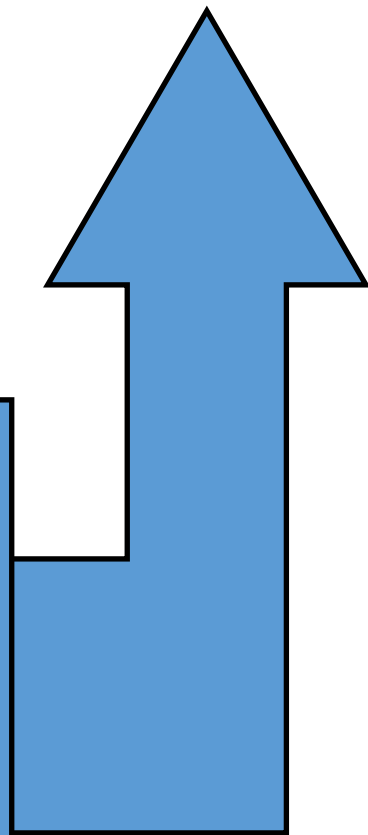




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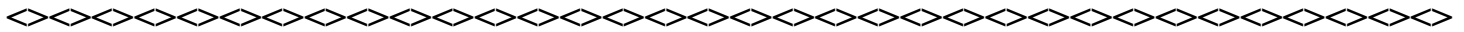
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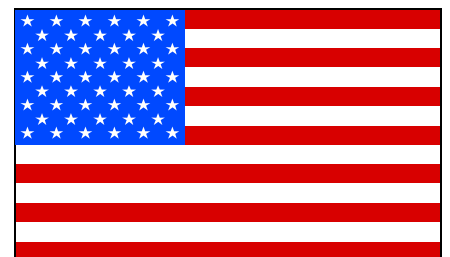
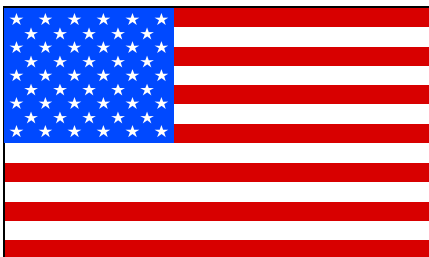
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**NEW *12V* (DBB) (9) SPL. ARMATURE
FOR MOTOR NUMBERS,
1787AC, 1788AC, W-9787, W-9788, W-9795
“WMS” PART NUMBER, WA-97**

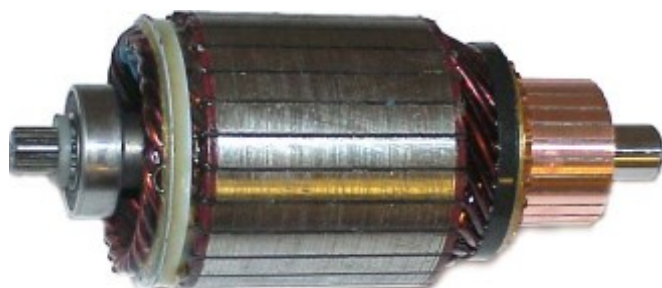
(Overall shaft length is 6.940”/ 176.28mm) (6-201-4 CE bearing)



**NEW *12V* (9) SPL. BUSHING ARMATURE
FOR MOTOR NUMBERS, W-9794P, W-9787-P**

“WMS” PART NUMBER, WA-87P

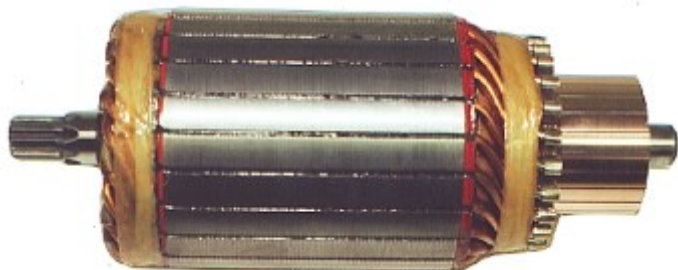
*(Overall shaft length is 7.135”/ 181.22mm)
(Diameter of shaft at CE is .625”/ 15.875mm)*



**NEW “SPECIAL” *12V* (9) SPL. BUSHING
ARMATURE FOR MOTOR NUMBERS,
W-9787-LB, W-9797-LC, W-9799C
*Special banding & welded windings for high RPM’s***

“WMS” PART NUMBER, WA-9787LC

*(Overall shaft length is 7.135”/ 181.22mm)
(Diameter of shaft at CE is .625”/ 15.875mm)*



**“NEW” *12V* (9) SPL. (DBB) ARMATURE
FOR MOTOR NUMBERS,
W-8987, W-8989, W-9789, W-9895, 1789AC**

“WMS” PART NUMBER, WA-204

(Overall shaft length is 7.520”/ 191.00mm) (6-201-4 CE bearing)



**NEW *24V* (9) SPL. ARMATURE FOR
NUMBERS, MMR-5107N
MMR-5106S & MMR-5107S
REPLACES NUMBER, MBD3586**

“WMS” NUMBER, 16-1298

(Overall shaft length is 11.435”/ 290.45mm)



**NEW *24V* (9) SPL. ARMATURE FOR
“WMS” MOTOR NUMBERS,
W-5106 & W-5106B**

“WMS” NUMBER, WA-5106

(Overall shaft length is 11.11”/ 282.19mm)

**NEW 24V ARMATURE FOR “WMS”
MOTOR NUMBERS, W-9063, W-8950,
(WITH BALL BEARING COM END)
(USE’S # 6-201-4 BEARING AT COMM END)**

“WMS” PART NUMBER, WA-950

(Overall shaft length is 6.575”/ 167.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)

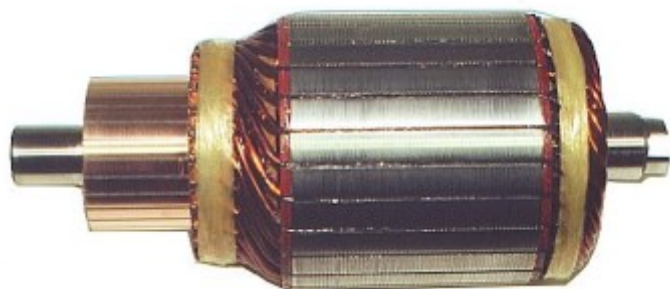


**NEW 12V ARMATURE FOR “WMS”
MOTOR NUMBERS, W-8992, W-8993
WA-307, W-8799, W-8999, W-9993, W-9000**

(WITH BUSHING COM END SHAFT)
(USE’S # CB-216 OR CB-990 BUSHING)

“WMS” PART NUMBER, WA-302

(Overall shaft length is 6.850”/ 174.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)

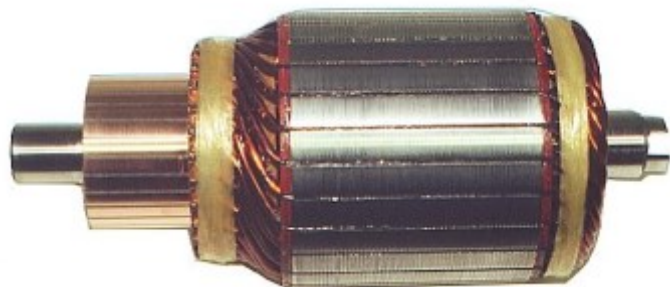


**NEW 12V ARMATURE FOR MOTOR NUMBERS,
W-8968, W-8990E, W-8739, 46-4040, MDY-7070,
MUE-6112, MDL-2134J, MDL-2134, 2258, 2263**

(WITH BUSHING COM END)
(USE’S # CB-216 OR CB-990 BUSHING)

“WMS” PART NUMBER, WA-302-E

(Overall shaft length is 6.850”/ 174.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)



**NEW 12V ARMATURE FOR “WMS”
MOTOR NUMBERS,
W-8901BC, W-8273, W-8990E-DBB etc.**

(WITH BALL BEARING COM END)
(USE’S # 6-201-4 BEARING AT COMM END)

“WMS” PART NUMBER, WA-302-BBE

(Overall shaft length is 6.575”/ 167.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)

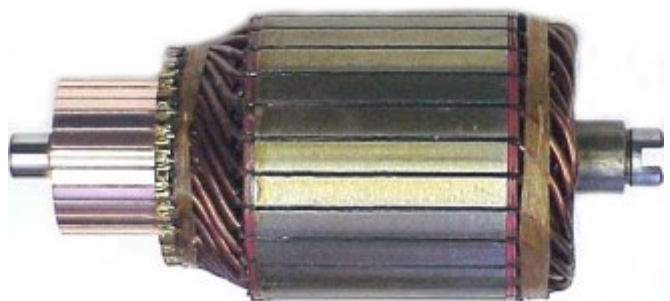


**NEW 12V ARMATURE FOR
“WMS” MOTOR NUMBERS,
W-8992D, W-8993D, W-8999D, W-9993D**

(WITH BALL BEARING COM END)
(USE’S # 6-201-4 BEARING AT COMM END)

“WMS” PART NUMBER, WA-302D

(Overall shaft length is 6.575”/ 167.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)





**“NEW” 12V (DBB) SLOT SHAFT ARMATURE
FOR MOTOR NUMBERS, W-1701, W-1707, W-1711
W-1768, W-8995, W-8997, ETC.
(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)**

“WMS” PART NUMBER, WA-304

(Overall shaft length is 6.375”/ 161.92mm) (0.256 SLOT)



**“NEW” 12V (DBB) SLOT SHAFT ARMATURE
FOR MOTOR NUMBERS,
W-8901F, W-8998, W-9007, W-9008, W-9009
(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)**

“WMS” PART NUMBER, WA-308

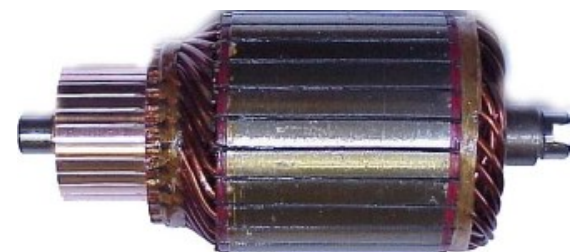
(Overall shaft length is 6.675”/ 169.54mm) (0.256 SLOT)



**“NEW” 24V (DBB) SLOT SHAFT ARMATURE
FOR *24V* MOTOR NUMBERS,
W-8824F, W-8959, W-8961, W-8963, W-8963B
(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)**

“WMS” PART NUMBER, WA-324

(Overall shaft length is 6.625”/ 168.27mm) (0.256 SLOT)



**“NEW” 12V (DBB) SLOT SHAFT ARMATURE
FOR MOTOR NUMBERS,
W-8935, W-8735, W-6001
W-8734A, W-8775, W-8875**

“WMS” PART NUMBER, WA-935

(Overall shaft length is 6.575”/ 167.00mm) (0.256 SLOT)



**“NEW” “HD” *12V* ARMATURE
WITH BUSHING COMMUTATOR END SHAFT
FOR MOTOR NUMBERS, W-8934, W-8943, W-8944, W-8947
REPLACES, MFX-2156, MFX-2156BS, MFX-2156CS**

“WMS” PART NUMBER, WA-303

(Overall shaft length is 7.800) (0.256 SLOT)



**“NEW” “HD” *12V* DBB ARMATURE
FOR MOTOR NUMBERS, W-8934D, W-8943D
46-2616, W-8745, W-8945D, W-8946, W-8947D, MMW4003
REPLACES NUMBERS, 16-941, MMW-2006
(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)**

“WMS” PART NUMBER, WA-343

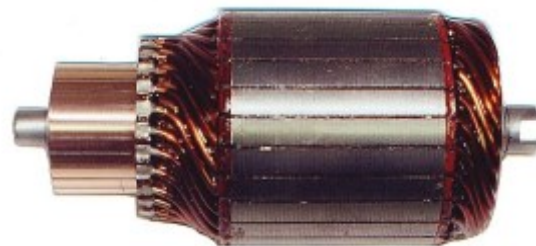
(Overall shaft length is 7.52”/ 191.00mm) (0.256 SLOT)

***“NEW” *12V* (DBB) ARMATURE
FOR MOTOR NUMBER, W-8996,
(THIS IS A “CCW” ARMATURE)***

(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)

“WMS” PART NUMBER, WA-334

*(Overall shaft length is 6.360”/ 161.54mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)*



***“NEW” *12V* (DBB) SLOT SHAFT ARMATURE
FOR MOTOR NUMBERS, IM-0132, AMJ-4747, 11.216.200, W-8235***

(USE’S # 6-201-4 CE BEARING & 6-202-4 DE BEARING)

“WMS” PART NUMBER, WA-8235

*(Overall shaft length is 6.320”/ 160.52mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)*



***“NEW” *24V* (DBB) SLOT SHAFT ARMATURE
FOR MOTOR NUMBERS, IM-0137, AMJ-4750, 11.216.206, W-8263
REPLACES NUMBER, 16.361.307***

(USE’S # 6-201-4 CE BEARING & 6-202-4 DE BEARING)

“WMS” PART NUMBER, WA-8263

*(Overall shaft length is 6.320”/ 160.52mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)*

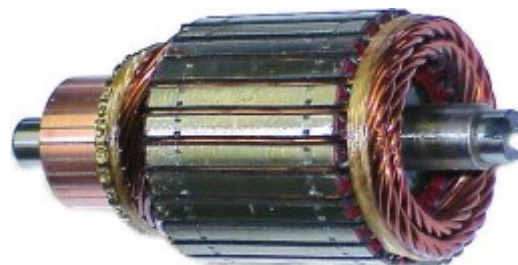


***“NEW” *24V* ARMATURE
FOR MOTOR NUMBERS, W-8924, W-8951, W-8955, W-9405, W-9459
(HAS BUSHING CE & USE’S # 6-202-4 DRIVE END BEARING)***

REPLACES NUMBERS, MHJ-2134, MHJ-3134 ETC.

“WMS” PART NUMBER, WA-405

*(Overall shaft length is 6.850”/ 174.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)*



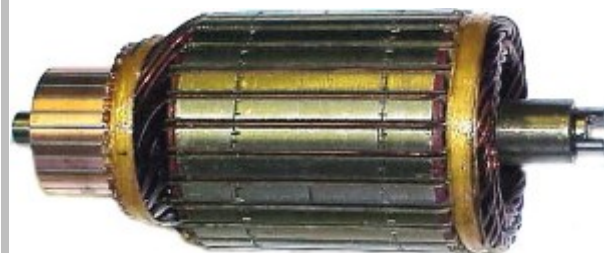
***“NEW” *24V* “DBB” ARMATURE
FOR MOTOR NUMBERS,
46-2574, MUD-4001, W-8937, W-8948, W-8949***

REPLACES NUMBERS, 16-894, MUD-2006

(USE’S # 6-201-4 CE BEARING & 6-202-4 DRIVE END BEARING)

“WMS” PART NUMBER, WA-948

*(Overall shaft length is 7.52”/ 191.00mm)
(ARMATURE HAS A 0256”/ 6.50mm SLOT)*





**“NEW” *12V* ARMATURE FOR THE (3”)
PERMANENT MAGNET MOTOR
NUMBERS, W-8912 AND W-8931.**

“WMS” PART NUMBER, WA-931

(ARMATURE HAS A 0.256”/ 6.50mm SLOT)



**“NEW” *12V* ARMATURE FOR THE (3”)
PERMANENT MAGNET MOTOR
NUMBER, W-8932**

“WMS” PART NUMBER, WA-932

(ARMATURE HAS A 0.187”/ 4.76mm SLOT)



**“NEW” *12V* ARMATURE FOR THE W-8805
(4.8”) MEYER & BUYER STYLE PERMANENT
MAGNET SALT SPREADER MOTOR.**

“WMS” PART NUMBER, WA-805



**“NEW” 12V / 24V ARMATURE FOR THE
WESTERN MOTOR NUMBER W-6750 & W-6850
(REPLACEMENT AUTO CRANE MOTOR)**

“WMS” PART NUMBER, WA-850

*(This armature use’s a 6-202-4 bearing at the drive end)
(Replaces armature numbers, 40850, WA-750)*



*This armature is used in a motor that use’s
1/4 X 20 thru bolts*

**“NEW” *12V* ARMATURE FOR THE
(3”) PERMANENT MAGNET MOTOR
NUMBERS, W-8012D & W-8031D**

“WMS” PART NUMBER, WA-8031D

(ARMATURE HAS A 0.256”/ 6.50mm SLOT)



*This armature is used in a motor that use’s
5mm X 151mm thru bolts*

**“NEW” *12V* ARMATURE FOR THE
(3”) METRIC PERMANENT MAGNET
MOTOR NUMBER, W-8053D**

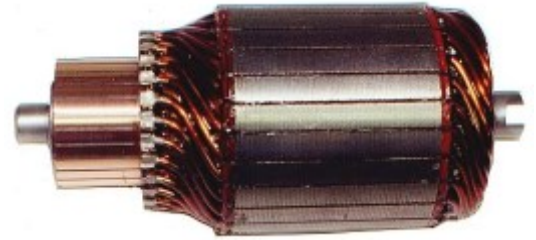
“WMS” PART NUMBER, WA-8053D

(ARMATURE HAS A 0.256”/ 6.50mm SLOT)

**“NEW” 12V (DBB) ARMATURE FOR THE 4.5” “MEYER”
QUICK LIFT PLOW MOTOR NUMBERS, W-8991, W-5692
(CHINA VERSION) (USE’S # 6-201-4 CE BEARING)**

“WMS” PART NUMBER, WA-305

(Overall shaft length is 6.325”/ 160.65mm)
(ARMATURE HAS A .0256”/ 6.50mm SLOT)

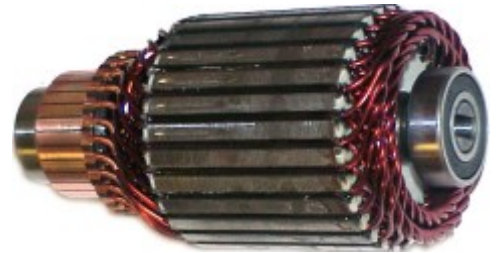


**“NEW” 12V (DBB) ARMATURE FOR THE ISKRA
4.5” “MEYER” QUICK LIFT PLOW MOTOR
NUMBERS, 51053, 15829, 11.212.981, AMJ4739**

(ISKRA VERSION) (HAS 6-201-4 CE BEARING)

“WMS” PART NUMBER, WA-5981

(Overall shaft length is 6.025”/ 153.00mm)
(ARMATURE HAS A .0256”/ 6.50mm SLOT)



**“NEW” 12V “BUSHING” CE/DE ARMATURE
FOR THE “EARLY / OLD STYLE” WESTERN
PLOW MOTOR NUMBER W-8940**

“WMS” PART NUMBER, WA-940

(Overall shaft length is 7.925”/ 201.30mm)
(ARMATURE HAS A 0.197”/ .500mm SLOT)



**“NEW” 12V “BUSHING” CE/DE ARMATURE
FOR THE WESTERN & FISHER PLOW MOTORS
(WITH A SEAL IN THE DRIVE END)
REPLACES NUMBERS, WA-306, MDL-2256
FOR MOTOR NUMBERS, W-6205, W-6206, W-6305, W-6306
MUE-7001, MUE-6103, MUE-6111, MUE-6111S, W-8994, W-6294**

“WMS” PART NUMBER, WA-994

(Overall shaft length is 7.220”/ 183.38mm)
(ARMATURE HAS A 0.197”/ .500mm Slot)



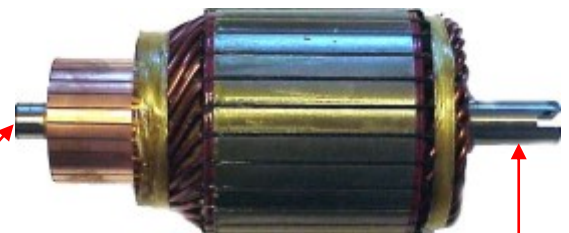
**“NEW” 12V BALL BEARING CE ARMATURE
FOR THE WESTERN & FISHER STYLE PLOW MOTOR
NUMBERS W-6206D & W-6306D**

“WMS” PART NUMBER, WA-6306D

(This armature use’s a 6-201 ball bearing at the shaft CE)

The shaft at the drive end with the 0.197 slot is .625”/ 15.875mm for a bushing

(Overall shaft length is 6.80”/ 172.72mm)
(ARMATURE HAS A 0.197”/ .500mm SLOT)



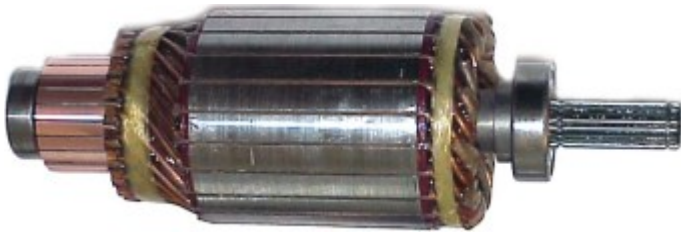


**“NEW” (HD) *12V* WINCH MOTOR ARMATURE
FOR NUMBERS, W-9120, W-5623, W-8923D**

*(THIS ARMATURE USE'S A 6-201 BB
SHAFT AT THE COMM END AND HAS A
“20” SPLINE SHAFT AT THE DRIVE END)*

“WMS” PART NUMBER, WA-923D

(Overall shaft length is 8.90”/ 226.00mm)



**“NEW” (HD) *12V* WINCH MOTOR ARMATURE
FOR NUMBERS, W-7608, W-7609, W-7623, W-7625**

*(USE'S # 6-201-4 CE BEARING AND HAS
A “20” SPL SHAFT AT THE DRIVE END)*

“WMS” PART NUMBER, WA-623

(Overall shaft length is 9.60/ 243.80mm)



**“NEW” (HD) *12V* WINCH MOTOR ARMATURE
FOR NUMBERS, MBJ4402, 4403, 4405, 4407,
MBJ4409, 4410, W-8833, W-8933 etc.**

“WMS” PART NUMBER, WA-933

(Armature has a (.750”/19.05mm) diameter shaft)

(Overall shaft length is 9.05”/ 229.87mm)



**12V * ARMATURE WITH A (5/8”) DIA. SHAFT
FOR “PRESTOLITE” MOTOR NUMBERS,
46-2148, MMC4004, MMC4004S, MMC-4004
REPLACES ARMATURE, MDL-2166**

“WMS” PART NUMBER, 16-538

(Long shaft is 3.375”/ 85.72mm long)

(Overall shaft length is 9.50”/ 241.00mm)



**“NEW” (HD) “DBB” *12V* WINCH MOTOR
ARMATURE FOR, W-9114, W-9116 & W-9143 etc.**

(USE'S # 6-201-4 CE BEARING)

“WMS” PART NUMBER, WA-143

(Armature has a .750”/19.05mm diameter shaft)

(Overall shaft length is 8.575”/ 217.80mm)



“NEW” (HD) “DOUBLE BALL BEARING”

***12V* WINCH MOTOR ARMATURE
FOR NUMBERS, W-9144, W-7643, W-7644**

(USE'S # 6-201-4 CE BEARING)

(ARMATURE HAS A (.750”) DIA. SHAFT)

“WMS” PART NUMBER, WA-9144

(Armature has a .750”/19.05mm diameter shaft)

(Overall shaft length is 9.50”/ 241.00mm)

**“NEW” *HD/12V* BUSHING ARMATURE
WITH A (5/8) DIA. SHAFT.
FOR MOTOR NUMBERS, W-8020, W-8027,
MBJ-4406, W-8927, MBJ4406
REPLACES NUMBERS, MCH-2206, 16-700**

“WMS” PART NUMBER, WA-927

(Overall shaft length is 9.50”/ 241.3mm)



**“NEW” *12V* BALL BEARING ARMATURE
WITH A (5/8) DIA. SHAFT.
FOR “WMS” MOTOR NUMBERS,
W-8829-P, W-8938-P, W-8939-P, W-8840-P**

“WMS” PART NUMBER, WA-938

*(Overall shaft length is 8.550”/ 217.00mm)
(Shaft is 1.75”/ 44.45mm long from the bearing)*



**“NEW” *12V* ARMATURE WITH (5/8) DIAMETER
SHAFT, HAS THREADED HOLE IN THE END
FOR “WMS” MOTOR NUMBERS,
MDY-7003, MMC-4003, W-7003, W-8900,
16-440, MMC-4003S, 46-2132, 46-2590
REPLACES NUMBERS, MDY-2102, 16-284**

“WMS” PART NUMBER, WA-2102

*(Overall shaft length is 11.125”/ 282.57mm)
(Shaft has a 5/16X18 threaded hole in the end)*



**“NEW” *12V* ARMATURE (5/8) DIAMETER
SHAFT, WITH THREADED END
FOR “WMS” MOTOR NUMBERS,
MDY-7018, MMC-4005, W-7018, W-7015
MDY-7004, 46-255, 46-441, ECT.
REPLACES NUMBER,
MDY-2104, 16-194, 16-821, MDY2104A**

“WMS” PARTN MUNBER, WA-2104

*(Overall shaft length is 10.250”/ 260.35mm)
(Shaft has 5/8X11 TPI threaded end)*



**“NEW” 12V *HD/DBB* ARMATURE WITH
A (5/8) DIA, SHAFT WITH BAR KEY SLOT
FOR MOTOR NUMBERS, W-8930, W-8930B
REPLACES NUMBERS, WA-8930**

“WMS” PART NUMBER, WA-8930B

*(Overall shaft length is 9.480”/ 240.80mm)
(Shaft is 2”/50.8mm long from the bearing)*



**12V *DBB* ARMATURE WITH BAR KEY SLOT
(WILL ONLY FIT THE “WMS” MOTOR)**

**FOR MOTOR NUMBERS,
W-7020D, W-7022D**

“WMS” PART NUMBER, WA-399

(Overall shaft length is 8.320”/ 211.32mm)



**12V “DBB” ARMATURE WITH BAR KEY SLOT
REPLACES NUMBERS, WA565, MDL-2169
(USE’S # 6-201-4 CE BEARING)**

**FOR MOTOR NUMBERS, W-6027, W-6029, W-8743,
MUE-6115, MDT-6026, MDT-6027, MDT-6029**

“WMS” PART NUMBER WA-565

(Overall shaft length is 8.120”/ 206.25mm)



**12V BUSHING ARMATURE W/A SPECIAL SLOT SHAFT
REPLACES NUMBERS, 16-120, 16-120B, MDL2119
(USE’S BUSHINGS AT THE CE AND DE)**

FOR MOTOR NUMBERS, W-8977, W-8980 etc.

“WMS” PART NUMBER WA-120B

(Overall shaft length is 7.630”/ 193.80mm)

(Diameter of slot end is .510/ 12.95mm < slot is .155/3.93mm wide)



**“NEW” *12V* BUSHING TYPE ARMATURE
REPLACES NUMBERS, 2257, MDL-2028
FOR MOTOR NUMBERS W-8878, W-8959
MDY-7030, MDY-7058, MDY-6123S, MDY-6125S**

(USE’S BUSHINGS AT THE CE AND DE)

“WMS” PART NUMBER, WA-958

(Overall shaft length is 7.10”/ 180.34mm)

(ARMATURE HAS A .0256”/6.50mm SLOT)

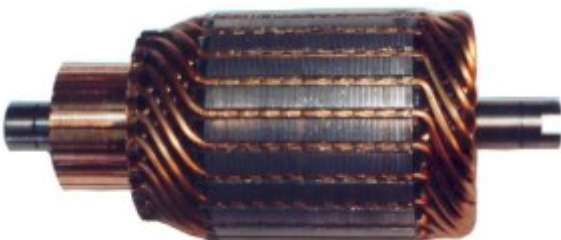


**12V BUSHING STYLE ARMATURE
(WITH A (5/8”) DIA. SHAFT)
REPLACES NUMBERS, 16-1254, MCH-2246S
FOR MOTOR NUMBER, 46-3663, MCL-6509S**

“WMS” PART NUMBER, WA-313

(Overall shaft length is 7.20”/ 182.88mm)

(ARMATURE HAS A .0256”/6.50mm SLOT)



12V *HD* BUSHING ARMATURE WITH A (5/8") DIA. SHAFT.

FOR "WMS" MOTOR NUMBERS, W-6508, W-6509 & MCL-6508
REPLACES ARMATURES,
MHC2130H, MCH-2130, MCH-2130A

"WMS" PART NUMBER, WA-312H

(SHAFT LENGTH IS 8.690"/220.72mm SLOT)
(Shaft has woodruff key slot & .250"/ 6.35mm roll pin hole)



12V *HD* BUSHING CE STYLE ARMATURE

**FOR EARLY "ML" MOTORS
WITH BUSHING SHAFT AT COMM END**
Replaces, ML-2133, ML-2133D, 1847, 16-925

"WMS" PART NUMBER, WA-2133

(Overall shaft length is 8.070"/ 204.97mm)
(ARMATURE HAS A .0256"/ 6.50mm SLOT)

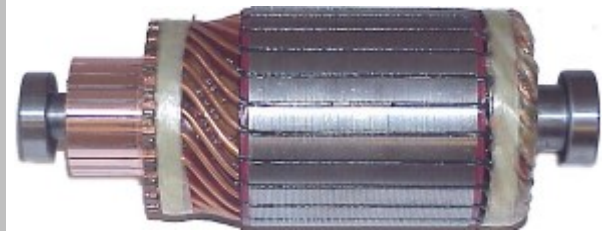


NEW 12V *HD* "DBB" BEARING ARMATURE

FOR MOTOR NUMBERS,
W-5207, ML-5007, ML-5007N ETC.
Replaces, 16-922, ML-2506, ML-2506A

"WMS" PART NUMBER, WA-5207

(ARMATURE HAS A .0256"/ 6.50mm SLOT)
(Overall shaft length w/bearings is 8.100"/ 205.74mm)
(Overall shaft length without bearings is 7.980"/ 202.69mm)



"NEW" 12V BALL BEARING ARMATURE

FOR MOTOR NUMBERS, 007-03900-0, W-9238 ETC.
(HAS "ALLEN" WRENCH TYPE SHAFT AT COMM END)

"WMS" PART NUMBER, WA-9238

(Overall shaft length is 9.990"/ 253.74mm)
(Shaft is 1.75"/ 44.45mm long from the bearing shoulder)



"NEW" 24V BALL BEARING ARMATURE

FOR MOTOR NUMBERS, 007-03900-0024, W-9234 ETC.
(HAS "ALLEN" WRENCH TYPE SHAFT AT COMM END)

"WMS" PART NUMBER, WA-9234

(Overall shaft length is 9.990"/ 253.74mm)
(Shaft is 1.75"/ 44.45mm long from the bearing shoulder)

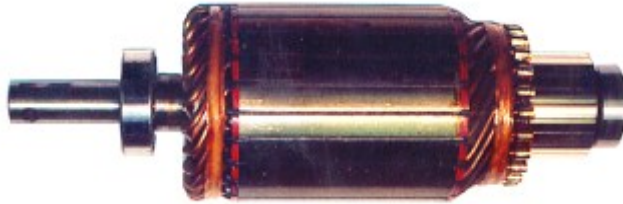




***12V* HD* BALL BEARING ARMATURE FOR “WMS” & HALE MOTOR NUMBERS,
200-0042-00-0, 200-0043-00-0, W-6541, W-6542, W-6552, W-6553, W-6563**

“WMS” PART NUMBER, WA-552

(ARMATURE HAS A .0256”/ 6.50mm SLOT) (Overall shaft length is 7.460”/ 189.48mm)



**“NEW” *12V* HD* BALL BEARING ARMATURE
FOR “WMS” & HALE NUMBERS, 200-0040-00-0, W-6503, W-6598, W-9898, W-6599, W-6559**

“WMS” PART NUMBER, WA-598

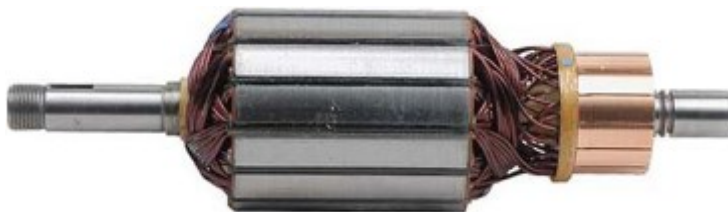
*(Overall shaft length is 8.975”/ 227.96mm)
(Armature shaft is 1.5”/38.1mm long from the bearing & has a woodruff key slot & .250”/6.35mm)*



**“NEW” *12V* PRESTOLITE STYLE STARTER ARMATURE
(FOR STARTER NUMBERS, 160-309, 3460, 5222, MHA7015, MHA6107, 46-3602 etc.)
REPLACES NUMBERS, 1793, MDL-2085, MDL2085**

“WMS” PART NUMBER, 16-75

(Overall shaft length is 12.320”/ 312.92mm with a .250”/ 6.35mm roll pin hole)



← BUSHING SHAFT

“NEW” REPLACEMENT “COMM END” BUSHING ARMATURE

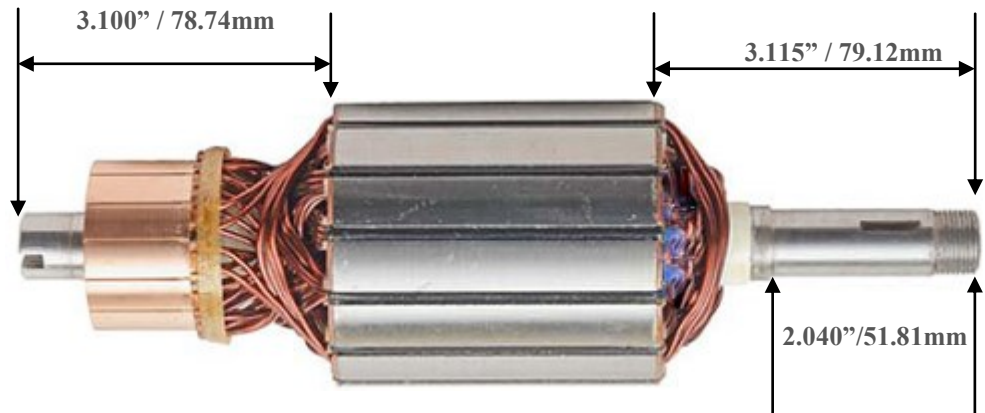
**THIS ARMATURE USE'S THE 6-203 BALL BEARING ON THE DRIVE END AND A CB-2491 “BUSHING”
AT THE COMMUTATOR END, REPLACES, WA678N, 301-20010, WA-678, 678**

**THIS IS FOR THE “OLDER” GOODALL “BUSHING/CE” GENERATOR NUMBERS,
10626, 45-734, 45-376, GKR-7101, GKR-7101S etc.**

“WMS” PART NUMBER, WA-678N

*(The length of the shaft from the commutator to the end of the shaft is 1.250”/ 31.75mm)
(Overall shaft length is 9.921”/ 252.0mm with a woodruff key slot <> Shaft diameter at CE & DE is 0.669)*

BEARING SHAFT
WITH SLOT



“NEW” REPLACEMENT DOUBLE BALL BEARING ARMATURE
THIS ARMATURE USE’S THE 6-203 BALL BEARING ON BOTH ENDS

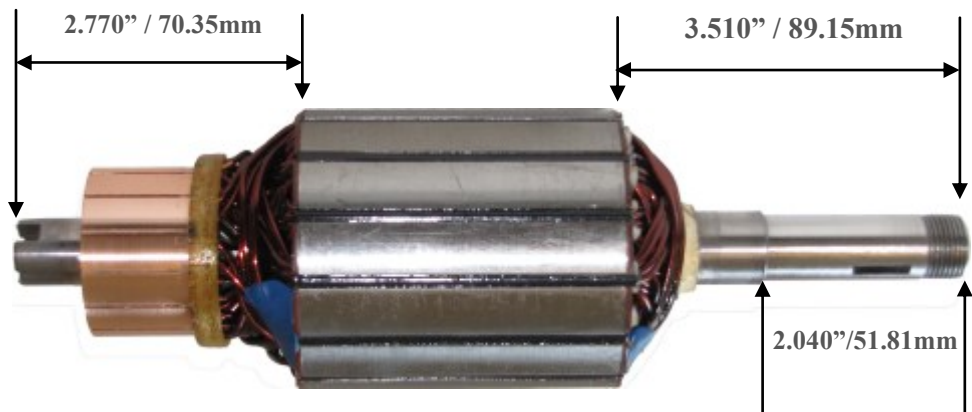
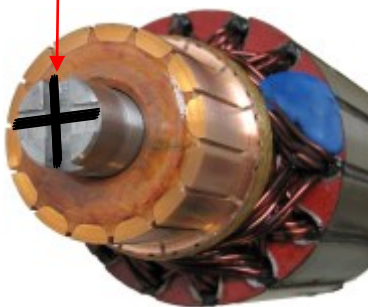
REPLACES ARMATURE NUMBERS, 10-282, 301-20012, GKR2006H, GKR2030F

FOR GOODALL / AMETEK GENERATOR NUMBERS,
 79370, 79371, 79373, 79375, 45-734, GKR-6104S, GKR-6104A

“WMS” PART NUMBER, WA-734N

(The length of the shaft from the commutator to the end of the shaft is 0.700”/ 17.78mm)
 (Overall shaft length is 9.299”/ 236.2mm with a woodruff key slot < Shaft diameter at CE & DE is 0.669)

BEARING SHAFT WITH
CRISS-CROSS SLOTS



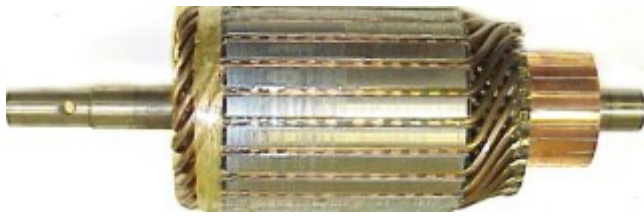
“NEW” REPLACEMENT DOUBLE BALL BEARING ARMATURE
THIS ARMATURE USE’S THE 6-203 BALL BEARING ON BOTH ENDS

REPLACES ARMATURE NUMBERS, GKR-2106

THIS WILL ONLY WORK PROPERLY IN THE AMETEK,
 GENERATOR NUMBERS GKR6105S, GKR6105, GKR-6105

“WMS” PART NUMBER, WA-6105N

(The length of the shaft from the commutator to the end of the shaft is 0.700”/ 17.78mm)
 (Overall shaft length is 9.299”/ 236.2mm with a woodruff key slot < Shaft diameter at CE & DE is 0.669)



“NEW” *12V* HD ARMATURE
FOR NUMBERS, 46-3648, MUJ-4001S, 46-3648N
(ARMATURE HAS A .250 ROLL PIN HOLE IN THE SHAFT)
“WMS” PART NUMBER, 16-1247

(Overall shaft length is 8.965”/ 227.71mm)



“NEW” *12V* ARMATURE WITH KEY SLOT
AND A THREADED 5/16X18 HOLE IN SHAFT
FOR NUMBERS, 46-2603, ML-5004, W-5204
REPLACES NUMBERS, 16-929, ML-2516

“WMS” PART NUMBER, WA-5204

(Overall shaft length is 9.325”/ 236.85mm)
(Diameter of small end is .625/ 15.87mm < large area is .870”)



“NEW” *24V* MBD STYLE SLOT SHAFT ARMATURE
REPLACES, 16-914, MBD-2556A, MBD-3556A

“WMS” PART NUMBER, WA-507

FOR MOTOR NUMBERS, W-5007S, W-5007
46-2553, MBD-5107, MBD-5107S, W-5407 etc.

