

MIL-C-5015 CONNECTOR ACCESSORY QUICK REFERENCE

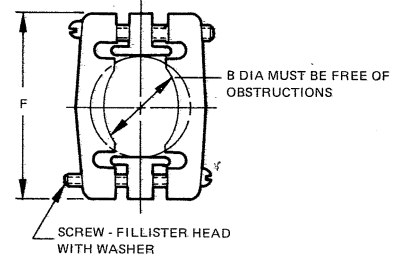
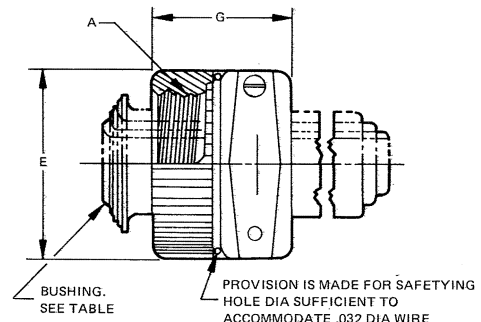
DESCRIPTION	PART NUMBER	CONTACT STYLE (PAGE NO. REF)				
		SOLDER	CRIMP			
			FRONT RELEASE		REAR RELEASE	
			005015E	5015F	5015F	83723
BACKSHELLS/CABLE CLAMPS						
CABLE CLAMP	MS3057	279				
GROMMET NUT	M83723/35N					274
GROMMET NUT	MS3413		289			
GROMMET NUT	MS3416*E			289	289	
GROMMET NUT	MS3416*G			289	289	
STRAIGHT BACKSHELL	M83723/51R					278
STRAIGHT BACKSHELL	MS3437			292	292	
STRAIGHT QUICK TIE	M83723/50R					277
STRAIGHT QUICK TIE	MS3152			280	280	
STRAIGHT SHIELDED BACKSHELL	MS3419			291	291	
STRAIGHT STRAIN RELIEF	M83723/35S					274
STRAIGHT STRAIN RELIEF	MS3410D/E		287			
STRAIGHT STRAIN RELIEF	MS3417			290	290	
45° BACKSHELL	M83723/51B					278
45° BACKSHELL	MS3189			285	285	
45° QUICK TIE	M83723/50B					277
45° QUICK TIE	MS3153			280	280	
45° STRAIN RELIEF	MS3415			289	289	
90° BACKSHELL	M83723/51A					278
90° BACKSHELL	MS3188			283	283	
90° QUICK TIE	M83723/50A					276
90° QUICK TIE	MS3154			281	281	
90° STRAIN RELIEF	M83723/35A					274
90° STRAIN RELIEF	MS3410F		287			
90° STRAIN RELIEF	MS3418			290	290	
SEALING ADAPTER	MS3411		288			
SHIELDING RING	MS3161			282	282	
CONDUIT FITTINGS						
	AN3050	319	319	319	319	319
	THRU					
	AN3068	319	319	319	319	319
CONNECTOR ASSEMBLY WRENCH						
	MS3480	326	326	326	326	326
CRIMP CONTACTS						
PIN, SIZE 0-16	M83723/29					329
PIN, SIZE 0-16	MS3162				329	
PIN, SIZE 0-16	MS90453		328	328		
SOCKET, SIZE 0-16	M83723/30					329
SOCKET, SIZE 0-16	MS3163				329	
SOCKET, SIZE 0-16	MS90454		328	328		
CRIMP CONTACT ADAPTER						
SIZE 0-8	MS3348		328	328	328	328

DESCRIPTION	PART NUMBER	CONTACT STYLE (PAGE NO. REF)				
		SOLDER	CRIMP			
			FRONT RELEASE		REAR RELEASE	
			005015E	5015F	5015F	83723
CRIMP CONTACT EXTRACTION & INSERTION TOOLS						
EXTRACTION ONLY	MS3165				333	
EXTRACTION ONLY (8, 4 & 0)	MS3483				333	
EXTRACTION ONLY	MS90456		332	332		
EXTRACTION OR INSERTION	M83723/31					333
EXTRACTION OR INSERTION	M83723/32					333
EXTRACTION OR INSERTION	MS3447				333	
EXTRACTION OR INSERTION	MS27534				333	
INSERTION ONLY	MS90455		332	332		
CRIMP TOOLS						
SIZE 12-20 CONTACTS	M22520		336	336	336	336
SIZE 12-20 CONTACTS	MS3191		336	336	336	336
SIZE 8-0 CONTACTS	MS25441		336	336	336	336
DUMMY RECEPTACLES						
FOR PLUG	MS3105	239	239	239	239	239
FOR PLUG	NAS 1196	242	242	242	242	242
DUST CAPS						
METAL, FOR PLUG	MS25042	346	346	346	346	346
METAL, FOR RECEPTACLE	MS25043	352	352	352	352	352
PLASTIC, FOR PLUG OR RECEPTACLE	MS90376	356	356	356	356	356
GASKET FOR FLANGE MOUNT RECEPTACLE						
	MS52000	358	358	358	358	358
RUBBER BUSHINGS						
	MS3420	360	360	360	360	360
	MS39056	361	361	361	361	361
	MS39057	361	361	361	361	361
SEALING PLUGS						
SIZE 0-20	M83723/28					364
SIZE 8-20	MS25251	364	364	364	364	
SHRINK BOOTS & ADAPTERS						
BOOT ADAPTER	M83723/27M					368
BOOT ADAPTER	MS3158			371	371	
BOOT ADAPTER	MS3416*G			372	372	
STRAIGHT BOOT	M83723/27S					367
STRAIGHT BOOT	MS3109			369	369	
90° BOOT	M83723/27A					366
90° BOOT	MS3117			370	370	
SHRINK SLEEVE	MS3118			371	371	

