

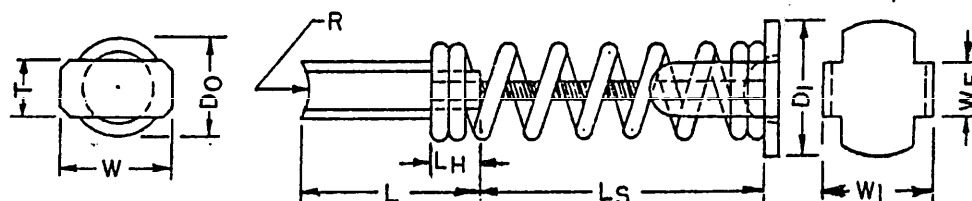
NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded as implying in any manner whatsoever that the Government is in any way endorsing, approving, or certifying the use of such drawings, specifications, or other data in any manner whatsoever, or otherwise as in any manner licensing the holder of any patent or other right of intellectual property in any invention that may in any way be related thereto.

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This document has been promulgated by the Department of Defense as the military standard to limit the selection of the item, product, or design covered herein in engineering, design, and procurement. This standard shall become effective not later than 90 days after the latest date of approval shown, for procurement of brush assemblies employed in dynamotors covered by Specification MIL-D-24.

FED. SUP CLASS.

5977



1. Brush marking: Each brush shall be marked in accordance with Standard MIL-STD-130, with a line or groove indicating the point of 75 percent wear, and with the grade of brush material used (last character in dash number) in accordance with the requirements of the procuring service.
2. The acceptance of equivalent brush assemblies shall be determined in accordance with the applicable requirements of the procuring service.
3. There shall be two closed turns at each end of the spring.
4. All brushes shall be chamfered as follows:

<u>Brush thickness or width (whichever is smaller)</u>	<u>Chamfer depth</u>
1/4 in. or less - - - - -	.010 $\frac{.005}{.000}$ in.
Over 1/4 in. but less than 3/8 in. - - - - -	.032 $\frac{.016}{.000}$ in.
3/8 in. to 5/8 in., inclusive - - - - -	.062 $\frac{.032}{.000}$ in.
Over 5/8 in. - - - - -	.093 $\frac{.032}{.000}$ in.

5. All shunt terminals shall be hot-tinned.
6. The maximum length of the terminal-lug ears shall not exceed the solid compressed length of the spring.
7. Referenced documents shall be of the issue in effect on date of invitation for bids.
8. This standard takes precedence over documents referenced herein.

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CUSTODIANS:	OTHER INT:
SigC	A — EOT
Aer	N — MCOx
USAF	AF —
(B)	(B)
PROCUREMENT SPECIFICATION	

OTHER INT:
A — EOT
N — MCOx
AF

MILITARY STANDARD

BRUSHES, ELECTRICAL CONTACT, CARTRIDGE TYPE

PROCUREMENT SPECIFICATION

SUPERSEDES

MS 91000

SHEET 1 OF 5

APPROVED 25 August 1953 REVISED (A) 31 January 1955 (B) 12 November 1957

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5977

MS PART NO. ^{1/}	FIIN ^{2/}	MS PART NO. ^{1/}	FIIN ^{2/}
MS91000-01MA		MS91000-09MB	
MS91000-01NA		MS91000-09NC	
MS91000-02MB		MS91000-10MC	
MS91000-02NB		MS91000-10NA	
MS91000-03MA		MS91000-11MB	
MS91000-04MB		MS91000-11NB	
MS91000-04NB		MS91000-12MA	
MS91000-05MA		MS91000-12PA	
MS91000-06MA		MS91000-13MB	
MS91000-06PA		MS91000-14NA	
MS91000-07MB		MS91000-15PC	
MS91000-07PB		MS91000-16SA	
MS91000-08MA		MS91000-17PD	
MS91000-08NA			

^{1/} The part number consists of the MS military-standard number followed by a dash number. The dash number indicates the following: First two characters - size; last two characters - manufacturer and grade of brush material.

^{2/} Federal Item Identification Number.