(Overall shaft length is 10.394”/ 264.0mm < .256 slot)



“NEW” *24V* AMPLEX SHAFT ARMATURE
REPLACES NUMBERS, MBD-3556F

“WMS” PART NUMBER, WA-5112

FOR MOTOR NUMBERS,
MBD-5112S , W-5112, W-5114, W-5115

(This is for “WMS” motors only)
(THIS ARMATURE WILL NOT FIT OHIO MOTORS)
(Overall shaft length is 10.686”/ 271.42mm)



“NEW” *24V* OHIO AMPLEX SHAFT ARMATURE
REPLACES, WA-D468250RM, C-65002710

“WMS” PART NUMBER, C650027-10

FOR MOTOR NUMBERS, D468237XWF07A
D468247XWF07A, D468255XWF07A ETC.

(This is for “Ohio” motors only)
(ARMATURE WILL NOT FIT W-5112 OR W-5114 MOTORS)
(Overall shaft length is 10.669”/ 271.0mm)



****24V* MFY STYLE SLOT SHAFT ARMATURE***

REPLACES NUMBERS, MBD-2506A

“WMS” PART NUMBER, 16-908N

FOR MOTOR NUMBERS, 46-2275, 46-2810, MFY-4101, MFY-4202 ETC.

(Overall shaft length is 9.354”/ 237.60mm <> .256”/ 6.50mm slot)



****24V* MFY STYLE INTERNAL (9) SPLINE ARMATURE***

REPLACES NUMBERS, MBD-2506B

“WMS” PART NUMBER, 16-1286N

FOR MOTOR NUMBERS, 46-4037, MFY-4203, MFY-4203S ETC.

(Overall shaft length is 9.640”/ 244.85mm)



****24V* MBD STYLE SLOT SHAFT ARMATURE***

REPLACES NUMBERS, MBD-2546B

“WMS” PART NUMBER, 16-921

FOR MOTOR NUMBERS, 2200225, 46-2540, MMT5001

(Overall shaft length is 9.125”/ 231.77mm <> .256”/ 6.50mm slot)



“NEW” *12V* PRESTOLITE STYLE STARTER ARMATURE

(FOR STARTER NUMBERS, 46-3597, MHA-7021, MHA-6102, MHA-6102NR)

REPLACES NUMBERS, 16-896, MDL-2246, MDL2246

“WMS” PART NUMBER, WA-2246

(Overall shaft length is 11.950”/ 303.53mm with a .250”/ 6.35mm roll pin hole)



NEW *24V* WMS / MFY STYLE SLOT SHAFT ARMATURE

“WMS” PART NUMBER, WA-4810

FOR “WMS” MOTOR NUMBER, W-4810, W-4810B & W-4816

*(With bearings overall shaft length is 9.320”/ 236.72mm
W/O bearings length is 9.235”/ 234.57mm < .256”/ 6.50mm slot)*



NEW *24V* WMS / MFY STYLE INTERNAL (9) SPLINE ARMATURE

“WMS” PART NUMBER, WA-4037

FOR “WMS” MOTOR NUMBERS, W-4037, W-4038, W-4039, W-4040, W-4042

(With bearings overall shaft length is 9.375”/ 238.10mm)



“REPLACEMENT” *12V* HD ARMATURE W/14 TOOTH GEAR
FOR “WMS” MOTOR NUMBERS, W-8703, W-8903, W-8905 etc.

*(REPLACES NUMBER, MCH2150, MCH2150S MCH-2150, 16-446)
(ARMATURE HAS 14 TOOTH GEAR AS PART OF SHAFT)
(ARMATURE HAS EXTENDED SHAFT AT COMMUTATOR END WITH ROLL PIN HOLE)*

“WMS” PART NUMBER, WA-903

(Overall shaft length is 9.430”/ 239.52mm)



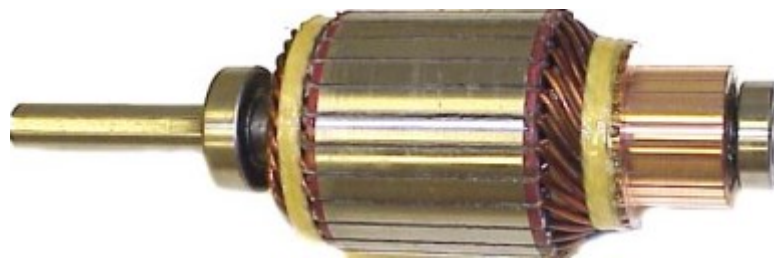
****24V* BAR KEY SLOT SHAFT ARMATURE***

THE BAR KEY SHAFT IS 2.875"/ 73.02mm LONG FROM THE BEARING

"WMS" PART NUMBER, WA-323

FOR MOTOR NUMBERS, W-6624 etc.

(Overall shaft length is 9.575"/ 243.20mm \sphericalangle shaft length from the ball bearing is 2.75"/ 69.85mm)



****12V* BAR KEY SLOT SHAFT ARMATURE***

THE BAR KEY SHAFT IS 2.875"/ 73.02mm LONG FROM THE BEARING

"WMS" PART NUMBER, WA-740

FOR MOTOR NUMBERS, W-6973, W-6993, W-6838, W-6740 etc.

(Overall shaft length is 9.575"/ 243.20mm \sphericalangle shaft length from the ball bearing is 2.75"/ 69.85mm)



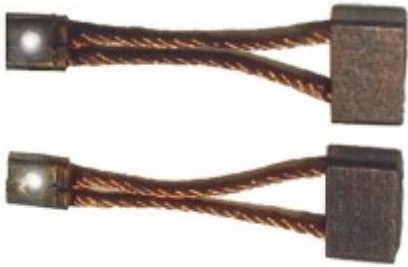
****12V* SIREN MOTOR ARMATURE FOR FEDERAL SIGNAL***

(This armature will only work in motors that use a drive end frame)

"WMS" PART NUMBER, WA-7905

FOR MOTOR NUMBERS, Z8280080B, 0036000, W-7905

(Overall shaft length is 10.394"/ 264.00mm)



12V

**GROUND BRUSH
FOR PUMP MOTORS
(SPECIAL COMPOSITION)
ATTACHES WITH A
GROUND SCREW**

**REPLACES NUMBER
17-22 GROUND BRUSH**

“WMS” PART NUMBER K-81

L -.500/12.7mm W -.750/19.05mm
T -.345/8.76mm LL -1.938/49.22mm



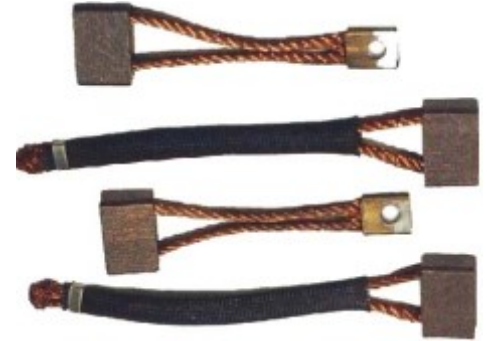
12V

**INSULATED BRUSH
FOR PUMP MOTORS
(SPECIAL COMPOSITION)
FOR SOLDERING OR
SPOT WELDING TO COILS**

**REPLACES NUMBER
17-22 POSITIVE BRUSH**

“WMS” PART NUMBER K-82

L -.500/12.7mm W -.750/19.05mm
T -.345/8.76mm LL -3.625/92.00mm



12V

***BRUSH SET*
FOR PUMP MOTORS
(SPECIAL COMPOSITION)
(BRUSH SET OF)
(K-81 AND K-82)**

**REPLACES NUMBER
17-22 BRUSH SET**

“WMS” PART NUMBER K-83

**(SAME DIMENSIONS AS)
(NUMBERS K-81 & K-82)**

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



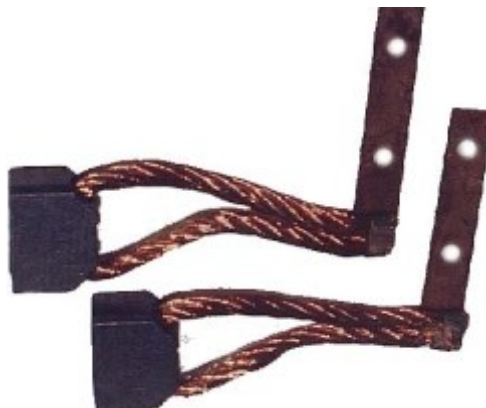
**GROUND BRUSH SET FOR
SOLDERING OR SPOT
WELDING TO PRESTOLITE
STYLE BRUSH HOLDER.**

(SPECIAL COMPOSITION)

**REPLACES NUMBER
17-147 GROUND BRUSH**

“WMS” NUMBER K-87

L -.600/15.24mm W -.695/ 17.65mm
T -.345/8.76mm LL -1.80/45.72mm



**GROUND BRUSH SET WITH
FLATS FOR ATTACHING TO
THE W-214 AND W-221
BRUSH HOLDERS**

(SPECIAL COMPOSITION)

**REPLACES NUMBER
17-33 GROUND BRUSH**

“WMS” NUMBER K-88

L -.560/14.22mm W -.750/19.05mm
T -.345/8.76mm LL -1.80/45.72mm



**GROUND BRUSH SET FOR
SOLDERING OR SPOT
WELDING TO THE W-214 AND
W-221 BRUSH HOLDERS**

(SPECIAL COMPOSITION)

**REPLACES NUMBER
17-33 GROUND BRUSH**

“WMS” NUMBER K-88S

L -.560/14.22mm W -.750/19.05mm
T -.345/8.76mm LL -1.80/45.72mm

THE "SCOTT" STYLE MOTORS REQUIRE BRUSHES AND SPRINGS IN QUANTITIES OF (2) < (4) < OR (8) PER MOTOR; (PLEASE ORDER ACCORDINGLY)

HIGH CARBON BRUSH



USE BRUSH SPRING # NEG-0149



VERY POPULAR BRUSH



"NON-INSULATED BRUSH"
FOR SCOTT STYLE MOTORS
(90V)

"WMS" NUMBER BRU-0090

SOLD INDIVIDUALLY "EACH"

L -1.00/25.40mm W- .740/18.79mm
T -.400/10.16mm LL- 1.75/44.45mm

"INSULATED BRUSH"
FOR SCOTT STYLE MOTORS
(12V & 24V)

"WMS" NUMBER BRU-0040

SOLD INDIVIDUALLY "EACH"

L -1.00/25.40mm W- .740/18.79mm
T -.400/10.16mm LL- 2.00/50.80mm

"INSULATED BRUSH"
FOR SCOTT STYLE MOTORS
(12V & 24V)

"WMS" NUMBER BRU-0058

SOLD INDIVIDUALLY "EACH"

L -1.00/25.40mm W- .740/18.79mm
T -.400/10.16mm LL- 2.00/50.80mm

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



**BRUSH & SPRING SET
FOR SCOTT MOTORS**

**FOR MOTOR NUMBER,
W4BB-3765 etc.**

(BRUSH HAS WEAR SENSOR WIRE)

**SOLD ONLY AS COMPLETE
SET AS SHOWN ABOVE**

"WMS" NUMBER WBK-3784

L -1.00/25.40mm W - .740/18.79mm
T -.400/10.16mm LL - 2.00/50.80mm

SCOTT MOTOR BRUSH SPRING
(VERY POPULAR)



*** SPECIAL BRUSH SPRING ***

**FOR SCOTT STYLE
PERMANET MAGNET MOTORS**

"WMS" NUMBER NEG-0149

SOLD INDIVIDUALLY "EACH"

0.250 WIDE & 0.975 END TO END



**BRUSH & SPRING SET FOR
48V AND 72V SCOTT MOTORS**

**FOR MOTOR NUMBERS,
W4BD-2164, W4BD-2744 etc.**

(SPECIAL COMPOSITION)

**SOLD ONLY AS COMPLETE
SET AS SHOWN ABOVE**

"WMS" NUMBER WBK-4872

L -1.00/25.40mm W - .740/18.79mm
T -.400/10.16mm LL - 2.00/50.80mm



* 12V/24V "F & R" MOTORS *

**BRUSH SET FOR THE
W-9133 WINCH MOTOR
FOR MOTOR NUMBERS
W-8936, W-9133, ETC.**

"WMS" PART NUMBER, K-33

L -.560/14.22mm W -.750/19.05mm
T -.345/ 8.76mm LL - 1.40 GRD. BR.
LL - 2.50 & 4.50 POS. BR.



* 12V/24V "F & R" MOTORS *

**BRUSH AND BRUSH HOLDER FOR
THE MBD, MMD & WMS STYLE
WINCH MOTOR NUMBERS WITH
"SQUARE SHOULDER" TERMINAL**

**FOR MOTOR NUMBERS
W-8933, W-8913, W-8928, W-8941
W-8856, W-8956, W-9143, WB-975**

"WMS" PART NUMBER, 17-184K

L -.560/14.22mm W -.750/19.05mm
T -.345/ 8.76mm LL -2.50 & 4.50



**POSITIVE STUD NO LONGER
HAS SQUARE SHOULDER**

**BRUSH SET FOR THE
MBJ44XX & MMD44XX
STYLE WINCH MOTORS**

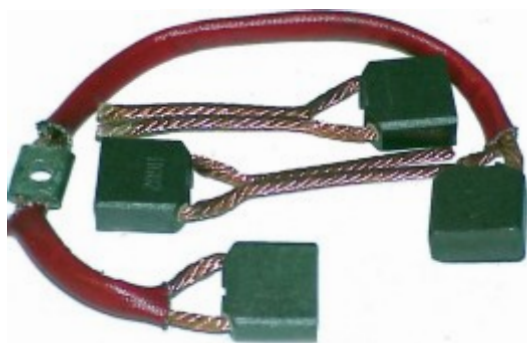
**FOR MOTOR NUMBERS
MBJ-4401, MBD-4407 ETC.**

**REPLACES NUMBERS, 17-184
MBJ-1012AS, MMD-1012S, 17-184K**

"WMS" PART NUMBER 17-370

L -.650/16.51mm W -.695/17.65mm
T -.345/8.76mm LL -2.50" & 4.50"

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



FOR "CCW" WAPSA MOTORS

**POSITIVE BRUSH WITH GROUND
BRUSHES FOR THE WAPSA STYLE
PUMP MOTORS**

2200727, 9130450081

(Positive brush has eyelet for a screw)

"WMS" NUMBER, WB-181K

L -.750/19.05mm W -.750/19.05mm
T -.345/ 8.76mm LL -2.25" & 5.25"



FOR "F & R" WAPSA MOTORS

**POSITIVE BRUSH WITH POST &
GROUND BRUSHES FOR THE
WAPSA STYLE WINCH MOTORS**

9130450047, 9130450074

*(5/16X24 TERMINAL POST
HAS A ROUND SHOULDER)*

"WMS" NUMBER, WB-185K

L -.750/19.05mm W -.750/19.05mm
T -.345/ 8.76mm LL - 2.25" & 5.25"



(POS & NEG BRUSH SET)

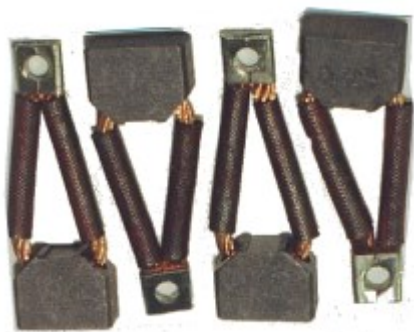
**FOR "WMS"
MOTOR NUMBERS,**

**W-8934, W-8943, W-8934D
W-8943D, W-8946 ETC.**

SPECIAL COMPOSITION

"WMS" PART NUMBER, K-43

L -.560/14.22mm W -.750/19.05mm
T -.345/8.76mm LL-2.00" & 5.00"

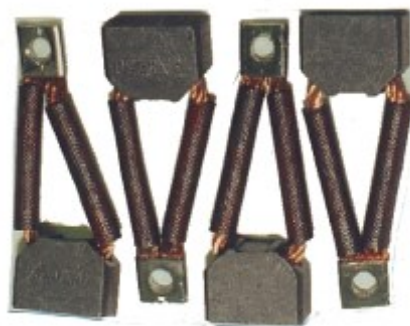


**BRUSH SET FOR CHINESE
AND MEXICAN MOTORS**

***24V* INSULATED BRUSH SET**
FOR W-8961, W-8963
W-9793, W-9796, ETC.
(SPECIAL COMPOSITION)

“WMS” PART NUMBER K-24

L – .560/14.22mm W – .750/19.05
T – .345/8.76mm LL - 1.50/38.1mm



**BRUSH SET FOR CHINESE
AND MEXICAN MOTORS**

***12V* INSULATED BRUSH SET**
FOR W-9788, W-9795
W-9007, W-9009, ETC.
(SPECIAL COMPOSITION)

“WMS” PART NUMBER K-86

L – .560/14.22mm W - .750/19.05mm
T – .345/8.76mm LL - 1.50/38.1mm



**BRUSH SET FOR CHINESE
AND MEXICAN MOTORS**

**“SPECIAL” COMPOSITION
FOR PUMP MOTORS.**

W-8996, W-9787, W-9789, W-
9794, W-8939, W-8991, W-8995

“WMS” PART NUMBER K-90

L – .560/14.22mm W - .750/19.05mm
T – .345/8.76mm LL -- 1.50/38.1mm

(L) = Brush Length ◇ (W) = Brush Width ◇ (T) = Brush Thickness ◇ (LL) = Lead Length



**LONG & SHORT BRUSH LEADS
WITH TERMINAL POST W/INS.**
(SQUARE SHOULDER ON STUD)
APPLICATIONS
(W-8923, W-8933, W-8941,)
(W-9133, W-9143, W-9405 ETC.)
(SPECIAL COMPOSITION)
(SOLD EACH)

“WMS” PART NUMBER K-89-T

L – .560/14.22mm W - .750/19.05mm
T – .345/.876mm LL -2.50” & 4.50”



**LONG & SHORT BRUSH LEADS
USED IN MOST “CCW”
APPLICATIONS
FOR MOTOR NUMBERS
(W-8992, W-8993)
(W-8799, W-8999 ETC.)
(SPECIAL COMPOSITION)
(SOLD EACH)**

“WMS” PART NUMBER K-89

L – .560/14.22mm W - .750/19.05mm
T – .345/.876mm LL - 2.50” & 4.50”



**EVEN SPLIT BRUSH LEADS
USED IN MOST “CW”
APPLICATIONS
FOR MOTOR NUMBERS
(W-8958, W-8984, W-8977)
(W-8990, W-8994 ETC.)
(SPECIAL COMPOSITION)
(SOLD EACH)**

“WMS” PART NUMBER K-94

L – .560/14.22mm W - .750/19.05mm
T – .345/.876mm LL -- 3.25” & 3.25”



FOR EARLY PRESTOLITE STYLE
12V DC MOTORS & STARTERS

REPLACES NUMBERS,
MDL-50, MDL-2012CS

FOR MOTOR & STARTER SERIES,
MDU, MDY, MHA, MHN etc.

“WMS” NUMBER 17-39

L - .500/12.7mm W -.695/17.65mm
T - .345/8.76mm LL -2.00” Grd.
LL - 3.00” & 3.25” Pos.



FOR AMETEK/PRESTOLITE
BI-DIRECTIONAL
** 12V DC MOTORS **

REPLACES NUMBERS,
17-355 W/POST, 17-370B

FOR MOTOR NUMBERS
46-4157, MBJ6200, MBJ6201 etc.

“WMS” NUMBER WBK-4157

L - .650/16.51mm W - .695/17.65mm
T - .345/ 8.76mm
LL --2.75” & 4.75” Grd lead - 2.5”



FOR AMETEK/PRESTOLITE
MOTORS

BRUSH SET FOR THE XOT
PRESTOLITE STYLE MOTORS

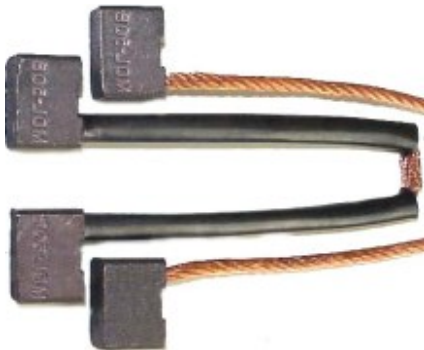
FOR MOTOR NUMBERS
MUE-6202S, MUE-6203S
MUE6202AS, MEG-6201S etc.

REPLACES NUMBERS,
MUE-1013 & MUE-2012S

“WMS” NUMBER 17-342

L – .650/16.51mm W - .695/17.65mm
T – .345/8.76mm LL --2.00/50.8mm
Positive LL -- 2.50” & 4.00”

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



FOR PRESTOLITE MHB STYLE
24V DC MOTORS & STARTERS

REPLACES NUMBERS,
MHB-2012, MHB-2012S
MHB2012S, MHB-2012BS

FOR STARTER NUMBERS,
MHB4006, 7, 8, 10, 11, 12 etc.

“WMS” NUMBER 17-126

L - .500/12.7mm W -.695/17.65mm
T - .345/8.76mm LL -2.00” Grd.
LL - 3.00” & 3.00” Pos.



FOR PRESTOLITE MHJ STYLE
24V DC MOTORS & STARTERS

REPLACES NUMBERS,
MDL-50C, MDL-2012GS
17-157, MDL-2012HS,

FOR MOTOR NUMBERS,
MEX, MMB, MHJ SERIES

“WMS” NUMBER 17-127

L - .500/12.7mm W -.695/17.65mm
T - .345/8.76mm LL -2.00” Grd.
LL - 3.00” & 3.00” Pos.



**** FOR AMETEK PRES. ****
*** MUF-6102 SERIES MOTORS ***

REPLACES NUMBERS,
MDL50B, 17-53, MDL-50B
(LATE STYLE ONLY)

FOR MOTOR NUMBER
MUF-6102 (Late style only)

“WMS” NUMBER WB-50B

L - .500/12.7mm W - .695/17.65mm
T - .345/8.76mm LL -- 3.25” & 3.25”



FOR AMETEK/PRESTOLITE MOTORS

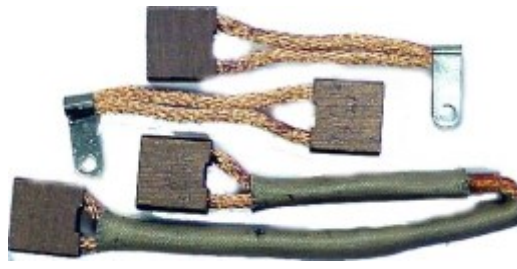
BRUSH SET FOR THE XOT PRESTOLITE STYLE MOTORS

FOR MOTOR NUMBERS
MUE6201S, MUE-6201AS
MUE-6201S etc.

REPLACES NUMBERS,
MUE-1013A & MUE-2012AS

“WMS” NUMBER 17-344

L – .650/16.51mm W – .695/17.65mm
T – .345/8.76mm LL --2.00/50.8mm
Positive LL -- 2.50” & 4.00”



FOR AMETEK/PRESTOLITE MOTORS

BRUSH SET FOR THE XOT PRESTOLITE STYLE MOTORS

FOR MOTOR NUMBERS
MMY-6101, MMY-6101AS
MMY-6101S etc.

REPLACES NUMBER,
MMY-2012S, MMY-2012AS

“WMS” NUMBER 17-350

L – .650/16.51mm W –.695/17.65mm
T – .345/8.76mm LL-2.75” & 4.75”
Grd/lead - 2.5/63.5mm



FOR AMETEK/PRESTOLITE MOTORS

BRUSH SET FOR THE XOT PRESTOLITE STYLE MOTORS

FOR MOTOR NUMBERS
MBJ-6200, MBJ-6201,
MMD-6101, MMD-6102 etc.

REPLACES NUMBER,
MMD-2012S

“WMS” NUMBER 17-355

L – .650/16.51mm W --.695/17.65mm
T – .345/8.76mm LL --2.75” & 4.75”
Grd/lead - 2.5/63.5mm

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



BRUSH SET FOR THE XOT PRESTOLITE STYLE MOTORS

FOR SNOW PLOW MOTOR NUMBERS
46-4175, MUE-6206A,

REPLACES NUMBER,
17-357, MUE-2013BS

“WMS” NUMBER WB-357

L - .500/12.7mm W -.695/17.65mm
T - .345/8.76mm LL -3.25” & 3.25”



***24V* PRESTOLITE BRUSH SET**

FOR MHJ AND MHP MOTORS AND STARTERS

REPLACES NUMBER,
MDL-2012ES

“WMS” NUMBER 17-90

L – .500/12.7mm W -- .695/17.65mm
T – .345/8.76mm LL -- 3.25” & 3.25”



12V PRESTOLITE BRUSH SET FOR THE XOT PRESTOLITE STYLE MOTORS

46-4218, MMY-6102S

REPLACES NUMBERS,
MMY-2013, MMY-2013S

“WMS” NUMBER 17-364

L - .650/16.51mm W- .695/17.65mm
T - .345/8.76mm LL - 2.75” & 4.75”



FOR EARLY STYLE PRESTOLITE
MAW, MAX, MAY & MCT
6V & 12V DC MOTORS / STARTERS
REPLACES NUMBERS, 17-11
17-9, MAW1012S, MAY1012AS
FOR MOTOR NUMBERS
MAY4146, MAY4301 etc.

“WMS” NUMBER WB-38

L - 0.480/ 12.19 W - 0.875/ 22.22mm
T - 0.280/ 7.12mm LL - 2.00”/ 50.8mm

(SOLD EACH)



FOR EARLY STYLE PRESTOLITE
MAW, MAX, MAY & MCT
6V & 12V DC MOTORS / STARTERS
REPLACES NUMBERS, 17-11
17-8, MAW2012S, MAY2012AS
FOR MOTOR NUMBERS
MAY4146, MAY4301 etc.

“WMS” NUMBER WB-37

L - 0.480/ 12.19 W - 0.875/ 22.22mm
T - 0.280/ 7.12mm LL - 3.50”/ 88.9mm

(SOLD EACH)



FOR EARLY STYLE PRESTOLITE
MAW, MAX, MAY & MCT
6V & 12V DC MOTORS / STARTERS
REPLACES NUMBERS, 17-11
17-99, MAW2012S, MAY2012AS
FOR MOTOR NUMBERS
MAY4146, MAY4301 etc.

“WMS” NUMBER WB-99

L - 0.480/ 12.19 W - 0.875/ 22.22mm
T - 0.280/ 7.12mm
LL-3.50”/ 88.9mm & LL-2.00”/ 50.8mm

(SOLD AS A SET)

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



FOR EARLY MDL, MDT & MDY
STYLE 4000 SERIES
12V DC MOTORS & STARTERS

REPLACES NUMBERS,
E-79, MDL2012AS, 17-21, 17-111

For motor & starter numbers,
MDT6012, MDT6013, MDT6021
MDY6104, MDY6109, MDY6121

“WMS” NUMBER WB-79

L - .650/16.51mm W -.740/18.80mm
T - .280/ 7.11mm

(SOLD AS A SET)



FOR EARLY STYLE PRESTOLITE
MAY, MBJ & MCT

* 12V DC WINCH MOTORS *

REPLACES NUMBERS,
17-147, 17-57, MAY1012DS

FOR MOTOR NUMBERS
MBJ4201, 4206, 4207, 4208, 4209

“WMS” NUMBER WB-147

L - 0.480/ 12.19 W - 0.875/ 22.22mm
T - 0.280/ 7.12mm
Ground Brush LL - 2.00/ 50.8mm
LL - 3.50”/ 88.9mm & LL - 5”/ 127mm

(SOLD AS A SET)



FOR EARLY MMW & MMY STYLE
4000 SERIES 12V DC MOTORS

REPLACES NUMBERS,
MHD2012S, MHD-2012S, 17-144

FOR MOTOR NUMBERS,
MMW-4003, 46-2616
MMW-4002, MMY-4003 ETC.

“WMS” NUMBER WB-144

L - .650/16.51mm W -.695/17.65mm
T - .345/8.76mm LL -2.00” Grd.
LL - 3.50” & 5.00” Pos.

Original Ametek / Prestolite brush sets and brush holder for the "6300" series motors



**FOR PRESTOLITE 12V
BI-DIRECTIONAL DC MOTORS**

REPLACES NUMBERS, SP6254

**FOR 63XX MOTOR NUMBERS
MBJ6302, MBJ6303, MBJ6304
MMW, MUQ, MUR, etc.**

"WMS" NUMBER SP-6254

L - .650/16.51mm W - .695/17.65mm
T - .345/ 8.76mm
LL --2.75" & 4.75" Grd lead - 2.5"
(Terminal post has 5/16X 18 threads)



**FOR PRESTOLITE 24V
BI-DIRECTIONAL DC MOTORS**

REPLACES NUMBERS, SP6255

**FOR 63XX MOTOR NUMBERS
MUX6301, MUX6301S, MUX6302
MUX6302A, MUX6303, MUX6304
MUX6305, MUX6306 etc.**

"WMS" NUMBER SP-6255

L - .650/16.51mm W - .695/17.65mm
T - .345/ 8.76mm
LL --2.75" & 4.75" Grd lead - 2.5"
(Terminal post has 5/16X 18 threads)



**FOR PRESTOLITE MMY &
MUV SERIES 12V DC MOTORS**

REPLACES NUMBERS, SP6256

**FOR MMY63XX & MUV63XX
MOTOR NUMBERS**

**MMY6301, 6302, 6302A
6304, 6305, 6306, MUV6301A etc.**

"WMS" NUMBER SP-6256

L - .650/16.51mm W - .695/17.65mm
T - .345/ 8.76mm
LL --2.75" & 4.75" Grd lead - 2.5"

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



*** FOR "CW / CCW " MOTORS***

**BRUSH SET FOR THE ML TYPE
5" BI-DIRECTIONAL MOTORS**

**FOR MOTOR NUMBERS
W-24362, W-12370, W-24370 etc.**

"WMS" NUMBER WB-62

L - .560/14.22mm W --.750/19.05mm
T - .345/8.76mm LL --2.25" & 5.50"

(THE TERMINAL POST
HAS 3/8 X 16 THREADS)



**FOR AMETEK / PRESTOLITE
INSULATED & NON-INSULATED
GROUND MMY & MUE MOTORS**

**FOR MUE & MMY 63XX MOTOR
NUMBERS, MMY6303, MMY6307,
MMY6308 MMY6309, MUE6301
MUE6302, MUE6306 etc.**

"WMS" NUMBER SP-6260

L - .650/16.51mm W - .695/17.65mm
T - .345/8.76mm
LL --2.75" & 4.75" Grd lead - 2.5"
(Terminal post has 5/16X 18 threads)



**BRUSH HOLDER
WITH SPRINGS**

**FOR THE 63XX SERIES
OF THE MUE, MMW
MMY, MUV, MUY ETC.**

**AMETEK/PRESTOLITE
MOTORS**

"6300 SERIES MOTORS"

**"WMS" PART
NUMBER WBH-1363**



***“SPECIAL”
GE MOTOR BRUSH***

**THIS “GE” STYLE MOTOR
BRUSH HAS A BRUSH
WEAR SENSOR WIRE**

“WMS” NUMBER WB-091

**L - 1.10/ 27.94mm W - .624/15.85mm
T - .375/ 9.52mm LL -2.00/ 50.8mm**

(SOLD “EACH”)



***“SPECIAL”
GE MOTOR BRUSH***

**THIS “GE” STYLE MOTOR
BRUSH HAS A BRUSH
WEAR SENSOR WIRE**

“WMS” NUMBER WB-48NAC35

**L - 1.45/36.83mm W - .624/15.85mm
T - .500/12.7mm LL -1.75/44.45mm**

(SOLD “EACH”)



**FOR GE BI-DIRECTIONAL
** 36/48V DC MOTORS ****

**REPLACES NUMBERS,
10-376242, NBF5A, 10345090**

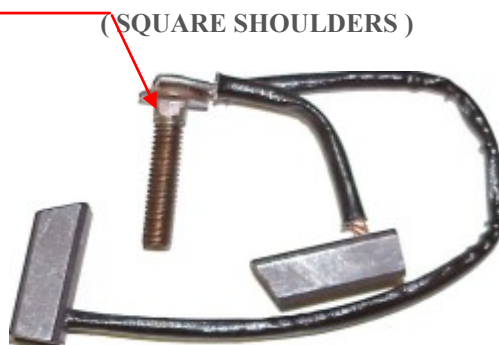
**FOR GE MOTOR NUMBERS,
5BPA48NBF25, 5BPA48NBF25A**

“WMS” NUMBER WB-NBF5A

**L - 1.10/27.94mm W - .625/15.87mm
T - .375/9.52mm LL - 2.00/50.8mm**

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**** POPULAR*
GE MOTOR BRUSH W/POST***

***Brush leads have a 1/4 X 20
terminal post w/a square shoulder***

(SOLD “EACH”)

“WMS” NUMBER WB-2010

**L - 1.370/34.80mm W - .620/15.74mm
T- .500/12.7mm LL -2.50” & LL- 9.50”**

**For motor # 70-049-00, 388P etc.
*Double check spec's***

**** POPULAR*
GE MOTOR BRUSH W/POST***

***Brush leads have a 5/16 X 18
terminal post w/a square shoulder***

(SOLD “EACH”)

“WMS” NUMBER WB-JB870

**L - 1.370/34.80mm W - .620/15.74mm
T- .500/12.7mm LL -2.50” & LL- 9.50”**

For motor # 5BC48JB870 etc.

**** POPULAR*
GE MOTOR BRUSH W/POST***

***BRUSH LEADS HAVE A
5/16 X 18 TERMINAL POST***

(SOLD “EACH”)

“WMS” NUMBER WB-JB871

**L - 1.50/34.80mm W - .620/15.74mm
T- .500/12.7mm LL -2.50” & LL- 9.50”**

**For motor # 5B59JBS6194B
5BC59JBS6194, 5BC48JB779 etc.**



*** POPULAR ***
GE MOTOR BRUSH SET

REPLACES NUMBERS,
GE10-2003S, WBJB305D

FOR MOTOR NUMBERS
5BC49JB305D ETC.

“WMS” NUMBER WB-305

L - 1.45/36.83mm W - .620/15.74
T - .500/12.7mm LL - 1.50/38.1mm



*** POPULAR ***
GE MOTOR BRUSH SET

REPLACES NUMBERS,
WB-402C, 501, WBJB814

FOR MOTOR NUMBERS
5BC49JB402C, 5BC48JB814 ETC.

“WMS” NUMBER WB-JB814

L - 1.150/29.21 W - .620/15.74mm
T - .500/12.7mm LL - 2.00/50.8mm



GE MOTOR BRUSH SET

**BRUSH SET HAS TWO
5/16 X 18 TERMINAL POSTS**

REPLACES NUMBER, WB545

FOR MOTOR NUMBERS
5BC58JBS6163, 5BC58JBS6163A

“WMS” NUMBER WB-JB545

L - 1.370/ 35.56mm W - .620/ 15.74mm
T - .500/12.7mm
LL - 2.50/63.5mm & LL - 9.50/241.3mm

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** POPULAR ***
GE MOTOR BRUSH W/POST

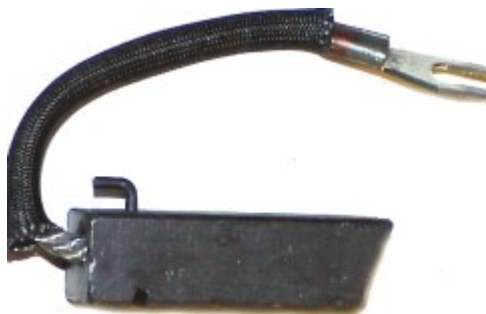
**BRUSH LEADS HAVE A
5/16 X 18 TERMINAL POST**

(SOLD “EACH”)

“WMS” NUMBER WB-JB540

L - 1.370/ 35.56mm W - .620/ 15.74mm
T - .500/12.7mm
LL - 2.50/63.5mm & LL - 9.50/241.3mm

For motor # 5BC58JBS6163A etc.
Double check spec's



*** POPULAR ***
GE MOTOR BRUSH

**POPULAR MOTOR BRUSH
FOR THE “GE” TYPE MOTORS**

(SOLD “EACH”)

“WMS” NUMBER WB-2060

L - 1.690/42.92mm W - .624/15.74mm
T - .500/12.7mm LL - 3.00/76.2mm

Brush has hook for brush spring



*** POPULAR ***
GE MOTOR BRUSH

**POPULAR MOTOR BRUSH
FOR THE “GE” TYPE MOTORS**

(SOLD “EACH”)

“WMS” NUMBER WB-JB424B

L - 1.45/36.83mm W - .624/15.74mm
T - .500/12.7mm LL - 1.75/44.45mm

For motor # 5BC49JB424B
5BC49JB423A etc.



