.93)	1.120 (28.45)	1.625 (41.28)	35.93 (16.3)
MS9769-122	1.375 (34.93)	1.085 (27.56)	1.875 (47.63)	43.74 (19.8)
MS9769-161	1.625 (41.28)	1.163 (29.54)	1.875 (47.63)	42.27 (19.2)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified tolerances for linear dimensions are $\pm .010$ inch (0.25 mm), angular dimensions $\pm 5^\circ$.
4. Machined surfaces shall be finished to 125μ in Ra, unless otherwise specified on the figures. Surface finish shall be in accordance with ASME B46.1.
5. Break sharp edges .003 to .015 inch (0.08 to 0.38 mm), unless otherwise specified.
6. 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.

FIGURE 1. Reducer, tube dimensions and configurations - Continued.

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REQUIREMENTS:

Reducer, tube shall be as specified on figure 1.

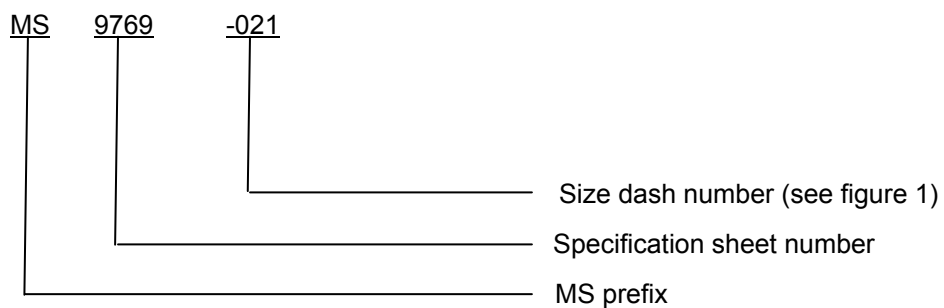
Fluorescent penetrate examination shall be in accordance with ASTM E1417.

Fluorescent penetrate shall be in accordance with SAE-AMS2644.

Material: Corrosion resistant steel in accordance with SAE-AMS5646.

Finish: Passivate in accordance with SAE-AMS2700, type 6.

PIN: The PIN consists of the letter "MS" the specification sheet number, and a dash number for tube and port size. Unassigned PIN's shall not be used.



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

Application note: Fluid flow reduction is from dimension "Dia. L" to "Dia. A".

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.

Referenced documents. This document references the following:

ASME B46.1
ASTM E1417
SAE-AMS2644
SAE-AMS2700
SAE-AMS5646
SAE-AS478
SAE-AS8879

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CONCLUDING MATERIAL

Custodians:

Navy - AS
Air Force - 99
DLA - CC

Preparing activity:

DLA - CC

(Project 4730-2008-032)

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>.