DESIGNATIONS FOR BRUSH-MANUFACTURERS' GRADES OF BRUSH MATERIAL

Designation	Manufacturer and grade (or equal) (see note 2)
MA	Morganite CM-5H
MB	Morganite HM-6782
MC	Morganite CM-3H2
NA	National Carbon Cophite 39
NB	National Carbon AY
NC	National Carbon 9613
PA	Pure Carbon MC-65
PB	Pure Carbon G-38-G
PC	Pure Carbon KDX
PD	Pure Carbon M-85-X
SA	Stackpole W2

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Aer
USAF
OTHER INT: A - EOT
N - MCO
AF -
PROCUREMENT SPECIFICATION
NONE

MILITARY STANDARD

BRUSHES, ELECTRICAL CONTACT, CARTRIDGE TYPE

SUPERSEDES

MS 91000

SHEET 2 OF 5

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SIZE	BRUSH-ASSEMBLY DESCRIPTION (CONTINUED)							
	Spring (measurements made on unassembled springs)							
	D ₀ (Diameter) (inch $\pm .000$ -.008)	Pressure condition 1		Pressure condition 2			Solid com- pressed length, maximum (inch)	Material
		Pressure, minimum (ounces)	Com- pressed length (inches)	Pressure, minimum (ounces)	Pressure, maximum (ounces)	Com- pressed length (inch)		
01	.189	1.527	.641	---	2.621	.391	.335	Be Cop
02	.189	1.527	.641	---	2.621	.391	.335	Be Cop
03	.328	10.8	.906	---	17.9	.954	.312	Be Cop
04	.191	2.0	.843	---	2.5	.531	.500	Be Cop
05	.253	4.5	.843	---	5.5	.531	.250	Be Cop
06	.248	2.5	.906	3.5	3.8	.687	.312	Sst
07	.248	2.5	.906	3.5	3.8	.687	.375	Sst
08	.473	Load rate: .284 pound per inch					.500	Be Cop
09	.223	Load rate: .195 pound per inch					.422	Be Cop
10	.684	23.0	1.437	27.0	31.0	.812	.500	Sst
11	.226	3.0	1.250	3.6	4.0	.890	.339	Sst
12	.316	7.0	.750	---	9.0	.500	.375	Sst
13	.203	1.6	.905	2.1	2.4	.655	.242	Sst
14	.305	6.0	.855	8.0	9.0	.480	.335	Sst
15	.245	3.75	.812	5.0	5.75	.437	.185	Sst
16	.243	4.4	.704	---	5.5	.422	.419	Be Cop
17	.365	10.0	.920	12.0	13.0	.580	.375	Be Cop

CUSTODIANS:
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Aer
USAFOTHER INT:
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N — MCO
AF —

(B)

(B)

MILITARY STANDARD

BRUSHES, ELECTRICAL CONTACT, CARTRIDGE TYPE

PROCUREMENT SPECIFICATION
NONE

SUPERSEDES

MS 91000

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FED. SUP CLASS.
5977

(B)

SIZE	BRUSH-ASSEMBLY DESCRIPTION (CONTINUED)					FIRST USED WITH DYNA- MOTOR TYPE
	Shunt cable		Shunt-terminal dimensions (inches)			
	L _S (Length) (inches $\pm .125$) ($-.000$)	Description	D ₁ (Diameter) $\pm .000$ $-.008$	W ₁ (Width) $\pm .000$ $-.008$	W _E (Width) $\pm .016$	
01	1.007	2 strands, 33 cond, .002 dia	.317	.250	.140	DM-36
02	1.007	2 strands, 33 cond, .002 dia	.317	.250	.077	DM-36
03	1.338	18.7 amp, min	.566	.375	.359	DM-35
04	1.154	.225 amp, min	.328	.245	.077	DY-102/VRC
05	1.279	9.2 amp, min	.378	.307	.170	DY-102/VRC
06	.990	3.4 amp, min	.314	Round type		DM-41
07	.990	.138 amp, min	.314	Round type		DM-41
08	1.968	7 strands, 50 cond, .003 dia	.692	.500	.359	DY-96/VRC
09	1.520	2 strands, 33 cond, .003 dia	.312	.250	.171	DY-96/VRC
10	1.184	7 strands, 59 cond, .003 dia	1.180	1.000	.366	BD-77
11	1.058	1 strand, 33 cond, .003 dia	.370	.258	.174	BD-77
12	.905	9 amp, min	.503	.370	.233	DY-85/VRC-2X
13	.897	2 strands, 33 cond, .002 dia	.370	.275	.077	DY-97/GRC-9
14	.845	7 strands, 9 cond, .005 dia	.502	.370	.233	DY-97/GRC-9
15	.850	2 strands, 33 cond, .003 dia	.377	.307	.169	DY-97/GRC-9
16	.875	3 strands, 50 cond, .002 dia	.376	.306	.170	DY-133/U
17	.903	7 strands, 115 cond, .002 dia	.602	.430	.358	DY-65/VRC-2

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CUSTODIANS: SigC
Aer
USAF (B)

OTHER INT:
A — EOT
N — MCO
AF — (B)

PROCUREMENT SPECIFICATION
W/TYPE

MILITARY STANDARD

BRUSHES, ELECTRICAL CONTACT, CARTRIDGE TYPE

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MS 91000

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