*** FOR (PM) REEL MOTORS ***

**BRUSH SET FOR THE
HANNAY REEL MOTORS
AND IMPERIAL ELECTRIC
FOR NUMBERS, P56AN227
P56AN230, 239, 24, 335, ETC.**

(Replaces, 99.16.0071)

“WMS” NUMBER WB-0071

**L - .735/9.52mm W -.400/ 10.16mm
T - .375/9.52mm LL -2.50”/63.5mm**



*** FOR (PM) REEL MOTORS ***

**BRUSH SET FOR THE
HANNAY REEL MOTORS
AND IMPERIAL ELECTRIC
FOR MOTOR NUMBERS
P56SX139, P56SX001,
P56SX401, P56SX007
P56SX038, P56SX043, etc.**

“WMS” NUMBER K-56

**L - .745/18.95mm W - .400/ 10.16mm
T - .375/9.52mm LL --8.00/203.2mm
INSULATION SPLIT IS AT
LL -- 2.00” & 6.00”**



(Brush has a round eyelet)

*** FOR (PM) REEL MOTORS ***

**BRUSH SET FOR THE
HANNAY REEL MOTORS
AND IMPERIAL ELECTRIC
FOR NUMBERS, P56SG601
P56SG617, P56SG630 etc.**

(FOR 24V & 36V REEL MOTORS)

“WMS” NUMBER WB-SG601

**L - 1.135/ 28.82mm W -.622/ 15.80mm
T - .248/ 6.30mm LL --3.00/ 76.2mm**

**(SOLD “EACH”)
(High carbon brush)**

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR “CW & CCW ” MOTORS***

**BRUSH SET FOR THE 5” DIA.
MDR & ML STYLE MOTORS
FOR MOTOR NUMBERS
W-5202, W-5205, W-5207, ETC.
REPLACES NUMBERS,
MDR-2012BS**

“WMS” NUMBER 17-48

**L - .560/14.22mm W --.750/19.05mm
T - .345/8.76mm LL --2.25” & 5.50”**

**(For a 0.750” length “long life”
brush set use number WB-182K)**



*** FOR LATE STYLE ML & MDR ***

*** 12V DC PRESTOLITE MOTORS ***

**REPLACES NUMBERS, 17-48
ML1169, 17-42, ML-1169, ML-1169S**

**FOR MOTOR NUMBERS
46-3527, MDR5102 AND ML-5009**

“WMS” NUMBER WB-182K

**L - .750/ 19.05 W - .750/ 19.05mm
T - .345/8.76mm LL - 2.25” & 5.25”**

**BRUSH SET (2) BRUSH
LEADS AS SHOWN ABOVE**



**FOR 36V CLARK MOTORS
(Brush has a slotted eyelet)**

**REPLACES NUMBERS,
10-256211-104-2-01**

**FOR MOTOR NUMBERS,
P56SG619, 45036A**

“WMS” NUMBER WB-256211

**L - 1.135/ 28.82mm W -.622/ 15.80mm
T - .248/ 6.30mm LL --3.00/ 76.2mm**

**(SOLD “EACH”)
(High carbon brush)**



**FOR PREVOST
* 12V/24V DC MOTORS ***

**REPLACES NUMBERS,
BRTF-12, BRTF12, WB590**

**FOR MOTOR NUMBERS
711590, 711590/29, 71159029 etc.**

“WMS” NUMBER WB-590

L - 1.000/25.4mm W - .785/9.93mm
T - .310/7.87mm LL -2.000/50.8mm

(SOLD “EACH”)



**FOR 24V / 36V PREVOST
* DC MOTORS ***

**REPLACES NUMBERS,
WB15-2030, WB152030**

**FOR MOTOR NUMBERS
72870/18, GE15-2030, WB2030**

“WMS” NUMBER WB15-2030

L - 1.380/35.05mm W -1.260/32.00mm
T - .470/11.93mm LL -3.500/88.9mm

(This is a high carbon brush)

(SOLD “EACH”)



**FOR OHIO BI-DIRECTIONAL
* 12/24V DC MOTORS ***

**REPLACES NUMBERS,
7300220-11, WB-116, WB7300**

**FOR MOTOR NUMBERS
D468235XWF12A**

“WMS” NUMBER WB-7300

L - .750/19.05mm W - .755/19.17mm
T - .375/9.52mm LL -2.25” & 4.75”

**(Terminal posts are 1.750” long
with 3/8 x 16” threads)**

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**FOR RELIANCE
** DC MOTORS ****

**REPLACES NUMBERS,
16G864, WB3990A,**

**FOR RELIANCE MOTOR
NUMBERS
177P2808AC, 177P2808AC-GD etc.**

WMS” NUMBER WB-3990A

L - 1.180/29.97mm W - .945/24.00mm
T - .350/ 8.90mm LL -2.000/50.8mm

(SOLD “EACH”)



*** For Pacific Scientific Motors ***

“INSULATED BRUSH”

For Pacific Scientific

(12V & 24V) Motors

“WMS” NUMBER WB-1619

L - .880/22.35mm W - .870/22.09mm
T - .295/ 7.49mm LL - 1.50”/38.1mm

(SOLD “EACH”)



OHIO MOTOR BRUSH

**REPLACES NUMBERS,
B-250416-02, WB6347**

**FOR MOTOR NUMBERS
D422309X6347**

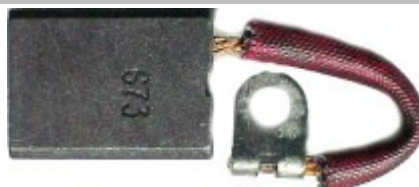
“WMS” NUMBER WB-6347

L - .800/20.32mm W - .875/ 22.22mm
T - .278/ 7.06mm LL -1.50/ 38.1mm

(SOLD “EACH”)



DUMORE BRUSH SPRING
“WMS” NUMBER WBS-409
SOLD INDIVIDUALLY “EACH”



12V \diamond *24V*
“INSULATED BRUSH”
 FOR DUMORE STYLE MOTORS
 (12V & 24V)

“WMS” NUMBER WB-409

SOLD INDIVIDUALLY “EACH”

L -1.00/25.40mm W- .740/18.79mm
 T -.375/ 9.52mm LL- 2.00/50.80mm



12V
INSULATED BRUSH SET

FOR MOTOR NUMBERS
W-8003 & W-8803

THIS BRUSH AND SPRING
 SET FITS WESTERN MOTORS
 AND OEM ROLL RITE MOTORS

“WMS” NUMBER WB-803

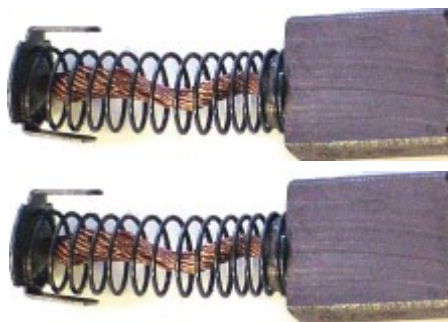
L - .580/ 14.73mm W - .320/ 8.12mm
 T - .320/8.12mm LL - 1.600/40.64mm

**** FOR “F & R” MOTORS ****
BRUSH SET FOR NUMBER W-6750
(REP. AUTO CRANE MOTOR)
FOR MOTOR NUMBER W-6750
 (For the early style Auto Crane
 Motor number W-6750)

“WMS” PART NUMBER K-750

L - .875/22.22mm W - .750/19.05mm
 T - .375/9.52mm LL - 1.40”/3.55mm

(L) = Brush Length \diamond (W) = Brush Width \diamond (T) = Brush Thickness \diamond (LL) = Lead Length

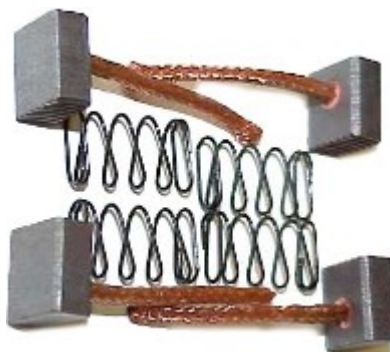


*** BRUSH SET FOR THE NEW ***
*** IMPROVED W-6850 MOTOR ***

FOR “WESTERN MOTORS”
 AUTO CRANE MOTOR
 PART NUMBER W-6850

“WMS” NUMBER WB-850

L - .880/22.35mm W - .730/18.54mm
 T - .340/8.63mm LL - 1.50/38.1mm

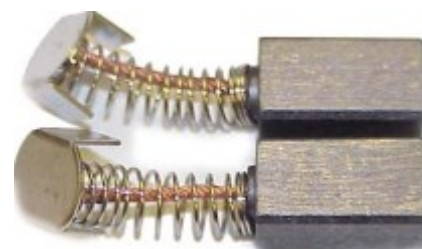


**** FOR WMS ****
**** MOTOR NUMBERS ****
 W-8002, W-8012, W-8023, W-8026
 W-8028, W-8030, W-8031 W-8032
 W-8053, W-8055, W-8092BB
 W-8804

BRUSH KIT IS (4) BRUSHES
 AND (4) SPRINGS

“WMS” NUMBER WB-023

L - .500/12.7mm W - .470/11.93mm
 T - .250/6.35mm LL - 1.40”/3.55mm



***12V* BR / SET WITH SPRINGS**

FOR MOTOR NUMBERS
“W-8015 & W-8815”

THIS BRUSH AND SPRING
 SET FITS WESTERN MOTORS
 SALT SPREADER MOTOR
 NUMBER = W-8815

“WMS” NUMBER WB-815

L - .700/17.78mm W - .390/9.90mm
 T - .310/7.87mm LL - 1.00/25.4mm

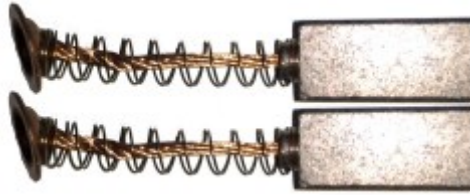


**SPECIAL BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(SPECIALTY MOTORS)
(SPECIAL COMPOSITION)

“WMS” PART NUMBER WB-1K045

L - .555/14.09mm W -.285/7.24mm
T - .220/5.58mm LL -.874/22.22mm



**SPECIAL BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(SPECIALTY MOTORS)
(SPECIAL COMPOSITION)

“WMS” NUMBER WB-1H682

L - .775/19.68mm W -.370/9.40mm
T - .245/6.22mm LL -1.25”/31.75mm

(Has more copper than the WB-1106H7)



**SPECIAL BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(Power Mate Generator)
(SPECIAL COMPOSITION)

“WMS” NUMBER WB-1106H7

L - .760/19.30mm W -.370/9.40mm
T - .245/6.22mm LL -1.50”/38.1mm

(Has more carbon than the WB-1H682)

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



**SPECIAL BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(SPECIALTY MOTORS)
(SPECIAL COMPOSITION)

“WMS” PART NUMBER WB-121

L - .890/22.60mm W -.310/7.87mm
T - .310/7.87mm LL -1.00”/25.4mm



**SPECIAL BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(BALDOR MOTORS)
(SPECIAL COMPOSITION)

“WMS” PART NUMBER WB-300

L - .835/21.20mm W -.625/15.87mm
T - .310/7.87mm LL -1.50”/38.1mm



**SPECIAL 12V / 24V BRUSH SET
WITH SPRING & CONTACT**

APPLICATIONS
(FOR “OHIO” MOTORS)
(SPECIAL COMPOSITION)

“WMS” PART NUMBER WB-661

L - .870/22.09mm W -.560/14.22mm
T - .310/7.87mm LL -1.50”/38.1mm



**FOR 36 / 48V OHIO PM
** DC MOTORS ****

**REPLACES NUMBERS,
WB1003, B25041003**

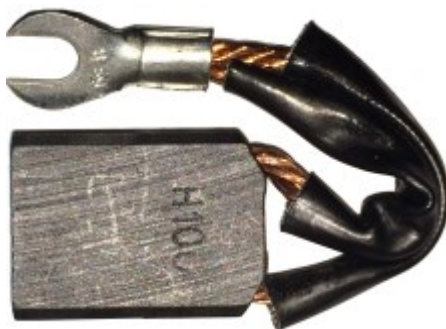
**FOR MOTOR NUMBERS
X8087, E561281X8087 etc.**

“WMS” NUMBER WB-1003

L- 1.100/27.94mm W - .810/20.57mm
T - .370/9.40mm LL -2.50/ 63.5mm

(This is a medium carbon brush)

(SOLD “EACH”)



**FOR 24V / 36V OHIO PM
** DC MOTORS ****

**REPLACES NUMBERS,
WB1006, B25041006**

**FOR MOTOR NUMBERS
E561274X8274, 2200892, X8739**

“WMS” NUMBER WB-1006

L- 1.100/27.94mm W - .810/20.57mm
T - .370/9.40mm LL -2.500/ 63.5mm

(SOLD “EACH”)



**FOR 48V OHIO PM
** DC MOTORS ****

**REPLACES NUMBERS,
WB1007, B25041007**

**FOR MOTOR NUMBERS
D563209X8138A, E561283X8097**

“WMS” NUMBER WB-1007

L- 1.100/27.94mm W - .810/20.57mm
T - .370/9.40mm LL -2.500/ 63.5mm

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**FOR OHIO PM
** DC MOTORS ****

**REPLACES NUMBERS,
15-1010,**

WMS” NUMBER WB-1010

L - .750/19.05mm W - .500/12.7mm
T - .310/7.87mm LL -2.650/67.31mm

(high carbon brush)

(SOLD “EACH”)



**FOR 36 / 48V OHIO
** DC MOTORS ****

**REPLACES NUMBERS,
WB1105, B25041105**

**FOR MOTOR NUMBERS
D481518X7456, D482255X7878
D482255X7878A, E561212X8715**

“WMS” NUMBER WB-1105

L- 1.100/27.94mm W - .810/20.57mm
T - .370/9.40mm LL -2.000/50.8mm

(very high carbon brush)

(SOLD “EACH”)



**FOR 36V OHIO
** DC MOTORS ****

**REPLACES NUMBERS,
WB6308, BRX6308, 10360080**

**FOR MOTOR NUMBERS
C421206X6308, D421374X6363A**

“WMS” NUMBER WB-6308

L - 1.000/25.4mm W - .875/22.22mm
T - .280/7.11mm LL -2.250/57.15mm

(high carbon brush)

(SOLD “EACH”)



12V / 24V

PM OHIO MOTOR BRUSH

POPULAR MOTOR BRUSH
FOR THE 12V / 24V OHIO
PERMANENT MAGNET
MOTORS

“WMS” NUMBER WB15-1000

L - 1.120/28.44mm W - .810/20.57mm
T - .370/9.39mm LL - 2.00/50.8mm

(SOLD “EACH”)

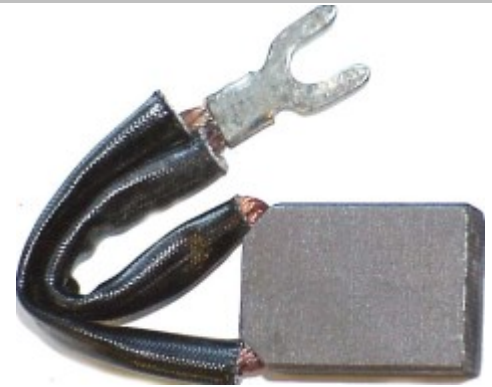


***BRUSH SPRING FOR
THE “PM” OHIO MOTORS***

POPULAR BRUSH SPRING
FOR THE OHIO
PERMANENT MAGNET
MOTORS

“WMS” NUMBER WS-7450

(SOLD “EACH”)



12V / 24V

PM OHIO MOTOR BRUSH

POPULAR MOTOR BRUSH
FOR THE 12V & 24V OHIO
PERMANENT MAGNET MOTORS

“WMS” NUMBER WB15-1200

L - 1.120/28.44mm W - .810/20.57mm
T - .370/ 9.39mm LL - 2.50/ 50.8mm

(SOLD “EACH”)

(L) = Brush Length \diamond (W) = Brush Width \diamond (T) = Brush Thickness \diamond (LL) = Lead Length



36V / 48V

PM OHIO MOTOR BRUSH

POPULAR MOTOR BRUSH
FOR THE 36V & 48V OHIO
PERMANENT MAGNET
MOTORS

“WMS” NUMBER WB15-3648

L - 1.120/28.44mm W - .810/20.57mm
T - .370/9.39mm LL - 2.00/50.8mm

(SOLD “EACH”)



72V

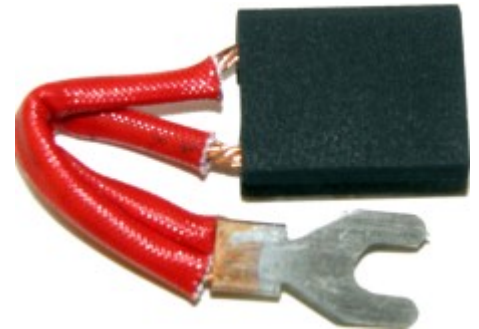
PM OHIO MOTOR BRUSH

POPULAR MOTOR BRUSH
FOR THE 72V OHIO
PERMANENT MAGNET
MOTORS

“WMS” NUMBER WB15-1072

L - 1.120/28.44mm W - .810/20.57mm
T - .370/9.39mm LL - 2.00/50.8mm

(SOLD “EACH”)



36/48/72V

PM OHIO MOTOR BRUSH

POPULAR MOTOR BRUSH
FOR THE 36V / 48V/ 72V OHIO
PERMANENT MAGNET
MOTORS

(*DOUBLE LEAD BRUSH*)

“WMS” NUMBER WB15-1072DL

L - 1.020/25.09mm W - .810/20.57mm
T - .370/9.39mm LL - 2.50/ 63.5mm
(very high carbon brush)

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE *
24V / 36V DC MOTORS**

**REPLACES NUMBERS, 17-218
MEA1012B, MEA1012BS, MGF1012S**

**FOR MOTOR NUMBERS,
MGF, MJT & MEA SERIES**

“WMS” NUMBER 17-138

**L - 1.380/35.05mm W - .624/ 15.85mm
T - 0.495/ 12.57mm LL -2.25/ 57.15mm**

**(SOLD “EACH”)
(Use’s brush spring WBS-138)**



*** FOR PRESTOLITE STYLE *
** 36V / 48V DC MOTORS ****

**REPLACES NUMBERS,
MVB2012SS, MVB2012BSS**

**FOR MOTOR NUMBERS,
MVF4002, MVF, MVK SERIES**

“WMS” NUMBER 17-341

**L - 1.40/35.56mm W - 0.850/21.59mm
T - 0.500/ 12.7mm LL -1.5/ 38.1mm**

(SOLD AS SET OF 4)



*** FOR PRESTOLITE STYLE *
** 36V / 48V DC MOTORS ****

**REPLACES NUMBERS,
MVB2012BSS, 17-247, MVB2012S**

**FOR MOTOR NUMBERS,
MVK4001, MVK, MVF SERIES**

“WMS” NUMBER 17-247

**L - 1.40/35.56mm W - 0.850/ 21.5mm
T - 0.500/ 12.7mm LL -1.5/ 38.1mm**

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR PRESTOLITE STYLE *
24V / 36V / 48V DC MOTORS**

**REPLACES NUMBERS,
17-236, MEE-12J, MEE1012GS**

**FOR MOTOR NUMBERS,
MGV, MKA, MKN, MLX SERIES**

“WMS” NUMBER 17-236

**L - 1.40/35.56mm W - 1.270/ 32.25mm
T - 0.500/ 12.7mm LL -1.75/ 44.45mm**

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE *
24V DC MOTORS**

**REPLACES NUMBERS,
17-266, MEE-12P, MEE1012PS**

**FOR MOTOR NUMBERS,
SERIES**

“WMS” NUMBER 17-266

**L - 1.40/35.56mm W - 1.270/ 32.25mm
T - 0.500/ 12.7mm LL -1.75/ 44.45mm**

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE *
** 36V / 48V DC MOTORS ****

**REPLACES NUMBERS,
MEE12K, MEE1012K**

**FOR MOTOR NUMBERS,
MEA, MSU, MVV SERIES**

“WMS” NUMBER 17-245

**L - 1.30/33.02mm W - 1.260/ 32mm
T - 0.500/ 12.7mm LL -1.5/ 38.1mm**

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE ***
**** 24V / 36V DC MOTORS ****

REPLACES NUMBERS,
 5977-01-158-0421, MGP1012KS
 DLA400-89-M-Q336, MGP12KS

FOR MOTOR NUMBERS,
 MGP & MGS SERIES

“WMS” NUMBER 17-220

L - 1.375/34.92mm W - 1.00/25.4mm
 T - 0.545/13.84mm LL -1.75/44.45mm

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE ***
**** 36V / 48V DC MOTORS ****

REPLACES NUMBERS,
 WB4002, BR-LNAJ4002

FOR MOTOR NUMBERS,
 LNAJ4002, LNAJ-4002

“WMS” NUMBER WB-4002

L - X.XX/X.0mm W - X.XX0/ X.mm
 T - 0.X00/ 12.7mm LL -X.X/ XX.1mm

(SOLD “EACH”)



*** FOR GE STYLE ***
**** 12V / 24V DC MOTORS ****

REPLACES NUMBERS,
 WBMA100, 10399701

FOR MOTOR NUMBER,
 5BCG52MA100

“WMS” NUMBER WB-MA100

L - 1.110/28.19mm W -1.245/31.62mm
 T - .490/ 12.44mm LL -1.50/38.1mm

(SOLD “EACH”)
(Use's brush spring WBS-MA100)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR PRESTOLITE STYLE ***
**** 24V / 36V DC MOTORS ****

REPLACES NUMBERS,
 17-240, MGP12H

FOR MOTOR NUMBERS,
 MGP & MGS SERIES

“WMS” NUMBER 17-240

L - 1.375/34.92mm W - 1.00/25.4mm
 T - .545/13.84mm LL -1.75/44.45mm

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE ***
**** 12V DC MOTORS ****

REPLACES NUMBERS,
 MCP1012S, 17-19, MCP2012S

FOR MOTOR NUMBERS,
 MCP & MEP SERIES

“WMS” NUMBER 17-19

L - 1.20/ 30.4mm W - 1.00/25.4mm
 T - .280/ 7.1mm LL -2.25/ 57.15mm

(SOLD “EACH”)



*** FOR PRESTOLITE STYLE ***
**** 12V DC MOTORS ****

REPLACES NUMBERS,
 17-228, MCP12F

FOR MOTOR NUMBERS,
 MCP & MEP SERIES

“WMS” NUMBER 17-228

L - 1.375/34.92mm W - 1.00/25.4mm
 T - .400/ 10.16mm LL -1.75/44.45mm

(SOLD “EACH”)



12V

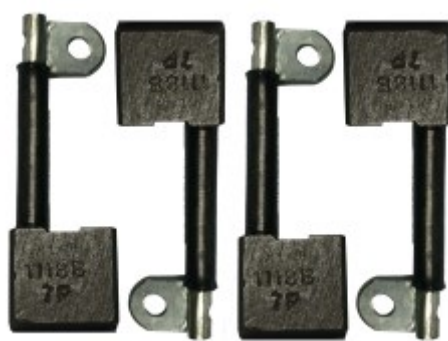
INSULATED BRUSH SET

**FOR THE OLDER STYLE MFX
PRESTOLITE “INS” MOTORS**

**REPLACES, 17-165, MDL1118A
MDL-1118CSS, MDL-1118C etc.**

“WMS” NUMBER 17-88

**L – .600/15.24mm W - .695/17.65mm
T – .345/8.76mm LL - 1.250/31.75mm**



24V

INSULATED BRUSH SET

**FOR THE OLDER STYLE
PRESTOLITE “INS” MOTORS**

**REPLACES NUMBERS,
MDL-1118BS**

“WMS” NUMBER 17-122

**L – .600/15.24mm W - .695/17.65mm
T – .345/8.76mm LL - 1.250/31.75m**

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



24V / 36V

INSULATED BRUSH SET

**FOR THE MHG, MHL, MHM
STYLE PRESTOLITE MOTORS**

**REPLACES NUMBERS,
MDL-1118BSS**

“WMS” NUMBER 17-123

**L – .600/15.24mm W - .695/17.65mm
T – .345/8.76mm LL - 1.250/31.75mm**



36V / 48V

INSULATED BRUSH SET

**FOR THE OLDER STYLE
PRESTOLITE “INS” MOTORS**

**REPLACES NUMBERS,
MDL-1118S**

“WMS” NUMBER 17-47

**L – .600/15.24mm W - .695/17.65mm
T – .345/8.76mm LL - 1.250/31.75m
(HIGH CARBON BRUSH)**



*** FOR CW & CCW MOTORS ***

**BRUSH SET FOR THE
HEAVY DUTY 5” DIA.
MBD STYLE MOTORS
AND SOME OHIO MOTORS**

**FOR MOTOR NUMBERS
W-5001, W-5109, ETC.
REPLACES NUMBER 17-223
(NOTE: OFFSET CLIP)**

“WMS” PART NUMBER K-92

**L -.750/19.05mm W- .875/22.22mm
T -.280/ 7.11mm LL -2.75 & 5.75**



FOR AMETEK/PRES /MOTORS
BRUSH SET FOR THE
PRESTOLITE STYLE MOTORS
REPLACES NUMBERS,
MBD12A, MBD13A, MBD-1323S

FOR MOTOR NUMBERS
MBD4037, 4041, 4046, 4047, 4062

“WMS” NUMBER 17-62

L – .750/19.05mm W - .625/5.87mm
T – .275/ 6.98mm LL - 3.00” & 6.00”



*** FOR LATE PRESTOLITE ***
*** MBR-5000 SERIES MOTORS***

REPLACES NUMBERS,
MEU-1312 & MEU-1312S

FOR MOTOR NUMBERS
MBR5001, MBR5002, MBR5102

“WMS” NUMBER 17-234

L – .750/19.05mm W - .595/5.11mm
T – .345/8.76mm LL - 3.00” & 6.00”



*** FOR EARLY PRESTOLITE ***
*** MBR-4000 SERIES MOTORS ***

REPLACES NUMBERS, 17-36
17-85, MBR-1323AS & MBR-1323S

FOR MOTOR NUMBERS
MBR-4029, MBR-4030, 46-105

“WMS” NUMBER WBR-1323S

L – .750/19.05mm W - .625/5.87mm
T – .345/8.76mm LL - 3.00” & 6.00”

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR CW & CCW MOTORS ***

BRUSH SET FOR THE
HEAVY DUTY 5” DIA.
MBD STYLE MOTORS

FOR MOTOR NUMBERS
W-5004, W-5007, W-5101,
W-5102, MBD-5107 ETC.
REPLACES NUMBER 17-203
(NOTE: INLINE CLIP)

“WMS” PART NUMBER K-93

L -.750/19.05mm W- .875/22.22mm
T -.280/ 7.11mm LL -1.50 & 5.50



FOR AMETEK/PRES /MOTORS
36V BRUSH SET FOR THE “CW”
PRESTOLITE STYLE MOTORS

REPLACES NUMBERS,
MBD-1512BS, MBD1512B

FOR MOTOR NUMBERS
MUG5101, 46-2812, MHG5101S

“WMS” NUMBER 17-274

L -.750/19.05mm W- .875/22.22mm
T -.280/ 7.11mm LL -1.50 & 5.50

(HIGHER CARBON BRUSH)



WMS /AMETEK / PRES /MOTORS

36V/48V BR/SET FOR THE
WMS / PRES STYLE MOTORS

REPLACES NUMBERS,
MBD-1512BS, MBD1512B

FOR 36 & 48V MBD & MUG
CW & CCW STYLE MOTORS

“WMS” NUMBER WB-275

L -.750/19.50mm W- .875/22.22mm
T -.280/ 7.11mm LL -2.75 & 5.75

(HIGHER CARBON BRUSH)



**LONG & SHORT BRUSH LEADS
WITH EYELET FOR SCREW**

(FOR WAPSA MOTORS)

APPLICATIONS
*(WAPSA MOTORS WITH "EYELET"
CONNECTION)*

(SPECIAL COMPOSITION)

"WMS" PART NUMBER WB-49

L - .750/19.05mm W -.750/19.05mm

T - .345/ 8.76mm LL -2.25" & 5.25"

(SOLD "EACH")



**LONG & SHORT BRUSH LEADS
WITH TERMINAL POST & INS.**

(FOR WAPSA WINCH MOTORS)

APPLICATIONS
*(WAPSA MOTORS WITH ROUND
5/16 X 24 TERMINAL POST)*

(SPECIAL COMPOSITION)

"WMS" PART NUMBER WB-49R

L - .750/19.05mm W -.750/19.05mm

T - .345/ 8.76mm LL -2.25" & 5.25"

(SOLD "EACH")



**LONG & SHORT BRUSH LEADS
WITH TERMINAL POST & INS.**

(FOR WAPSA WINCH MOTORS)

APPLICATIONS
*(WAPSA MOTORS WITH ROUND
5/16 X 24 TERMINAL POST)*

(SPECIAL COMPOSITION)

"WMS" PART NUMBER WB-49S

L - .750/19.05mm W -.750/19.05mm

T - .345/ 8.76mm LL -2.25" & 5.25"

(SOLD AS A SET)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**** FOR PRES. STYLE ****
**** MFY & MFJ MOTORS ****

**REPLACES NUMBERS,
MFJ-1012A & MFJ-2012S**

**FOR MOTORS, 46-4037, W-4037
MFY-4203, MFY-4101, W-4810
46-2275, 46-2810, MFY-4202 etc.**

"WMS" NUMBER 17-186

L - .750/19.05mm W - .750/19.05mm

T - .375/9.52mm LL -7.50"

INSULATION SPLIT IS AT

LL -- 2.00" & 5.50"



*** FOR EARLY PRESTOLITE ***
*** MHR 36V SERIES MOTORS ***

**REPLACES NUMBERS,
17-149, 17-207, MHR2012**

**FOR MOTOR NUMBERS
MFR-4001, MHR4001, MHR5001**

"WMS" NUMBER 17-183

L - .650/15.24mm W - .750/17.65mm

T - .345/8.76mm

LL - 4.50/31.75mm & 3.00



36V / 48V
INSULATED BRUSH SET

**FOR THE MMA4002 & 4004
PRESTOLITE "INS" MOTORS**

**REPLACES NUMBERS,
17-314, MHR1012C, MHR2012AS**

"WMS" NUMBER 17-159

L - .650/15.24mm W - .750/17.65mm

T - .345/8.76mm

LL - 4.50/31.75mm & 3.00



**** FOR ISKRA STYLE****
**** 24V DC MOTORS ****

REPLACES NUMBERS,
 2.537.010.009 & 16.906.463

FOR MOTOR NUMBERS,
 W-8263, 11.212.918, 2200976
 11.212.865, 11.216.401 etc.

“WMS” NUMBER WBK-8263

L - .640/16.25mm W - .624/15.85mm
 T - .355/9.01mm LL -1.50”/38.1mm

BRUSH HOLDER KIT
AS SHOWN ABOVE W/SPRINGS



**** FOR ISKRA STYLE****
**** 12V DC MOTORS ****

REPLACES NUMBERS,
 2.537.010.010 & 16.906.466

FOR MOTOR NUMBERS,
 W-8235, 11.212.721, AMJ-5238
 W-5981, 11.212.864 etc.

“WMS” NUMBER WBK-8235

L - .640/16.25mm W - .624/15.85mm
 T - .355/9.01mm LL -1.50”/38.1mm

BRUSH HOLDER KIT
AS SHOWN ABOVE W/SPRINGS



**** FOR ISKRA STYLE****
**** 12V DC MOTORS ****

REPLACES NUMBERS,
 16905684

(8) BRUSHES & (8) SPRINGS

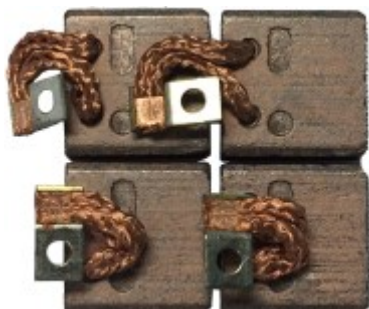
FOR MOTOR NUMBERS,
 11.212.108, AMJ5667, IM-0159

“WMS” NUMBER WBK-2108

L - 1.00/25.4mm W - .500/12.7mm
 T - .350/8.90mm LL -1.00/25.4mm

BRUSH SET WITH SPRINGS

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



BRUSH SET (4) FOR BOSCH
**** 24V DC MOTORS ****

REPLACES NUMBERS,
 2137014038, WB0136

FOR MOTOR NUMBERS
 0136352005, 0136355050,
 0136355060, 0136355061 etc.

“WMS” NUMBER WB-0136

L - 1.000/25.4mm W -1.020/25.90mm
 T - .350/ 8.90mm LL -1.250/31.75mm



**** FOR ISKRA STYLE****
**** 24V STARTER MOTORS ****

REPLACES NUMBERS,
 16906639

(4) BRUSHES & (4) SPRINGS

FOR STARTER NUMBERS
 IS-0407, 11.130.407, 11.131.388 ETC.

“WMS” NUMBER 16.906.639

L - .915/23.24mm W - .980/24.89mm
 T - .315/8.00mm LL - 1.50/38.1mm



**** FOR ISKRA STYLE****
**** 24V DC MOTORS ****

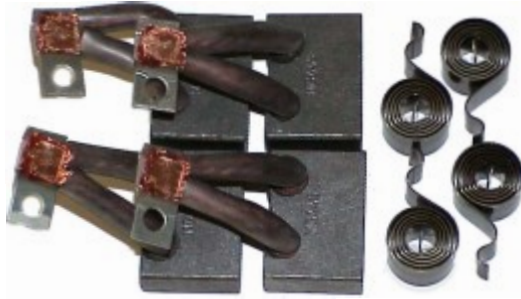
REPLACES NUMBERS,
 16905681

(8) BRUSHES & (8) SPRINGS

FOR MOTOR NUMBERS,
 11.212.106, AMJ4603, IM-0007

“WMS” NUMBER WBK-2106

L - 1.00/25.4mm W - .500/12.7mm
 T - .350/8.90mm LL -1.00/25.4mm



**** FOR ISKRA AMK MOTOR****
**** 24V DC MOTOR ****

REPLACES NUMBER, MG-445
(4) BRUSHES & (4) SPRINGS

FOR 5" DIA. MOTOR NUMBERS
11.216.146, 11.216.539, 11.216.587
IM-0251, AMK-5539, AMK-4638
AMK4638, 2201054, AMK-4626

"WMS" NUMBER WBK-2445

L- .890/22.60mm W- 1.290/32.76mm
T - .390/9.90mm LL -1.50/38.1mm



**** FOR ISKRA AMT MOTOR****
**** 36V DC MOTOR ****

REPLACES NUMBER, 16.908.687
(8) BRUSHES & (8) SPRINGS

(One brush has a brush wear indicator sensor wire)
FOR ISKRA MOTOR NUMBERS,
11.216.101, 11.216.510, 11.216.227, AMT4655, IM-0234
AMT-4649, AMT-4655, AMTK4664, 8507289, AMT-4664

"WMS" NUMBER WBK-227

L- 1.275/ 32.38mm W- .985/ 25.02mm
T - .390/ 9.90mm LL -2.00/ 50.8mm

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**** FOR ISKRA STYLE****
**** 24V DC MOTORS ****

REPLACES, 16908709
(4) BRUSHES & (4) SPRINGS

FOR MOTOR NUMBERS
11.216.163, AMK2605, IM-0198
IM-0168, IM-0202, 11.216.384

"WMS" NUMBER WBK-2384

L - 1.00/25.4mm W - .500/12.7mm
T - .350/8.90mm LL -1.00/25.4mm

BRUSH SET WITH SPRINGS



(FENNER SLOVENIA UNITS)
BRUSH SET FOR "ISKRA",
"SLOVENIA" & "YUGOSLAVIA"
STYLE (9) SPLINE MOTORS.

