

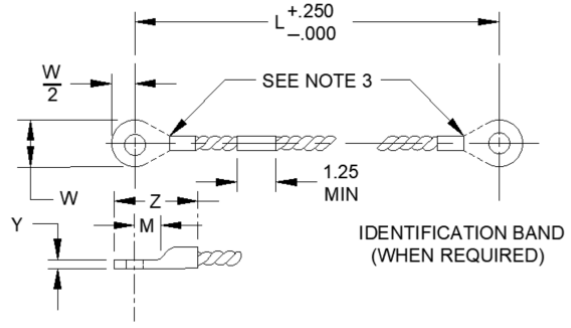
MIL-DTL-83413/8F
 16 December 2019
 SUPERSEDING
 MIL-DTL-83413/8E
 w/AMENDMENT 5
 21 December 2018

DETAIL SPECIFICATION SHEET

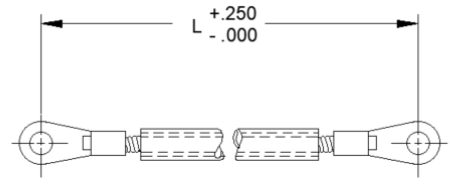
CONNECTORS AND ASSEMBLIES, ELECTRICAL, AIRCRAFT
 GROUNDING: TYPE IV JUMPER CABLE ASSEMBLY, LEAD, ELECTRICAL

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

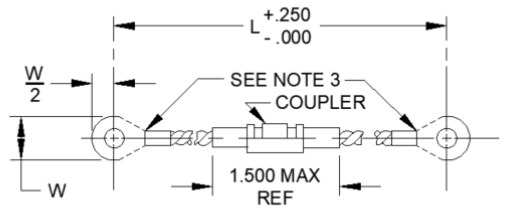
The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-83413.



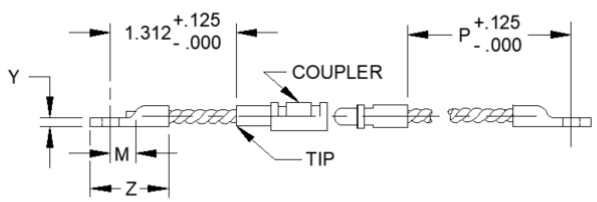
ASSEMBLY TYPES A, B, C, G AND H



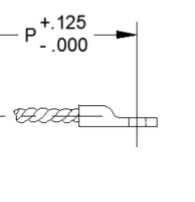
ASSEMBLY TYPES I, J, K, L



ASSEMBLY TYPE D



ASSEMBLY TYPE E
SHORT END



ASSEMBLY TYPE F
LONG END

Inches	mm
.125	3.18
.250	6.35
1.25	31.75
1.312	33.32
1.500	38.10

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Resistance readings to be taken at the junction of terminal barrels and tongues.

FIGURE 1. Jumper cable assembly.



Assembly types.

Assembly type C; is an aluminum jumper assembly that is fuel compatible:

Type C is the only jumper assembly described in this specification sheet that may be used within a fuel tank or fuel cell. Assembly type C shall not be used outside fuel tanks or fuel cells.

Type C terminals shall be dip brazed in accordance with AWS-C3.7 Specification for Aluminum Brazing. A coating is not required on interior strands of the cable, chemical conversion coating in accordance with MIL-DTL- 5541, class 3 shall be applied after brazing. Inert gas welding using aluminum based solder or other means of termination may be used only if approved by the qualifying activity. Aluminum terminals may be crimped to the cable to facilitate dip brazing. Over crimping shall be avoided.

Assembly types D, E and F; are a quick disconnect jumper cable:

Type D is the entire assembly with a quick disconnect coupler.

Type E is the short end with a quick disconnect coupler and is a fixed length.

Type F is the long end.

Assembly types D, E and F are not for Air Force or Navy, Aircraft or Aerospace vehicles.

Assembly types G and H; are the only jumpers that are lightning tested.