TYPE A - CABLE CLAMP, STRAIN RELIEF

DASH NO.	CONNECTOR SHELL SIZE (REF)	A THREAD	B MAX.	E ±.031 DIA.	F ±.031	G ±.031	BUSHING (REF) (a)
-3A	8S AND 10S	1/2-28UNEF-2B	.250	.688	.812	.812	MS3420-3
-4A	10SL, 12S AND 12	5/8-24UNEF-2B	.312	.812	.875	.875	MS3420-4
-6A	14S AND 14	3/4-20UNEF-2B	.438	.969	1.062	.875	MS3420-6
-8A	16S AND 16	7/8-20UNEF-2B	.562	1.094	1.156		MS3420-8
-10A	18	1-20UNEF-2B	.625	1.188	1.250	.938	MS3420-10
-12A	20 AND 22	1-3/16-18UNEF-2B	.750	1.375	1.469		MS3420-12
-16A	24 AND 28	1-7/16-18UNEF-2B	.938	1.656	1.688	1.031	MS3420-16
-20A	32	1-3/4-18UNS-2B	1.250	2.031	2.031	1.094	MS3420-20
-24A	36	2-18UNS-2B	1.375	2.219	2.281	1.156	MS3420-24
-28A	40	2-1/4-16UN-2B	1.625	2.500	2.688	1.688	MS3420-28
-32A	44	2-1/2-16UN-2B	1.875	2.781	2.938		MS3420-32
-40A	48	3-16UN-2B	2.375	3.281	3.500	1.750	MS3420-40

(a) NOTE: BUSHINGS ARE NOT SUPPLIED WITH CLAMPS

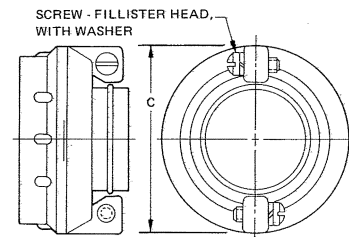
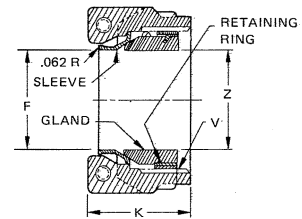


MS3057-*A

TYPE B CABLE SEAL, GROUNDING

DASH NO.	CONNECTOR SHELL SIZE (REF)	C MAX.	F +.020 - .000 DIA.	K MAX.	V THREAD	Z DIA. APPROX. (GLAND)		BUSHING (REF) (a)
						FREE	CLOSED	
-3B	8S AND 10S	.812	.231		1/2-28UNEF-2B	.219	.031	MS3420-3A
-4B	10SL, 12S AND 12	.937	.315	1.031	5/8-24UNEF-2B	.312	.094	MS3420-4A
-6B	14S AND 14	1.062	.440		3/4-20UNEF-2B	.438	.250	MS3420-6A
-8B	16S AND 16	1.188	.515		7/8-20UNEF-2B	.531	.312	MS3420-8A
-10B	18	1.312	.614	1.094	1-20UNEF-2B	.625	.375	MS3420-10A
-12B	20 AND 22	1.562	.738	1.219	1-3/16-18UNEF-2B	.750	.500	MS3420-12A
-16B	24 AND 28	1.750	.926		1-7/16-18UNEF-2B	.938	.594	MS3420-16A
-20B	32	2.250	1.200	1.344	1-3/4-18UNS-2B	1.250	.938	MS3420-20A
-24B	36	2.375	1.363	1.547	2-18UNS-2B	1.375	.969	MS3420-24A
-28B	40	2.625	1.611		2-1/4-16UN-2B	1.625	1.188	MS3420-28A
-32B	44	2.812	1.865	1.734	2-1/2-16UN-2B	1.875	1.375	MS3420-32A
-40B	48	3.312	2.365	1.781	3-16UN-2B	2.375	1.875	MS3420-40A

(a) NOTE: BUSHINGS ARE NOT SUPPLIED WITH CLAMPS

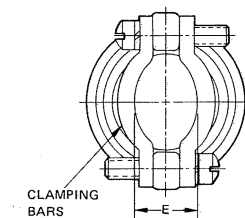
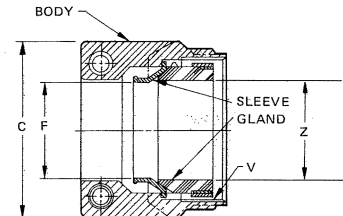


MS3057-*B

TYPE C CABLE SEAL, STRAIN-RELIEF

DASH NO.	CONNECTOR SHELL SIZE (REF)	C MAX.	E MAX. CLOSED	F +.020 - .000 DIA.	K MAX.	V THREAD	Z DIA. APPROX. (GLAND)		BUSHING (REF) (a)
							FREE	CLOSED	
-3C	8S AND 10S	.812	.217	.231		1/2-28UNEF-2B	.219	.031	MS3420-3A
-4C	10SL, 12S AND 12	.937	.296	.315	1.375	5/8-24UNEF-2B	.312	.094	MS3420-4A
-6C	14S AND 14	1.062	.390	.440		3/4-20UNEF-2B	.438	.250	MS3420-6A
-8C	16S AND 16	1.188		.515		7/8-20UNEF-2B	.531	.312	MS3420-8A
-10C	18	1.312	.434	.614		1-20UNEF-2B	.625	.375	MS3420-10A
-12C	20 AND 22	1.562		.738	1.437	1-3/16-18UNEF-2B	.750	.500	MS3420-12A
-16C	24 AND 28	1.750	.596	.926	1.562	1-7/16-18UNEF-2B	.938	.594	MS3420-16A
-20C	32	2.250		1.200	1.812	1-3/4-18UNS-2B	1.250	.938	MS3420-20A
-24C	36	2.375	.858	1.363		2-18UNS-2B	1.375	.969	MS3420-24A
-28C	40	2.625	1.107	1.611	2.062	2-1/4-16UN-2B	1.625	1.188	MS3420-28A
-32C	44	2.812	1.421	1.865	2.188	2-1/2-16UN-2B	1.875	1.375	MS3420-32A

(a) NOTE: BUSHINGS ARE NOT SUPPLIED WITH CLAMPS

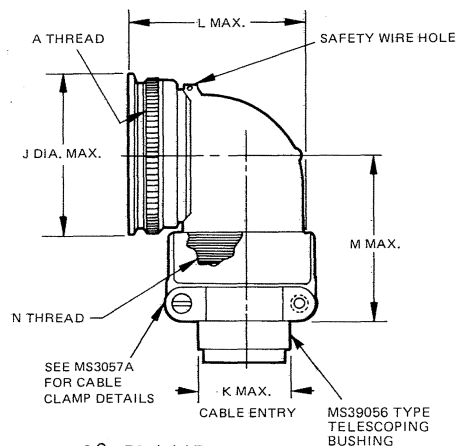
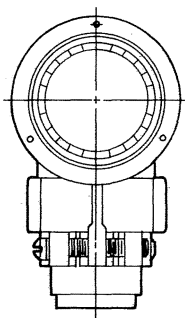