FENNER MOTOR NUMBERS,
1787AC, 1788AC

"WMS" PART NUMBER, YB-87

L - 1.00/25.4mm W - .500/12.7mm
T - .350/8.90mm LL -1.00/25.4mm

(For 24V use WBK-2384)



**** FOR ISKRA STYLE****
**** 12V DC MOTORS ****

REPLACES, YB-87 & 16905677
(4) BRUSHES & (4) SPRINGS

FOR MOTOR NUMBERS
11.212.089, AMJ5653, IM-0005

"WMS" NUMBER WBK-2089

L - 1.00/25.4mm W - .500/12.7mm
T - .350/8.90mm LL -1.00/25.4mm

BRUSH SET WITH SPRINGS



**FOR BI-DIRECTIONAL
** 24V DC MOTORS ****

**REPLACES NUMBERS,
0065052, 10365052**

**FOR MOTOR NUMBERS
W-5050N, W-5051N, W-5052N**

“WMS” NUMBER WBK-52N

L- .620/15.74mm W - .750/19.05mm
T - .345/8.76mm LL -3.00/76.2mm

*THE TERMINAL POSTS ON
THIS BRUSH SET ARE 1/4 X 20*



**FOR BI-DIRECTIONAL
** 24V DC MOTORS ****

**REPLACES NUMBERS,
0065048, 10365048**

**FOR MOTOR NUMBERS
10365048, W-5048, W-5048N**

“WMS” NUMBER WBK-5048

L- .620/15.74mm W - .750/19.05mm
T - .345/8.76mm LL -3.00/76.2mm

*THE TERMINAL POSTS ON
THIS BRUSH SET ARE 5/16 X 18*



**FOR BI-DIRECTIONAL
** 24V DC MOTORS ****

**REPLACES NUMBERS,
900450, 016577**

**FOR MOTOR NUMBERS
16577, W-5051, W5051, W-5151**

“WMS” NUMBER WB-5051

L- .620/15.74mm W - .750/19.05mm
T - .345/8.76mm LL -3.00/76.2mm

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**FOR YALE BI-DIRECTIONAL
** 24V DC MOTORS ****

**REPLACES NUMBERS,
10395142, 141-14000, WB73N**

**FOR MOTOR NUMBERS
7222360-21, 7300240-21 etc.**

“WMS” NUMBER WB-73N

L - .875/ 22.22mm W- .750/19.05mm
T - .345/ 8.76mm LL - 4.00/101.6mm



**FOR BI-DIRECTIONAL
** 24V DC MOTORS ****

**REPLACES NUMBER,
10365020, MHC1012S**

**FOR MOTOR NUMBERS,
MMX4001, MHC4001A
MHC4002A, 3, 5, 6, 8, 9**

“WMS” NUMBER 17-128

L- .620/15.74mm W - .750/19.05mm
T - .345/8.76mm LL -3.00/76.2mm



**FOR BOSCH
** 24V DC MOTORS ****

**REPLACES NUMBERS,
30-311111-144-4-01**

**FOR MOTOR NUMBERS
????????? etc.**

“WMS” NUMBER WB-44401

L - 1.100/ 27.94mm W- 1.95/49.53mm
T - .310/ 7.87mm LL - 1.50/ 38.1mm

(SOLD “EACH”)



***12V* BRUSH SET W/SPRINGS
FOR THE W-98985 & W-98987
PERMANET MAGNET
MOTORS**

“WMS” NUMBER WB-98985

L - .850/21.59mm W - .700/17.78mm
T - .370/9.39mm LL - 3.50” & 8.00”

Brush spring spec’s
.315/8.mm W & .900/ 22.86mm L

**BRUSH KIT INCLUDES,
BRUSH SET WITH TERMINALS
AND (4) BRUSH SPRINGS**



***12V* BRUSH HOLDER KIT**

**FOR THE W-98985 & W-98987
PERMANET MAGNET MOTORS**

“WMS” NUMBER WBHK-98985

L - .850/21.59mm W - .700/17.78mm
T - .370/9.39mm LL - 3.50” & 8.00”

Brush spring spec’s
.315”/8.mm W & .900”/ 22.86mm L

**BRUSH KIT INCLUDES,
BRUSH HOLDER, BRUSH SET
W/TERMINALS & BRUSH SPRINGS**



**4.75” DIAMETER 12V
COM END FRAME ASSEMBLY
FOR THE W-98985 & W-98987**

“WMS” NUMBER, WCA-98985

**COMES COMPLETE WITH
COMM/END FRAME,
BRUSH SET W/TERMINALS,
SPRINGS & BRUSH HOLDER
(THIS CE FRAME USE’S THE
6-202-4 BALL BEARING)**

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



***12V* BRUSH SET FOR THE
LARGE 4.8” DIAMETER
“PERMANENT MAGNET”
WINCH MOTORS AND
SALT SPREADER MOTORS
WITH THE “LONGER” POSTS**

**REPLACES NUMBERS,
K-98-T, WBS-200**

**(THE POSTS ARE 1.5” LONG)
FOR MOTOR NUMBERS
W-8808, W-8818RM, W-8818
W-8845RM, W-8845, ETC.**

“WMS” PART NUMBER WB-200

L - .625/15.87mm W - .270/ 6.85mm
T -.510/12.95mm LL -6.50/165.1mm

***12V* BRUSH SET FOR THE
LARGE 4.8” DIAMETER
“PERMANENT MAGNET”
WINCH MOTORS AND
SALT SPREADER MOTORS**

**REPLACES NUMBERS,
0802940, BR08029, K-98, 141-21001**

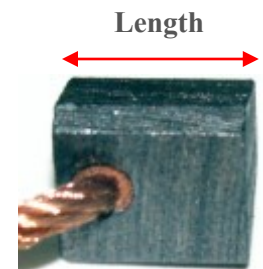
**(THE POSTS ARE 1” LONG)
FOR MOTOR NUMBERS
W-8800, W-8805, W-8858,**

“WMS” PART NUMBER WB-8805

L - .625/15.87mm W - .270/ 6.85mm
T -.510/12.95mm LL -6.50/165.1mm

**The triangle shaped brush sets
are measured as shown below.**

Length < Width < Thickness



Width



Thickness





12V

“UT” STYLE BRUSH SET

THE COMPLETE BRUSH SET INCLUDES ALL OF THE ITEMS SHOWN ABOVE.

“WMS” NUMBER BB-UT

1 POS/BRUSH W/POST & INSUL
2 NEG/BRUSHES & 4 BR/SPGS

Positive brush lead lengths

Short LL 1.50”/ 38.1mm

Long LL 3.00”/ 88.9mm

L - .475/12.06mm W - .310/ 7.87mm

T - .410/10.41mm LL -4.50/114mm



***12V* INS/GRD & F&R**

“UT” STYLE BRUSH SET

THE COMPLETE BRUSH SET INCLUDES THE BRUSH SPRINGS AS SHOWN

“WMS” NUMBER PBB-UT

(TWO POSITIVE BRUSHES)
(AND FOUR BRUSH SPRINGS)

Positive brush lead lengths

Short LL 1.75”/ 44.45mm

Long LL 3.50”/ 88.9mm

L - .500/12.7mm W - .310/ 7.87mm

T -.410/10.41mm LL -5.25/133.35mm

(L) = Brush Length \diamond (W) = Brush Width \diamond (T) = Brush Thickness \diamond (LL) = Lead Length



FOR 3.7” DIA./ “ISKRA” STYLE

*** 12V & 24V DC MOTORS ***

REPLACES NUMBERS,
16.906.580, 16.906.403

FOR MOTOR NUMBERS,
IM-0024, IM-0025, IM-0216

IM-0217, W-3584, W-3589,
W-3531, W-3532, W-3533, W-5800

“WMS” NUMBER WB-5800

L - .590/14.98mm W - .530/13.45mm

T - .460/11.68mm LL -6.50/171.45mm

Left brush ins/split is at 3.25”

Right brush ins/split is at 4.” & 2.5”



FOR 3.7” DIAMETER

“AMETEK” STYLE

*** 12V & 24V DC MOTORS ***

REPLACES NUMBERS,

FOR MOTOR NUMBERS,

39200428, 39200513

MZC4001, MZE4001

39200522, S201*4608, MZE4002

“WMS” NUMBER WB-5850

L - .590/ 14.98mm W- .495/ 12.57mm

T- .470/ 11.93mm Grd LL- 1.5/38.1mm

Pos LL-3.50/ 88.9mm & LL- 2.5/ 63.5mm



FOR THE W-7905 SIREN MOTOR

REPLACES NUMBERS,
0065048, 10365048

FOR SIREN MOTOR
NUMBERS

00.36000, W-7905

“WMS” NUMBER WB-905

L -.715/18.16mm W - .750/19.05mm

T -.345/ 8.76mm LL - 3.50” & 3.50”

Long & short LL 3.00” & 5.00”



12 / 24V
INSULATED BRUSH

FOR MOTOR NUMBERS

REPLACES NUMBERS,
????????????? etc.

“WMS” NUMBER WB-1360

L – .995/25.27mm W - .620/15.74mm
T – .310/7.87mm LL - 1.50/38.1mm

(SOLD “EACH”)

36 / 48V
INSULATED BRUSH

FOR IMPERIAL MOTORS,
P56SR293, P56SD700

REPLACES NUMBERS,
WB700, 0572013 etc.

“WMS” NUMBER WB-700

L – 1.070/ 27.18mm W - .995/ 25.27mm
T – .348/ 8.84mm LL - 2.5”/ 63.5mm

(SOLD “EACH”)

*** Special composition ***

INSULATED BRUSH
WITH SENSOR LEAD
FOR CAT MOTOR 916150

REPLACES, 966150, WB-1104

“WMS” NUMBER WB-16150

L - 1.77/ 45.mm W - .984/ 25mm
T - .500/ 12.7mm LL - XX/ XX mm

(SOLD “EACH”)

(L) = Brush Length < (W) = Brush Width < (T) = Brush Thickness < (LL) = Lead Length



24V
INSULATED BRUSH

FOR MOTOR NUMBERS

REPLACES NUMBERS,
????????????? etc.

“WMS” NUMBER WB-2450

L – .995/25.27mm W - .624/15.85mm
T – .310/ 7.87mm LL - 2.75/69.85mm

(SOLD “EACH”)

SPECIAL HIGH CARBON
BRUSH WITH EYELET

APPLICATIONS
(SPECIALTY MOTORS)
(SPECIAL COMPOSITION)

REPLACES, ML1485BB

“WMS” NUMBER WB-1485BB

L- 1.175/ 29.84mm W-1.10/ 27.94mm
T - .395/ 10.0mm LL -1.80”/45.72mm

(SOLD “EACH”)

FOR BI-DIRECTIONAL
24V / 36V MOTORS

REPLACES NUMBERS,
WB150, WB150A

FOR ??? MOTORS

“WMS” NUMBER WB-150A

L - 1.50/ 38.1mm W -1.00/ 25.4mm
T - .500/ 12.7mm LL -1.50/ 38.1mm

(SOLD “EACH”)



**FOR ADVANCED DC
** 36V / 72V DC MOTORS ****

**REPLACES NUMBERS,
89-012A, A89012A**

**FOR MOTOR NUMBERS
A89-4001, A00-4009, A90-4002**

“WMS” NUMBER A89-012A

L - 1.300/33.02mm W - .970/24.63mm
T - .625/15.87mm LL--1.400/35.56mm

*(MORE CARBON THAN THE A89-012F)
(BRUSH CONTACT AREA IS CURVED)*

(SOLD “EACH”)



**FOR ADVANCED DC
** 12V / 24V DC MOTORS ****

**REPLACES NUMBERS,
A89012F, WB-012F**

**FOR MOTOR NUMBERS
AL2-4001, AL2-4001RM, AL2-4001A**

“WMS” NUMBER A89-012F

L - 1.300/33.02mm W - .970/24.63mm
T - .625/15.87mm LL--1.300/33.02mm

*(SAME AS THE A91-112F ONLY THE
BRUSH CONTACT AREA IS CURVED)*

(SOLD “EACH”)



**FOR ADVANCED DC
** 12V / 24V DC MOTORS ****

**REPLACES NUMBERS,
A89112F, WB-012F, A91112F**

**FOR MOTOR NUMBERS
AL4-4001, AL4-4001RM, AL4-4001A**

“WMS” NUMBER A91-112F

L- 1.300/33.02mm W- .970/24.63mm
T- .625/15.87mm LL-1.300/33.02mm

*(SAME AS THE A89-0112F ONLY THE
BRUSH CONTACT AREA IS FLAT)*

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
A89112E, WB-012E**

**FOR MOTOR NUMBERS
AC4-4002, DH9-4001, BA4-4001**

WMS” NUMBER A91-112E

L- 1.300/33.02mm W- .970/24.63mm
T- .625/15.87mm LL- 1.400/35.56mm

*More carbon than the A91-112F
(BRUSH CONTACT AREA IS FLAT)*

(SOLD “EACH”)



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
B89012D,**

**FOR MOTOR NUMBERS
H89-4002, H89-4002A, K89-4001
K89-4001A, K89-4002, K89-4002A**

“WMS” NUMBER B89-012D

L- 1.300/33.02mm W- 1.240/31.49mm
T - .625/15.87mm LL -1.400/35.56mm

*(Harder composition, more
copper than the B89-012F)*

(SOLD “EACH”)



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
B89012F**

**FOR MOTOR NUMBERS
E90-4003, K99-4007, Y91-4001**

“WMS” NUMBER B89-012F

L- 1.300/33.02mm W- 1.240/31.49mm
T - .625/15.87mm LL -1.400/35.56mm

*More carbon than the B89-012D
(BRUSH CONTACT AREA IS FLAT)*

(SOLD “EACH”)



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
B89012A, WB579298**

**FOR MOTOR NUMBERS
B579-298, 579-298, K92-4005**

“WMS” NUMBER B89-012A

L -1.300/33.02mm W -1.240/31.49mm
T - .625/15.87mm LL -1.400/35.56mm

**(Softer brush, has more
Carbon than the B89-012B)**

(SOLD “EACH”)



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
B89012B**

**FOR MOTOR NUMBERS
73124G08, CL7-4001A, DE8-4001**

“WMS” NUMBER B89-012B

L-1.300/33.02mm W-.240/31.49mm
T- .625/15.87mm LL-1.400/35.56mm

**(Harder brush, has more
copper than the B89-012A)**

(SOLD “EACH”)



**FOR ADVANCED DC
** 24V DC MOTORS ****

**REPLACES NUMBERS,
WB-012A, 14001012C, 140/012C**

**FOR MOTOR NUMBERS
140-01-4003A, 140-01-4007A etc.**

“WMS” NUMBER 140-01-012C

L-1.100/27.94mm W -1.245/31.62mm
T- .485/12.31mm LL-1.400/35.56mm

**(Harder brush, has more
copper & flat contact area)**

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



ADCM BR./ SPRING (SOLD “EACH”)

“WMS” PART # B89-016

**FOR MOTOR NUMBERS,
AL4-4001, AL4-4001A etc.**



**FOR ADCM BI-DIRECTIONAL
12V DC MOTOR/GENERATOR**

**REPLACES NUMBERS,
114012034AS, 1122D**

**FOR MOTOR NUMBERS
114-01-4004, 114-01-4007
AM137931, 114014007**

“WMS” NUMBER 114-01-2034AS

L - .815/20.70mm W- .625/15.87mm
T - .390/9.90mm LL -1.50” & 6.00”

(Terminal posts are 6mm)



*** FOR HITACHI STYLE*
* 12V Starter / Generators ***

**REPLACES NUMBERS,
WBS04A, HITACHI S/G BRUSH
FOR STR. / GEN. NUMBERS
W-10704A, W-10710B ETC.**

“WMS” NUMBER WBS-04A

L - 1.050/26.67mm W- .535/13.58mm
T - .225/5.71mm LL -1.25/31.75mm



ADCM BR./SPRING (SOLD “EACH”)

“WMS” PART # 140-01-016

**FOR MOTOR NUMBERS,
140-01-4001, 140-01-4002,
140-01-4002A, 40-01-4003A etc.**



**FOR ADVANCED DC
** 24V / 36V DC MOTORS ****

**REPLACES NUMBERS,
140-07-012C, 140-07-012C**

**FOR MOTOR NUMBERS
140-07-4001, 140-09-4001 etc.**

“WMS” NUMBER 140-07-012A

L-.995/25.27mm W - .785/19.94mm
T- .485/12.31mm LL-1.50/38.1mm

**(Harder brush, has more
copper & flat contact area)**

(SOLD “EACH”)



**FOR ADVANCED DC
** 36V DC MOTORS ****

**REPLACES NUMBERS,
AC62034AS,**

**FOR MOTOR NUMBERS
DE8-4001, 73124G08, 73124G01
70-054-41, DY2-4001**

“WMS” NUMBER AC6-2034AS

L - 1.220/30.98 W - .970/24.63mm
T - .630/16.00mm LL -3.25” & 7.25”

(Terminal posts are 5/16 X 18)



**FOR HITACHI
** 24V DC MOTORS ****

**REPLACES NUMBERS,
113MP**

**FOR MOTOR NUMBERS
MP113-484RM, MP113-484 etc.**

“WMS” NUMBER WB-484

L-.910/23.11mm W - .490/12.44mm
T- .392/ 9.95mm LL-1.25/31.75mm

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR NISSAN / HITACHI*
(SPECIAL COMPOSITION)**

**REPLACES, 26242-L8000
26DA29051, 14320-1224071**

**FOR NISSAN
INDUSTRIAL MOTORS**

“WMS” NUMBER WB-29242

L - .894/22.70mm W- .780/19.81mm
T - .290/ 7.36mm LL -2.25/ 57.15mm

(SOLD “EACH”)



*** FOR TOYOTA STYLE*
(SPECIAL COMPOSITION)**

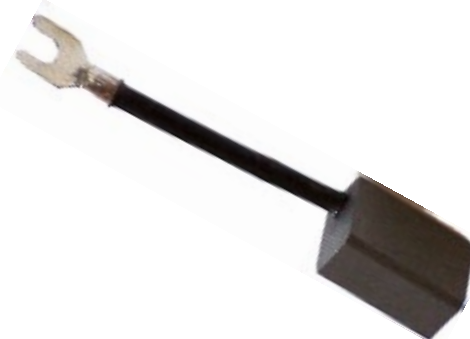
**REPLACES NUMBERS,
143201224071, 14320-1224071**

**FOR TOYOTA
INDUSTRIAL MOTORS**

“WMS” NUMBER 14320-12240-71

L - 1.50/ 38.1mm W- 1.570/39.88mm
T - .550/ 13.97mm LL -3.50/ 88.9mm

(SOLD “EACH”)



*** Special composition ***

**“INSULATED BRUSH”
FOR NISSAN MOTOR**

(48V) Motors

“WMS” NUMBER WB-31K20

L - 1.058/ 26.87mm W - .785/ 19.94mm
T - .49/ 12.44mm LL - 2.50”/ 63.5mm

(SOLD “EACH”)



**FOR BI-DIRECTIONAL
36V/48V MOTORS**

**REPLACES NUMBERS,
WB10320010**

**FOR MOTOR NUMBER
5BC48JB257A**

“WMS” NUMBER WB-JB257A

L - 1.750/ 44.45mm W -1.240/ 31.50mm
T - .498/ 12.65mm LL -3.50/ 88.9mm

(Has hook for brush spring)

(SOLD “EACH”)



**FOR BI-DIRECTIONAL
36V/ 48VMOTORS**

**REPLACES NUMBERS,
10395200**

**FOR YALE & HYSTER
MOTORS**

“WMS” NUMBER WB-95200

L - .994/25.25mm W -1.750/ 44.45mm
T - .380/ 9.6.5mm

LL -2.25/ 57.15mm & 8.00/ 203mm

(SOLD “EACH”)



**FOR BI-DIRECTIONAL
36V / 48V MOTORS**

**REPLACES NUMBERS,
10385040**

FOR ??? MOTORS

“WMS” NUMBER WB-85040

L - 1.250/ 31.75mm W -1.55/ 39.37mm
T - .550/ 13.97mm LL -3.50/ 88.9mm

(SOLD “EACH”)

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



36V

INSULATED BRUSH SET

(Replaces number WB36,)

APPLICATIONS

(36V pump motors and starters)

(SPECIAL 36V COMPOSITION)

“WMS” PART NUMBER WB-36

L - .650/16.51mm W --.695/17.65mm
T - .345/8.76mm LL --2.25” & 5.50”

(SOLD EACH)



36V

INSULATED BRUSH SET

(Replaces number ML-1181CS)

APPLICATIONS

(36V pump motors and starters)

(SPECIAL 36V COMPOSITION)

“WMS” PART NUMBER 17-238

L - .650/16.51mm W --.750/19.05mm
T - .345/8.76mm LL --2.25” & 5.25”

(SOLD EACH)



LEESON BRUSH CLIP
WMS # WSC-37012



BRUSH SPRING FOR THE "PM" LEESON MOTORS

**POPULAR BRUSH SPRING
FOR THE LEESON STYLE
PERMANENT MAGNET
MOTORS**

"WMS" NUMBER LBS-0150

THIS BRUSH SPRING IS
0.376"/9.55mm WIDE
1.045"/26.54mm LONG
WITH A CENTER HOLE

(SOLD "EACH")

12V & 24V PM LEESON MOTOR BRUSH WITH SPRING

**POPULAR MOTOR BRUSH
W/SPG. FOR THE 12V & 24V
LEESON PERMANENT
MAGNET MOTORS**

"WMS" NUMBER WB-1025

L- 1.250/31.75mm W- 1.250/31.75mm
T - .375/ 9.52mm LL - 2.00/50.8mm

USE'S BRUSH SPRING NUMBER
LBS-0150

(SOLD "EACH")

36V & 48V PM LEESON MOTOR BRUSH WITH SPRING

**POPULAR MOTOR BRUSH
W/SPG. FOR THE 36V & 48V
PERMANENT MAGNET
MOTORS**

"WMS" NUMBER WB-1023

L-1.250/31.75mm W-1.250/31.75mm
T - .375/ 9.52mm LL - 2.00/50.8mm

USE'S BRUSH SPRING NUMBER
LBS-0150

(SOLD "EACH")

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** 24V BRUSH W/SPRING***

*** FOR THE W-1372RM ***

REPLACES NUMBERS,
90-401261, 44-103-37020
4410337020, 90-401261, 1033-7020

FOR MOTOR NUMBERS
1372AC, PVB55029, MP05-02

"WMS" NUMBER WB-1372

L - 1.250/31.75mm W- 1.245/31.62mm
T - .400/10.16mm LL -1.60"/40.64mm

(SOLD "EACH")



FOR BI-DIRECTIONAL 36V LEESON MOTORS

REPLACES NUMBERS,
WB8853,

FOR MOTOR NUMBERS
C4D34DZ14A, 108853.00 etc.

"WMS" NUMBER WB-8853

L - 1.100/27.94mm W -1.250/31.75mm
T - .495/12.57mm LL -2.000/50.8mm

(SOLD "EACH")



FOR BI-DIRECTIONAL 24V/36V MOTORS

REPLACES NUMBERS,

FOR ??? MOTORS

"WMS" NUMBER WB-95150

L - 1.380/ 35.05mm W -1.255/ 31.87mm
T - .495/ 12.57mm LL -2.00/ 50.8mm

(SOLD "EACH")



**BRUSH HOLDER KIT ASSEMBLY FOR MOTOR NUMBERS
W-7627, W-7641, W-7656, W-9144 etc.
REPLACES NUMBER, 17-185K**

“WMS” PART NUMBER, WBK-20

*(KIT COMES COMPLETE WITH EVERYTHING SHOWN)
(THE TERMINAL POST HAS A SQUARE SHOULDER)*



**BRUSH HOLDER KIT ASSEMBLY FOR MOTOR NUMBERS
W-7608, W-7643, 08111A, W-7618, W-7619, W-7624
REPLACES NUMBER, 08111 BH & BR**

“WMS” PART NUMBER, WBK-22

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



**BRUSH HOLDER KIT ASSEMBLY FOR MOTOR NUMBERS
W-8911G etc.**

REPLACES, HALDEX BARNES & WAPSA

“WMS” PART NUMBER, WBK-714

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



**BRUSH HOLDER KIT ASSEMBLY FOR MOTOR NUMBERS
46-3650, W-8994, W-9787LC, MHT6101, MHT7001 etc.**

REPLACES NUMBER, 17-164, MHT2012S

“WMS” PART NUMBER, WBK-720

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



**BRUSH HOLDER KIT ASSEMBLY FOR MOTOR NUMBERS
W-8993, 08196, 08196B, W-8993D, W-8999, W-8999D**

REPLACES NUMBER, MONARCH & WAPSA

“WMS” PART NUMBER, WBK-725

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)

**BRUSH HOLDER KIT ASSEMBLY,
FOR WAPSA MOTOR NUMBERS, 08111D, 8111D
9130450081, 9.130.450.081, 2200-727, 2200727 etc.
REPLACES NUMBER, K-727**

“WMS” PART NUMBER, WBK-727

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



**BRUSH HOLDER KIT ASSEMBLY,
FOR WMS MOTOR NUMBERS, W-8950
W-6001, W-6294, W-8735, W-8935 ETC.**

“WMS” PART NUMBER, WBK-730

*(KIT COMES COMPLETE WITH EVERYTHING SHOWN)
(THE TERMINAL POST HAS A SQUARE SHOULDER)*



**BRUSH HOLDER KIT ASSEMBLY,
FOR WAPSA MOTOR NUMBERS,
9130450061, 2200-870, 9.130.450.061, 2200870
REPLACES, HALDEX BARNES & WAPSA**

“WMS” PART NUMBER, WBK-870

*(KIT COMES COMPLETE WITH EVERYTHING SHOWN)
(THE TERMINAL POST IS ROUND, “NO” SHOULDER)*



**BRUSH HOLDER KIT ASSEMBLY,
FOR MOTOR NUMBERS,
W-9799B, W-9799C, W-9799CDBN, W-9799D
REPLACES NUMBER, WAPSA**

“WMS” PART NUMBER, WBK-879

*(KIT COMES COMPLETE WITH EVERYTHING SHOWN)
(THE TERMINAL POST HAS A SQUARE SHOULDER)*



**BRUSH HOLDER KIT ASSEMBLY,
FOR WAPSA MOTOR NUMBERS,
9130450099, 9.130.450.099 etc.
REPLACES NUMBER, WAPSA**

“WMS” PART NUMBER, WBK-899

*(KIT COMES COMPLETE WITH EVERYTHING SHOWN)
(THE TERMINAL POST IS ROUND, NO SHOULDER)*





*** FOR EARLY PRES. STYLE ***
*** GOODALL GENERATORS ***

REPLACES NUMBERS,
 11-67, GJH-2012B, GJH-2012BS

FOR GENERATOR NUMBERS,
 45-374, 45-376, GKR-7101A
 45-734, 45-380, GKR-7101S
 10626, GKR-6101, GKR-6101S
 4W-70050, 4W-70050A

“WMS” NUMBER WB-1167

L - .890/22.60mm W - .890/22.60mm
 T - .245/6.22mm LL -2.00”/50.8mm

First version for the GKR generators



*** FOR PRES. STYLE ***
*** GOODALL GENERATORS ***

REPLACES NUMBERS,
 11-78, GJH-1032S, GJH-2012CS

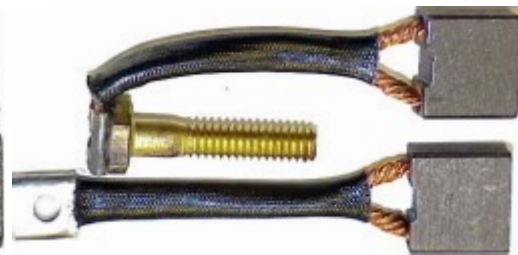
FOR GENERATOR NUMBERS
 45-734, GKR-6104, GKR-6104A
 79370, 79371, 79373, 79375, 79406

“WMS” NUMBER WB-1178

L - .645/16.38mm W - .695/17.65mm
 T - .345/8.76mm LL -2.50”/63.5mm

(With screw eyelets as shown)

Second version for GKR generators



*** FOR PRES. STYLE ***
*** GOODALL GENERATORS ***

REPLACES NUMBERS,
 11-79, GJH-1032S, GJH-2012CS

FOR GENERATOR NUMBERS
 45-734, GKR-6104, GKR-6104A
 79370, 79371, 79373, 79375, 79406

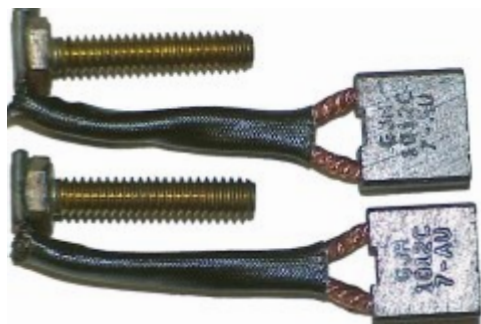
“WMS” NUMBER WB-1179

L - .645/16.38mm W - .695/17.65mm
 T - .345/8.76mm LL -2.50”/63.5mm

*(One with post attached and)
 (one with eyelet attached as shown)*

*Third version for the GKR generators
 (Terminal post has 1/4 X 20 threads)*

(L) = Brush Length <> (W) = Brush Width <> (T) = Brush Thickness <> (LL) = Lead Length



*** FOR GKR6104A PRES. STYLE ***
*** GOODALL GENERATORS ***

REPLACES NUMBERS,
 GJH-1032SS, GJH-2012CS
 AND GJH-1012C

FOR GENERATOR NUMBERS
 GKR-6104, GKR-6104A, GKR6105
 79370, 79371, 79373, 79375, 79406

“WMS” NUMBER WB-1180

L - .645/16.38mm W - .695/17.65mm
 T - .345/8.76mm LL -2.50”/63.5mm

*Late version for GKR generators
 with terminals on both brushes
 (Terminal post has 1/4 X 20 threads)*



(BR/HOLDERFOR THE W-6850)

**PLASTIC BRUSH HOLDER
 COMPLETE WITH THE
 BRASS SLEEVE AND
 SCREW ON CAP FOR THE
 W-6850 AUTO/CRANE MOTOR**

“WMS” NUMBER WBH-850

**THIS BRUSH HOLDER USE'S
 THE WB-850 BRUSH W/SPRING**



(BR/HOLDER FOR THE W-8815)

**PLASTIC BRUSH HOLDER
 COMPLETE WITH THE
 BRASS SLEEVE AND
 SCREW ON CAP FOR THE
 W-8815 SALT SPREADER MOTOR**

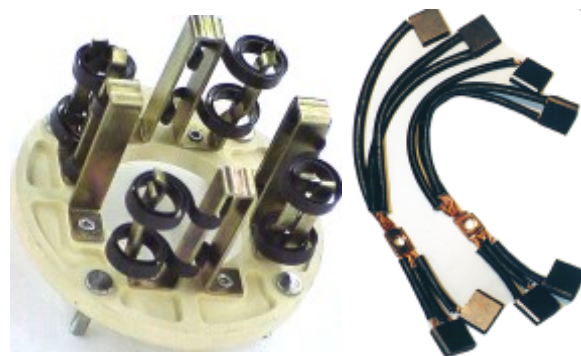
“WMS” NUMBER WBH-815

**THIS BRUSH HOLDER USE'S
 THE WB-815 BRUSH W/SPRING**

***BRUSH HOLDER KIT ASSEMBLY
FOR MOTOR NUMBERS, W-5001, W-5004,
W-5007, W-5107, MBD-5006, MBD-5007
MBD-5107, MBD-5107D, ETC.***

“WMS” PART NUMBER, W36-1035K

*REPLACES NUMBERS, 36-1035 & MBD-1564
(KIT IS COMPLETE WITH K-93 BRUSH SET AND SPRINGS)*



***“ML” BRUSH HOLDER KIT ASSEMBLY
FOR MOTOR NUMBERS,
W-5202, W-5205, W-5207, ML-5007 ETC.***

“WMS” PART NUMBER, W36-1153K

(COMPLETE WITH 17-48 BRUSH SET & SPRINGS)

***REPLACES NUMBERS,
ML1154, W-153, ML-1154, ML-1154F***

(FITS ALL OF THE ML “5000” SERIES MOTORS)

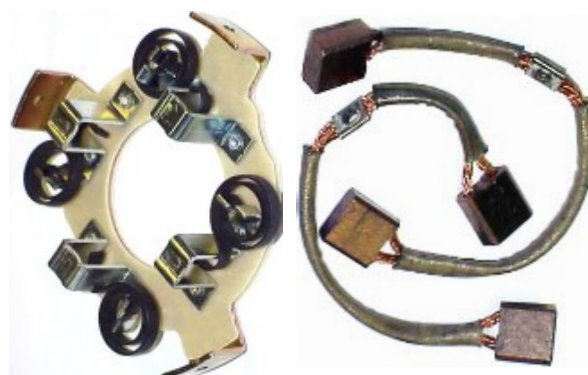


***“MFY” BRUSH HOLDER KIT ASSEMBLY
FOR MOTOR NUMBERS, W-4037, W-4810B
MFY-4101, MFY-4202, MFY-4203, W-4037 ETC.***

“WMS” PART NUMBER, W36-1187K

(COMPLETE WITH BRUSH SPRINGS & BRUSHES)

***REPLACES NUMBERS, MFY1064, MFY1064A,
MFY1064C, 36-796, MFY-1064, MFY-1064C***



***BRUSH HOLDER KIT FOR OHIO MOTORS
FOR MOTOR NUMBERS, D468253XWF07A
D468237XWF07A, D468210XWF07A, ETC.***

“WMS” PART NUMBER, W36-1092K

*(CW ROTATION OHIO MOTORS THAT HAVE FIELD COILS)
(KIT COMES COMPLETE W/ K-92 BRUSH SET & SPRINGS)*



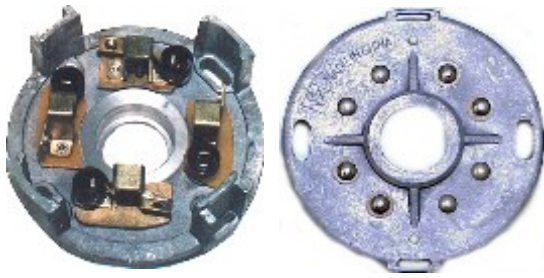
***BRUSH HOLDER ASSEMBLY W/BR & SPGS.
FOR MOTOR NUMBERS, W-5158, 0805158
0805839, 109512, CR805158, CR805158N, ETC.***

“WMS” PART NUMBER, WBHK-5158

(FOR HPI & CROWN MOTORS)

*(KIT COMES COMPLETE WITH AS SHOWN
WITH HOLDER, BRUSH SET, SPRINGS & POSTS)*





BRUSH HOLDER ASSEMBLY FOR NUMBERS

1787AC, 1789AC, 1791AC, 1792AC, 1794AC, W-8534, W-8901
W-8925, W-8938, W-8939, W-8995, W-8996, W-9724,
W-9787, W-9789, W-9791, W-9794 ETC.

“WMS” PART NUMBER, W-101

THIS BRUSH HOLDER ASSEMBLY USE’S THE 6-201-4 BEARING

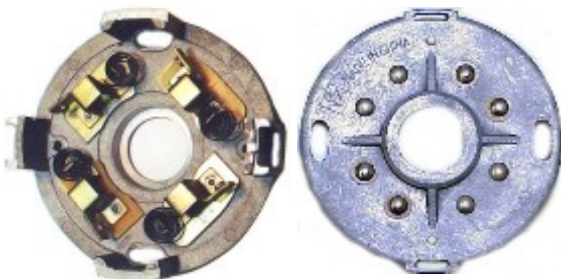


“INSULATED” BRUSH HOLDER FOR NUMBERS,

1788AC, 1793AC, W-5635, W-8960, W-8961, W-8962, W-8963
W-8964, W-9007, W-9008, W-9009, W-9788, W-9792, W-9793
W-9795, W-9796, W-9797, W-9895 ETC .

“WMS” PART NUMBER, W-102

THIS BRUSH HOLDER ASSEMBLY USE’S THE 6-201-4 BEARING



BRUSH HOLDER ASSEMBLY FOR NUMBERS

1787AC, 1789AC, 1791AC, 1792AC, 1794AC, W-8534, W-8901
W-8925, W-8938, W-8939, W-8995, W-8996, W-9724,
W-9787, W-9789, W-9791, W-9794 ETC.

“WMS” PART NUMBER, W-103

THIS BRUSH HOLDER ASSEMBLY USE’S THE 6-202-4 BEARING



***COMM END BRUSH HOLDER ASSEMBLY
FOR 3” DIAMETER PM MOTORS***

FOR MOTOR NUMBERS, W-8931, W-8932 etc.

Will fit on United Tech., Johnson Electric and others

“WMS” PART NUMBER, W-108

(Complete with brushes, springs, terminal etc as shown)



***PLASTIC COMM END BRUSH HOLDER
FOR 3” DIAMETER PM MOTORS***

FOR MOTOR NUMBERS, W-8906, W-8931, W-8932 etc.