Assembly type I; is a copper, Static Charge Bonding jumper cable:

Type I, where chafe guard/ identification label is used instead of the ID band, chafe guard must cover exposed cable length with a minimum gap of 0 and a maximum gap of .250 inch between chafe guard end and start of terminal barrel insulation.

Static charge bonding types I, are used for static charge bonding applications. Static charge bonding type I shall not be used for lightning protection bonding.

Assembly type J, K, and L; are steel, Bonding jumper cables:

Types J, K, and L where chafe guard/ identification label is used instead of the ID band, chafe guard must cover exposed cable length with a minimum gap of 0 and a maximum gap of .250 inch between chafe guard end and start of terminal barrel insulation.

Static charge bonding types J, K, and L are used for static charge bonding applications. Static charge bonding types J, K, and L shall not be used for lightning protection bonding, which requires conductor sizes of 12 AWG or larger.

Bonding jumper types J, K, and L are intended for use on aircraft structures where they are subjected to continuous and/ or excessive vibrations

TABLE I. Jumper assembly types and characteristics.

Jumper assembly type	Construction type	Wire and terminal material	Wire size (see table II)	Available lug sizes (see tables III, IV, V, VI, VII, VIII, IX)	Available cable length, see "L" or "P" dimensions on figure 1	Lightning tested	Fuel Compatible	Method of attaching terminals	Color of ID band or ID Chafe Guard	Superseded MS sheet or Drawing
A	Bonding	Copper	12	A thru J	002-999	No	No	Crimp	No band	MS25083-2
B	Current return	Copper	8	K,L,M,N,T, U, W, V, Z	002-999	No	No	Crimp	No band	MS25083-4
C	Bonding	Aluminum	10	O,P,Q,R,S (aluminum only)	003-999	No	Yes	Brazed	Clear	MS25083-1 and -7
D	Quick disconnect	Copper	12	A thru J	003-999	No	No	Crimp	No band	MS25083-3
E	Short end of quick disconnect	Copper	12	A thru J	Fixed length	No	No	Crimp	No band	MS25083-3S
F	Long end of quick disconnect	Copper	12	A thru J	002-999	No	No	Crimp	No band	MS25083-3P
G	Bonding	Copper	12	A thru J	003-999	Yes	No	Crimp	Yellow	MS25083-5
H	Current return	Copper	8	K,L,M,N,T, U, W, V, Z	003-999	Yes	No	Crimp	Yellow	MS25083-6
I	Static Charge Bonding	Copper	14	A,B,C,D,E, F,G	003-999	No	No	Crimp	ID Black Chafe Guard	SS7039-7
J	Static Charge Bonding	Steel	1/16	A,B,C,D,E, F,G	003-999	No	No	Crimp	ID Black Chafe Guard	SS7039-2
K	Bonding	Steel	3/32	A,B,C,D,E, F,G	003-999	No	No	Crimp	ID Black Chafe Guard	SS7039-3
L	Bonding	Steel	1/8	A,B,C,D	003-999	No	No	Crimp	ID Black Chafe Guard	SS7039-4

TABLE II. Wire characteristics by jumper assembly type.

Jumper assembly type	Material	Stranding no. x AWG	Wire size	Assembly <u>1</u> / resistance (max-ohms)	Tensile strength (min-lb)
A, G	Copper	(7 x 37) x 36	12	.00016xL + .00034 Ω	110
B, H	Copper	(7 x 95) x 36	8	.0006xL + .00016 Ω	225
C	Aluminum	37 x 0.0167 inch	10	.00042xL + .00110 Ω	75
D	Copper	(7 x 37) x 36	12	.00016xL + .00034 Ω	5 to 28 <u>2</u>
E	Copper	(7 x 37) x 36	12	.00057	110
F	Copper	(7 x 37) x 36	12	.00016xL + .00034 Ω	110
I	Copper	(7 x 24) x 36	14	.00030xL + .00043 Ω	70
J	Steel	(7 x 19)	1/16	.10107xL + .20214 Ω	70
K	Steel	(7 x 19)	3/32	.05041xL + .10082 Ω	110
L	Steel	(7 x 19)	1/8	.02514xL + .05028 Ω	225

1/ Where L = length of the cable assembly in inches. Example: For a 24 inch type A assembly, assembly resistance = .00016 ohm/inch x 24 inches + .00034Ω = .00418 ohms (max).