MS3057-*C

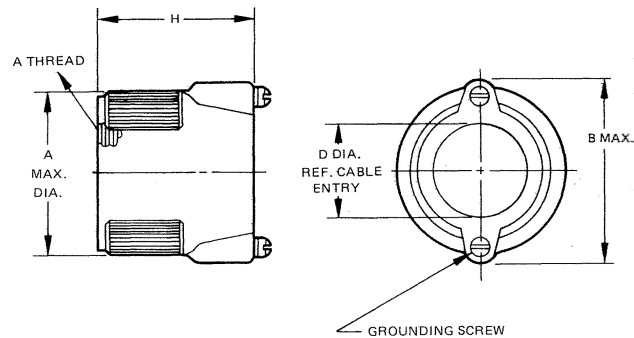
MIL SPEC DESIGNATION MS83723
SLASH SHEET -35
TYPE A
CLASS, FINISH 22 R
SHELL SIZE 22

TYPE
 A 90° clamp
 N No clamp
 S Straight clamp

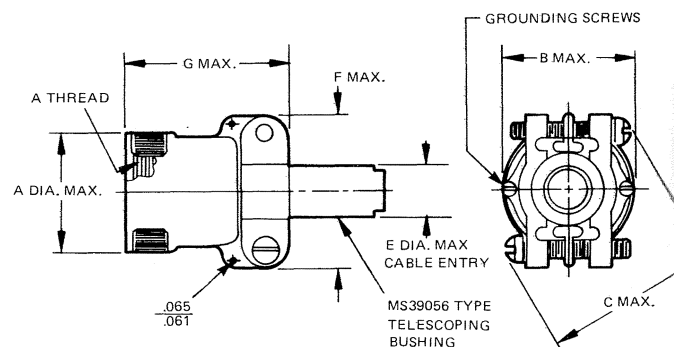
CLASS, FINISH
 R 200°C conductive finish
 G Passivated stainless steel



TYPE A 90° CLAMP



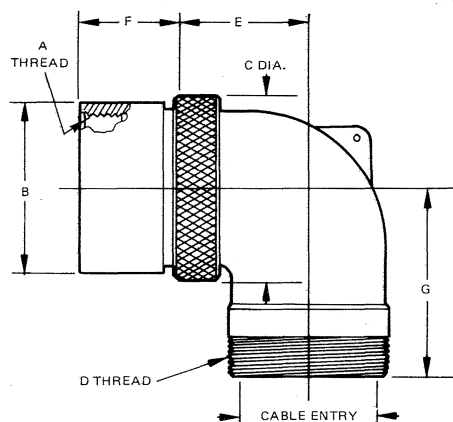
TYPE N NO CLAMP



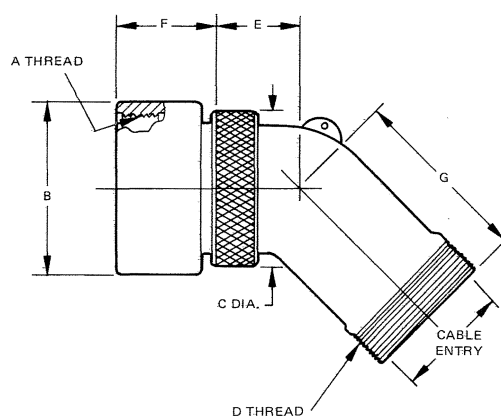
TYPE S STRAIGHT CLAMP

SHELL SIZE PART NO. DESIGNATION	MIL-C-5015 SHELL SIZE	A THREAD CLASS 2B	B MAX.	C MAX.	D MAX.	E MAX.	F MAX.	G MAX.	H MAX.	J MAX.	K MAX.	L MAX.	M MAX.	N THREAD CLASS 2A
08	8S	7/16-28 UNEF	.875	1.075	.257	.240	.835	1.290	.780	.797	.248	1.187	1.207	1/2-28 UNEF
10	10S	1/2-28	.875	1.075	.310	.240	.835		.780	.875	.248	1.187	1.238	1/2-28
11	10SL	9/16-24	.955	1.140	.390	.302	.900		.780	.969	.310	1.312	1.269	5/8-24
13	12S	5/8-24	.985	1.140	.415	.302	.900		.780	1.000	.310	1.312	1.269	5/8-24
12		5/8-24	.985	1.140	.415	.302	1.085	1.290	.780	1.000	.310	1.468	1.269	5/8-24
15	14S	3/4-20	1.135	1.360	.487	.427	1.085	1.368	.780	1.125	.436	1.437	1.395	3/4-20
14	14	3/4-20	1.135	1.360	.497	.427	1.080	1.368	.780	1.125	.436	1.594	1.395	3/4-20
17	16S	7/8-20	1.235	1.520	.616	.552	1.180	1.430	.780	1.250	.560	1.531	1.519	7/8-20
16	16	7/8-20	1.235	1.520	.616	.552	1.275	1.587	.970	1.250	.560	1.687	1.519	7/8-20
18	18	1-20	1.430	1.600	.735	.615	1.475	1.695	1.050	1.344	.623	1.765	1.582	1-20
20	20	1 1/8-18	1.555	1.890	.875	.740	1.475	1.695	1.050	1.469	.748	2.000	1.644	1 3/16-18
22	22	1 1/4-18	1.555	1.890	.983	.740	1.710	1.695	1.050	1.594	.748	2.000	1.707	1 3/16-18
24	24	1 3/8-18	1.865	2.145	1.095	.927	1.710	1.931	.970	1.719	.935	2.265	1.884	1 7/16-18
28	28	1 5/8-18 UNEF	1.865	2.145	1.255	.927	2.040	1.931	.970	1.969	.935	2.265	1.963	1 7/16-18 UNEF
32	32	1 7/8-16 UN	2.190	2.550	1.525	1.240	2.280	1.869	.970	2.219	1.248	2.578	2.176	1 3/4-18 UNS
36	36	2 1/8-16 UN	2.380	2.889	1.760	1.365	2.280	1.869	.970	2.469	1.373	2.815	2.395	2-18 UNS
40	40	2 3/8-16 UN	-	3.500	1.895	1.614	2.950	2.435	1.450	2.750	1.625	5.800	5.100	2 1/4-16 UN

