

INCH-POUND

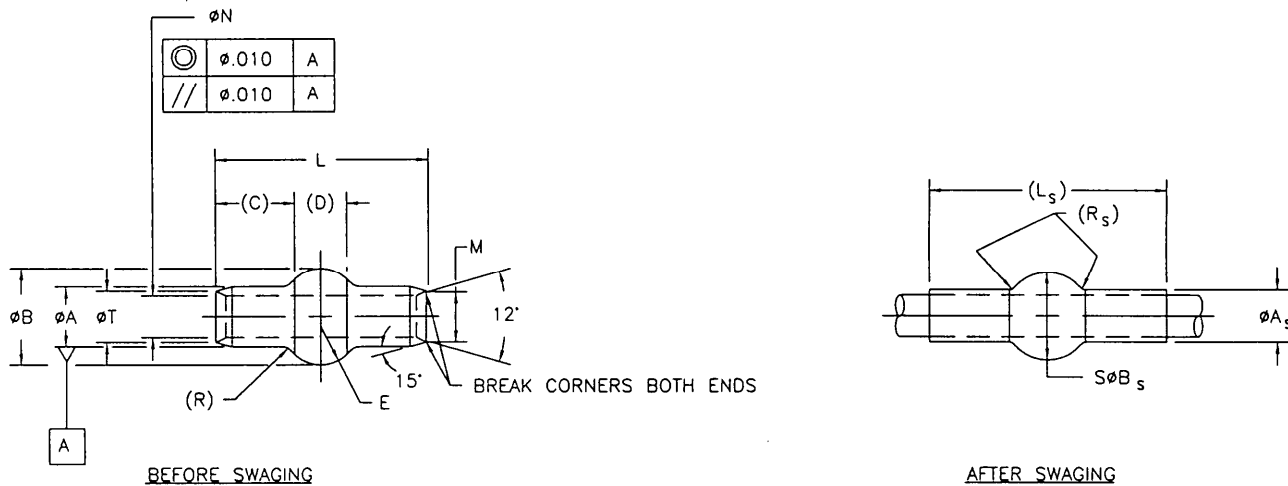
MS20663B
 15 AUGUST 1997
 SUPERSEDING
 MS20663A
 25 NOVEMBER 1963

MILITARY SPECIFICATION SHEET

BALL END, WIRE ROPE, SWAGING, DOUBLE SHANK

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 THE ISSUE OF THE FOLLOWING DOCUMENT
 LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS
 AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION: MIL-DTL-781.



(B) ENTIRE DOCUMENT REVISED

MS20663B

TABLE I. PART NUMBERS AND DIMENSIONS.

MS PART NUMBERS		NOM CABLE DIA	MINIMUM BREAKING STRENGTH	ϕA		ϕA_s		ϕB		$S\phi B_s$ SPHERICAL		C REF	D REF	E RAD REF
CORROSION RESISTANT STEEL														
MS20663C2	.062	480	.127	+0.000	.112	+0.000	.207	+0.000	.190	+0.000	.125	.114	+0.000 -0.003	.0825
MS20663C3	.093	920	.163	-0.004	.143	-0.003	.277	-0.004	.253	-0.003	.188	.152	+0.000 -0.004	.110
MS20663C4	.125	2000	.218		.190		.345		.315		.250	.1895		.137
MS20663C5	.156	2800	.254		.222	+0.000 -0.004	.419		.379	+0.000 -0.004	.313	.2270		.165
MS20663C6	.187	4200	.293		.255		.487		.442		.375	.2640		.192
MS20663C7	.218	5600	.347	+0.000	.302	+0.000 -0.005	.555	+0.000 -0.005	.505	+0.000 -0.005	.438	.3025	+0.000 -0.0050	.220
MS20663C8	.250	7000	.401	-0.005	.348		.624		.567		.500	.3395		.247
MS20663C9	.281	8000	.439		.382	+0.000	.694		.632	+0.000	.562	.3775		.275
MS20663C10	.312	9800	.475		.413	-0.007	.763		.694	-0.007	.625	.4145		.302

MS PART NUMBERS		L $\pm .0075$	L_s REF	M +0.010 -0.000	ϕN	R RAD REF	R_s RAD REF	ϕT +0.000 -0.010
CORROSION RESISTANT STEEL								
MS20663C2	.3620	.390	.079	.073		.028	.014	.109
MS20663C3	.5250	.578	.114	.104		.037	.019	.141
MS20663C4	.6880	.765	.152	.139	+0.004 -0.000	.046	.023	.188
MS20663C5	.8500	.953	.185	.169		.056	.028	.219
MS20663C6	1.0120	1.140	.221	.201		.065	.033	.250
MS20663C7	1.1750	1.328	(a)	.233		.075	.038	.297
MS20663C8	1.3370	1.515	(a)	.264	+0.005 -0.000	.084	.042	.344
MS20663C9	1.4970	1.719	(a)	.297		.094	.046	.375
MS20663C10	1.6640	1.875	(a)	.328		.103	.046	.406

(a) NO TAPERED BELLMOUTH ON -7, -8, -9, -10

REQUIREMENTS:

1. MATERIAL: CORROSION RESISTANT STEEL, 303Se (UNS S30323) OR 304 (UNS S30400).
2. FINISH: FINISH IN ACCORDANCE WITH MIL-DTL-781.
3. SWAGE: SWAGE IN ACCORDANCE WITH MIL-DTL-6117.
4. TOLERANCES: UNLESS OTHERWISE SPECIFIED: DECIMALS $\pm .010$, ANGLES $\pm 3'$.

NOTES:

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DRAWING IN ACCORDANCE WITH ASME Y14.5M.
3. REMOVE BURRS AND BREAK SHARP EDGES.
4. INTERCHANGEABILITY RELATIONSHIP; MS20663 AND AN663 PARTS IDENTIFIED BY THE SAME DASH NUMBER ARE UNIVERSALLY, FUNCTIONALLY, AND DIMENSIONALLY INTERCHANGEABLE.
5. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
6. UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.
7. MS20663 SUPERSEDES AN663.
8. CORROSION RESISTANT STEEL PARTS CAN BE UNIVERSALLY SUBSTITUTED FOR CARBON AND ALLOY STEEL PARTS IN ACCORDANCE WITH THE SUBSTITUTION TABLE. CARBON AND ALLOY STEEL PARTS CANNOT BE SUBSTITUTED FOR CORROSION RESISTANT STEEL PARTS.

MS20663B

SUBSTITUTION TABLE

MS PART NUMBERS	
CORROSION RESISTANT STEEL	CARBON STEEL, CAD PLATED
MS20663C2	MS20663-2
MS20663C3	MS20663-3
MS20663C4	MS20663-4
MS20663C5	MS20663-5
MS20663C6	MS20663-6
MS20663C7	MS20663-7
MS20663C8	MS20663-8
MS20663C9	MS20663-9
MS20663C10	MS20663-10

CUSTODIANS:

NAVY - AS
ARMY - ME
AIR FORCE - 99

REVIEW:

ARMY - AR, MD
NAVY - MC

PREPARING ACTIVITY:
DLA - IS

(PROJECT. 4030-0284)