2/ Tensile strength for D jumper assemblies is 5 to 28 lbs, however for the separate assembly ends: E = 110 lbs and F=110 lbs.

TABLE III. Available lug sizes.
A,D,E,F & G type jumper assembly. 1/ 2/ 6/

Code letter lug size designation	For stud size	12 AWG Copper terminals		Crimping tool 7/	
		SAE-AS25036 Insulated	SAE-AS20659 Un-insulated	Crimping tool	Crimping die
A	.138 (3.51)	MS25036-111	...	M22520/5-01	M22520/5-100
F	.138 (3.51)	...	MS20659-165	M22520/38-01	N/A
I	.164 (4.17)	MS25036-156	...	M22520/5-01	M22520/5-100
B	.190 (4.83)	MS25036-112	...	M22520/5-01	M22520/5-100
G	.190 (4.83)	...	MS20659-105	M22520/38-01	N/A
C	.250 (6.35)	MS25036-157	...	M22520/5-01	M22520/5-100
D	.313 (7.95)	MS25036-113	...	M22520/5-01	M22520/5-100
H 4/	.312 (7.92)	...	MS20659-106	M22520/38-01	N/A
E	.375 (9.53)	MS25036-114 3/	...	M22520/5-01	M22520/5-100
J 5/	.375 (9.53)	...	MS20659-128	M22520/38-01	N/A

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is $\pm .005$.

3/ Size #12 AWG wire only.

4/ Lug size designators D & H correspond to lug size D in Rev B, but were broken out separately for clarification.

5/ Lug size designators E & J correspond to lug size E in Rev B, but were broken out separately for clarification.

6/ For supersession information see table XII.

7/ Alternate crimping tools, may be used to facilitate high volume production of jumpers.

TABLE IV. Available lug sizes.
B & H type jumper assembly. 1/ 2/ 6/

Code letter lug size designation	For stud size	8 AWG Copper terminals		Crimp tool 7/	
		SAE-AS25036 Insulated	SAE-AS20659 Uninsulated	Crimping tool	Crimping die
T	.250 (6.35)	MS25036-116	...	SAE- AS5259/1	SAE-AS5259/1
U	.250 (6.35)	...	MS20659-141	MS25441-01	MS23002-8
K 4/	.313 (7.95)	MS25036-117 3/	...	SAE- AS5259/1	SAE-AS5259/1
L 4/	.312 (7.92)	...	MS20659-108 3/	MS25441-01	MS23002-8
M 5/	.375 (9.53)	MS25036-118	...	SAE- AS5259/1	SAE-AS5259/1
N 5/	.375 (9.53)	...	MS20659-129 3/	MS25441-01	MS23002-8
W	.164 (4.17)	...	MS20659-140	MS25441-01	MS23002-8
V	.190 (4.83)	...	MS20659-107	MS25441-01	MS23002-8
Z	.190 (4.83)	MS25036-115	...	SAE- AS5259/1	SAE-AS5259/1

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is \pm .005.

3/ Size #8 AWG wire only.

4/ Lug size designators K & L correspond to lug size D in Rev B, but were broken out separately for clarification.

5/ Lug size designators M & N correspond to lug size E in Rev B, but were broken out separately for clarification.

6/ For supersession information see table XIII.

7/ Alternate crimping tools, may be used to facilitate high volume production of jumpers.