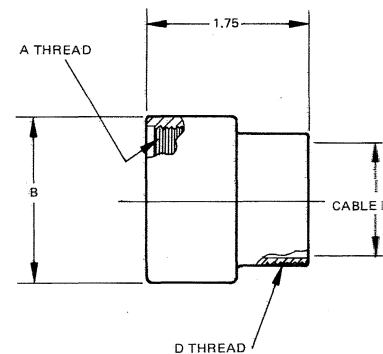
MIL SPEC DESIGNATION	M83723	-51	R	22	R	8	AN3054 NUT DASH NO. (TABLE II)
SLASH SHEET							FINISH CLASS
TYPE							A Cadmium plated, nickel b
A 90° elbow							G Passivated stainless steel
B 45° elbow							R 200°C conductive finish
R Straight							SHELL SIZE (TABLE I)



TYPE A, 90°



TYPE B, 45°



TYPE R, STRAIGHT

TABLE I

SHELL SIZE (83723)	(1) SHELL SIZE (5015)	A THREAD CLASS 2B	B MAX.	C MAX.	F MAX.
08	8S	7/16-28 UNEF	.578 .547	.450 .440	.937
10	10S	1/2- 28	.641 .609	.513 .503	.937
11	10SL	9/16-24	.703 .679	.575 .565	.937
12	12	5/8- 24	.766 .734	.640 .628	.937
13	12S	5/8- 24	.766 .734	.640 .628	.937
14	14	3/4- 20	.891 .859	.765 .753	.937
15	14S	3/4- 20	.891 .859	.765 .753	.937
16	16	7/8- 20	1.016 .984	.890 .878	1.093
17	16S	7/8- 20	1.016 .984	.890 .878	1.093
18	18	1- 20	1.141 1.109	1.015 1.003	1.093
20	20	1 1/8- 18	1.265 1.234	1.140 1.128	1.093
22	22	1 1/4- 18	1.391 1.359	1.265 1.255	1.093
24	24	1 3/8- 18	1.516 1.484	1.390 1.378	1.093
28	28	1 5/8- 18 UNEF	1.828 1.797	1.640 1.628	1.093
32	32	1 7/8- 16 UN	2.078 2.047	1.890 1.878	1.000
36	36	2 1/8- 16 UN	2.328 2.297	2.140 2.128	1.000
40	40	2 3/8- 16 UN	2.578 2.547	2.395 2.385	1.437

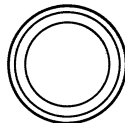
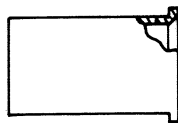
(1) MIL-C-5015 (REF)

TABLE II

(1) DASH NO.	CABLE SIZE (REF)	C MAX.	D THREAD CLASS 2A	E MAX.		G MAX.	
				90°	45°	90°	45°
4	.312	.880	5/8- 24 UNEF	.7	.6	1.23 1.17	1.21 1.15
6	.438	1.078	3/4- 20	.8	.7	1.35 1.29	1.28 1.22
8	.562	1.125	7/8- 20	.8	.7	1.37 1.31	1.34 1.28
10	.625	1.250	1- 20	.9	.8	1.69 1.63	1.68 1.62
12	.750	1.437	1 3/16-18	1.1	.9	1.78 1.72	1.79 1.73
16	.938	1.687	1 7/16-18 UNEF	1.2	1.1	1.96 1.90	1.98 1.92
20	1.250	2.000	1 3/4- 18 UNS	1.4	1.2	2.06 2.00	2.12 2.06
24	1.375	2.250	2- 18 UNS	1.5	1.3	2.23 2.17	2.18 2.12
28	1.625	2.500	2 1/4- 16 UN	1.9	1.4	2.48 2.42	2.28 2.22
32	1.825	2.750	2 1/2- 16 UN	2.1	1.4	2.45 2.39	2.37 2.31

(1) TO MATE WITH CORRESPONDING DASH NOS. OF AN3054 NUT

CRIMP CONTACT ADAPTER



MS3348 -8 -10

MS NUMBER

CONTACT WIRE
BARREL SIZE

WIRE SIZE

DASH NUMBER	-8 -10	-4 -6	-0 -2	-4 -6L	-1 -2L	-4 -5L	-6 -8L	-6 -9L	-1 -6L
CONTACT WIRE BARREL SIZE	8	4	1/0	4	1	4	6	6	1
WIRE SIZE	10	6	2	6	2	5	8	9	6

MATERIAL: COPPER ALLOY CONTACT BUSHINGS -8 -10, -4 -6 AND -0 -2 ARE FOR USE WITH WIRE BARRELS CONFORMING TO MS3190, TYPES B AND C. CONTACT BUSHING -() -()L IS FOR USE WITH CONTACTS MS90559 AND MS90560.