Will fit in United Tech., Johnson Electric and others

“WMS” PART NUMBER, WBH-931

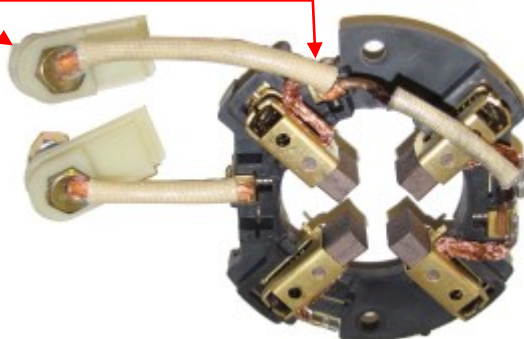
(Brush holder is 1.750” X 1.750” square)

This terminal wire is welded to the cross over jumper connector
**REPLACEMENT BRUSH HOLDER KIT ASSEMBLY
FOR ISKRA STYLE MOTORS.**

MOTOR NUMBERS, AMJ-4739, 11.212.981, 15829

“WMS” PART NUMBER, WBHK-5981

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



**12V / 24V CCW BRUSH HOLDER KIT ASSEMBLY
FOR MOTOR NUMBERS, AMJ-4664, AMJ-4787
11.216.400, 11.216.300, W-8263, 11.212.622, etc.
REPLACES NUMBER, 16.906.470, 16.908.670**

“WMS” PART NUMBER, WBHK-8263

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)

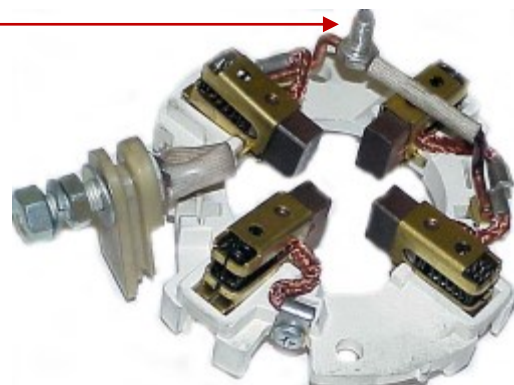


(This brush holder has a grounding bolt on the jumper)

*** 12V * CCW BRUSH HOLDER KIT ASSEMBLY,
FOR MOTOR NUMBERS, AMJ-4663, W-8013C
101820-4-12, 102680-4-12, 11.212.621, AMJ4663, IM-0031
REPLACES, NUMBERS, WBHK8013C, 16906468**

“WMS” PART NUMBER, WBHK-8013C

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



*** 12V * CW BRUSH HOLDER KIT ASSEMBLY,
FOR MOTOR NUMBERS, AMJ-5238,
11.212.864, 2200975, 11.216.204, 11.212.737 etc.
REPLACES, ISKRA NUMBER 16906471**

“WMS” PART NUMBER, WBHK-2864

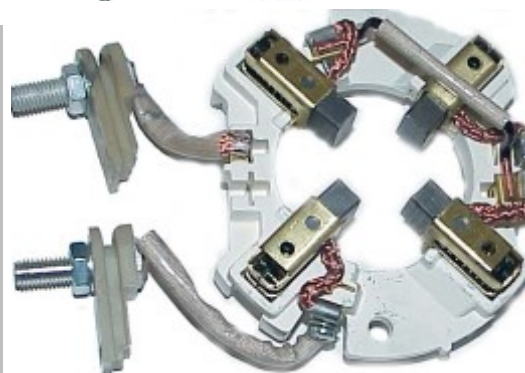
(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



*** 24V * CW BRUSH HOLDER KIT ASSEMBLY,
FOR MOTOR NUMBERS, AMJ-5720
11.212.987, 11.216.208, 11.216.446, AMJ-5767, etc.
REPLACES, ISKRA NUMBER 16906472**

“WMS” PART NUMBER, WBHK-2987

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)





***BRUSH HOLDER ASSEMBLY FOR
HITACHI STYLE MOTOR/GENERATOR NUMBERS,
W-10704A, W-10705A, W-10706E
W-10707F, W-10710A, W-10710B ETC.***

“WMS” PART NUMBER, WBH-107K

(KIT COMES COMPLETE WITH EVERYTHING SHOWN)



***NEW “MFY STYLE” BRUSH HOLDER ASSEMBLY
FOR MOTOR NUMBERS, W-4037, W-4810
MFY-4101, MFY-4202, MFY-4203 ETC.***

“WMS” PART NUMBER, WBH-1187

(COMPLETE WITH BRUSH SPRINGS)

REPLACES NUMBERS, 36-796, MFY-1064, MFY-1064C



***EARLY “MBD” BRUSH HOLDER ASSEMBLY
FOR MOTOR NUMBERS, MBD4304, MBD4308, MBD4311 etc.***

(THIS B/H IS FOR THE “EARLY“ MBD MOTORS)

“WMS” PART NUMBER, 36-552

(REPLACES, MBD 1421B, 36-907 <> COMPLETE WITH BRUSH SPRINGS)

(THIS WILL “NOT” WORK IN THE W-5007 OR MBD-5107S MOTORS)



***EARLY “MBD” BRUSH HOLDER ASSEMBLY
FOR MOTOR NUMBERS,***

(THIS B/H IS FOR THE “EARLY“ MBD MOTORS)

“WMS” PART NUMBER, 36-979

(REPLACES, MBD 1421D <> COMPLETE WITH BRUSH SPRINGS)

(THIS WILL “NOT” WORK IN THE W-5007 OR MBD-5107S MOTORS)

(DIAMETER OF THE FIBRE BOARD IS 4 & 1/8”)



***BRUSH HOLDER ASSEMBLY FOR MOTOR NUMBERS,
W-5001, W-5004, W-5007, W-5107, W-5112
W-5114, MBD-5006, MBD-5007, MBD-5107, etc.***

“WMS” PART NUMBER, WBH-1464

REPLACES NUMBERS, 36-1035 & MBD-1564

(FOR A KIT WITH K-93 BRUSHES & SPRINGS ORDER “WMS” # W36-1035K)

***“ML” BRUSH HOLDER ASSEMBLY
FOR MOTOR NUMBERS,
W-5202, W-5204, W-5205, W-5207, ML-5007 ETC.***

“WMS” PART NUMBER, W36-1153N

(COMPLETE WITH BRUSH SPRINGS)

***REPLACES NUMBERS, W-153, ML-1154, ML-1154F
(FITS ALL OF THE ML “5000” SERIES MOTORS)***



***“MBR” BRUSH HOLDER FOR MOTOR NUMBERS,
MBR5001, MBR5002, MBR5102 etc.***

“WMS” PART NUMBER, MBR1564

(WITHOUT BRUSH SPRINGS)

***REPLACES NUMBERS, 36-1144F
(FITS ALL OF THE MBR “5000” SERIES MOTORS)
(BRUSH SET FOR THIS HOLDER IS, 17-234)***



***“AMK” BRUSH HOLDER ASSEMBLY W/SPGS & BR/SET
FOR MOTOR NUMBERS, 11.216.146, AMK-4638, IM-0284, IM-0251
11.216.413, 11.216.521, AMK-2620, AMK-4626, AMK-2623, IM-0310***

“WMS” PART NUMBER, WBHK-530

(COMPLETE WITH SPRINGS, BRUSHES & TERMINAL)

REPLACES NUMBERS, 16.908.957C (FOR ISKRA AMK)



“AMP” BRUSH HOLDER ASSEMBLY W/SPRINGS

***FOR MOTOR NUMBERS,
IM-0077, AMP4632, 11.214.255***

“WMS” PART NUMBER, 16.903.557

***REPLACES NUMBERS,
16.903.557, WBHS-077 (FOR ISKRA AMP MOTORS)***



***“NEW” COMM END FRAME FOR MBD MOTORS
COMPLETE WITH BRUSH HOLDER, BRUSHES & SPRINGS
(FOR MBD-5107 & W-5007 MOTORS)***

***(WMS) MOTOR NUMBERS,
(W-5001, W-5006, W-5007, W-5112, W-5114 ETC.)***

“WMS” PART NUMBER, WC-507





**BRUSH HOLDER ASSEMBLY FOR
“WMS” MOTOR NUMBERS**

W-6020, W-6027, W-6129, W-8943 etc.

REPLACES NUMBERS, 36-12, 36-67, 36-505
36-878, 36-1169, 36-1333, MFX-1064, MDL-1064

“WMS” PART NUMBER, W-214



BRUSH HOLDER ASSEMBLY

*INCLUDES POSITIVE BRUSH
REF. NUMBERS (E-86, E-95, E-96, MDL-50)*

(FOR NUMBERS, MDL-1064, MDL-1064S, 36-67, S-2375)

*FOR PRES. STYLE MDY, MHA & MUE
STYLE STARTERS AND MOTORS*

“WMS” PART NUMBER, W-215K



**BRUSH HOLDER ASSEMBLY FOR
“WMS” MOTOR NUMBERS**

W-8911, W-8923, W-8927, W-8933 etc.

W-8992, W-8993, W-8999, W-9000, W-9143, ETC.

REPLACES NUMBERS, MDL1064NS, 36-975

“WMS” PART NUMBER, W-221

(FOR USE IN ALL “MBJ” STYLE WINCH MOTORS)



(TOTALLY) “INSULATED”

BRUSH HOLDER ASSEMBLY WITH METAL FRAME

REPLACES NUMBERS,

B-10645-7, 36-859, W-859, MHN-1064A,

“WMS” PART NUMBER, W-859M

FOR “WMS” MOTOR NUMBERS

W-6001, W-6029, W-8456, W-8917, W-8920, W-8935, W-8735

W-8944, W-8947, W-8948, W-8949, W-8950, W-8978, W-9405 etc.



(TOTALLY) “INSULATED”

**BRUSH HOLDER ASSEMBLY WITH FIBRE FRAME
REPLACES NUMBERS, B-10645-7, 36-859, MHN-1064A**

“WMS” PART NUMBER, 36-859

FOR “AMETEK” MOTOR NUMBERS

MHA6001, MUE-6102, MDY6109, MHA-6001, MDY6203

46-3633, 46-3639, MDY6121, MDY6206, MUE6102, MUF6102 etc.

BRUSH HOLDER ASSEMBLY
AS SHOWN, BRUSH SET WITH TERMINAL POST
BRUSH HOLDER WITH SPRINGS & CE FRAME

FOR HALDEX / SACO STYLE MOTOR NUMBERS,
939353171, 24MG2A2HE, 2201084, 2201086, 2201086A

“WMS” PART NUMBER, WCA-8486



AMETEK/PRESTOLITE BRUSH HOLDER W/SPRINGS
FOR THE GKR6104A, GKR6105 GENERATORS
REPLACES NUMBERS, MDL1064AB, 35-829 etc.
FOR THE AMETEK/PRESTOLITE
GKR6104A, GKR6105 SERIES GENERATORS

“WMS” NUMBER MDL1064AD



(TOTALLY) “INSULATED”
BRUSH HOLDER ASSEMBLY WITH FIBRE FRAME
REPLACES NUMBERS, 36-851, MHC-1064C, MHC1064

“WMS” PART NUMBER, MHC1064C

FOR “PRESTOLITE” MOTOR NUMBERS
MHC4005, MHC4009, MHC4009 etc.



(TOTALLY) “INSULATED”
BRUSH HOLDER ASSEMBLY WITH PLASTIC FRAME
REPLACES NUMBER, MEJ2122AS

“WMS” PART NUMBER, MEJ2122A

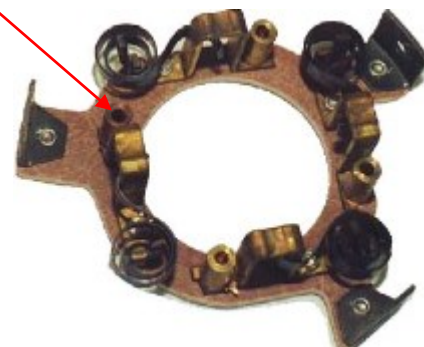
FOR “PRESTOLITE” MOTORS
(Round posts are threaded for brush & field lead attaching)



(TOTALLY) “INSULATED” (NLA)
BRUSH HOLDER ASSEMBLY WITH FIBRE FRAME
REPLACES NUMBERS, 36-827, MHN-1064

“WMS” PART NUMBER, 36-827

FOR “PRESTOLITE” MOTORS
MDY7040, MDY7047, MDY7052, MDY7055, MFX4006 etc.
“NLA” THIS INFORMATION IS FOR REFERENCE ONLY





BRUSH HOLDER WITH SPGS FOR “ADCM” MOTOR NUMBERS,
AL4-4001, AL4-4001RM, AL4-4001A

“WMS” PART NUMBER, WBH-81064

*NEW BRUSH HOLDER ASSEMBLY FOR THE “ADCM” MOTORS
REPLACES NUMBER, A88-1064*

*(COMES COMPLETE WITH BRUSH SPRINGS AS SHOWN)
The brush number for this brush holder is A89-012F*



BRUSH HOLDER WITH SPGS FOR “ADCM” MOTOR NUMBERS,

“WMS” PART NUMBER, WBH-0085

*NEW BRUSH HOLDER ASSEMBLY FOR THE “WE” MOTORS
REPLACES NUMBER, 10440085*

(COMES COMPLETE WITH BRUSH SPRINGS AS SHOWN)



*“DISCONTINUED” “FIBRE” BRUSH HOLDER ASSEMBLY
DISCONTINUED BY PRESTOLITE FOR “XOT” STYLE MOTOR
NUMBERS, 46-4209, 46-4116, 46-4211, 46-4157, MBJ6201
MBJ6200, MUR6202, MUQ6201, MUQ6202, MBJ62XX MOTORS*

REPLACES, 36-1369, MMY1064

“WMS” PART NUMBER, WBH-1369 “NLA”

“NLA” THIS INFORMATION IS FOR REFERENCE ONLY



*“DISCONTINUED” “PLASTIC” BRUSH HOLDER ASSEMBLY
DISCONTINUED BY PRESTOLITE FOR “XOT” STYLE MOTOR
NUMBERS, 46-4057, 46-4058, 46-4070, 46-4161, 46-4166, 46-4169, 46-4201
MUE6201, MUE6202, MUE6203, MUE6206 etc. ALL MUE62XX MOTORS*

REPLACES, 36-1359, MUE-15S, MUE-15SS, 36-1360, 36-1363

“WMS” PART NUMBER, WBH-1359 “NLA”

“NLA” THIS INFORMATION IS FOR REFERENCE ONLY



AMETEK/PRESTOLITE BRUSH HOLDER W/SPRINGS
FOR THE 6300 SERIES, MUE, MMW, MMY, MUV, MUY etc
THIS BRUSH HOLDER WILL ONLY FIT IN THE
AMETEK/PRESTOLITE 63XX SERIES MOTORS

“WMS” NUMBER WBH-1363

(TOTALLY) “INSULATED”

**BRUSH HOLDER ASSEMBLY WITH FIBRE FRAME
REPLACES NUMBERS, 36-1080, MHC-1164**

“WMS” PART NUMBER, MHC1164

**FOR “PRESTOLITE” MOTORS
(DIAMETER OF THE FIBRE BOARD IS 3.750”)**

**BRUSH HOLDER FOR “PRESTOLITE”
MOTOR NUMBER, MVV4001**

“WMS” PART NUMBER, WBH-1170

***REPLACES NUMBER, MEE1264
(COMES WITHOUT BRUSH SPRINGS)***

The brush number for this brush holder is MEE12K

**NEW 4.75” DIAMETER COM END FRAME ASSEMBLY
FOR THE W-98985 AND THE W-98987**

**COMES COMPLETE WITH COMM/END FRAME,
BRUSH SET W/TERMINALS, SPRINGS & BRUSH HOLDER
(THIS CE FRAME USE’S THE 6-202-4 BALL BEARING)**

“WMS” PART NUMBER, WCA-98985

***12V* “*BRUSH HOLDER KIT*”
FOR THE W-98985 & W-98987 P/M MOTORS**

“WMS” NUMBER WBHK-98985

**L - .850/ 21.59mm W - .700/ 17.78mm
T - .370/ 9.39mm LL - 3.50”/ 8.90mm & 8.00”/ 203.2mm**

Brush spring spec’s .315”/8.mm W & .900”/ 22.86mm L

***BRUSH KIT INCLUDES, RUSH HOLDER, BRUSH SET
WITH TERMINALS AND BRUSH SPRINGS***

**“*INSULATED*” BRUSH HOLDER ASSEMBLY
COMPLETE WITH BRUSHES, SPRINGS AND WIRES**

“WMS” PART NUMBER, WBH-160014

***(FOR THE P56SX SERIES HOSE REEL MOTORS)
(COMPLETE KIT AS SHOWN IN THE PICTURE)***





“GE” STYLE BRUSH HOLDER

REPLACES NUMBERS, GE10-1220S

“WMS” PART NUMBER, WBH-1220S

(COMES WITH FOUR BRUSH SPRINGS)

(BRUSH NUMBER FOR THIS HOLDER IS, WB-2060)

(FOR MOTOR NUMBERS, 5BC48JB756, 5BC48JB756B etc.)



“GE” STYLE BRUSH HOLDER ASSEMBLY

FOR MOTOR NUMBERS, 4BC49JB399, 4BC49JB399C
5BC48JB821B, 5BC49JB305D, 5BC49JB399C ETC.

“WMS” PART NUMBER, WBH-102003

This brush holder use’s brush number, WB-JB424B

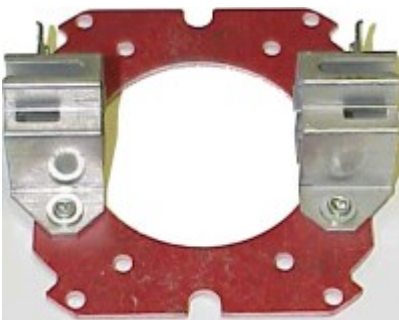


“GE” STYLE BRUSH HOLDER

FOR FOUR BRUSH MOTOR NUMBERS 570-845 ETC.

“WMS” PART NUMBER, WBH-1800

(COMES WITHOUT BRUSH SPRINGS)



“LEESON” STYLE BRUSH HOLDER

FOR TWO BRUSH MOTORS

“WMS” PART NUMBER, WBH-99410

(COMES WITHOUT BRUSH SPRINGS)



“LEESON” STYLE BRUSH HOLDER

FOR FOUR BRUSH MOTORS

“WMS” PART NUMBER, WBH-99415

(COMES WITHOUT BRUSH SPRINGS)

BRUSH HOLDER FOR "OHIO"
PERMANENT MAGNET MOTOR NUMBERS,
X7623, D482252X7707A, D482273X7088 ETC.

"WMS" PART NUMBER, WBH-1051

*(ORIGINAL OHIO BRUSH HOLDER
COMES COMPLETE WITH BRUSH SPRINGS)
Replaces, WBH-1050, 153-22001, B250105-01
(This brush holder is 4.5" / 114.3mm in diameter)*



BRUSH HOLDER FOR "OHIO" PERMANENT
MAGNET MOTOR NUMBERS, D562275X8375 ETC.

"WMS" PART NUMBER, WBH-1011

*(ORIGINAL OHIO BRUSH HOLDER
COMES COMPLETE WITH BRUSH SPRINGS)
Replaces, B250101-01
(This brush holder is 5" / 127.0mm in diameter)*



BRUSH HOLDER FOR "OHIO"
PERMANENT MAGNET MOTORS,
REPLACES, 1066s, OHIO-1066S etc.

"WMS" PART NUMBER, WBH-1066S

*NEW REPLACEMENT BRUSH HOLDER ASSEMBLY
FOR THE "OHIO" PERMANENT MAGNET MOTORS
(COMES COMPLETE AS SHOWN WITH WB-1010 BRUSH SET)*



BRUSH HOLDER FOR "OHIO"
PERMANENT MAGNET MOTOR NUMBERS,
C421206X6308 etc.

"WMS" PART NUMBER, WBH-60020

*NEW REPLACEMENT BRUSH HOLDER ASSEMBLY
FOR THE "OHIO" PERMANENT MAGNET MOTORS
(COMES COMPLETE WITH BRUSH SPRINGS)*



BRUSH HOLDER FOR "OHIO"
PERMANENT MAGNET MOTORS
"WMS" PART NUMBER, WBH-1065
*(COMES WITH BRUSH SPRINGS AS SHOWN)
(For motor number D468235XWF12A)*



THE BUSHINGS LISTED BELOW ARE FOR PRES. STYLE MOTORS
AND ALL HAVE STANDARD PRES. STYLE BUSHINGS SPEC'S AS LISTED.



“WMS” PART NUMBER, CB-216

(FOR “ALL” MCL, MDY, MBJ, MUE, ETC. PRES. STYLE
MOTORS WITH THE “BUSHING” TYPE CE FRAMES)

“FOR PRESTOLITE STYLE MOTORS ONLY”

(“OD” IS 0.753”/19.12mm < “ID” IS 0.6275”/5.93mm < “LENGTH” IS 0.625”/15.87mm)



“WMS” PART NUMBER, DB-258

(FOR MUE, MCL, ETC. TYPE DE FRAMES)

“FOR PRESTOLITE STYLE MOTORS ONLY”

(“OD” IS 0.753”/19.12mm < “ID” IS 0.6275”/5.93mm < “LENGTH” IS 0.735”/18.66mm)



“WMS” PART NUMBER, DB-337

(FOR MBJ, AND MMD TYPE DE FRAMES)

“FOR PRESTOLITE STYLE MOTORS ONLY”

(“OD” IS 0.878”/22.30mm < “ID” IS 0.749”/19.02mm < “LENGTH” IS 0.860”/21.84mm)



“WMS” PART NUMBER, 42-62

REPLACES NUMBER, 4262, ML21A, 24-21

FOR MOTOR NUMBERS, ML4370, ML4371, ML5004, W-5204

“FOR PRESTOLITE STYLE MOTORS ONLY”

(“OD” IS 1.00” / 25.4mm < “ID” IS 0.874” / 22.20mm < “LENGTH” IS 1.00” / 25.4mm)



“WMS” PART NUMBER, CB-2491

(BUSHING FOR THE OLDER STYLE “GOODALL” GKR GENERATORS
WITH THE “BUSHING” STYLE COMMUTATOR END FRAMES (GJC-38)

“FOR PRESTOLITE STYLE GENERATORS ONLY”

(“OD” IS 0.800”/20.32mm < “ID” IS 0.670”/ 17.01mm < “LENGTH” IS 0.720”/18.28mm)

***SPECIAL SIZE STEEL WASHERS FOR SPACING OUT THE
6202 BALL BEARING ON PUMP MOTOR ARMATURES***

“WMS” PART NUMBER, BSW-2

REPLACES NUMBERS, MDY-99, MDY-99B,
MDY-99S, 36-1015, 36-1152, 36-1158.

(APPLICATIONS) (MDL2134 TYPE ARMATURE)

FOR MOST PRESTOLITE STYLE ARMATURES THAT
REQUIRE THE DE BALL BEARING TO BE SPACED OUTWARD.

(2 WASHERS PER PACKAGE < USE 1 OR 2 WASHERS AS NEEDED)
(SPACER WASHERS ARE 0.055” / 1.397mm thick < Hole I.D. is 0.592” / 15.03mm)



THE BUSHINGS LISTED BELOW ARE FOR “WESTERN MOTOR SERVICE” MOTORS
AND ALL HAVE A “LARGER” SIZE “OD” THAN PRESTOLITE STYLE BUSHINGS.

“WMS” PART NUMBER, CB-990

FOR “ALL” WESTERN MOTOR SERVICE “BUSHING” TYPE CE FRAMES.

(HAS A LARGER “OD” THAN A MDL OR MDY STYLE BUSHING)

“WESTERN MOTOR SERVICE & CHINA TYPE MOTORS ONLY”

(“OD” IS 0.789”/20.04mm < “ID” IS 0.625”/15.87mm < “LENGTH” IS 0.585”/ 14.85mm)



“WMS” PART NUMBER, DB-994

FOR W-8940, W-8994, W-6507, W-6508, W-6509 DE FRAME

(HAS A LARGER “OD” THAN A MDL OR MDY STYLE BUSHING)

“WESTERN MOTOR SERVICE & CHINA TYPE MOTORS ONLY”

(“OD” IS 0.789”/20.04mm < “ID” IS 0.625”/15.87mm < “LENGTH” IS 0.990”/25.14mm)



“WMS” PART NUMBER, DB-933

FOR W-8925, W-8926, W-8927, W-8933, W-8956 DE FRAME

(HAS A LARGER “OD” THAN A MBJ STYLE WINCH MOTOR BUSHING)

“WESTERN MOTOR SERVICE & CHINA TYPE MOTORS ONLY”

(“OD” IS 0.946”/24.02mm < “ID” IS 0.750”/19.05mm < “LENGTH” IS 0.864”/21.94mm)





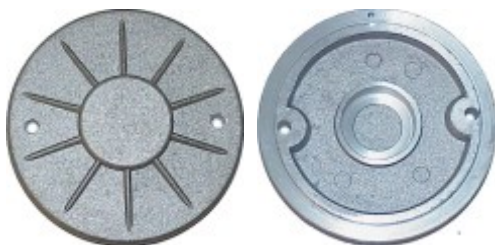
NEW “*BUSHING TYPE*” COM END FRAME FOR ALL
“WMS” & PRES. STYLE 4.5” DIA./ MOTORS SUCH AS
MBJ, MDT, MFD, MUF, MHP, MFX, MMY, MMW, MDY, MHN
W-8911, W-8990, W-8992, W-8993, W-8994, W-8999, W-9000, ETC.
(*COMPLETE WITH BUSHING & OIL WICK*)

“WMS” PART NUMBER, WC-210



NEW “*BALL BEARING*” COM END FRAME FOR ALL
“WMS” & PRES. STYLE MOTORS SUCH AS
W-6324, W-8937, W-8948, W-8949, W-9114, W-9116, W-9143
W-6001, W-8930, W-8930B, W-8950, W-8990D, W-8993D
(*THIS CE FRAME USE’S THE 6-201-4 BALL BEARING*)

“WMS” PART NUMBER, WC-211



NEW “*BALL BEARING*” COM END FRAME FOR ALL
“WMS” & PRES. STYLE MOTORS SUCH AS
46-3639, MUF-6102, 46-3639N, W-8532, W-8547,
46-3639N, 46-3633, MUE-6102, W-8310, W-8311, ETC.
(*MUE & MUF STYLE MOTORS USING THE 6-202-4 BEARING*)
(*THIS CE FRAME USE’S THE 6-202-4 BALL BEARING*)

“WMS” PART NUMBER, WC-212



BUSHING I.D. IS 0.55”/ 13.97mm
BUSHING DEPTH IS 0.70”/ 17.78mm

NEW “*BUSHING TYPE*” COM END FRAME ASSEMBLY
FOR THE LARGE 4.8” DIA. (PERMANENT MAGNET)
MOTORS USED ON WINCHES AND SALT SPREADERS
“WMS” MOTOR NUMBERS, W-8805, W-8818, W-8845, W-8858
(*COMPLETE WITH BUSHING, BRUSHES & OIL WICK*)

“WMS” PART NUMBER, WC-213

(*Note: the bushing in the CE frame may not have the
same dimensions as your old CE frame and could require fitting*)



PLASTIC BRUSH HOLDER FOR THE 4.8” DIAMETER
COMM END FRAME ON THE PM SALT SPREADER MOTORS
FOR MOTOR NUMBERS, W-8858, W-8805 etc.

(Will fit in “WMS” number W-8805 and many others)

“WMS” PART NUMBER, WBH-200

(Brush holder hold down screw holes are on 2” centers)

(Distance across brush holder is 1.750”)

***MACHINED ALUMINUM DRIVE END PLATE FOR
“TESTING” MOTORS THAT HAVE A
6-202-4 BALL BEARING AT THE DE.***

“WMS” PART NUMBER, TP-100

(MOTOR END FRAME FOR TEST BENCH)

***BEARING HOLE IS THE TRUE BEARING SIZE FOR EASY
INSTALLATION & REMOVAL FOR BENCH TESTING.***



(“ALUMINUM” BASE PLATE MOTOR MOUNT)

***THIS 4 HOLE MOUNT HAS A LOW PROFILE
AND CAN BE BOLTED TO A MOTOR FIELD CASE***

“WMS” PART NUMBER, MM-450

(THIS MOUNT IS FOR THE 4.5” DIAMETER FIELD CASE)



(STAMPED “STEEL” BASE PLATE MOTOR MOUNT)

***THIS 4 HOLE MOUNT HAS A HIGHER PROFILE & CAN
BE BOLTED OR WELDED TO A MOTOR CASE***

“WMS” PART NUMBER, MM-452

(THIS MOUNT IS FOR THE 4.5” DIAMETER FIELD CASE)



(STAMPED “STEEL” BASE PLATE MOTOR MOUNT)

***THIS 4 HOLE MOUNT HAS A HIGHER PROFILE & CAN
BE BOLTED OR WELDED TO A MOTOR CASE***

“WMS” PART NUMBER, MM-455

(THIS MOUNT IS FOR THE 5” DIAMETER FIELD CASE)

(REPLACES NUMBER 003305)



(“ALUMINUM” BASE PLATE MOTOR MOUNT)

***THIS 2 SLOT / 4 HOLE MOUNT HAS A LOW PROFILE
AND CAN BE BOLTED TO A MOTOR FIELD CASE***

“WMS” PART NUMBER, MM-458

(THIS MOUNT IS FOR THE 4.5” DIAMETER FIELD CASE)





**BRUSH HOLDER COVER FOR ALL
CHINESE AND MEXICAN MOTORS
(FENNER STYLE)**

“WMS” PART NUMBER, C-102



**ALUMINUM BALL BEARING DRIVE
END FRAME FOR MOTOR NUMBERS,
W-6020, W-6129, W-6322, W-8839, W-8840, W-8938, ETC.
(With 0.340 thick aluminum de frame)**

(THE DIAMETER OF THE RAISED RING AREA IS 3”/ 76.2mm)

“WMS” PART NUMBER, W-104



**DRIVE END FRAME FOR ALL (9) SPLINE MOTORS
AND THE 4 1/2” MEYERS PLOW MOTOR # W-8991.
1787AC, W-8989, W-8991, W-9795, W-9787, W-9789, ETC.**

“WMS” PART NUMBER, W-202K



**DRIVE END FRAME FOR 4.5” DIAMETER
MOTORS NUMBERS, W-5692, W-5981
W-8214, W-8213, MUE6301D, W-8213A etc.**

“WMS” PART NUMBER, WDE-5981

(Drive end frame has recesses in the face for pump/motor alignment)



**WESTERN PLOW MOTOR DRIVE END FRAME
WITH RUBBER SEAL AND BUSHING.
FOR MOTOR NUMBERS,**

W-8994, MUE-6111, MUE-7001, ETC.

“WMS” PART NUMBER, WD-994

(FOR RUBBER SHAFT SEAL ORDER NUMBER W-994S)



**DRIVE END FRAME GASKET FOR THE WESTERN
AND FISHER SNOW PLOW MOTORS**

“WMS” PART NUMBER, WG-994

“NEW” DRIVE END FRAME FOR 8N & 9N FORD STARTER MOTORS COMPLETE WITH BUSHING FOR 5/8” SHAFT.

(FOR FORD STARTERS AND MANY CONVERSIONS THAT HAVE BEEN MADE FROM FORD STARTER MOTORS)

(WMS) STARTER MOTOR NUMBER, (W-3109, W-3109N ETC.)

“WMS” PART NUMBER WDE-109

(THE RAISED RING IS 2.60”/ 6.604mm IN DIAMETER)



“NEW” DRIVE END FRAME FOR PRIMER PUMP MOTORS

(FOR OEM HALE, PRIMER PUMP MOTORS THAT ARE MANUFACTURED BY “WESTERN MOTORS”)

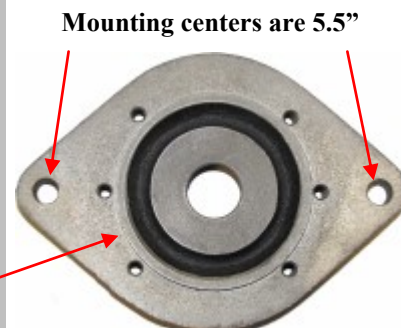
This will fit all (WMS) “DBB” Primer motors w/flange mount

“WMS” PART NUMBER WDE-563

(THIS DE FRAME USE’S THE 6-203 BALL BEARING)

(HALE #’S 200-0043-00-0, 200-0063-00-0 < WMS #’S W-6560 & W-6563)

(THE RAISED ALINGMENT RING IS 3.25”/ 82.55mm IN DIAMETER)

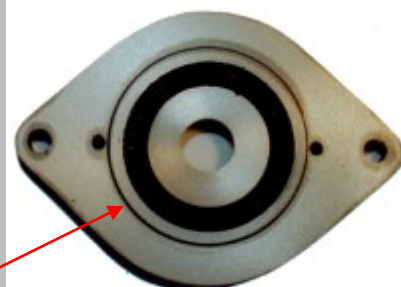


Mounting centers are 5.5”

Mounting centers are 5.5”



Mounting centers are 5.5”



Mounting centers are 5.5”

“NEW” DRIVE END FRAME FOR PRIMER PUMP MOTORS COMPLETE WITH BUSHING FOR 5/8” SHAFT.

(FOR “BUSHING” MOTOR NUMBERS, MHP-6103T, MCL-6509)

(46-3801, 46-3663, 200-0040-00-0, 200-0062-00-0)

(REPLACES PART NUMBER 22-456) (FOR HALE PRIMER MOTORS)

(WMS) MOTOR NUMBER (W-6510, AND W-6524)

“WMS” PART NUMBER WDE-510

(THE RAISED ALINGMENT RING IS 3.25”/ 82.55mm IN DIAMETER)

“NEW” DRIVE END FRAME FOR PRIMER PUMP MOTORS

(FOR HALE, PRIMER PUMP MOTORS)

(THAT ARE MANUFACTURED BY “WESTERN MOTORS”)

WILL ONLY FIT (WMS) MOTOR NUMBERS, W-6542, W-6552, W-6554

“WMS” PART NUMBER WDE-541

(THIS DE FRAME USE’S THE 6-203 BALL BEARING)

(200-0041-00-0, 200-0042-00-0 AND THE 200-0062-00-0)

(THE RAISED ALINGMENT RING IS 3.25”/ 82.55mm IN DIAMETER)

“NEW” DRIVE END FRAME FOR PRIMER PUMP MOTORS

(FOR HALE, WATEROUS, ETC. PRIMER PUMP MOTORS)

(THAT ARE MANUFACTURED BY “WESTERN MOTORS”)

WILL ONLY FIT (WMS) MOTOR NUMBERS,

(W-6103, W-6503, W-6536, W-6598 & W-6599)

“WMS” PART NUMBER WDE-598

(THIS DE FRAME USE’S THE 6-203 BALL BEARING)

(THE RAISED ALINGMENT RING IS 3.25”/ 82.55mm IN DIAMETER)



***SPECIAL* “CONVERSION DRIVE END FRAME” FOR CONVERTING THE “BUSHING” STYLE WINCH MOTOR TO A (HD) “BALL BEARING” DRIVE END DESIGN. (MACHINED ALUMINUM FRAME) WILL WORK FOR MOTOR NUMBERS, (W-8914, W-8916) (W-8925, W-8926, W-8927, W-8933, AND W-8956 etc.) (CONVERTS ALL “BUSHING” TYPE “MBJ” MOTORS) (THAT USE THE “CAST IRON” DE FRAME) DRIVE END FRAME COMPLETE WITH BEARING AND SPECIAL STEEL COLLAR SPACER.**

“WMS” PART NUMBER, WDE-123

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)



“NEW” CAST IRON DRIVE END FRAME FOR WINCH MOTORS (BALL BEARING STYLE DE FRAME)

(FOR MBJ (DOUBLE BALL BEARING TYPE MOTORS) THIS DE FRAME IS FOR MOTOR NUMBERS, (W-7643, W-9114, W-9116, W-9133, W-9143, W-9144 ETC.)

“WMS” PART NUMBER, WDE-143

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)



“NEW” CAST IRON DRIVE END FRAME FOR WINCH MOTORS COMPLETE WITH BUSHING FOR 3/4” SHAFT.

(FOR MDE & MBJ TYPE MOTORS LISTED BELOW) (WMS) MOTOR NUMBERS, (W-8914, W-8916, W-8925, W-8926, ETC.)

“WMS” PART NUMBER, WDE-925

(THIS DE IS FOR MOTORS WITH ONE OR TWO TERMINAL POSTS)

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)



“NEW” CAST IRON DRIVE END FRAME FOR WINCH MOTORS COMPLETE WITH BUSHING FOR 3/4” SHAFT.

(WMS) MOTOR NUMBERS, (W-8927, W-8933, W-8956, ETC.)

“WMS” PART NUMBER, WDE-933

(THIS DE IS FOR BUSHING STYLE MOTORS WITH THREE TERMINAL POSTS)

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)



“NEW” “ALUMINUM” DRIVE END FRAME FOR WINCH MOTORS COMPLETE WITH BUSHING FOR 3/4” SHAFT.

(AMETEK) MOTOR NUMBERS, (MBJ6201, MBJ6302, MBJ6303 ETC.)