TABLE V. Available lug sizes.
C type jumper assembly. 1/ 2/ 6/

Code letter lug size designation	For stud size	10 AWG Aluminum terminal <u>3/</u>				
		Stud Hole ID	M min	W	Y	Z max
O	.138 (3.51)	.152 (3.86)	.218 (5.54)	.406 (10.31) .313 (7.95)	.083 (2.11) .037 (0.94)	1.172 (29.77)
		.142 (3.61)				
P	.190 (4.83)	.203 (5.16)	.250 (6.35)	.540 (13.72) .450 (11.43)	.083 (2.11) .037 (0.94)	1.300 (33.02)
		.193 (4.90)				
Q	.250 (6.35)	.285 (7.24)	.281 (7.14)	.540 (13.72) .450 (11.43)	.083 (2.11) .037 (0.94)	1.300 (33.02)
		.260 (6.60)				
R <u>4/</u>	.312 (7.92)	.343 (8.71)	.329 (8.36)	.741 (18.82) .531 (13.49)	.090 (2.29) .038 (0.97)	1.390 (35.31)
		.320 (8.13)				
S <u>5/</u>	.375 (9.53)	.385 (9.78)	.343 (8.71)	.741 (18.82) .531 (13.49)	.090 (2.29) .038 (0.97)	1.626 (41.30)
		.410 (10.41)				

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is $\pm .005$.

3/ Aluminum in accordance with ASTM-B209 or ASTM-B211/B211M Temper O.

4/ Lug size designators R correspond to lug size D in Rev B, but were broken out separately for clarification.

5/ Lug size designators S correspond to lug size E in Rev B, but were broken out separately for clarification.

6/ For supersession information see XIV.

TABLE VI. Available lug sizes.
I type jumper assembly. 1/ 2/ 3/ 4/

Code letter lug size designation	For stud size	12 AWG <u>4/</u> Copper terminals
		SAE-AS7928/1 Insulated
A	.138 (3.51)	M7928/1-56
B	.164 (4.17)	M7928/1-57
C	.190 (4.83)	M7928/1-58
D	.250 (6.35)	M7928/1-59
E	.312 (7.92)	M7928/1-60
F	.375 (9.53)	M7928/1-61
G	.500 (12.70)	M7928/1-62

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is ± 0.005 .

3/ Size 14 AWG wire only.

4/ Wire diameter slightly larger than concentric lay AWG due to rope lay construction. Terminal lug size have been selected accordingly.

TABLE VII. Available lug sizes.
J type jumper assembly. 1/ 2/ 3/

Code letter lug size designation	For stud size	14 AWG Copper terminals
		SAE-AS7928/1 Insulated
A	.138 (3.51)	M7928/1-49
B	.164 (4.17)	M7928/1-50
C	.190 (4.83)	M7928/1-51
D	.250 (6.35)	M7928/1-52
E	.312 (7.92)	M7928/1-53
F	.375 (9.53)	M7928/1-54
G	.500 (12.70)	M7928/1-55

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is ± 0.005 .

3/ Size 1/16 steel wire only.

TABLE VIII. Available lug sizes.
 K type jumper assembly. 1/ 2/ 3/ 4/

Code letter lug size designation	For stud size	10 AWG <u>4/</u> Copper terminals
		SAE-AS7928/1 Insulated
A	.138 (3.51)	M7928/1-63
B	.164 (4.17)	M7928/1-64
C	.190 (4.83)	M7928/1-65
D	.250 (6.35)	M7928/1-66
E	.312 (7.92)	M7928/1-67
F	.375 (9.53)	M7928/1-68
G	.500 (12.70)	M7928/1-69

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is ± 0.005 .

3/ Size 3/32 steel wire only.

4/ Wire diameter slightly larger than concentric lay AWG due to rope lay construction. Terminal lug size have been selected accordingly.

TABLE IX. Available lug sizes.
L type jumper assembly. 1/ 2/ 3/ 4/

Code letter lug size designation	For stud size	8 AWG <u>4/</u> Copper terminals
		SAE-AS25036 Insulated
A	.190 (4.83)	MS25036-115
B	.250 (6.35)	MS25036-116
C	.312 (7.92)	MS25036-117
D	.375 (9.53)	MS25036-118

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ Unless otherwise specified, tolerance is ± 0.005 .