FRONT RELEASE CONTACTS

SOCKET (NOTE 1)	MATING PIN (NOTE 1)	CONTACT SIZE	WIRE RANGE	COLOR BAND(S)	MAX. TEMP	INSERTION TOOL	EXTRACTION TOOL	CRIMP TOOL ASSEMBLY	CRIMP TOOL BODY	LOCATOR (DIE)
MS3193	MS3192					MS24256 OR MS90455	MS24256 OR MS90456		M22520	M22520
A20A	A20A	20	20-24	RED		A20	R20	MS3198-1PA OR MS3191-1 OR -3	/1-01 OR /2-01	/1-02 OR /2-02
A20-20*	A20-20*	20	20-24	RED/RED		A20	R20		/1-01 OR /2-01	/1-02 OR /2-02
-20-20*	-20-20*	20	20-24	RED/RED		A20	R20		/1-01 OR /2-01	/1-02 OR /2-02
-16A	-16A	16	16-20	BLUE		A16 -1	R16 -1	MS3191-1 OR -3	/1-01	/1-02
-16-16*	-16-16*	16	16-20	BLUE/BLUE		A16 -1	R16 -1	MS3191-1 OR -3	/1-01	/1-02
-16-20*	-16-20*	16	20-24	BLUE/RED		A16 -1	R16 -1	MS3191-1 OR -3	/1-01	/1-02
-12A	-12A	12	12-14	YELLOW		A12 -2	R12 -2	MS3191-1 OR -3	/1-01	/1-02
-12-12*	-12-12*	12	12-14	YELLOW/YELLOW		A12 -2	R12 -2	MS3191-1 OR -3	/1-01	/1-02
-12-16	-12-16	12	16-20	YELLOW/BLUE		A12 -2	R12 -2	MS3191-1 OR -3	/1-01	/1-02
MS24255	MS24254					MS24256 OR MS90455	MS24256 OR MS90456		M22520	M22520
-20S	-20P	20	20-24	RED/RED		A20	R20	MS3198-1PA MS3191-1 OR -3 MS3191-1 OR -3	/1-01 OR /2-01	/1-02 OR /2-02
-16S	-16P	16	16-20	BLUE/BLUE		A16 -1	R16 -1		/1-01	/1-02
-12S	-12P	12	12-14	YELLOW/YELLOW		A12 -2	R12 -2		/1-01	/1-02
MS27185	MS27184					MS24256 OR MS90455	MS24256 OR MS90456		M22520	M22520
-20P	-20P	(NOTE 2)	22KIN6			A12 -2	R12 -2		/1-01	/1-02
-22P	-22P		22KIN6			A12 -2	R12 -2		/1-01	/1-02
MS90454	MS90453					MS90455	MS90456		M22520	M22520
-16	-16	16	16-20	BLUE	200°C	-1 OR -16	-1 OR -16		/1-01	/1-02
-16-22	-16-22	16	22-26	BLUE/GREEN	200°C	-1 OR -16	-1 OR -16		/1-01	/1-02
-16-16	-16-16	16	16-20	BLUE/BLUE	200°C	-1 OR -16	-1 OR -16		/1-01	/1-02
-12	-12	12	12-14	YELLOW	200°C	-2 OR -12	-2 OR -12		/1-01	/1-02
-12-16	-12-16	12	16-20	YELLOW/BLUE	200°C	-2 OR -12	-2 OR -12		/1-01	/1-02
-12-12	-12-12	12	12-14	YELLOW/YELLOW	200°C	-2 OR -12	-2 OR -12		/1-01	/1-02
-8	-8	8	8	RED	200°C	-3 OR -8	-3 OR -8		MS25441-1	MS3150-8
-8-8	-8-8	8	8	RED/RED	200°C	-3 OR -8	-3 OR -8		MS25441-1	MS3150-8
-4	-4	4	4	BLUE	200°C	-4 OR -4	-4 OR -4		MS25441-1	MS3150-4
-4-4	-4-4	4	4	BLUE/BLUE	200°C	-4 OR -4	-4 OR -4		MS25441-1	MS3150-4
-0	-0	0	0	YELLOW	200°C	-5 OR -0	-5 OR -0		MS25441-1	MS3150-0
-0-0	-0-0	0	0	YELLOW/YELLOW	200°C	-5 OR -0	-5 OR -0		MS25441-1	MS3150-0
MS90560	MS90559	(NOTE 3)					MS90562			
-1	-1	4/0	4/0			NONE REQUIRED	-1			
	-2	4/0N	4/0			NONE REQUIRED	-1			
-2	-3	2/0	2/0			NONE REQUIRED	-2			
	-4	2/0N	2/0			NONE REQUIRED	-2			
-3	-5	1/0	1/0	YELLOW/YELLOW		NONE REQUIRED	-3		MS25411-1	MS3150-0
	-6	1/0N	1/0	YELLOW/YELLOW		NONE REQUIRED	-3		MS25411-1	MS3150-0
-4		2	3			NONE REQUIRED	-4			
	-7	2N	3			NONE REQUIRED	-4			
-5	-8	4	4	BLUE/BLUE		NONE REQUIRED	-5		MS25411-1	MS3150-4
-6		4	5	BLUE		NONE REQUIRED	-5		MS25411-1	MS3150-4
	-9	4N	4	BLUE/BLUE		NONE REQUIRED	-5		MS25411-1	MS3150-4
	-10	4N	5	BLUE		NONE REQUIRED	-5			
-7	-11	6	6			NONE REQUIRED	-6			
	-12	6N	6			NONE REQUIRED	-6			
-8	-14	6G	6			NONE REQUIRED	-6			
-9	-13	4G	4	BLUE/BLUE		NONE REQUIRED	-5		MS25411-1	MS3150-4

NOTES:

1. ASTERISK (*) INDICATES TYPE OF MATERIAL HAS BEEN OMITTED. SEE MS DRAWING.

2. SHIELDED CABLE PER MIL-C-27500.

3. G = GROUNDING, N = NEUTRAL.

REAR RELEASE CONTACTS

SOCKET	MATING PIN	CONTACT SIZE	WIRE RANGE	COLOR BAND(S)	TEMP MAX.	INSERTION TOOL	EXTRACTION TOOL (NOTE 1)			ORIGINALLY RECOMMENDED	
							WIRED CONTACTS		UNWIRED	CRIMP TOOL BODY	LOCATOR (DIE)
<u>M39029/5</u>	<u>M39029/4</u>					<u>MS3447</u> OR <u>MS27534</u>	<u>MS3447</u> OR <u>MS27534</u>	<u>MS3448</u>		<u>M22520</u>	<u>M22520</u>
-20-20	-20-20	20	20-24	RED/RED	200°C	-20 -20	-20 -20	-001A		/1-01 OR /2-01	/1-02 OR /2-02
-16-16	-16-16	16	16-20	BLUE/BLUE	200°C	-16 -16	-16 -16	-001B		/1-01 OR /2-01	/1-02 OR /2-02
-16-20	-16-20	16	20-24	BLUE/RED	200°C	-20 -20	-20 -20	-001B		/1-01 OR /2-01	/1-02 OR /2-02
-12-12	-12-12	12	12-14	YELLOW/YELLOW	200°C	-12 -12	-12 -12	-001C		/1-01 OR /2-01	/1-02 OR /2-02
-12-16	-12-16	12	16-20	YELLOW/BLUE	200°C	-16 -16	-16 -16	-001C		/1-01 OR /2-01	/1-02 OR /2-02
<u>M39029/15</u>						<u>MS3160</u>	<u>MS3160</u>	<u>MS3159</u>		<u>M22520</u>	<u>M22520</u>
-22-28		22	28-32	GREEN/WHITE	200°C	-22	-22	-22		/2-01	/2-19
-22-22		22	22-28	GREEN/GREEN	200°C	-22	-22	-22		/2-01	/2-19
-20-20		20	20-24	RED/RED	200°C	-20	-20	-20		/2-01	/2-20
-16-16		16	16-20	BLUE/BLUE	200°C	-16	-16	-16		/2-01	/2-21
<u>M39029/16</u>	<u>M39029/18</u>					<u>MS3160</u>	<u>MS3160</u>	<u>MS3159</u>		<u>M22520</u>	<u>M22520</u>
-23-28	-23-28	23	28-32	YELLOW/WHITE	200°C	-22	-22	-22		/2-01	/2-13
-23-22	-23-22	23	22-28	YELLOW/GREEN	200°C	-22	-22	-22		/2-01	/2-13
-20-20	-20-20	20	20-24	RED/RED	200°C	-20	-20	-20		/2-01	/2-14
-16-16	-16-16	16	16-20	BLUE/BLUE	200°C	-16	-16	-16		/2-01	/2-15
-12-12	-12-12	12	12-14	YELLOW/YELLOW	200°C	-12	-12	-12		/1-01	/1-09
<u>M39029/17</u>	(NOTE 2)					<u>MS3160</u>	<u>MS3160</u>	<u>MS3159</u>		<u>M22520</u>	<u>M22520</u>
-23-28		23	28-32	YELLOW/WHITE	200°C	-22	-22	-22		/2-01	/2-16
-23-22		23	22-28	YELLOW/GREEN	200°C	-22	-22	-22		/2-01	/2-16
-20-20		20	20-24	RED/RED	200°C	-20	-20	-20		/2-01	/2-17
-16-16		16	16-20	BLUE/BLUE	200°C	-16	-16	-16		/2-01	/2-18
-12-12		12	12-14	YELLOW/YELLOW	200°C	-12	-12	-12		/1-01	/1-10
<u>M83723/30T</u>	<u>M83723/29T</u>					<u>M83723/31</u> OR <u>MS27534</u>	<u>M83723/31</u> OR <u>MS27534</u>			<u>M22520</u>	<u>M22520</u>
-17	-16	16S	16-20	BLUE/BLUE	200°C	-16 -16	-16 -16			/1-01 OR /2-01	/1-02 OR /2-02
-16	-16	16	16-20	BLUE/BLUE	200°C	-16 -16	-16 -16			/1-01 OR /2-01	/1-02 OR /2-02
-12	-12	12	12-14	YELLOW/YELLOW	200°C	-12 -12	-12 -12			/1-01 OR /2-01	/1-02 OR /2-02
-8	-8	8	8	RED/RED	200°C	NONE REQUIRED	-8			<u>MS25441</u>	<u>MS3150</u>
-4	-4	4	4	BLUE/BLUE	200°C	NONE REQUIRED	-4			-1	-4
-0	-0	0	0	YELLOW/YELLOW	200°C	NONE REQUIRED	-0			-1	-0
<u>M83723/34B</u>	<u>M83723/33B</u>					<u>M83723/31</u> OR <u>MS27534</u>	<u>M83723/31</u> OR <u>MS27534</u>			<u>M22520</u>	<u>M22520</u>
-20	-20	20	20-24	RED/RED	200°C	-20 -20	-20 -20			/2-01 OR /1-01	/2-02 OR /1-02
-16	-16	16	16-20	BLUE/BLUE	200°C	-16 -16	-16 -16			/1-01	/1-02
-12	-12	12	12-14	YELLOW/YELLOW	200°C	-12 -12	-12 -12			/1-01	/1-02
<u>MS3163</u>	<u>MS3162</u>					<u>MS3447</u> OR <u>MS27534</u>	<u>MS3447</u> OR <u>MS27534</u>	<u>MS3448</u>		<u>M22520</u>	<u>M22520</u>
16S-16	-16-16	16S	16-20	BLUE/BLUE	200°C	-16 -16	-16* -16	-001B		/1-01	/1-02
16-16	-16-16	16	16-20	BLUE/BLUE	200°C	-16 -16	-16* -16	-001B		/1-01	/1-02
12-12	-12-12	12	12-14	YELLOW/YELLOW	200°C	-12 -12	-12 -12	-001C		/1-01	/1-02
8-8	-8-8	8	8	RED/RED	200°C	<u>MS3483</u>	<u>MS3165</u>			<u>MS25441</u>	<u>MS3150</u>
4-4	-4-4	4	4	BLUE/BLUE	200°C	-1	-8			-1	-8
0-0	-0-0	0	0	YELLOW/YELLOW	200°C	-2	-4			-1	-4
						-3	-0			-1	-0
<u>MS3343</u>	<u>MS90461</u>					<u>MS3323</u>	PINS SOCKETS <u>MS3342</u> <u>MS3344</u>			<u>M22520</u>	<u>M22520</u>
A23-28	A23-28	23	28-32	YELLOW/WHITE	150°C	-22	-23 -23			/2-01	/2-03
B23-28	B23-28	23	28-32	YELLOW/WHITE	200°C	-22	-23 -23			/2-01	/2-03
A23-22	A23-22	23	22-28	YELLOW/GREEN	150°C	-22	-23 -23			/2-01	/2-03
B23-22	B23-22	23	22-28	YELLOW/GREEN	200°C	-22	-23 -23			/2-01	/2-03
A20-20	A20-20	20	20-24	RED/RED	150°C	-20	-20 -20			/1-01	/1-08
B20-20	B20-20	20	20-24	RED/RED	200°C	-20	-20 -20			/1-01	/1-08
A16-16	A16-16	16	16-20	BLUE/BLUE	150°C	-16	-16 -16			/1-01	/1-08
B16-16	B16-16	16	16-20	BLUE/BLUE	200°C	-16	-16 -16			/1-01	/1-08
A12-12	A12-12	12	12-14	YELLOW/YELLOW	150°C	-12	-12 -12			/1-01	/1-08
B12-12	B12-12	12	12-14	YELLOW/YELLOW	200°C	-12	-12 -12			/1-01	/1-08

NOTES:

1. FOR OVERSIZE WIRE INDICATED BY (*) USE MS3165-16.
2. USE M39029/18. CRIMP LOCATORS FOR M39029/17 & M39029/18 ARE DIFFERENT.