“WMS” PART NUMBER, WDE-6302

(THIS DE IS FOR BUSHING STYLE MOTORS WITH THREE TERMINAL POSTS)

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)

**“NEW” ALUMINUM DRIVE END FRAME
COMPLETE WITH BUSHING FOR 5/8” SHAFT.
(FOR MANY MISC. MDT & MDY TYPE MOTORS)**

“WMS” PART NUMBER 22-195

REPLACES NUMBERS, MDT-1045, MDT-45
(THE DIAMETER OF THE RAISED RING AREA IS 3” / 76.20mm)



**“NEW” DE FRAME FOR MDT-6027 & MDT-6029 MOTORS
(BALL BEARING STYLE DE FRAME)**

“WMS” PART NUMBER, 22-323

***THIS IS FOR “WMS” NUMBERS, W-6027 & W-6029
(HAS SPECIAL MOUNTING HOLES IN FACE OF PLATE)***



**“NEW” ALUMINUM DRIVE END FRAME
FOR MOTOR NUMBERS, W-8310, W-8311, W-9311 ETC.
AND STARTER NUMBERS, W-3110N, W-3115N, W-3136N**

“WMS” PART NUMBER WDE-115

***FITS ALL OF THE LONG SHAFT 3 BOLT FORD STARTER MOTORS
(The thru bolt threads are 1/4X20)***



**COMMUTATOR END FRAME FOR THE
GOODALL “GKR” STYLE GENERATOR
(BALL BEARING STYLE CE FRAME)
FOR NUMBER, 45-734, WG-4572, GKR-6104A etc.**

REPLACES, CE, 12-335, GKR2,

“WMS” PART NUMBER, WGC-335



**DRIVE END FRAME FOR THE
GOODALL “GKR” STYLE GENERATOR
FOR GENERATOR NUMBERS,
10626, 45-734, WG-4572, GKR7101, GKR6104A etc.**

REPLACES, GJP-1102, 14-40,

“WMS” PART NUMBER, WGDE-40





“NEW” ALUMINUM DRIVE END FRAME *FOR MOTOR NUMBERS, 3673AB, MMR-5106S, 46-4065, W-5106, W-5106B*

“WMS” PART NUMBER 22-520

REPLACES NUMBER, MBD423AL, MBD-423AL

THIS IS FOR THE 5” DIAMETER MOTORS



“NEW” ALUMINUM DRIVE END FRAME *FOR MOTOR NUMBERS, MMR-5107S, 46-4143, MMR5107N*

“WMS” PART NUMBER 22-525

REPLACES NUMBER, MMR3A, MMR-3A

THIS IS FOR THE 5” DIAMETER MOTORS



“NEW” ALUMINUM DRIVE END FRAME *FOR MOTOR NUMBERS, MBD-5112S, W-5112, W-5114, W-5115*

“WMS” PART NUMBER WDE-5115

THIS IS FOR THE 5” DIAMETER WESTERN MOTORS UNITS



“NEW” DRIVE END FRAME *FOR MOTOR NUMBERS, ML-4370, ML-4371, ML-5004, W-5204*

“WMS” PART NUMBER 36-481

REPLACES NUMBER, MH1034D, MH-1034D

THIS IS FOR THE 5” DIAMETER MOTORS

(THE RAISED ALINGMENT RING IS 3”/ 76.20mm IN DIAMETER)



“NEW” ALUMINUM DRIVE END FRAME *FOR THE 46-4037, W-4037 & MFY4203 MOTORS*

“WMS” PART NUMBER WDE-4037

REPLACES NUMBER, 22-515, MBD-523

THIS IS FOR THE 5” DIAMETER MOTORS

(DE FRAME IS COMPLETE WITH O-RING AND GASKET)

ALUMINUM DRIVE END FRAME

“WMS” PART NUMBER 22-167

REPLACES NUMBER, 22-167, MHA1042, MHA-1042

FOR PRESTOLITE MOTOR NUMBER, MHA-7017

(THE RAISED RING DIAMETER IS 2.75”/ 69.85mm)

(THE “ID” OF THE BUSHING IS 0.810”/ 20.57mm)



BALL BEARING CAST IRON DRIVE END FRAME

“WMS” PART NUMBER WDE-740

DRIVE END FRAME FOR MOTOR NUMBERS,
W-8938-P, W-6520, W-6740, W-6838, W-6322, W-6020, W-6028 ETC.

(0.625 thick cast iron de frame)

(THE DIAMETER OF THE RAISED RING AREA IS 3”/ 76.20mm)



**BALL BEARING CAST IRON DRIVE END FRAME
FOR MISC. MZ AND MBG (4”) DIAMETER MOTORS**

“WMS” PART NUMBER 22-89

REPLACES NUMBER, MZ-377, MZ377

“THIS IS FOR THE (4”) DIAMETER MZ & MBG MOTORS”



**CAST IRON DRIVE END FRAME FOR (4.5”) DIAMETER
MOTOR NUMBERS, W-6102, W-6102C, MDY6109 etc.**

“WMS” PART NUMBER WDE-6102

REPLACES NUMBERS, 22-46, MDY-28, 22-69, MDY-28A

*FOR MOTORS WITH THE 5 AND 11 THRU BOLT POSITION
AND FOR MOTORS WITH THE 3 AND 9 THRU BOLT POSITIONS*



**CAST IRON DRIVE END FRAME FOR (4.5”) DIAMETER
MOTOR NUMBERS, W-6104, W-8947WD etc.**

“WMS” PART NUMBER WDE-6104

REPLACES NUMBERS, MDY-44R & MDY-44W

*FOR MOTORS WITH THE 5 AND 11 THRU BOLT POSITION
AND FOR MOTORS WITH THE 3 AND 9 THRU BOLT POSITIONS*





STARTER DRIVE END HSG. < PS-1375A
FOR STARTER NUMBERS, 46-3561, 160-185
5246, MDU-6103, MDU-7102, MDU-7104, MDU-7115 ETC.

“WMS” PART NUMBER, 21-109



STARTER DRIVE END HSG. < PS-1391
FOR STARTER NUMBERS,
5097, MEO-6003, MEO-6102, MHJ-6105, MHP-6101 ETC.

“WMS” PART NUMBER, 21-119



STARTER DRIVE END HSG. < PS-1325CS
FOR STARTER NUMBERS, 3003779, 46-879, 46-953,
160-152, 1941119, 46-1295613, MDT-6013, MDT-6021 ETC.

“WMS” PART NUMBER, 21-383



STARTER DRIVE END HSG. < PS-347, WDE401, PS-1454AS
FOR STARTER NUMBERS, 160-179, 160-179A & B
5608, 46-3556, MDT7018, MDT7024, MDT7025, MDT6102

“WMS” PART NUMBER, 21-401



STARTER DRIVE END HSG. < PS-1375MS
FOR STARTER NUMBERS,
MDT-7021, MDY-7045, MDY-7046

“WMS” PART NUMBER, 21-410



STARTER DRIVE END HOUSING
REPLACES, PS-1473
FOR STARTER NUMBERS, 160-155, 46-3597
MHA-7021, MHA-6102 ETC.

“WMS” PART NUMBER, 21-454

STARTER DRIVE END HSG. <> PS-355, WDE414, PS-1355AS
FOR STARTER NUMBERS,
3440, 3460, 5222, 46-3604, MHA-6107, MHA-7015 ETC.

“WMS” PART NUMBER, 21-414



STARTER DRIVE END HOUSING
REPLACES, PS-1309, PS-309, 21-416, 21-94

FOR STARTER NUMBERS, 160-532, 46-128, 46-2427
5609, 5607, 5615, MDU-6019, MDT6012, MDT-6012C ETC.

“WMS” PART NUMBER, 21-416



STARTER DRIVE END HSG. <> PS-1433S
FOR STARTER NUMBERS,
46-3575, MDY-6140

“WMS” PART NUMBER, 21-428



STARTER DRIVE END HSG. <> PS-1462BS
FOR STARTER NUMBERS,
46-3582, MDY-6148

“WMS” PART NUMBER, 21-442



STARTER DRIVE END HSG. <> PS-1462
FOR STARTER NUMBERS,
46-3599, 46-2485, 46-2273, MHA-6104, MHA-7016, MHA-7020

“WMS” PART NUMBER, 21-426



STARTER DRIVE END HSG. <> PS-1354S
FOR STARTER NUMBERS,
3456, 3471, 46-3555, 46-3557, MDT-6101, MDT-6103

“WMS” PART NUMBER, 21-381





* CW * <> * 12V * FIELD COIL SET FOR
W-1766, W-8787, ETC.

**HD* "HIGH RPM"
(2) COILS WITH LEAD*

"WMS" PART NUMBER, FW-198



FIELD COIL SET WITH POSITIVE BRUSH
AND GROUND BRUSH HOLDER ASSEMBLY.

* CCW * <> * 12V *

*FOR PRESTOLITE STYLES OF NUMBERS
8111, 8111D, 8111E, ETC. AND OUR
"WMS" NUMBERS, W-8911, W-9000, ETC.*

"WMS" PART NUMBER, FBS-199



FIELD COIL SET WITH POSITIVE BRUSH
FOR MOTOR NUMBERS,
W-6020, W-8940, W-8958, W-8990, W-8994, ETC.

* CW * <> * 12V *

"WMS" PART NUMBER, FW-216

(MOTORS WITH THE 5 & 11 THRU BOLT POSITION)



FIELD COIL SET WITH POSITIVE BRUSH
FOR MOTOR NUMBERS,
W-6129, W-8973, W-8973-DBB, ETC.

* CW * <> * 12V *

"WMS" PART NUMBER, FW-973

(MOTORS WITH THE 3 & 9 THRU BOLT POSITION)



FIELD COIL SET WITH POSITIVE
BRUSH FOR NUMBERS LISTED BELOW

W-8799, W-8992, W-8992-DBB, ETC.

* CCW * <> * 12V *

"WMS" PART NUMBER, FW-992

(MOTORS WITH THE 5 & 11 THRU BOLT POSITION)



FIELD COIL SET WITH POSITIVE BRUSH
FOR MOTOR NUMBERS,

W-6028, W-8857, W-8993, W-8993-DBB, ETC.

* CCW * <> * 12V *

"WMS" PART NUMBER, FW-993

(MOTORS WITH THE 3 & 9 THRU BOLT POSITION)



**CW & CCW* DEPENDING ON THE BRUSH HOLDER USED FOR POSITIONING THE BRUSHES.*

NEW (HD) *12V* FIELD COIL SET
COMPLETE WITH "HOT" BRUSHES,
FOR "WMS" MOTORS, W-8934, W-8943, W-8944,
W-8945, W-8946, W-8947,
(MMW, & MMY TYPE MOTORS)

"WMS" PART NUMBER, FW-943
(Long pole shoe slot length is 3.125" / 79.37mm)



**SPECIAL* (FORWARD & REVERSE)*
FIELD COIL SET FOR *12V* MOTOR
NUMBERS, W-8538, W-8900, W-8901,
W-8901-P, W-8925, W-8938, W-8976,
AND W-9794.

(ALSO REPLACES PRESTOLITE STYLE)
20-444, 20-531

"WMS" PART NUMBER, FW-901



NEW* CHINA FIELD COIL SET (CW* HD) *12V
(FOR "HD" MOTOR NUMBER, 1789AC)
FOR "WMS" MOTOR NUMBERS,
W-6539, W-6541, W-6598, W-9789

"WMS" PART NUMBER, FW-789
(APPLICATIONS)
(MISC. HD MOTORS, FENNER FLUID POWER)
(Long pole shoe slot length is 3.125" / 79.37mm)



**SPECIAL* (FORWARD & REVERSE)*
FIELD COIL SET FOR
24V MOTOR NUMBERS,
W-8824, W-8824P, W-8838P, W-9724,

(ALSO REPLACES PRESTOLITE STYLE)
20-555, MMS1005, MMS1005S

"WMS" PART NUMBER, FW-824



FIELD COIL SET WITH BRUSH LEAD
FOR MOTOR NUMBERS,
W-9035, W-6206, W-6294 ETC.

* CW OR CCW * \diamond * 12V *

"WMS" PART NUMBER, FW-6294



SPECIAL* (FORWARD & REVERSE) *HD
FIELD COIL SET FOR *12V* MOTOR
NUMBERS, W-6929, W-8930, W-9538,
W-9894, W-9901, W-9901P, & W-9938.

(THIS COIL IS LONGER THAN THE FW-901)

"WMS" PART NUMBER, FW-930
(Long pole shoe slot length is 3.125" / 79.37mm)



**** SPECIAL ** 24V ** COILS**
FIELD COIL SET FOR *24V* MOTOR
NUMBERS, W-1715, W-8964, W-9405,
W-9405-DBB, W-9459, AND W-9464.
(BOTTOM POST CONNECTION)

REPLACES, 20-719, 20-429, MHP-1005
“WMS” PART NUMBER, FW-405



**** SPECIAL ** 24V ** COILS WITH BRUSH**
FIELD COIL SET FOR *24V* MOTOR
NUMBERS, W-6507, W*6524, W-8851,
(MHP, MUF) W-8917, W-8951,
(TOP POST CONNECTION)

REPLACES, 20-706, MHP-1005AS,
“WMS” PART NUMBER, FW-451



**** 2 FIELD & 2 SHUNT * 24V * COIL SET**
FOR “MFD” TYPE MOTOR NUMBERS,
MFD-6101, MFD-6103, MFD-6201, MFD-6202,
MFD-6203, MFD-6204, ETC.

REPLACES, 20-596, MFD-2005S,
“WMS” PART NUMBER, FW-20-596



**** 24V <> CCW * COILS ****
COMPLETE WITH POSITIVE BRUSH
FOR “WMS” MOTOR NUMBER, W-8950.

“WMS” PART NUMBER, FW-950



**** 12V <> CW * COILS ****

COMPLETE WITH
POSITIVE BRUSH
AND BRUSH HOLDER

FOR “WMS” MOTOR
NUMBER, W-6508
AND MCL-6508

“WMS” PART
NUMBER, FW-508K



12V <> CW OR CCW COILS DEPENDING ON
HOW THE CE FRAME IS SET.

FOR STARTER NUMBERS, MZ-4206 ETC.

AIRCRAFT & SWAMP BOATS
WITH AIRPLANE ENGINES ETC.

COIL NUMBERS,
MZ-3005BS, 20-41, MZ-3005GS

“WMS” PART NUMBER, FW-3005GS



(*FORWARD & REVERSE*)
FIELD COIL SET FOR *12V* MOTOR
NUMBERS, W-8923, W-8927, W-8933,
W-8941, W-9133, W-9137, W-9143

REPLACES, 20-514, MAY-2005DS

(*FITS ALL "WMS" THREE POST MOTORS
AND "MBJ" PRESTOLITE STYLE MOTORS*)

"WMS" PART NUMBER, FW-933



**SPECIAL* (FORWARD & REVERSE)
FIELD COIL SET FOR *12V* MOTOR
NUMBERS, W-7920, W-7937,
(RAMSEY 458073) AND (WARN MRV-B7)
THESE COILS ARE FOR THE RAMSEY AND
WARN WINCH MOTORS WITH THE
SHORT 4.95" LENGTH. FIELD CASE
THAT IS 4.5" IN DIAMETER.*

"WMS" PART NUMBER, FW-937



* SPECIAL * 12V <> "CW" COILS,
FIELD COIL SET FOR MOTOR NUMBERS,
W-1714 AND W-9788.

(*BOTTOM POST CONNECTION W/ BRUSH*)

"WMS" PART NUMBER, FW-788

(MOTORS WITH THE 3 & 9 THRU BOLT POSITION)



* SPECIAL * 12V <> "CCW" COILS,
FIELD COIL SET FOR *12V* MOTOR
NUMBERS, W-1707, W-8920,
W-8920-DBB, AND W-8998.

(*BOTTOM POST CONNECTION W/ BRUSH*)

REPLACES, 20-384, MHN-1005AS,

"WMS" PART NUMBER, FW-920

(MOTORS WITH THE 3 & 9 THRU BOLT POSITION)



**** 12V <> SHUNT COIL ****

FOR "WMS" MOTOR PART
NUMBERS, W-8990, W-8992
W-8993, W-8793, W-8740
W-8739, W-8968, W-8958 ETC.

**"WMS" PART NUMBER,
WFS-15**



**** 12V <> SHUNT COIL ****

FOR "WMS" MOTOR PART
NUMBERS, W-1711, W-9787
W-1768, W-8534, W-5635 ETC.

**"WMS" PART NUMBER,
WFS-87**



FIELD COIL SET FOR (12V) "CHINA"

MOTOR NUMBERS, W-1711, W-1768, 1787AC,
W-9787, W-8991, W-8995, MEYER 2869AB,
"ALL" CHINESE (CW) (3 FLD. & SHUNT)

"WMS" PART NUMBER, FW-200

(APPLICATIONS)

(FENNER FLUID POWER, MEYER QUICK LIFT)



FIELD COIL SET FOR (12V) "MEXICAN"
MOTOR NUMBERS, 1787AC,
"ALL" CHINESE (CW) (3 FLD. & SHUNT)
MODELS WITH LEADS

"WMS" PART NUMBER, FW-201

(APPLICATIONS)

(FENNER FLUID POWER)



**12V FIELD COIL SET WITH LEADS
FOR MOTOR NUMBERS,**

MDY-6118, MDY-6120, MDY-6121, MDY-6122,
MDY-6202, MDY-6203, MDY-6205, MDY-7065,

* CCW * <> * 12V *

"WMS" PART NUMBER, FW-20-599



**12V FIELD COIL SET WITH LEADS
FOR MOTOR NUMBERS,**

MDY-6131, MDY-6131S

REPLACES, MDY-1005ES-2, 20-905

* CW * <> * 12V *

"WMS" PART NUMBER, FW-20-905



FIELD COIL SET FOR MOTOR NUMBERS,

ML-5007, ML-5007S, W-5205, W-5207

REPLACES, 20-304, 20-590, ML1005KS

* CW * <> * 12V *

"WMS" PART NUMBER, FW-207



**FIELD COIL SET FOR MOTOR NUMBERS
LISTED BELOW WITH THE TERMINAL
POST AT THE DE OF THE FIELD CASE**

MFX4001, MFX4001S, MFX4002, MFX4003, W-8947B

REPLACES, MFX-3005S, 20-443, 20-385

12V CW OR CCW * DEPENDING ON
WHICH BRUSH HOLDER IS USED

"WMS" PART NUMBER, FW-20-385

(Long pole shoe slot length is 3.125" / 79.37mm)



** 24V * FIELD COIL SET FOR MOTOR
MOTOR NUMBERS,
W-8956, W-8956-DBB, W-8921,
W-8957, W-6324, W-8915, W-9156 ETC.*

“ALL” 24 VOLT THREE POST WINCH MOTORS

“WMS” PART NUMBER, FW-956

REPLACES NUMBERS,
20-442, MHP-1005D, MHP-1005DS



*FIELD COIL SET COMPLETE W/BRUSH
FOR (12V) “CW” ROTATION MOTORS*

“WMS” PART NUMBER, 20-332

REPLACES NUMBERS,
MDU-1005, MDU-1005S

*THESE COILS WILL FIT INTO ANY “CW” STARTER
OR MOTOR THAT HAS THE 5 AND 11 THRU BOLT
POSITION WITH THE EVEN SPLIT BRUSH*



*FIELD COIL SET COMPLETE W/BRUSH
FOR (12V) “CCW” ROTATION MOTORS*

“WMS” NUMBER, 20-756

REPLACES NUMBERS,
MHT-2005A, MHT-2005AS

*THESE COILS WILL FIT INTO ANY “CCW” STARTER
OR MOTOR THAT HAS THE 5 AND 11 THRU BOLT
POSITION WITH THE EVEN SPLIT BRUSH*



*FIELD COIL SET COMPLETE W/BRUSH
FOR (12V) “CCW” ROTATION MOTORS*

“WMS” PART NUMBER, FW-999

REPLACES NUMBERS,
MDU-1005, MDU-1005S

THESE COILS WITH BRUSH WILL FIT ALL
“WMS” MOTOR NUMBERS,
W-8899, W-8999, W-8999-DBB ETC.
(MOTORS WITH THE 5 & 11 THRU BOLT POSITION)



FOR MOTOR NUMBERS,
8100, MMY-4001, MMY-4001A, 46-2516
MMW-4001, MMW-4002, 46-2534, 46-2495
W-8532, W-8547, W-8947, W-8947-DBB, ETC.

**12V * “CCW”*

“WMS” NUMBER, 20-586

REPLACES NUMBERS, MMY-2005S, MMW-2005S
(Long pole shoe slot length is 3.125”/ 79.37mm)



FOR MOTOR NUMBERS,
MMY-4002, MMY-4002S, 46-2520
W-8934, W-8934-DBB, W-8944

**12V * “CW”*

“WMS” NUMBER, 20-591

REPLACES NUMBERS, MMY-1005S
(Long pole shoe slot length is 3.125”/ 79.37mm)

*** 12Volt ***



**** SPECIAL ** 12V ** FIELD COILS
FOR PRES. STYLE MOTORS
MBR AND MHV, REPLACES 20-534
20-413, 20-752, MHV-1005S, MBR-1005D & G
MHV1005S, MBR1005D, MBR1005G
“WMS” PART NUMBER, FW-5102**



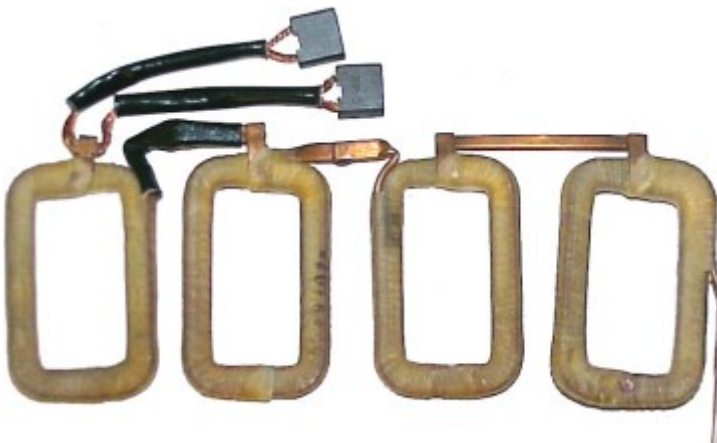
**FIELD COIL SET FOR *24V* MOTOR
NUMBERS, W-5007,
MBD-5000 SERIES MOTORS
REPLACES, 20-537, MBD-1005PS
MBD1005PS, MBD1005D
“WMS” PART NUMBER, FW-507**



**** SPECIAL ** 24V ** FIELD COILS
FOR PRES. STYLE MOTOR NUMBER
MMT-4001 AND MMT-5001
REPLACES, MMT-1005SS, MMT1005
MMT-1005, MMT-1005S, MMT1005S
“WMS” PART NUMBER, 20-556**



**FIELD COIL SET FOR *24V* MOTOR
NUMBERS, MMR-5106 & 5107
MMR-5000 SERIES MOTORS
REPLACES, 20-540, MMR-1005S
MMR1005, MMR1005S
“WMS” PART NUMBER, 20-540**



**** SPECIAL ** 12V ** FIELD COIL
WITH POSITIVE BRUSH FOR THE
FEDERAL SIREN MOTOR NUMBERS,
Z8280080B, 0036000, W-7905 ETC.
“WMS” PART NUMBER, FW-7905
*(Use brush holder number W-859M)
(and brush set number WB-905)***



**** 24V ** FIELD COILS**
FOR WMS & PRESTOLITE STYLE MOTORS
W-4810, MFY4101, MFY4201, MFY4202, MFY4203
REPLACES 20-492, 20-765, MFY-1005MS, MFY1005M
“WMS” PART NUMBER, FW-492



**** 36V ** FIELD COILS FOR MOTOR NUMBERS,**
MTV-4003, MTV-4003S & WTM-4003N
REPLACES NUMBERS,
20-766, MTV-3005, MTV-3005S, MTV3005, MTV3005S
“WMS” PART NUMBER, FW-20766N



***36V* SERIES FIELD COILS**
FOR PRES. STYLE MOTOR
NUMBER, 46-2812, MUG-5101
REPLACES, MUG-1005S, MUG1005S
“WMS” PART # FW-MUG5101



**** FIELD COIL POLE SHOE INSULATOR ****
REPLACES NUMBERS,
20-766, MTV-3005, MTV-3005S, MTV3005, MTV3005S
FOR MOTOR NUMBERS,
46-4149, 46-4172, MTV-4003, MTV-4003S, WTM-4003
(This insulator fits the FW-20766N field coil shown above)
“WMS” PART NUMBER, WFTP-73N



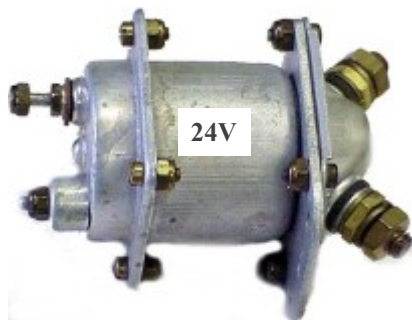
***12V* 3 COILS & SHUNT FOR CW**
MOTOR NUMBERS, W-9008, W7864 etc.
The brush lead lengths are
2” and 4” long
“WMS” PART # FW-7864



FIELD COILS FOR ALL
GKR STYLE GENERATORS,
GKR6104A etc.
REPLACES NUMBERS, 13-194
GGW-1005RS, GGW1005R
“WMS” # FW-13194



12V FIELD COILS FOR
ISKRA STYLE MOTORS
FOR ISKRA NUMBERS,
11.216.088, W-5981 etc.
“WMS” # FW-5981



*** 24V * "HD" SWITCH**
REPLACES, 7E-656, 15-427
19207-6183391, B-6183391
2920-00-636-8779
WSE-4101, WSE-4101A
"WMS" PART #, 15-58



36V
"SPECIAL" SWITCH
ACTIVATES WHEN
GROUNDING THE
SMALL 10/32 POST
REPLACES, SAS-4304
"WMS" PART # 15-350



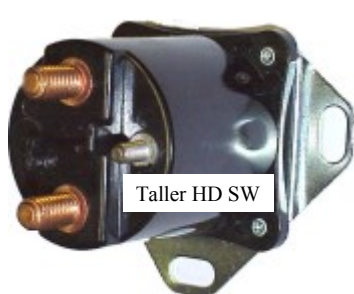
12V
"SPECIAL" SWITCH
ACTIVATES WHEN
GROUNDING THE
SMALL 10/32 POST
REPLACES, SAW-4211
"WMS" PART # 15-212



12V
METAL CASE GROUND
SOLENOID SWITCH
WITH (1) TERMINAL
EXTENDED DUTY
REPLACES, SAS-4215
"WMS" PART # 15-277



12V
CONTINUOUS DUTY
"INSULATED GROUND"
SOLENOID SWITCH
REPLACES, SBC-4201C
"WMS" PART # 15-322
(.250 MOUNTING SLOTS)



12V
CONTINUOUS DUTY
SOLENOID SWITCH
REPLACES, SBC-4201D
"WMS" PART # 15-342
(TALL BODY SWITCH)



24V
"INSULATED" GROUND
EXTENDED DUTY
SOLENOID SWITCH
REPLACES, SAZ-4401R
"WMS" PART # 15-398



12V
"INS" GROUND
EXTENDED DUTY
SOLENOID SWITCH
REPLACES, 15-418
SAZ-4201BR,
"WMS" PART # 15-418



24V
"INS" GROUND
CONTINUOUS DUTY
SOLENOID SWITCH

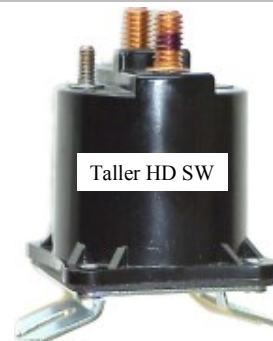
REPLACES, 15-470
SBC-4401B, SBC-4401C
"WMS" PART # 15-433



24V
"INSULATED" GROUND
EXTENDED DUTY
SOLENOID SWITCH
(CURVED BASE)
REPLACES, SAS-5402E
"WMS"
PART # WS-141CB



12V
INS/CONTINUOUS DUTY
SOLENOID SWITCH
REPLACES,
SBJ-4201, 15-550
"WMS"
PART # WS-550



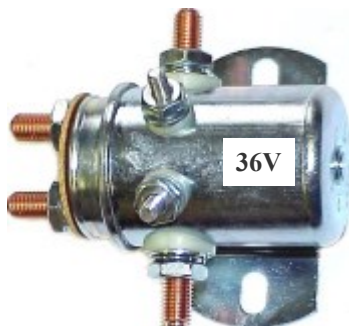
12V
CONTINUOUS DUTY
SOLENOID SWITCH
REPLACES, SBC-4201AC
"WMS"
PART # 15-521



***12V* (5) POST SWITCH
CONTINUOUS DUTY
(*WHITE ROGERS*)**

REPLACES NUMBERS,
124-305241, 305211
L24305211, 24305241

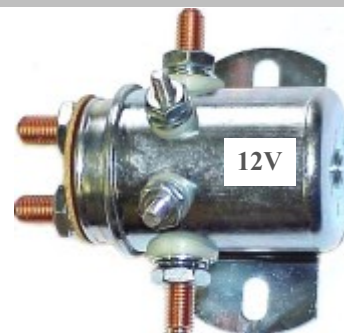
"WMS" PART # WS-136



***36V* (6) POST INS/SWITCH**

REPLACES, 15-300, 24400
SBD-4301, 335786, S0-51193
"CONTINUOUS DUTY"
SIX POST SOLENOID
WITH SILVER CONTACTS

"WMS" PART # WS-300



***12V* (6) POST INS/SWITCH**

REPLACES, 08136, 200182
70-311221-5, SBD-4201G
CONTINUOUS DUTY
SIX POST SOLENOID

"WMS" PART # WS-386P

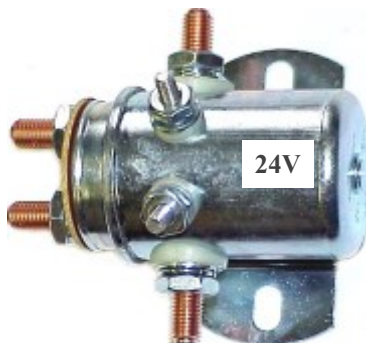


***24V* (6) POST INS/SWITCH**

REPLACES, 15-381, SBD5401

THIS *24V* SWITCH HAS
A SPECIAL INSULATED OR
SHOCK BASE AS SHOWN.

"WMS" PART # WS-381



***24V* (6) POST INS/SWITCH**

REPLACES NUMBERS,
98420-66, 70-6918, WS-956-6P,
THIS *24V* SWITCH IS FOR
NUMBERS, W-8956, W-7656
W-9156, W-8921, W-8957, ETC.

"WMS" PART # WS-326



***12V* CONTINUOUS DUTY
FIVE POST SOLENOID**

(SWITCH IS RATED 200 AMP)
REPLACES, 15-301, 15-341, SBD-
7-1051, 244101, 516-087, 15-338

"WMS" PART # WS-341P



***12V* (4) TERMINAL INS/GRD
ISKRA STYLE SWITCH**

*MOUNTING SLOTS ARE
FOR A 1/4X20 SCREW*

REPLACES, WS-121, 16.908.158

"WMS" PART #, WS-158



***24V* (4) TERMINAL INS/GRD
ISKRA STYLE SWITCH**

*MOUNTING SLOTS ARE
FOR A 1/4X20 SCREW*

REPLACES, 16.908.399, 16.908.157

"WMS" PART #, WS-157



***24V* (4) POST SWITCH**

REPLACES, 15-286
15-238, SAW-4401T

EXTENDED DUTY
FOUR POST SWITCH

"WMS" PART # WS-286



12V* <> *24V

**MECHANICAL PUSH
SWITCH FOR MISC.**

**LIFT GATES
(HAS RUBBER BOOT AS SHOWN)**

**REPLACES, 26763,
3350, 93547, 26763A**

“WMS” PART # WS-763



12V* <> *24V

“SHORT”

**MECHANICAL PUSH
SWITCH FOR MISC.**

LIFT GATES

**REPLACES, 15-122,
15-424, 230442, DR450**

“WMS” PART # WS-856



12V

**METAL CASE GROUND
STD / DUTY SWITCH
(CURVED BRACKET / SHORT CAN)**

**REPLACES, SAW-4201
15-79, WS-87, 59925, 3427
20042, 0010527, 1889797
02.1900016, 021900016**

“WMS” PART # WS-79P



6V

**METAL CASE GROUND
EXTENDED DUTY
SOLENOID SWITCH**

**REPLACES, 10093, 10527
13863, 120568, SAW-4601
15-129, 15-191, SAW-4604A**

“WMS” PART # WS-129



H/D *12V*

**CONTINUOUS DUTY SWITCH
(FLAT BRACKET)**

**REPLACES, 15-123, 15-247 15-139,
15-345, 97216, 97219 97226, 97229,
WS-139, SAS-4208, SAS-4220
SAW-4226**

“WMS” PART # WS-139P



12V

**METAL CASE GROUND
STD / DUTY SWITCH
(CURVED BRACKET / SHORT CAN)**

**REPLACES, SAW-4228
15-163, SAW-4201T, 15-532
15-232, SAW-4214, 15-404,**

“WMS” PART # WS-532P

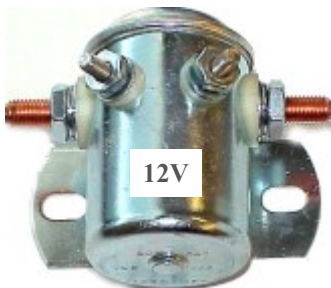


12V

**METAL CASE GROUND
STD / DUTY SWITCH
(FLAT BRACKET & SHORT CAN)**

**REPLACES NUMBERS,
SAW-4209, 24046BX, 15-77**

“WMS” PART # WS-77P

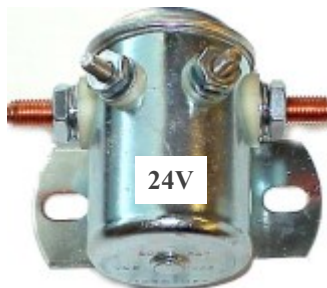


***12V* (Continuous Duty)**

**“INSULATED” GROUND
(FLAT BRACKET)**

**REPLACES, 15-133, SAS-4202
15-313, 77181, 15-236, SAS-4213
SAS-5803, 15-316, SAS-5201A,
SAW-4208M, 15-81**

“WMS” PART # WS-133P



***24V* (Continuous Duty)**

**“INSULATED” GROUND
CONTINUOUS DUTY
(FLAT BRACKET)**

**REPLACES, 15-141, SAS-4401
WS-88, 15-269, SAS-4410, 15-467
15-317, SAS-5403A, SAS-5403B**

“WMS” PART # WS-141P



***36V* (Continuous Duty)**

**“INSULATED” GROUND
CONTINUOUS DUTY
(FLAT BRACKET)**

**REPLACES NUMBERS,
3338, 11882, 11889, 15-243
WS-89, SAS-4301, SAS-4302**

“WMS” PART # WS-243



12V

**“SPECIAL” SWITCH
ACTIVATES WHEN
GROUNDING THE
SMALL 10/32 POST**
**REPLACES,
WS-911, S301, 70-6902**
“WMS” PART # WS-911P



**SPECIAL 12/24V SWITCH
FOR FENNER / SPX
APPLICATIONS**
REPLACES, EF-1070 & 71
**“WMS” PART #
WS-EF1070**



12V
**EXTENDED DUTY
SOLENOID SWITCH
WITH FLAT BRACKET**
**REPLACES NUMBERS,
SAZ4201D, 15-260**
“WMS” PART # WS-260



*** 12V* 200 AMP
REPLACES, DK-121**
**FOR ISKRA &
CHINA/ISKRA MOTORS**
“WMS” PART # WS-121



48V

*** 48V* CONTINUOUS DUTY “INS”
WHITE ROGERS SWITCH**
REPLACES, JR1-H1950-00, 586-120111
“WMS” PART #, WS-48
(APPLICATIONS) 48V HD motors
(W-8048, X7788, X7029 etc.)
(The switch body is 2.25” in diameter)



***12V* 4 POST INS/GRD SW
EXTENDED DUTY SWITCH
“INSULATED GROUND”
SOLENOID SWITCH**
“WMS” PART # WS-526
**REPLACES,
SBC-4201AD, 15-526**



24V

*** 24V* CONTINUOUS DUTY “INS”
WHITE ROGERS SWITCH**
REP. 586-905, 586-1141113
“WMS” PART #, WS-24
(APPLICATIONS) 24V HD motors
(W-5007, W-5114, W-4810, W-4037)
(The switch body is 2.25” in diameter)



***12V* 4 POST INS/GRD. SWITCH**
**REPLACES, SAZ4201GK
SAZ4201GK2, 28308, SAZ4201GK-2**
(CURVED MOUNT W/ INS GROUND)
***New old stock with some
Blemished plating on the bracket“***
WMS” PART #, WS-534



***12V* 3 POST BASE GRD/SW
switch has a bracket with 0.275
mount/slots that are approximately
1” forward from rear area.**
REPLACES, 15-535, SAZ-4201GF
“WMS” PART # WS-535



Taller HD SW

***12V* 4 POST INS/GRD SW
switch has a bracket with 0.275 mount
slots that are approximately 1” forward**
**REPLACES NUMBERS, 15-595
WS536, SBJ4255, WS635, SBJ-6255**
“WMS” PART # WS-536



Taller HD SW

12V

**CONTINUOUS DUTY
SOLENOID SWITCH
WITH (I) TERMINAL**

**REPLACES,
15-307, SBC-4201B**

**“WMS”
PART # WS-307**



Taller HD SW

12V

**CONTINUOUS DUTY
SOLENOID SWITCH
WITH “INS” GROUND**

**REPLACES, 15-322
SBC-4201C, SBC-4201E**

**“WMS”
PART # WS-322**



12V

**4 POST BASE GROUND
SOLENOID SWITCH
WITH “I” TERMINAL**

**REPLACES, SAZ-4201CB
15-331, SAZ-4201AG**

**“WMS”
PART # WS-331**



***12V* 3 POST
SOLENOID SWITCH**

**REPLACES NUMBERS,
APL-3020, 15-527, 15-408
SAZ-4201FG, SAZ-4201BJ**

**“WMS” PART # WS-408
(0.275 MOUNTING SLOTS)**



24V

24V

**4 POST “INSULATED”
GRD. SOL. SWITCH**

**REPLACES NUMBERS,
15-468W, SAZ-4401ACW**

**“WMS” PART # WS-468
(0.275 MOUNTING SLOTS)**



24V

24V

**4 POST “INSULATED”
GRD. SOL. SWITCH**

**REPLACES NUMBERS,
15-468, SAZ-4401AC**

**“WMS” PART # WS-470
(0.200 MOUNTING SLOTS)**



12V

**4 POST “INSULATED”
GROUND SOLENOID
SWITCH**

**REPLACES, SAZ-4201GC
15-483, SAZ-4201ER**

**“WMS”
PART # WS-483**



12V

**“INSULATED” GROUND
EXTENDED DUTY
SOLENOID SWITCH**

**REPLACES, SAZ4201EY1
15-487, SAZ-4201EY,
440262, 546-033, 1231A**

“WMS” PART # WS-487



Taller HD SW

12V

**CONTINUOUS DUTY
SOLENOID SWITCH**

**REPLACES,
SBC-4201AC, 15-521**

**“WMS” PART # WS-521
(Curved mounting base)**



***12V* 3 POST**

**SOLENOID SWITCH
REPLACES NUMBERS,
15-544, SAZ-4201FY**

**“WMS”
PART # WS-544
(0.200 MOUNTING SLOTS)**



12V

**4 POST SOLENOID
WITH (I) TERM.**

**REPLACES, 15-411,
15-436, SW-1533, A, B & C
WS-1034, SAZ-4201CG**

**“WMS”
PART # WS-1034**

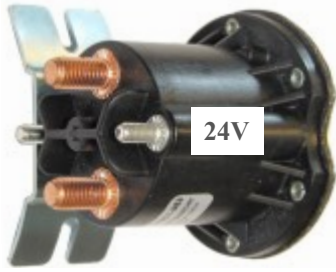


12V

**3 POST PLASTIC CASE
SOLENOID SWITCH**

**REPLACES, 15-268
15-283, SW-1951, A, B & C**

**“WMS”
PART # WS-1035**



***24V* EXT/DUTY 4 POST SWITCH**
 REP. 684-2461-212

“WMS” NUMBER, WS-623L

switch has special bracket with 0.200
 mount/slots that are approximately
 1.25” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)



***24V* EXT/DUTY 4 POST SWITCH**
 REP. 684-2411-212, WS-468 etc.

“WMS” NUMBER, WS-624

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)



***12V* EXT/DUTY 3 POST SWITCH**
 REP. 634-1261-212

“WMS” NUMBER, WS-633L

switch has special bracket with 0.200
 mount/slots that are approximately
 1.25” forward from rear plate area.