3/ Size 1/8 steel wire only.

4/ Wire diameter slightly larger than concentric lay AWG due to rope lay construction. Terminal lug size have been selected accordingly.

TABLE X. Combined data from tables III through IX.

Jumper assembly type	Material	Wire size	Stud Size .138 (3.51) Lug Type	Stud Size .164 (4.17) Lug Type	Stud Size .190 (4.83) Lug Type	Stud Size .250 (6.35) Lug Type	Stud Size .312 (7.92) Lug Type	Stud Size .375 (9.53) Lug Type	Stud Size .164 (4.17) Lug Type	Stud Size .190 (4.83) Lug Type	Stud Size .500 (12.70) Lug Type
A, D, E, F, G	Cu	12	A MS25036 -111 <u>1</u> /	I MS25036 -156 <u>1</u> /	B MS25036 -112 <u>1</u> /	C MS25036 -157) <u>1</u> /	D MS25036 -113 <u>1</u> /	E MS25036 -114 <u>1</u> /			
			F MS20659 -165) <u>2</u> /		G MS20659 -105 <u>2</u> /		H MS20659 -106 <u>2</u> /	J MS20659 -128 <u>2</u> /			
B, H	Cu	8				T MS25036 -116 <u>1</u> /	K MS25036 -117 <u>1</u> /	M MS25036 -118 <u>1</u> /		Z MS25036 -115 <u>1</u> /	
						U MS20659 -141 <u>2</u> /	L MS20659 -108 <u>2</u> /	N MS20659 -129 <u>2</u> /	W MS20659 -140 <u>2</u> /	V MS20659 -107 <u>2</u> /	
C <u>3</u> /	Al	10	O		P	Q	R	S			
I	Cu	14	A M7928/1 - 56	B M7928/1 - 57	C M7928/1 - 58	D M7928/1 - 59	E M7928/1 - 60	F M7928/1 - 61			G M7928/1 - 62
J <u>4</u> /	Steel	1/16 "	A M7928/1 - 49	B M7928/1 - 50	C M7928/1 - 51	D M7928/1 - 52	E M7928/1 - 53	F M7928/1 - 54			G M7928/1 - 55
K 5/	Steel	3/32 "	A M7928/1 - 63	B M7928/1 - 64	C M7928/1 - 65	D M7928/1 - 66	E M7928/1 - 67	F M7928/1 - 68			G M7928/1 - 69
L 6/	Steel	1/8"			A MS25036 - 115	B MS25036 - 116	C MS25036 - 117	E MS25036 - 118			

1/ Insulated Terminal Lug

2/ Un-insulated Terminal Lug

3/ Aluminum uninsulated terminal lug dimensions see Table V.

4/ J-type jumper uses 14-gauge insulated Copper terminal lugs M7928/1-XX on 1/16" steel cable.

5/ K-type jumper uses 10-gauge insulated Copper terminal lugs M7928/1-XX on 3/32" steel cable.

6/ L-type jumper uses 8-gauge un-insulated Copper terminal lugs MS25036-XXX on 1/8" steel cable.

REQUIREMENTS:

Material:

For jumper types A, D, E, F, and G: Soft or drawn and annealed tin coated copper wire per ASTM- B172. Rope-lay-bunched member stranding consisting of 7 bunches of 37 individual strands of 36 AWG equivalent solid copper wire (259 individual wire strands with total approximate circular mill area 6475 with 12 AWG total equivalent).

For jumper type I: Soft or drawn and annealed tin coated copper wire per ASTM- B172. Rope-lay-bunched member stranding consisting of 7 bunches of 24 individual strands of 36 AWG equivalent solid copper wire (168 individual wire strands with total approximate circular mill area 4200 with 14 AWG total equivalent).