REAR RELEASE CONTACTS

SOCKET	MATING PIN	CONTACT SIZE	WIRE RANGE	COLOR BAND(S)	TEMP MAX	INSERTION TOOL	EXTRACTION TOOL (NOTE 1)		ORIGINALLY RECOMMENDED		
							WIRED CONTACTS	UNWIRED	CRIMP TOOL BODY	LOCATOR (DIE)	
<u>MS27490</u>	<u>MS27493</u>					<u>MS27495</u> OR <u>MS27534</u>	<u>MS27495</u> OR <u>MS27534</u>		<u>M22520</u>	SOCKET	PIN
-22M	-22M	22D	24-28		150°C	A22M -22D	R22M -22D		/2-01	<u>M22520</u>	<u>M22520</u>
-22D	-22D	22D	22-28		150°C	A22M -22D	R22M -22D		/2-01	/2-07	/2-09
-22	-22	22	22-26		150°C	A22	R22		/2-01	/2-07	/2-09
-20	-20	20	20-24		150°C	A20 -20	R20 -20	MS3191-9	/2-01 OR /1-01	/2-10 OR /1-04	/2-10 OR /1-04
-16	-16	16	16-20		150°C	A16 -16	R16 -16	MS3191-9	/1-01	/1-04	/1-04
-12	-12	12	12-14		150°C	A12 -12	R12 -12	MS3191-9	/1-01	/1-04	/1-04
<u>MS27491</u>	<u>MS27493</u>					<u>MS27495</u> OR <u>MS27534</u>	<u>MS27495</u> OR <u>MS27534</u>		<u>M22520</u>	SOCKET	PIN
-22M	-22M	22D	24-28		150°C	A22M -22D	R22M -22D		/2-01	<u>M22520</u>	<u>M22520</u>
-22D	-22D	22D	22-28		150°C	A22M -22D	R22M -22D		/2-01	/2-06	/2-09
-22	-22	22	22-26		150°C	A22	R22		/2-01	/2-06	/2-09
-20	-20	20	20-24		150°C	A20 -20	R20 -20	MS3191-9	/2-01 OR /1-01	/2-10 OR /1-04	/2-10 OR /1-04
-16	-16	16	16-20		150°C	A16 -16	R16 -16	MS3191-9	/1-01	/1-04	/1-04
-12	-12	12	12-14		150°C	A12 -12	R12 -12	MS3191-9	/1-01	/1-04	/1-04
<u>MS27492</u>	<u>MS27494</u>					<u>MS27495</u> OR <u>MS27534</u>	<u>MS27495</u> OR <u>MS27534</u>		<u>M22520</u>	SOCKET	PIN
-22M	-22M	22D	24-28		200°C	A22M -22D	R22M -22D		/2-01	<u>M22520</u>	<u>M22520</u>
-22D	-22D	22D	22-28		200°C	A22M -22D	R22M -22D		/2-01	/2-06	/2-09
-22	-22	22	22-26		200°C	A22	R22		/2-01	/2-06	/2-09
-20	-20	20	20-24		200°C	A20 -20	R20 -20	MS3191-9	/2-01 OR /1-01	/2-10 OR /1-04	/2-10 OR /1-04
-16	-16	16	16-20		200°C	A16 -16	R16 -16	MS3191-9	/1-01	/1-04	/1-04
-12	-12	12	12-14		200°C	A12 -12	R12 -12	MS3191-9	/1-01	/1-04	/1-04
<u>MS27535</u>	<u>MS27536</u>	8	SHIELDED COAX FOR RG180B/U OR RG195A/U		150°C				<u>M22520</u> /2-01 T & B WT203 (OUTER COAX)	/2-31 (INNER COAX)	
<u>MS27655</u>	<u>MS27494</u>					<u>MS27495</u> OR <u>MS27534</u>	<u>MS27495</u> OR <u>MS27534</u>		<u>M22520</u>	SOCKET	PIN
-22D	-22D	22D	22-28		200°C	A22M -22D	R22M -22D		/2-01	<u>M22520</u>	<u>M22520</u>
-20	-20	20	20-24		200°C	A20 -20	R20 -20	MS3191-9	/2-01 OR /1-01	/2-10 OR /1-04	/2-10 OR /1-04
-16	-16	16	16-20		200°C	A16 -16	R16 -16	MS3191-9	/1-01	/1-04	/1-04
-12	-12	12	12-14		200°C	A12 -12	R12 -12	MS3191-9	/1-01	/1-04	/1-04
<u>MS90460</u>	<u>MS90461</u>					<u>MS3323</u>	PINS <u>MS3342</u> SOCKETS <u>MS3344</u>		<u>M22520</u>	<u>M22520</u>	
A23-28	A23-28	23	28-32	YELLOW/WHITE	150°C	-22	-23 -23		/2-01	/2-03	
B23-28	B23-28	23	28-32	YELLOW/WHITE	200°C	-22	-23 -23		/2-01	/2-03	
A23-22	A23-22	23	22-28	YELLOW/GREEN	150°C	-22	-23 -23		/2-01	/2-03	
B23-22	B23-22	23	22-28	YELLOW/GREEN	200°C	-22	-23 -23		/2-01	/2-03	
A20-20	A20-20	20	20-24	RED/RED	150°C	-20	-20 -20		/1-01	/1-08	
B20-20	B20-20	20	20-24	RED/RED	200°C	-20	-20 -20		/1-01	/1-08	
A16-16	A16-16	16	16-20	BLUE/BLUE	150°C	-16	-16 -16		/1-01	/1-08	
B16-16	B16-16	16	16-20	BLUE/BLUE	200°C	-16	-16 -16		/1-01	/1-08	
A12-12	A12-12	12	12-14	YELLOW/YELLOW	150°C	-12	-12 -12		/1-01	/1-08	
B12-12	B12-12	12	12-14	YELLOW/YELLOW	200°C	-12	-12 -12		/1-01	/1-08	
<u>NAS1663</u>	<u>NAS1662</u>					<u>NAS1664</u>	<u>NAS1664</u>		<u>MS3191</u>	THE MS3191-1 OR MS3191-3 INCLUDES LOCATOR	
-20	-20	20	20-24	RED/RED		-20	-20		-1 OR -3		
-16	-16	16	16-20	BLUE/BLUE		-16	-16		-1 OR -3		
-12	-12	12	12-14	YELLOW/YELLOW		-12	-12		-1 OR -3		

NOTE:

1. FOR OVERSIZE WIRE INDICATED BY (*) USE MS3165-16.

INSERTION TOOLS

Sometime in late 1976 or early 1977, Military Specification MIL-I-81969 will come into effect. This specification covers all removable crimp contact extraction and insertion tools. All of the MS numbers shown on the following pages will be obsoleted and superseded by an M81969/* part number. As of the date of this publication, this information is not yet available.