(CURVED MOUNT W/ CASE GROUND)



*** 12V* EXT/DUTY 3 POST SWITCH**
 REP. 97819-000, 634-1211-212

“WMS” NUMBER, WS-634

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(CURVED MOUNT W/ CASE GROUND)



***36V* EXTENDED DUTY SWITCH**
 REP. 684-3611-012

“WMS” NUMBER, WS-636

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)



***12V* EXTENDED DUTY SWITCH**
 REP. 684-1261-212

“WMS” NUMBER, WS-637L

switch has special bracket with 0.200
 mount/slots that are approximately
 1.25” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)



***12V* EXTENDED DUTY SWITCH**
 REP. 684-1211-212, 684-1211-212-06

“WMS” NUMBER, WS-638

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)

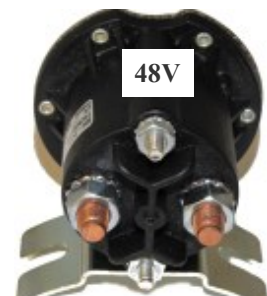


***12V* EXTENDED DUTY SWITCH**
 REP. 684-1211-212, 684-1211-212-06

“WMS” NUMBER, WS-639

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(The WS-639 includes a WCS-5 cable)
 (CURVED MOUNT W/ INS GROUND)



***48V* CONTINUOUS DUTY SWITCH**
 REP. 684-4811-022

“WMS” NUMBER, WS-648

switch has standard bracket with 0.275
 mount/slots that are approximately
 1” forward from rear plate area.

(CURVED MOUNT W/ INS GROUND)



***12V* CONTINUOUS DUTY
INS/GRD 4 POST SWITCH
REP. 586-902, 114-1211-010, 114-1211-020**

“WMS” NUMBER, WS-812C

(APPLICATIONS) 12V HD motors
W5144, MBR5102N, W5001, W8163RM etc.
(The switch has a curved mount base)



***12V* CONTINUOUS DUTY
INS/GRD 4 POST SWITCH
REP. 586-902, 114-1211-010, 114-1211-020**

“WMS” NUMBER, WS-812F

(APPLICATIONS) 12V HD motors
C561350X8081, X7642, W8163RM etc.
(The switch has a flat mount base)



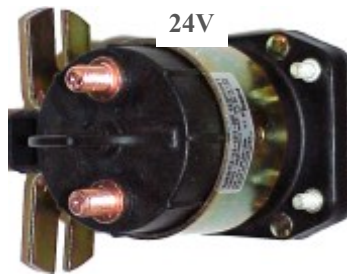
***12V*
CONTINUOUS DUTY
4 POST SWITCH
REPLACES, 684-1221-012
“WMS” NUMBER, WS-930
(FLAT MOUNT W/ INS GROUND)**



***24V* CONTINUOUS DUTY
INS/GRD 4 POST SWITCH
REPLACES, 114-2411-020, 586-905C**

“WMS” NUMBER, WS-824C

(APPLICATIONS) 24V HD motors
W5007, W5112, W5114, W4038, W4810 etc.
(The switch has a curved mount base)



***24V* CONTINUOUS DUTY
INS/GRD 4 POST SWITCH
REPLACES, 114-2411-020, 586-905**

“WMS” NUMBER, WS-824F

(APPLICATIONS) 24V HD motors
W5007, W5112, W5114, X7088, X7707A etc.
(The switch has a flat mount base)



***12V*
EXTENDED DUTY
4 POST SWITCH
REPLACES, 684-1221-212
“WMS” NUMBER, WS-931
(FLAT MOUNT W/ INS GROUND)**



***12V* CONT/DUTY 4 POST SW.
REP. 684-1251-012, 684-1251-012-02**

“WMS” NUMBER, WS-935

switch has standard bracket with 0.275
mount/slots that are approximately
1” forward from rear plate area.
(FLAT MOUNT W/ INS GROUND)



***12V* CONT/DUTY 3 POST SW.
REP. 634-1251-012, 634-1221-212**

“WMS” NUMBER, WS-936

switch has standard bracket with 0.275
mount/slots that are approximately
1” forward from rear plate area.
(FLAT MOUNT W/ CASE GROUND)



***24V* CONT/DUTY 4 POST SW.
REP. 684-2451-022, 684-2451-240**

“WMS” NUMBER, WS-937

switch has standard bracket with 0.275
mount/slots that are approximately
1” forward from rear plate area.
(FLAT MOUNT W/ INS GROUND)



12V

EXTENDED DUTY 4 POST SW.

**REPLACES NUMBERS,
684-1241-012, WS-1034**

“WMS” NUMBER, WS-938

(FLAT MOUNT W/ INS GROUND)



12V

12V

**“HD” INSULATED GROUND
CONT/DUTY SOLENOID SWITCH**

REPLACES, 1119865

“WMS” NUMBER WS-865



12V

EXTENDED DUTY 3 POST SW.

**REPLACES NUMBERS.
634-1241-212, 634-1241-212-02**

“WMS” NUMBER, WS-939

(FLAT MOUNT W/ CASE GROUND)



24V

24V

**“HD” INSULATED GROUND
CONT/DUTY SOLENOID SWITCH**

REPLACES, 1119866

“WMS” NUMBER WS-866



Taller HD SW

***24V* 4 POST INS/GRD SW**
switch has a bracket with 0.275 mount
slots that are approximately 1” forward

**REPLACES NUMBERS,
SBJ4455, SBJ-4455**

“WMS” PART # WS-945



12V

EXTENDED DUTY 3 POST SW.

**REPLACES NUMBERS.
852-1221-210, 854-1221-210 etc.**

“WMS” NUMBER, WS-940

**(FLAT MOUNT W/ CASE GROUND)
COPPER POSTS ARE 5/16X24 THREADS**



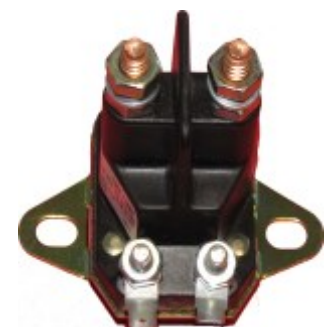
12V

EXTENDED DUTY 4 POST SW.

**REPLACES NUMBERS.
884-1221-210, 120-105711 etc.**

“WMS” NUMBER, WS-941

**(FLAT MOUNT W/ INS GROUND)
COPPER POSTS ARE 5/16X24 THREADS**



12V

EXTENDED DUTY 4 POST SW.

**REPLACES NUMBERS.
892-1221-210, etc.**

“WMS” NUMBER, WS-942

**(FLAT MOUNT W/ INS GROUND)
COPPER POSTS ARE 1/4X20 THREADS**



12V

**3 POST METAL BASE
GROUND SOLENOID SWITCH
REPLACES, A8, SAD4501, 4502
15-61, 15-62, 15-63, SAD-4401
“WMS” NUMBER WS-63**



12V

**3 POST METAL CAP W/BASE
GROUND SOLENOID SWITCH
REPLACES, A8, SAD4501, 4502
15-61, 15-62, 15-63, SAD-4401
“WMS” NUMBER WS-63M**



24V

**4 POST INSULATED
GROUND SOLENOID SWITCH
REPLACES,
SAL-4101T, WS-271M, 15-271
“WMS” NUMBER WS-271**



24V

**4 POST METAL CAP WITH
INSULATED GROUND
SOLENOID SWITCH**

REPLACES, SAL-4101T, 15-271

“WMS” NUMBER WS-271M



**BRUSH SPRING SET FOR
12V AND 24V MOTORS**

**MBJ, MCH, MCL, MDT, MDY,
MMD, MMQ, MUE, ETC.
FITS MOST 4 & 1/2" TYPES OF
PRES. STYLE MOTORS**

"WMS" NUMBER K-28-SP



**BRUSH SPRING SET FOR
12V AND 24V MOTORS**

**W-9787, W-9789, W-8991
W-5692, W-9793, W-9795 ETC.
FITS MOST 4 & 1/2" TYPES OF
THE CHINA STYLE MOTORS**

"WMS" NUMBER K-90-SP



**BRUSH SPRING SET FOR
12V AND 24V MOTORS**

**MBD, MMR, W-5007, W-5112
MBD-5107, W-5107, W-5114 etc.
FITS MOST 5" DIAMETER
PRESTOLITE STYLE MOTORS**

"WMS" NUMBER K-93-SP



ADCM BRUSH SPRING

"WMS" PART # B89-016

*USED IN MOTOR NUMBERS,
AL4-4001, AL4-4001A etc.*

(SOLD "EACH")



ADCM BRUSH SPRING

"WMS" PART # 140-01-016

*USED IN MOTOR NUMBERS,
140-01-4001, 140-01-4002 etc.*

(SOLD "EACH")



ISKRA BRUSH SPRING

"WMS" PART # WBS-227

*FOR ISKRA MOTOR NUMBERS,
11.216.436, AMT4660 etc.
Replaces number, 11845110*

(SOLD "EACH")



PRESTOLITE BRUSH SPRING

"WMS" PART # 50-525

*USED IN MOTOR NUMBERS,
MMV4001 etc.
Replaces, MGP18A, MGP-18AS
(Spring width is 0.312/7.92mm)*

(SOLD "EACH")



PRESTOLITE BRUSH SPRING

"WMS" PART # MGP-18S

*USED IN MOTOR NUMBERS,
MKO4008, MKF4001 etc.
Replaces, MEE-1164, MCP-1164
50-375, MGP18S, MGP18SS,
(Spring width is 0.190/4.82mm)*

(SOLD "EACH")



GE BRUSH SPRING

"WMS" PART # MT-3207SP

*USED IN MOTOR NUMBERS,
MT32007, MT320-07 etc.*

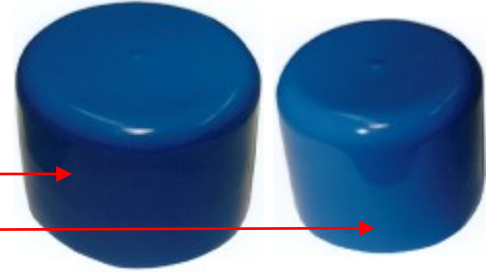
Replaces number, 4325

(SOLD "EACH")

**RAIN MOTOR COVER PROTECTS MOTORS
FROM RAIN, SNOW etc.
FOR THE 3" & 4.5" DIAMETER MOTORS**

4.5" Dia. PART NUMBER, R M C

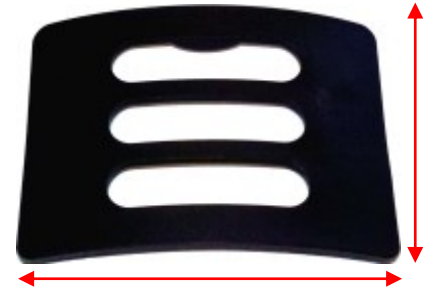
3" Dia. PART NUMBER, S R M C



**** ISKRA "PLASTIC" BRUSH PORT COVER ****

**REPLACES ISKRA NUMBER, 16.915.592
FOR ISKRA "AMK" MOTOR NUMBERS,
AMK4626, 4635, 4638, 4651, 4678, 5554 etc.**

**"ISKRA" PART NUMBER, 16.915.592
(This brush port cover is sold in a 4 pack)
3.00"/ 76.50mm X 2.20"/ 56.10mm**



**** "PLASTIC" BRUSH PORT COVER ****

**REPLACES NUMBERS, HDB-35AS, W361182, 36-1182
FOR MOTOR NUMBERS, MTV4001, MTV4002
MTV4002S, MTV4003, MTV-4003S AND WTM-4003N etc.**

**"WMS" PART NUMBER, W-361182N
(This brush port cover is sold "Each")
3.25"/ 82.55mm X 2.25"/ 57.15mm**



***STAINLESS STEEL 4.6" DIAMETER CLAMP*
FOR MOUNTING SOLENOID SWITCHES
TO 4.5" DIAMETER FIELD FRAMES.**

**Has holes in band to mount the switch to the clamp
then the clamp can be mounted on the field frame.**

**"WMS" PART NUMBER, WSC-0043
3.75-4.6"/95-117mm diameter < 0.625"/15.87mm**



***STAINLESS STEEL 5.5" DIAMETER CLAMP*
FOR MOUNTING SOLENOID SWITCHES
TO 5" DIAMETER FIELD FRAMES.**

**Has holes in band to mount the switch to the clamp
then the clamp can be mounted on the field frame.**

**"WMS" PART NUMBER, WSC-0055
3.5 - 5.5"/89-140mm diameter < 0.56"/142mm wide**

SEE PAGE'S "11 & 12" FOR THE "GKR" STYLE ARMATURE DIMENSIONS

BEARING CE SHAFT



BUSHING CE SHAFT



BEARING CE SHAFT



NOTE THIS ARMATURE IS "NOT" THE SAME AS THE WA-734N, SEE PAGE 12 FOR ARMATURE SPEC'S

"NEW" DBB ARMATURE

IT USE'S THE 6-203 BALL BEARING ON BOTH CE & DE
REPLACES ARMATURE NUMBERS, 10-282, GKR2030F
FOR GOODALL GENERATOR NUMBERS, 79370
79371, 79373, 79375, 45-734, GKR-6104S, GKR-6104A

"WMS" PART NUMBER, WA-734N

"NEW" BUSHING CE ARMATURE

USE'S THE 6-203 BALL BEARING ON THE DRIVE END
AND A CB-2491 "BUSHING" AT THE COMMUTATOR END

FOR "OLDER" GOODALL NUMBERS,
10626, 45-734, GKR-7101, GKR-7101S

"WMS" PART NUMBER, WA-678N

"NEW" DBB ARMATURE

IT USE'S THE 6-203 BALL BEARING ON BOTH CE & DE
REPLACES ARMATURE NUMBERS, GKR-2106
ONLY FOR AMETEK/PRESTOLITE NUMBER GKR6105

"WMS" PART NUMBER, WA-6105N



"NEW" PULLEY FOR THE GOODALL STARTING UNIT
FOR GENERATOR NUMBERS,
45-734, GKR-6101, GKR-6104, GKR-6104A, GKR-6105

"WMS" PART NUMBER WP-34719

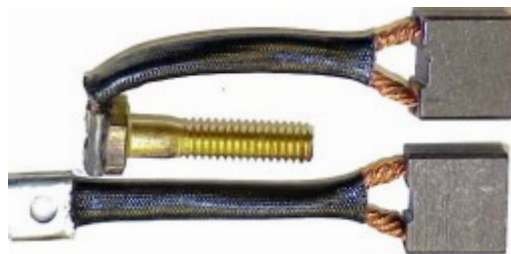
REPLACES NUMBERS, 34-719, PU-1164



**** FOR EARLY PRES. STYLE****
**** GOODALL GENERATORS ****

REPLACES, 11-67, GJH-2012BS
FOR GENERATOR NUMBERS,
GKR-7101A, GKR-7101S
10626, GKR-6101, GKR-6101S

"WMS" NUMBER WB-1167



**** FOR PRES. STYLE****
**** GOODALL GENERATORS ****

REPLACES NUMBERS,
11-79, GJH-1032S, GJH-2012CS
FOR GENERATOR NUMBERS
45-734, GKR-6104, GKR-6104A
79370, 79371, 79373, 79375, 79406

"WMS" NUMBER WB-1179



**** FOR LATE PRES. STYLE****
**** GOODALL GENERATORS ****

REPLACES, GJH-1032SS
GJH-2012CS, GJH-1012C
FOR GENERATOR NUMBERS
GKR-6104, GKR-6104A, GKR-6105
79370, 79371, 79373, 79375, 79406

"WMS" NUMBER WB-1180

**“NEW” CENTER SUPPORT FRAME FOR STARTERS
FOR STARTER NUMBERS, MDT6103, MDY6140, MHA6101
MHA7021, MHA6106, MHA6107, MEO6105, MHA6102 ETC.**

“WMS” PART NUMBER 36-8

REPLACES NUMBER, MDL-1080, 4588, 4588B, MCH-1051
(FOR STARTER MOTORS THAT DO NOT USE A RUBBER SEAL)



**CENTER SUPPORT FOR STARTERS W/OIL BATH DRIVES
FOR STARTER MOTOR NUMBERS, MDT6102, MDU6103
5608, MDT7025, MDY6148, MHA6103, ETC.**

“WMS” PART NUMBER 36-839

REPLACES NUMBER, MDL-2080A
(FOR STARTER MOTORS THAT USE A RUBBER SEAL)
(OUTER GASKET FOR THIS CENTER SUPPORT PLATE IS WG-255N)
(Limited availability call to check inventory)



**105C THERMIK OVERLOAD PROTECTION DEVICE WITH
THREADED MOUNTING POST AND 12” LONG WIRES
For 12V 3” dia. motor numbers, W-8055A, IM-0195 etc.**

“WMS” PART NUMBER, WOLP-134



**085C THERMIK OVERLOAD PROTECTION DEVICE WITH
THREADED MOUNTING POST KIT WITH 18” LONG WIRES
For 24V motor numbers, AMK-4638, IM-0251 etc.**

“WMS” PART NUMBER, WOLP-136



**140C THERMIK OVERLOAD PROTECTION
DEVICE WITH 10” LONG WIRES
For 12V motor numbers, MUV6301A, W-6901, etc.**

“WMS” PART NUMBER, WOLP-138



**140C THERMIK OVERLOAD PROTECTION
DEVICE WITH 13” LONG WIRES
For 12V motor numbers, W-7864A, W-8911K, W-8943K etc.**

“WMS” PART NUMBER, WOLP-140





**5/16X24X1&3/8" FIELD COIL
TERMINAL POST KIT**

FOR "ALL" "WMS" MOTORS
THAT USE A SCREW AT THE
FIELD CONNECTION.

THIS IS FOR THE FIELD
FRAME WITH THE OVAL
FORD TYPE INSULATOR.

"WMS" PART # TK-90



**5/16X24X1&3/8" FIELD COIL
TERMINAL POST KIT**

FOR PRES. STYLE MOTORS
THAT USE A SCREW AT THE
FIELD CONNECTION AND
HAVE THE "THIN" WALL
FIELD CASE (*BAND BARREL*)

SUCH AS (MDY 7039)
(REPLACES 90-711)

"WMS" PART # TK-92



**5/16X24X1&3/8" FIELD COIL
TERMINAL POST KIT**

FOR WAPSA STYLE MOTORS
THAT USE A SCREW AT THE
FIELD CONNECTION AND

HAVE THE "THICK" WALL
FIELD CASE WITH A ROUND
HOLE THROUGH THE FRAME
(FOR WAPSA & BOSCH)

"WMS" PART # TK-93



**5/16X24X1&3/8" FIELD COIL
TERMINAL POST KIT**

FOR PRES. STYLE MOTORS
THAT USE A SCREW AT THE
FIELD CONNECTION & HAVE
THE THICK WALL FIELD CASE.
SUCH AS (MHN, MUE, MUF)

**"WMS" PART # TK-94
(REPLACES 90-726)**



OD 1.190
ID .550

SHAFT SEAL FOR
THE 4.8" DIAMETER
BUYERS AND MEYER
STYLE SPREADER
MOTOR NUMBERS
W-8805 & MOTOR
NUMBER W-8858

PART # WSS-8805



OD .990
ID .505

SHAFT SEAL FOR
THE 3" DIAMETER
WESTERN
AND FISHER STYLE
SALT SPREADER
MOTOR NUMBERS,
W-8015 AND W-8815

PART # WSS-8815



OD .875
ID .475

SHAFT SEAL FOR
ALL WESTERN AND
FISHER SNOW PLOW
MOTORS

W-8994, W-6294 etc.
Replaces,
CR-4259 & OS-3626

PART # WSS-994



**3/8X16 TERMINAL POST KIT
FOR "ALL" "WMS" 5" DIA.
"ML" STYLE MOTORS NUMBERS
W-5204, W-5205, W-5207, W-5209**

FOR FIELD FRAMES WITH THE
OVAL SHAPED INSULATOR HOLE

"WMS" PART # WTP-5207



**TERMINAL POST KIT
FOR OHIO "PM" MOTORS
D482266X7623, D482273X7088 etc.**

COMPLETE WITH INSULATORS,
NUTS AND WASHERS AS SHOWN

"WMS" NUMBER WTP-7088



**FOR "ALL" "XOT" 4.5" DIA.
PRESTOLITE MOTOR NUMBERS,
MUE6201, MUE6203, MUE6206 etc.**

TWO VIEWS OF THE "XOT" STYLE
PRESTOLITE/AMETEK INSULATOR

**"WMS" PART # MUE66
(SOLD "EACH")**



**“SEALED”
BALL BEARING
WITH A 6-202-4 “OD”
AND A 6-203-4 “ID”**
“WMS” PART NUMBER
WBB-103
ID 17 mm < OD 35 mm
Width 10 mm



**“SEALED”
BALL BEARING
WITH A 6-201-4 “OD”
AND A 6-202-4 “ID”**
“WMS” PART NUMBER
WBB-212
ID 15 mm < OD 32 mm
Width 9 mm



**“SEALED”
BALL BEARING
REPLACES NUMBERS
201, 6-201-2, 6-201-4**
“WMS” PART NUMBER
WBB-201
ID 12 mm < OD 32 mm
Width 10 mm



**“SEALED”
BALL BEARING
REPLACES NUMBERS
202, 6-202-2, 6-202-4**
“WMS” PART NUMBER
WBB-202
ID 15 mm < OD 35 mm
Width 11 mm



**“SEALED”
BALL BEARING
REPLACES NUMBERS
203, 6-203-2, 6-203-4**
“WMS” PART NUMBER
WBB-203
ID 17 mm < OD 40 mm
Width 12 mm



**“SEALED”
BALL BEARING
WITH A 6-202-4 “OD”
AND A 5/8” “ID”**
“WMS” PART NUMBER
WBB-20210
ID 15.88 mm < OD 35 mm
Width 11 mm



**“SEALED”
BALL BEARING
WITH A 6-203-4 “OD”
AND A 5/8” “ID”**
“WMS” PART NUMBER
WBB-20310
ID 15.88 mm < OD 40 mm
Width 12 mm



**“SEALED”
BALL BEARING
FOR WINCH MOTOR
W-9133 & W-9143 DE**
“WMS” PART NUMBER
WBB-6004
ID 20 mm < OD 42 mm
Width 12 mm



**“SEALED”
BALL BEARING
REPLACES NUMBERS
6902, 6-902-4**
“WMS” PART NUMBER
WBB-8815DEB
ID 15 mm < OD 28 mm
Width 7 mm



**“SPECIAL”
WAVY SPRING
WASHER FOR CE
FRAMES USING THE
6-201-4 BEARING**
“WMS” PART NUMBER
WSP-201
OD 31 mm



**“SPECIAL”
WAVY SPRING
WASHER FOR CE
FRAMES USING THE
6-202-4 BEARING**
“WMS” PART NUMBER
WSP-202
OD 34 mm



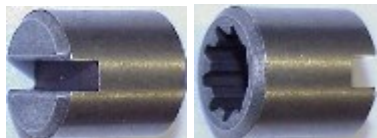
**“SPECIAL”
WAVY SPRING
WASHER FOR CE
FRAMES USING THE
6-203-4 BEARING**
“WMS” PART NUMBER
WSP-203
OD 39 mm



1118-AA (9 SPLINE X 9 SPLINE) 1.258"/ 31.95mm LONG



1134-AB (9 SPLINE X 16 SPLINE) 1.165"/ 29.59mm LONG
ONE END IS 9 SPLINE & THE OTHER END IS 16 SPLINE



1236-AA (9 SPLINE WITH SLOT) 0.800"/ 20.32mm LONG
SLOT IS 0.160"/ 4.064mm WIDE



1267-BA (9 SPLINE WITH TANG) 1.430"/ 36.32mm LONG
TANG IS 0.250"/ 6.35mm WIDE



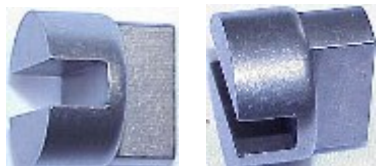
2181-BA (9 SPLINE X 9 SPLINE) 1.800"/ 45.72mm LONG



2440-AB (9 SPLINE WITH TANG) 0.880"/ 22.35mm LONG
TANG IS 0.250"/ 6.35mm WIDE



2441-BA (9 SPLINE X 9 SPLINE) 0.946"/ 24.02mm LONG



J3-1001-00 (SLOT WITH TANG) 0.575"/ 14.60mm LONG
Tang is 0.250"/ 6.35mm wide / Slot is 0.170"/ 4.318mm / For a 202 bearing



J3-1001-14 (16 SPLINE W/TANG) 0.764"/ 19.40mm LONG
TANG IS 0.250"/ 6.35mm WIDE



J3-1001-15 (SLOT WITH TANG) 1.070"/ 27.17mm LONG
Tang is 0.250"/ 6.35mm wide / Slot is 0.250"/ 6.35mm / For a 203 bearing



J4-1001 AMPLEX COUPLER KIT AS SHOWN
REPLACES NUMBERS, 087703, CR087703
FOR MOTOR NUMBERS,
C4D17DB1D, IM-0284, W-2273, 11.216.146, W-5115, IM-0251
IM-0284, D482259X7707A, D482273X7088, W-5112, W-5114, W-5120



**LEFT SIDE SOLENOID
SWITCH CONNECTOR STRAP**

REPLACES NUMBERS,
26-104, SS-6L 26-95

**“WMS” PART NUMBER
WCS-95**



**4 GAUGE FLEX CABLE SWITCH
TO MOTOR CONNECTOR**

THIS FLEX CABLE OVERALL
LENGTH IS 5” < THE LENGTH
FROM HOLE CENTERS IS 4.25”

Cable ends are for 5/16 terminal posts

“WMS” PART NUMBER, WCS-5



**4 GAUGE FLEX CABLE SWITCH
TO MOTOR CONNECTOR**

THIS FLEX CABLE
LENGTH IS 10” BETWEEN
THE HOLE CENTERS

Cable ends are for 5/16 terminal posts

“WMS” PART NUMBER, WCS-10



**RIGHT SIDE SOLENOID
SWITCH CONNECTOR STRAP**

REPLACES, SS-6R, 26-96

FOR W-6507, W-6508, W-6509
W-6524, W-6541, W-6598 ETC.

**“WMS” PART NUMBER
WCS-96**



**LATE STYLE “XOT” SOLENOID
SWITCH CONNECTOR STRAP**

REPLACES, 26-324 MHA-23

FOR MUE-6201, MUE-6202
MUE-6210, MUP-6201 ETC.

**“WMS” PART NUMBER
WCS-23**



*** SPECIAL SHIM / GASKET ***
SHIM SPACER FOR THE PUMP
FACE AND MOTOR DE FRAME.
TO PROPERLY SPACE AMPLEX
COUPLER FIT TO PUMP
(3) PER PACK

**“WMS” PART NUMBER
WSG-273**



**LATE STYLE MONARCH
SOLENOID CONNECTOR STRAP**

THIS STRAP IS USED WITH THE
WS-634 STYLE SOLENOID SWITCH

“WMS” NUMBER, WCS-634



**3/8 X 24 DOUBLE THREADED
STUD/BOLT**

FOR MBJ STYLE
WINCH MOTORS

PART NUMBER, MBJ/STUD

**(SOLD “EACH”
ORDER AS NEEDED)**



**DRIVE END FRAME
GASKET FOR THE
WESTERN AND FISHER
SNOW PLOW MOTORS**

**“WMS” NUMBER, WG-994
SOLD “EACH”**



**MOTOR DRIVE END
BEARING SUPPORT
FOR ARMATURE
(THIS IS FOR THE 6-202-4 BEARING)**

**“WMS” PART NUMBER
WAS-219**



**MOTOR DRIVE END
BEARING SUPPORT
FOR ARMATURE
(THIS IS FOR THE 6-203-4 BEARING)**

**“WMS” PART NUMBER
WAS-220**



**GE STYLE TERMINAL INSULATOR KIT
FOR MANY GE STYLE PM MOTORS**

THIS IS FOR THE FIELD FRAMES WITH THE

“WMS” PART # WTPI-JB540



**GE STYLE TERMINAL POST KIT
FOR MANY GE STYLE MOTORS
THIS TERMINAL HAS A 5/16 X 18 MOTOR STUD**

*THIS IS FOR THE FIELD FRAMES WITH THE
SQUARE SHAPED INSULATOR HOLE IN FRAME*

“WMS” PART # TK-JB870



**PRESTOLITE STYLE TERMINAL POST KIT
FOR “ALL” “WMS” 5” DIAMETER “MFY” STYLE
MOTORS WITH THE 3/8 X 16 MOTOR STUD
FOR WMS NUMBERS, W-4037 AND W-4810**

*THIS IS FOR THE FIELD FRAMES WITH THE
SQUARE SHAPED INSULATOR HOLE IN FRAME*

“WMS” PART # WTP-4810



BLACK & RED CABLE SET (6 GAGE WIRE)

“WMS” PART # WCS-5800S

*CABLE ENDS ARE FOR 5/16 POSTS
CABLES ARE 24” LONG
(FOR THE W-5800 MOTOR)*



BLACK & RED CABLE SET (6 GAGE WIRE)

“WMS” PART # WCS-5845S

*CABLE ENDS ARE FOR 5/16 POSTS
CABLES ARE 45” LONG
(FOR THE W-5845 MOTOR)*



BLACK GROUNDING CABLE (6 GAGE WIRE)

“WMS” PART # WC-5800B

*CABLE ENDS ARE FOR 5/16 POSTS
CABLE IS 24” LONG
(FOR GRD./POST ON W-8930B etc.)*



RED POSITIVE CABLE (6 GAGE WIRE)

“WMS” PART # WC-5800R

*CABLE ENDS ARE FOR 5/16 POSTS
CABLE IS 24” LONG
(FOR REMOTE MOUNTED SWITCHES etc.)*



**“2” TERMINAL POST F & R MOTOR CONTROL
FOR WMS & AMETEK STYLE MOTORS**

*This controller is for the (2) terminal post
motors such as the W-8805 etc.*

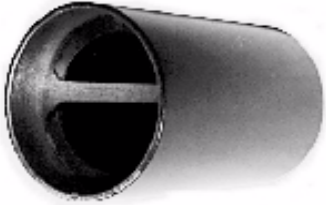
“WMS” PART NUMBER, WCK-01-2



**“3” TERMINAL POST F & R MOTOR CONTROL
FOR WMS & AMETEK STYLE WINCH MOTORS**

*This controller is for the (3) terminal post
motors such as the W-9143, W-7643 etc.*

“WMS” PART NUMBER, WCK-01-3



(3" Diameter) PM BARREL

FOR MOTOR NUMBERS,

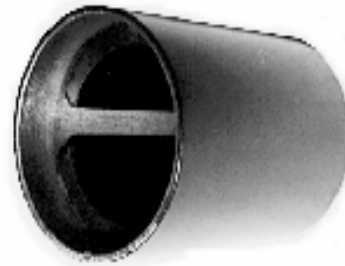
W-8906, W-8909

W-8910, W-8912

W-8931, W-8932, ETC.

"WMS" PART NUMBER, BA-932

(LENGTH OF MAGNET CASE IS 4 & 13/16")



(4.8" Diameter) PM BARREL

FOR MOTOR NUMBERS,

W-8800, W-8805, W-8808, W-8818, W-8845, ETC.