Aluminum wire (type C assembly): Size 10, 37 strands of 0.0167 inch, electrical grade, aluminum alloy, 1350 strands in accordance with ASTM-B230/B230M, concentric stranded, length of lay (pitch) .75 to 1.25 inch.

Jumper types B and H: Soft or drawn and annealed. Tin coated copper wire per ASTM-B172. Rope-lay-bunched member stranding consisting of 7 bunches of 95 individual strands of 36 AWG equivalent solid copper wire (665 individual wire strands with total approximate circular mill area 16625 with 8 AWG total equivalent).

For jumper types J, K, and L: Flexible, corrosion resistant steel wire rope, type I, composition B, per MIL-DTL-83420/2, construction type 7 x 19 rope-lay-bunched member stranding consisting of 7 bunches of 19 individual strands. (133 individual wire strands total).

Coupler (assembly types "D", "E", and "F" only): In accordance with MIL-DTL-6852, M6852-3.

Identification band (types C, G, and H only): Polyolefin, heat shrinkable in accordance with SAE-AMS-DTL-23053/5 Class 1 or 3. Color specified in table I.

Chafe guard/ Identification label (types I and J only): Heat shrinkable electrical insulation tubing per SAE-AMS-DTL-23053/5, "Insulation Sleeving, Electrical, Heat Shrinkable, Polyolefin, Flexible, Class 1 or 3, color black, .125" I.D. size.

Chafe guard/ Identification label (type K only): Heat shrinkable electrical insulation tubing Per SAE-AMS-DTL-23053/5, "Insulation Sleeving, Electrical, Heat Shrinkable, Polyolefin, Flexible, Class 1 or 3, color black,.187" I.D. size.

Chafe guard/ Identification label (type L only): Heat shrinkable electrical insulation tubing Per SAE-AMS-DTL-23053/5, "Insulation Sleeving, Electrical, Heat Shrinkable, Polyolefin, Flexible, Class 1 or 3, color black,.250" I.D. size.

Electrical and mechanical:

Group I

Visual and mechanical Inspection: Applicable, dimensions and configuration: See figure 1.

Marking: Applicable to types C, G, H, I, J, K, and L only.

Types C, G, and H. The Part or Identifying Number (PIN) shall be marked on the identification band. If the identification band is too short to accommodate the entire PIN on a single line, the PIN may be put on two lines or both sides of the identification band. Assembly type "C" parts shall be marked with an ink or fluid which is compatible with fuel.

Types I, J, K, and L. The PIN shall be marked with white lettering in ink.

Detent action	Not Applicable
Handgrip force	Not Applicable
Side loading	Not Applicable
Torque	Not Applicable
Engagement	Not Applicable
Contact resistance	Not Applicable
Clamp connector resistance	Not Applicable

Assembly resistance: Applicable, (see table II).

Resistance readings to be taken at the junction of terminal barrels and tongues. (See figure 1, NOTE 3)

Group II

Cable attachment	Not Applicable
Clamp release force	Not Applicable
Clamping life	Not Applicable
Vibration	Not Applicable
Durability	Not Applicable
Flexibility	Applicable (For Type C, see figure 2)
Terminal strength	Applicable (See table II). Perform after the flexibility test in accordance with MIL-DTL-83413 group II qualification sequence. Omit assembly resistance test as a terminal strength post test.
Terminal strength for D jumper assemblies is 5 to 28 lbs, however for the separate assembly ends: E = 110 lbs and F=110 lbs.	

Crush Not Applicable

Group III

Humidity	Applicable	Not applicable to types J, K, and L.
Temperature cycling	Applicable	Not applicable to types J, K, and L.
Drop	Not Applicable	
Altitude – low temperature	Not Applicable	
Dust	Not Applicable	
Fluid immersion	Not Applicable	
Salt spray: 48 hours in accordance with test procedure EIA/ECA-364-26. Not applicable to types J, K, and L.		