CRIMP CONTACT EXTRACTION AND INSERTION TOOLS

PART NUMBER	INSERTION	EXTRACTION	COLOR CODE	CONTACT SIZE	MATERIAL
MS24256 A12	•			12	METAL
MS24256 A16	•			16	METAL
MS24256 A20	•			20	METAL
MS24256 R12		•		12	METAL
MS24256 R16		•		16	METAL
MS24256 R20		•		20	METAL
MS90455 -1	•			16	METAL
MS90455 -2	•			12	METAL
MS90455 -3	•			8	METAL
MS90455 -4	•			4	METAL
MS90455 -5	•			0	METAL
MS90456 -1		•		16	METAL
MS90456 -2		•		12	METAL
MS90456 -3		•		8	METAL
MS90456 -4		•		4	METAL
MS90456 -5		•		0	METAL
MS90562 -1		•		4/0	METAL
MS90562 -2		•		2/0	METAL
MS90562 -3		•		1/0	METAL
MS90562 -4		•		2	METAL
MS90562 -5		•		4	METAL
MS90562 -6		•		6	METAL

REAR RELEASE TOOLS FOR EXTRACTION OF UNWIRED CONTACTS

PART NUMBER	INSERTION	EXTRACTION	COLOR CODE	CONTACT SIZE	MATERIAL
MS3159-12		•	YELLOW	12	METAL & PLASTIC
MS3159-16		•	BLUE	16	METAL & PLASTIC
MS3159-20		•	RED	20	METAL & PLASTIC
MS3159-22		•	YELLOW	22	METAL & PLASTIC
MS3448-001A		•	RED	20	METAL & PLASTIC
MS3448-001B		•	BLUE	16	METAL & PLASTIC
MS3448-001C		•	YELLOW	12	METAL & PLASTIC

REAR RELEASE EXTRACTION AND INSERTION TOOLS

PART NUMBER	INSERTION	EXTRACTION	COLOR CODE	CONTACT SIZE	MATERIAL
M83723/31-12	●	●	YELLOW/WHITE	12	PLASTIC
M83723/31-16	●	●	BLUE/WHITE	16	PLASTIC
M83723/31-20	●	●	RED/WHITE	20	PLASTIC
M83723/32-00		●	YELLOW	0	PLASTIC
M83723/32-04		●	BLUE	4	PLASTIC
M83723/32-08		●	RED	8	PLASTIC
MS3160-12	●	●	YELLOW/WHITE	12	PLASTIC
MS3160-16	●	●	BLUE/WHITE	16	PLASTIC
MS3160-20	●	●	RED/WHITE	20	PLASTIC
MS3160-22	●	●	YELLOW/WHITE	22	PLASTIC
MS3165-0		●	YELLOW	0	PLASTIC
MS3165-4		●	BLUE	4	PLASTIC
MS3165-8		●	RED	8	PLASTIC
MS3165-12		●	YELLOW	12	PLASTIC
MS3165-16		●	BLUE	16	PLASTIC
MS3323-12	●		YELLOW	12	METAL & PLASTIC
MS3323-16	●		BLUE	16	METAL & PLASTIC
MS3323-20	●		RED	20	METAL & PLASTIC
MS3323-22	●		GREEN	22	METAL & PLASTIC
MS3342-12		PIN ONLY ●	YELLOW	12	METAL & PLASTIC
MS3342-16		●	BLUE	16	METAL & PLASTIC
MS3342-20		●	RED	20	METAL & PLASTIC
MS3342-23		●	YELLOW	23	METAL & PLASTIC
MS3344-12		SOCKET ONLY ●	YELLOW	12	METAL & PLASTIC
MS3344-16		●	BLUE	16	METAL & PLASTIC
MS3344-20		●	RED	20	METAL & PLASTIC
MS3344-23		●	YELLOW	23	METAL & PLASTIC
MS3447-12	●	●	YELLOW/WHITE	12	PLASTIC
MS3447-16	●	●	BLUE/WHITE	16	PLASTIC
MS3447-20	●	●	RED/WHITE	20	PLASTIC
MS3483-1		●		8	METAL
MS3483-2		●		4	METAL
MS3483-3		●		0	METAL
MS27495A12	●		YELLOW/WHITE	12	METAL
MS27495A16	●		BLUE/WHITE	16	METAL
MS27495A20	●		RED/WHITE	20	METAL
MS27495A22	●		BROWN/WHITE	22	METAL
MS27495A22M	●		BLACK/WHITE	22D	METAL
MS27495R12		●	YELLOW/WHITE	12	METAL
MS27495R16		●	BLUE/WHITE	16	METAL
MS27495R20		●	RED/WHITE	20	METAL
MS27495R22		●	BROWN/WHITE	22	METAL
MS27495R22M		●	BLACK/WHITE	22D	METAL
MS27509A22M	●		BLACK	22M	PLASTIC
MS27509A22	●		BROWN	22	PLASTIC
MS27509A20	●		RED	20	PLASTIC
MS27509R22M		●	BLACK	22M	PLASTIC
MS27509R22		●	BROWN	22	PLASTIC
MS27509R20		●	RED	20	PLASTIC
MS27534-12	●	●	YELLOW/WHITE	12	PLASTIC
MS27534-16	●	●	BLUE/WHITE	16	PLASTIC
MS27534-20	●	●	RED/WHITE	20	PLASTIC
MS27534-22D	●	●	GREEN/WHITE	22D	PLASTIC
NAS1644-12	●	●	YELLOW/WHITE	12	PLASTIC
NAS1644-16	●	●	BLUE/WHITE	16	PLASTIC
NAS1644-20	●	●	RED/WHITE	20	PLASTIC