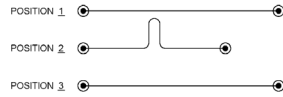
Group IV

Lightning current Applicable to Types G and H only. Applicable for initial qualification only.

Flexibility: For type "C" aluminum assemblies, change the MIL-DTL-83413 test to the following: Twist and flex: prior to the tensile strength test of MIL-DTL-83413.

Test No. 1 – Twist test 2 half twists (360°) in a direction to tighten the wire weave. This is for clarification and to accommodate the short 3 inch C type jumper.

Test No. 2 – Flex 20 times.



NOTE: For copper assemblies the flexibility test in accordance with MIL-DTL-83413 shall be performed at a rate of 30-65 cycles/minute.

FIGURE 2. Twist and flex test.

Sampling Plan:

Group A, Conformance Inspection, (Group I): Table XI tests shall be performed on a production lot basis. Sample size shall be randomly selected in accordance with table IV in MIL-DTL-83413. If one or more defects are found, the lot shall be rescreened and defects removed. A new sample, as specified in table IV, shall be randomly selected. If one or more defects are found in the second sample lot, the lot shall not be supplied to this specification. See paragraph 4.6 Conformance inspection MIL-DTL-83413.

Group C, Periodic Inspection:

Sample specimens: Sample specimens shall be 12 inches in length. And manufactured using the same process, material and tooling that is used to manufacture Group A product.

Sample size: Sample size for jumper cable assemblies shall consist of 12 jumpers per jumper assembly type from Table I. Each group of 12 samples shall use all available terminals for no less than one test cycle.

When testing D type Jumpers, E and F type Jumpers shall not be tested as individual jumpers. Jumper types E, and F, are subcomponents of jumper type D.

All specimens shall be subjected to the group I tests in table XI. After passing group I tests, the 12 specimens from each jumper type shall be subdivided into three groups of four specimens. One group of 4 specimens shall be subjected to group II tests and one group of 4 specimens shall be subjected to group III tests.

Qualification required: The activity responsible for the qualified products list for this specification sheet is the DLA Land and Maritime, Columbus, DLA Land and Maritime-VQ, P.O. Box 3990, Columbus, Ohio 43218-3990.

To retain qualification, the qualified manufacturer shall periodically forward reports to the Qualifying Activity in accordance with MIL-DTL-83413. Qualification inspection shall consist of the inspections specified in table XI.

TABLE XI. Qualification and Group A and C inspection of jumper assemblies.

Group	Qualification inspection	Requirement paragraph	Test Paragraph	Qual- # of Specimens	Conf - # of Specimens	Retention of Qualification
I	Visual and mechanical Inspection Detent action Handgrip force Side loading Torque Engagement Contact resistance Clamp connector resistance Assembly resistance	3.1, 3.3, 3.4 3.6, 3.8 N/A N/A N/A N/A N/A N/A 3.5.6.3	4.7.1 4.7.7.3	12	Per Table IV Of MIL-DTL-83413	Conformance inspection Group A
II	Cable attachment Clamp release force (initial) Clamp release force (after conditioning) Clamping life Vibration Durability Flexibility Terminal strength Crush	N/A N/A N/A N/A N/A 3.5.13 3.5.12 N/A	 4.7.14 4.7.13	4	4	Periodic Inspection Group C
III	Humidity Temperature cycling Drop Altitude – low temperature Dust Fluid immersion Salt spray	3.5.15 3.5.16 N/A N/A N/A N/A 3.5.22	4.7.16 4.7.17 4.7.23	4	4	
IV	Lightning current	3.5.23	4.7.24	4	N/A	Qualification Only

TABLE XII. Supersession table for the A, D, E, F & G type jumper assemblies.

Superseded LUG Code (Rev B)	Preferred LUG Code
A	A
F	F
I	I
B	B
G	G
C	C
D	D
D	H
E	E
E	J

TABLE XIII. Supersession table.
B & H type jumper assembly.

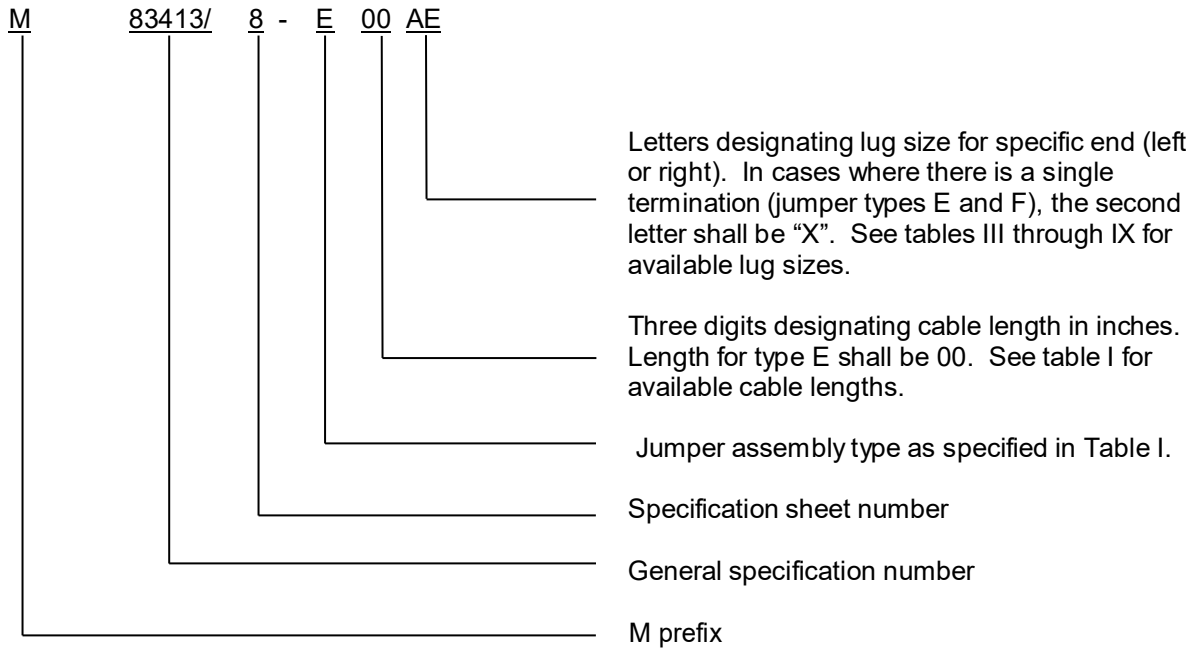
Superseded LUG Code (Rev B)	Preferred LUG Code
D	K
D	L
E	M
E	N
----	T (NEW)
----	U (NEW)

TABLE XIV. Supersession table.
C type jumper assembly.

Superseded LUG Code (Rev B)	Preferred LUG Code
A	O
B	P
C	Q
D	R
E	S
F	No replacement 1/
G	No replacement 1/

1/ AS20659 is copper, uninsulated. This jumper is aluminum.

Example of PIN: M83413/8-E00AE



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. In addition to MIL-DTL-83413, this document references the following:

- | | |
|-----------------|---------------------|
| MIL-DTL-5541 | AWS-C3.7 |
| MIL-DTL-6852 | EIA/ECA-364-26 |
| MIL-DTL-83420/2 | SAE-AS5259/1 |
| ASTM-B172 | SAE-AS7928/1 |
| ASTM-B209 | SAE-AS25036 |
| ASTM-B211/B211M | SAE-AS20659 |
| ASTM-B230/B230M | SAE-AMS-DTL-23053/5 |

CONCLUDING MATERIAL

Custodians:

Army - AV
Navy - AS
Air Force - 85
DLA - CC

Preparing activity:

DLA - CC
(Project 6150-2019-003)

Review activities:

Army - AR, CR, CR4, MI
Navy - MC
Air Force - 02
DLA -GS

NOTE: The activities listed above were interested in this document as of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.