**THIS (PM) BARREL WILL WORK ON MOST (48HM)
MOTORS USED ON WINCHES & SALT SPREADERS**

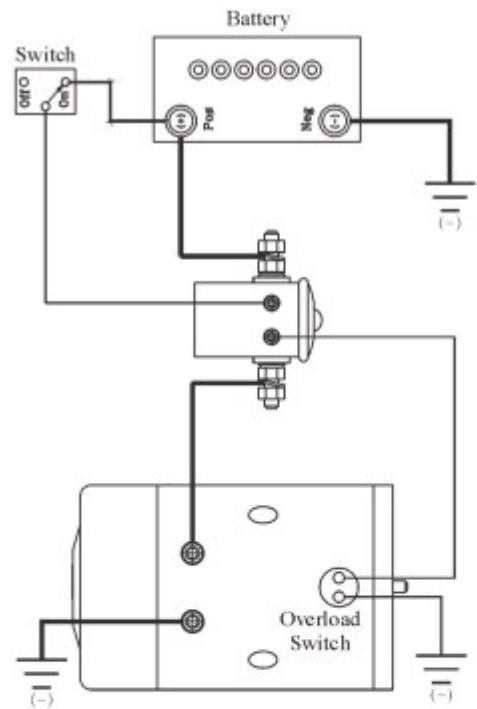
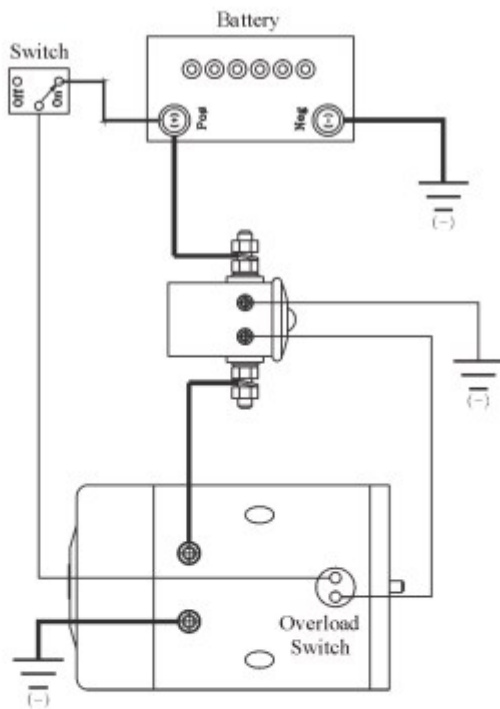
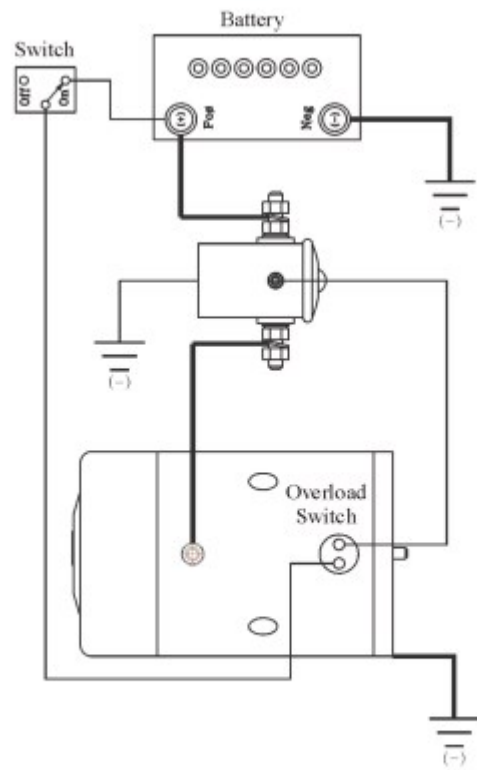
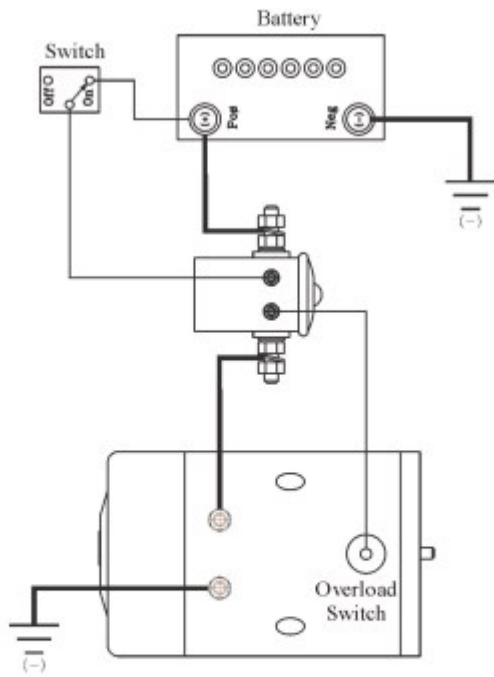
"WMS" PART NUMBER, BA-805

(LENGTH OF MAGNET CASE IS 4 & 1/4")



**DRIVE END FRAME FOR ALL MEYERS STYLE
4.8" DIAMETER PERMANENT MAGNET
SALT SPREADER MOTORS SUCH AS THE
WESTERN MOTORS NUMBER, W-8805**

"WMS" PART NUMBER, WD-805



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Rockford, Illinois

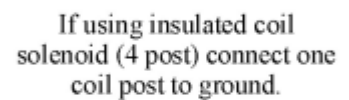
Wiring Diagram

Date: 1/23/08

Scale: N/A
Tolerance: N/A


Dwn by: JEK

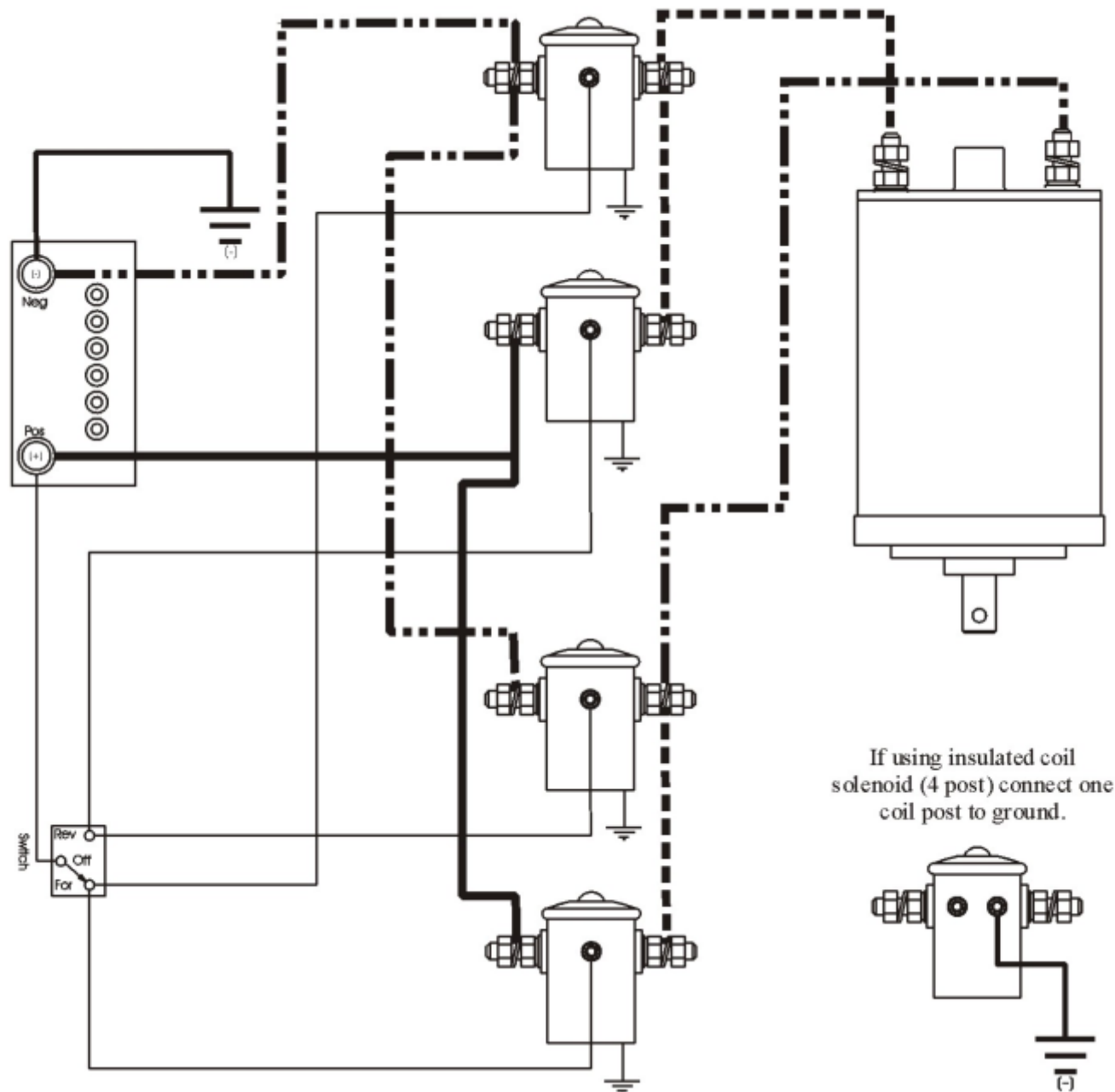
Overload Wiring



(Late Wiring Design)

Permanent magnet Bi-directional motor

| | | |
|---|-----------------------|---------------|
| Western Motors Service Co.  Rockford, Illinois | Wiring Diagram | |
| | Date: 1/13/98 | Scale: N/A |
| | Dwn by: JEK | Tolerance N/A |



(Early Wiring Design)
Permanent magnet
Bi-directional motor

Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

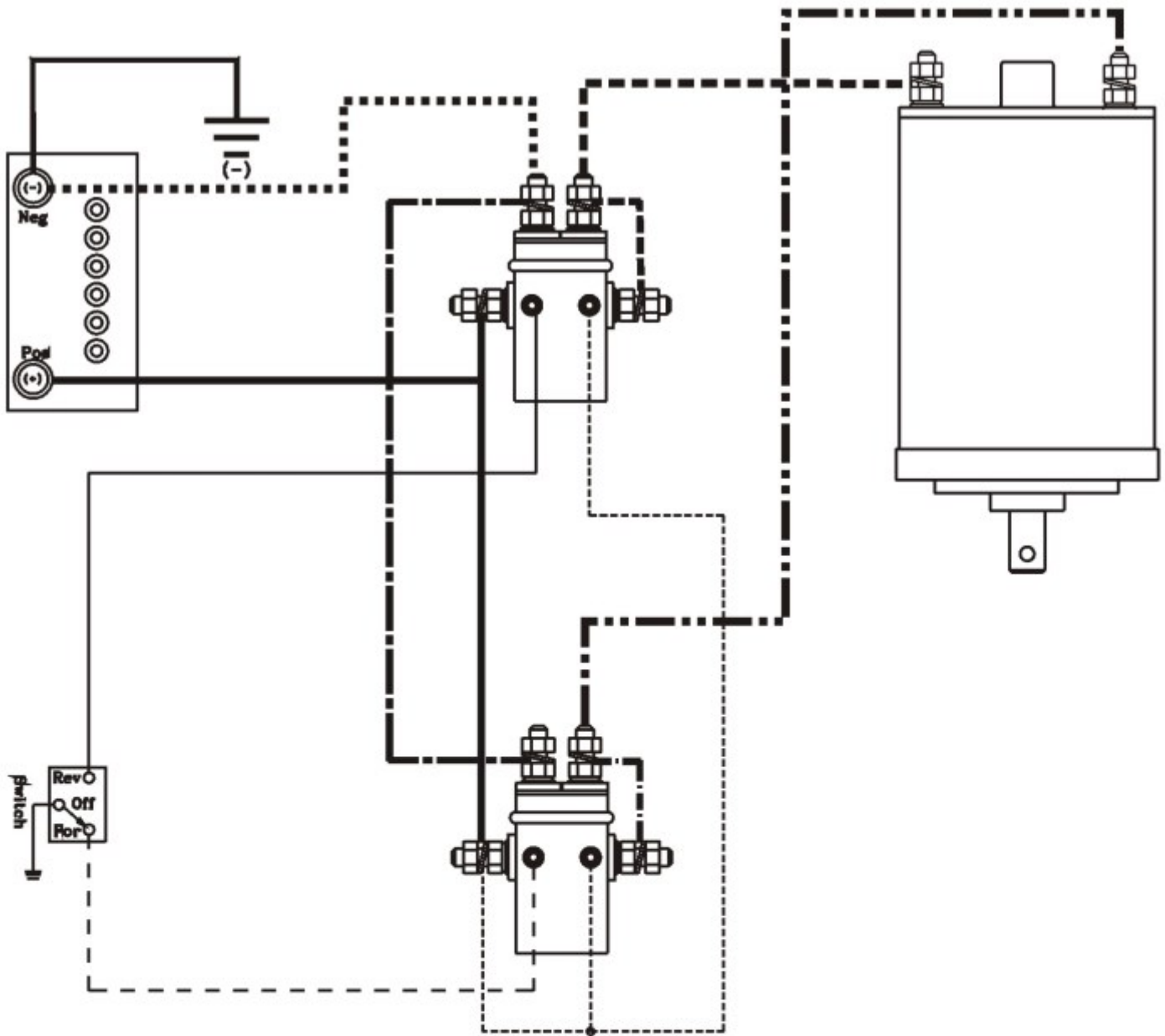
Date: 1/13/98

Scale: N/A

Tolerance N/A

Dwn by: JEK

PM 4S 4P SG WD



(Late Wiring Design)

Permanent magnet Bi-directional motor
(Insulated System)
with negative switch activation

Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

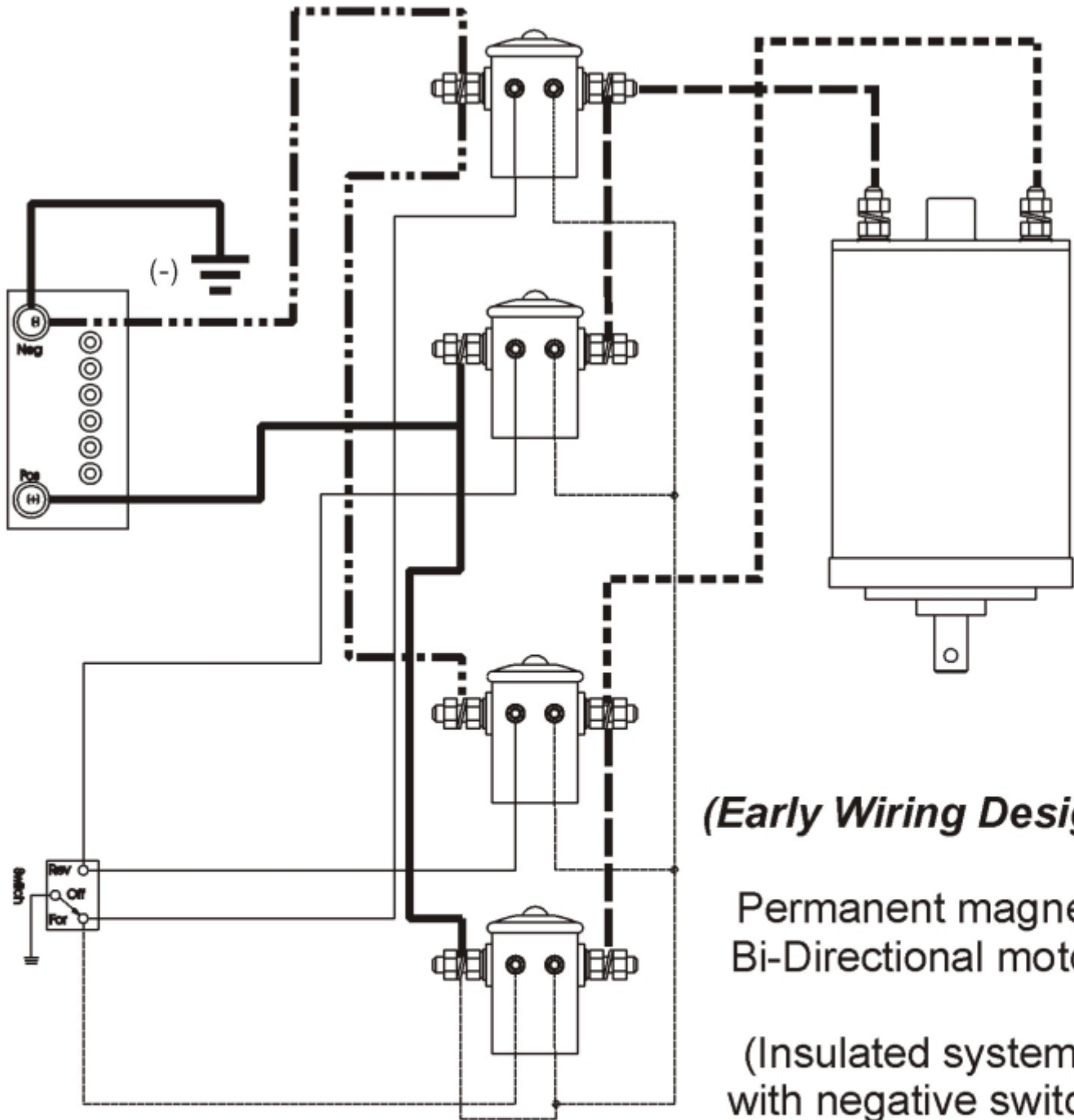
Date: 1/13/98

Scale: N/A

Tolerance N/A

Dwn by: JEK

2S 3P SG 2F WG



(Early Wiring Design)

Permanent magnet
Bi-Directional motor

(Insulated system)
with negative switch
activation

Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

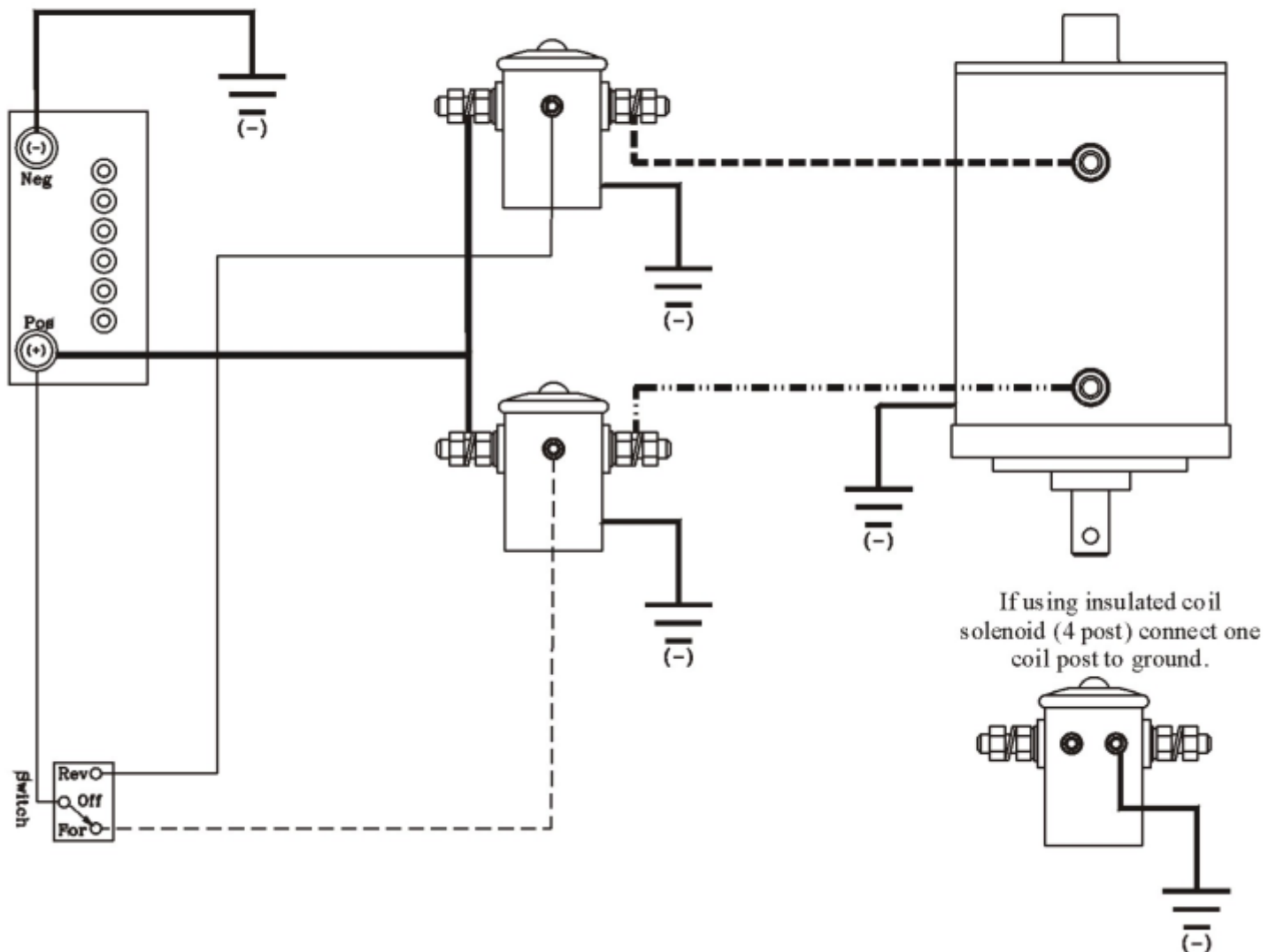
Date: 1/13/98

Scale: N/A

Tolerance N/A

Dwn by: JEK

PM 4S 4P IG Neg



**This is for a two post bi-directional
motor with field coils**

Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

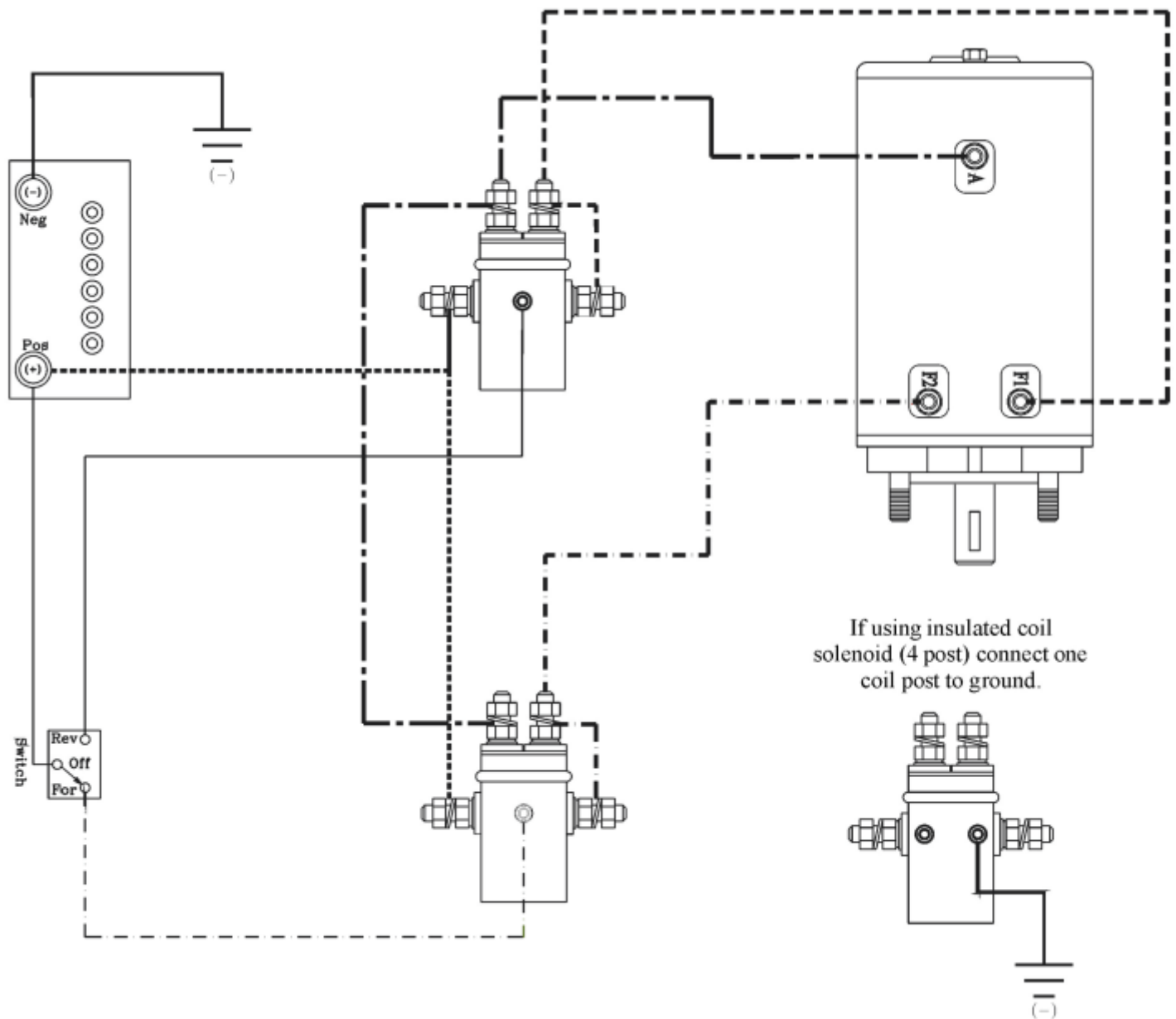
Date: 1/13/98

Scale: N/A

Tolerance N/A

Dwn by: JEK

2S 3P SG 2F WG



(Late Wiring Design)

This is for a three post bi-directional winch motor with field coils

Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

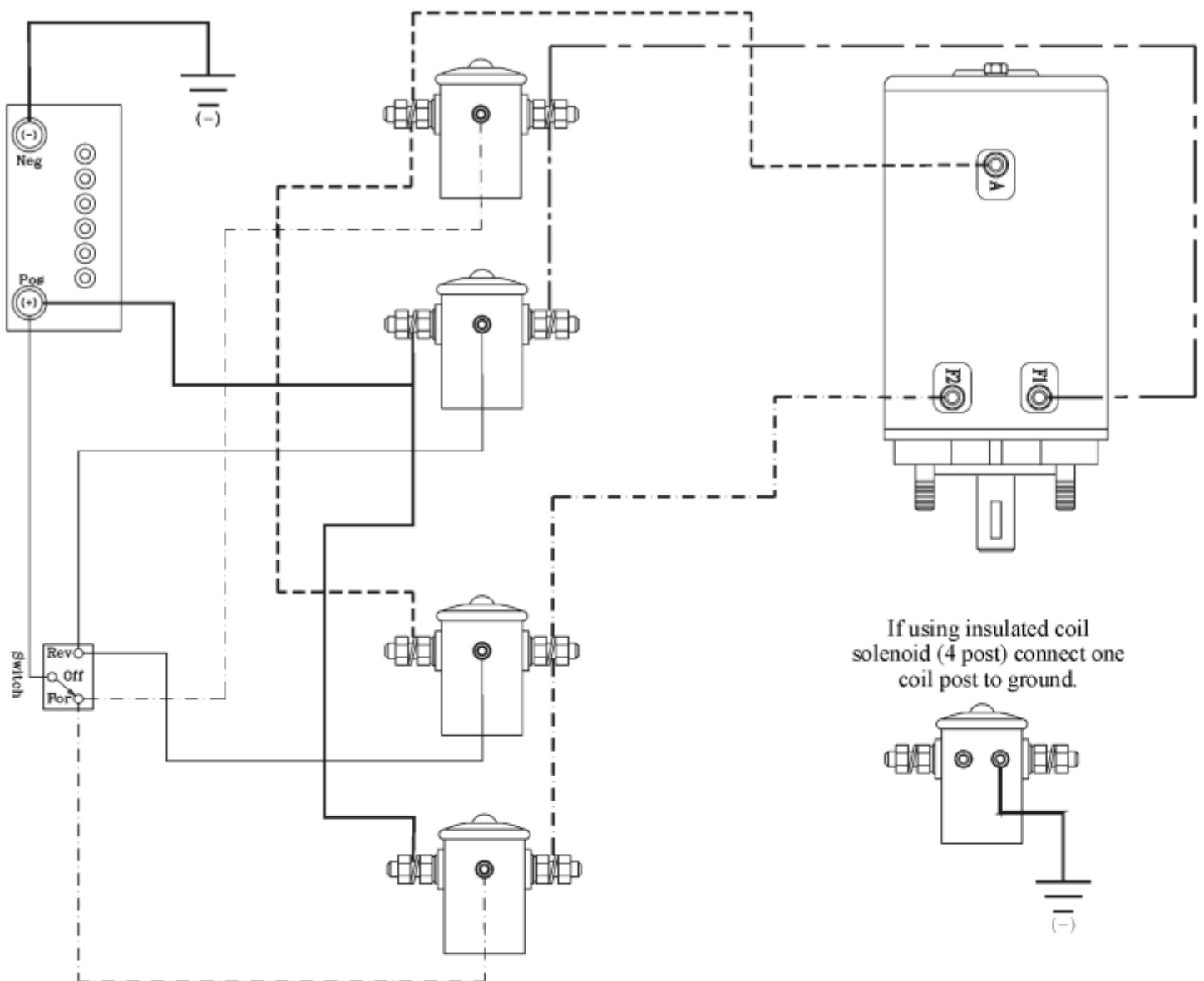
Date: 1/23/08

Scale: N/A

Tolerance N/A

Dwn by: JEK

3 Post Winch Motor



(Early Wiring Design)

This is for a three post bi-directional winch motor with field coils

Western Motors Service Co.



Rockford, Illinois

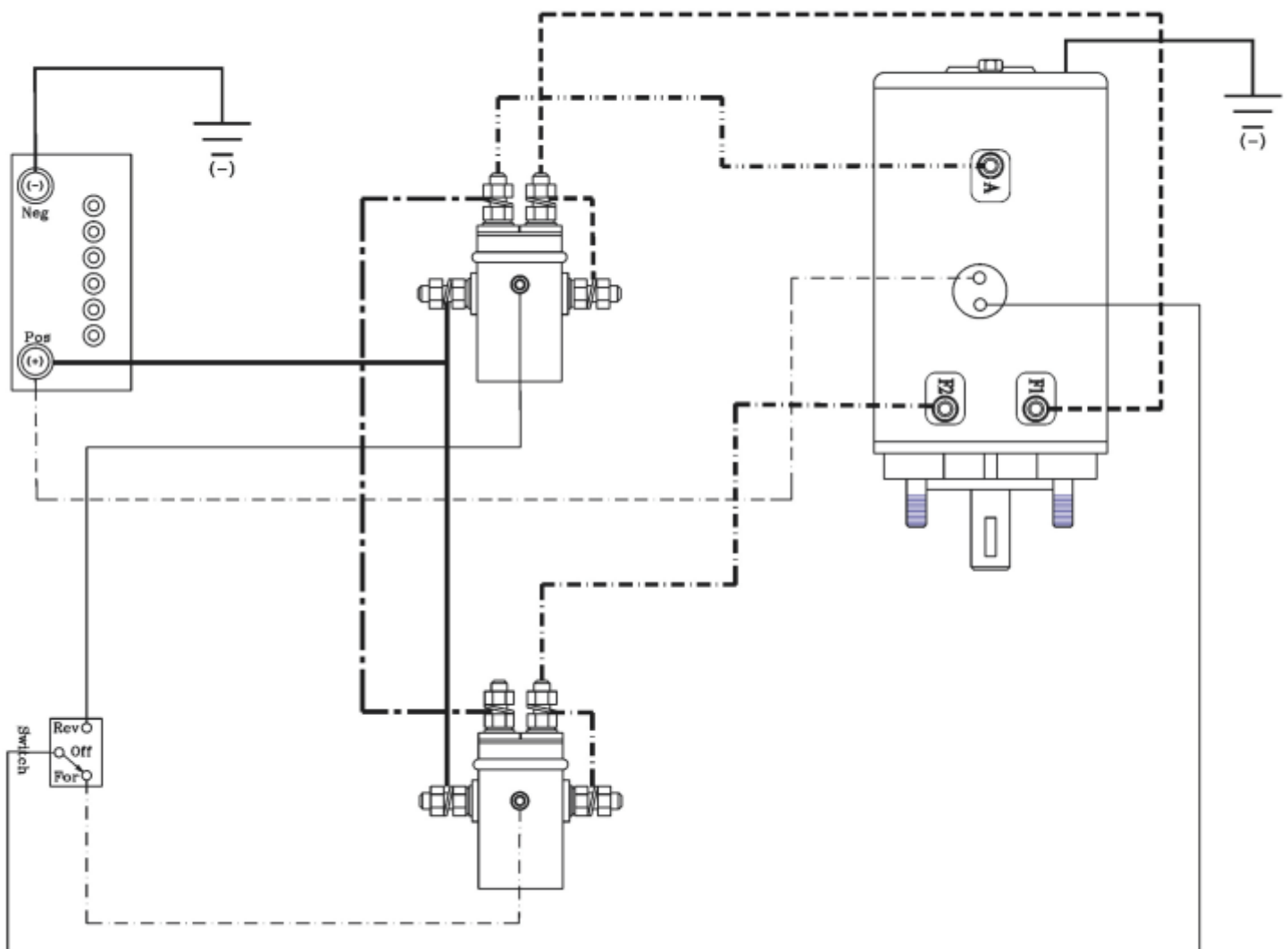
Wiring Diagram

Date: 1/13/98

Scale: N/A
Tolerance: N/A

Dwn by: JEK

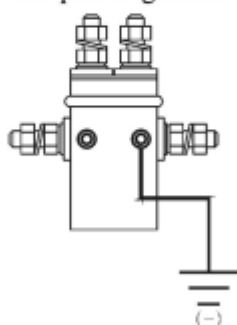
4 Sol. Winch



(Late Wiring Design)

This is for a three post bi-directional winch motor with field coils and overload

If using insulated coil solenoid (4 post) connect one coil post to ground.



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Rockford, Illinois

Wiring Diagram

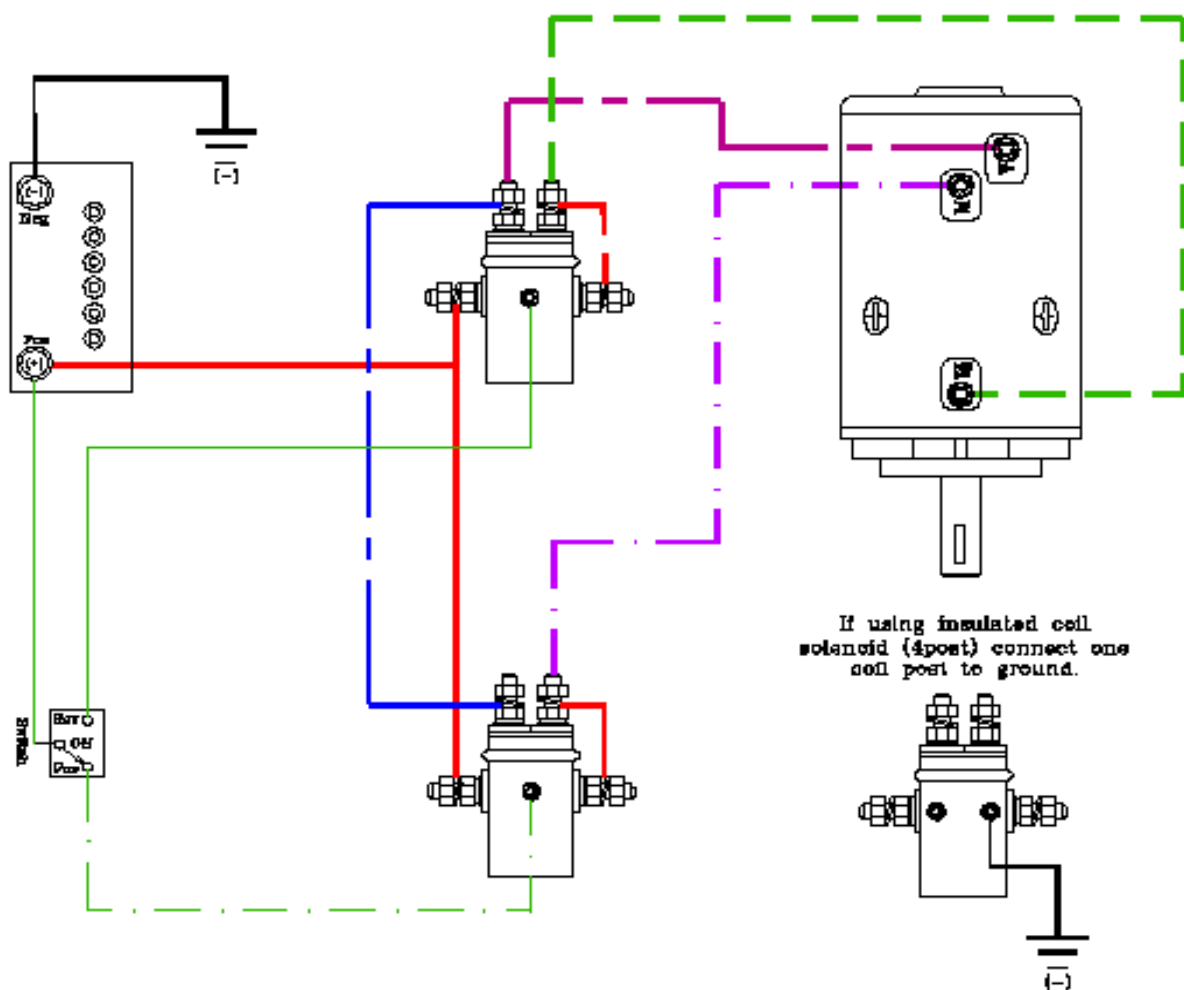
Date: 03/03/03

Scale: N/A

Tolerance N/A

Dwn by: JEK

Overload Style



(Late Wiring Design)
 Bi-Directional Motors
 2 Solenoids, 5 post grounded coil
 Positive control switch

Western Motors Service Co.



Rockford, Illinois

Drawing Title:

Wire Diagram

Date

4/24/05

Scale: N/A

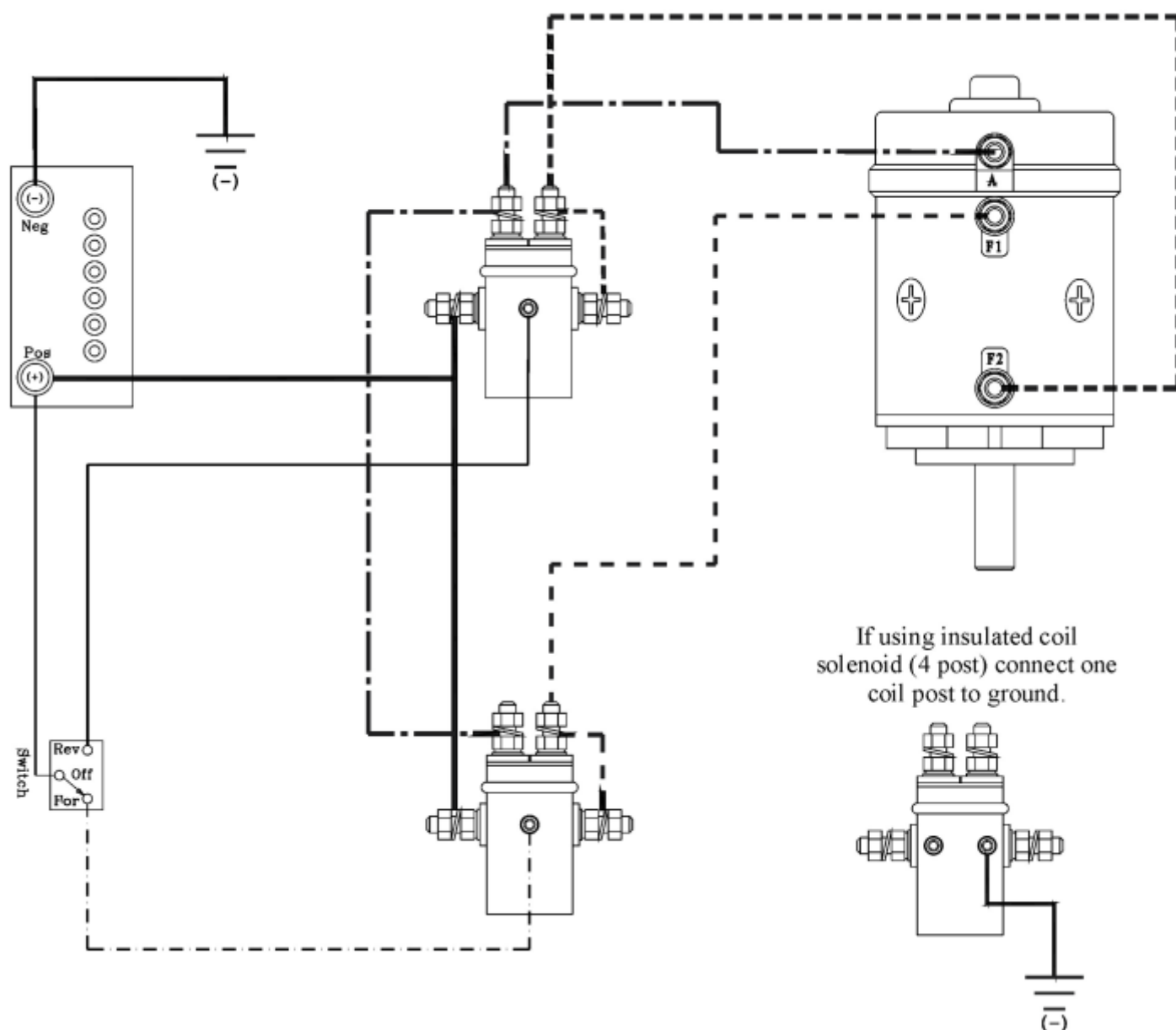
Tol: $\pm .005$

Drawn By:

JEK

Dwg #

W-7643



(Late Wiring Design)

This is for a three post bi-directional XOT style winch motor with field coils

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Rockford, Illinois

Wiring Diagram

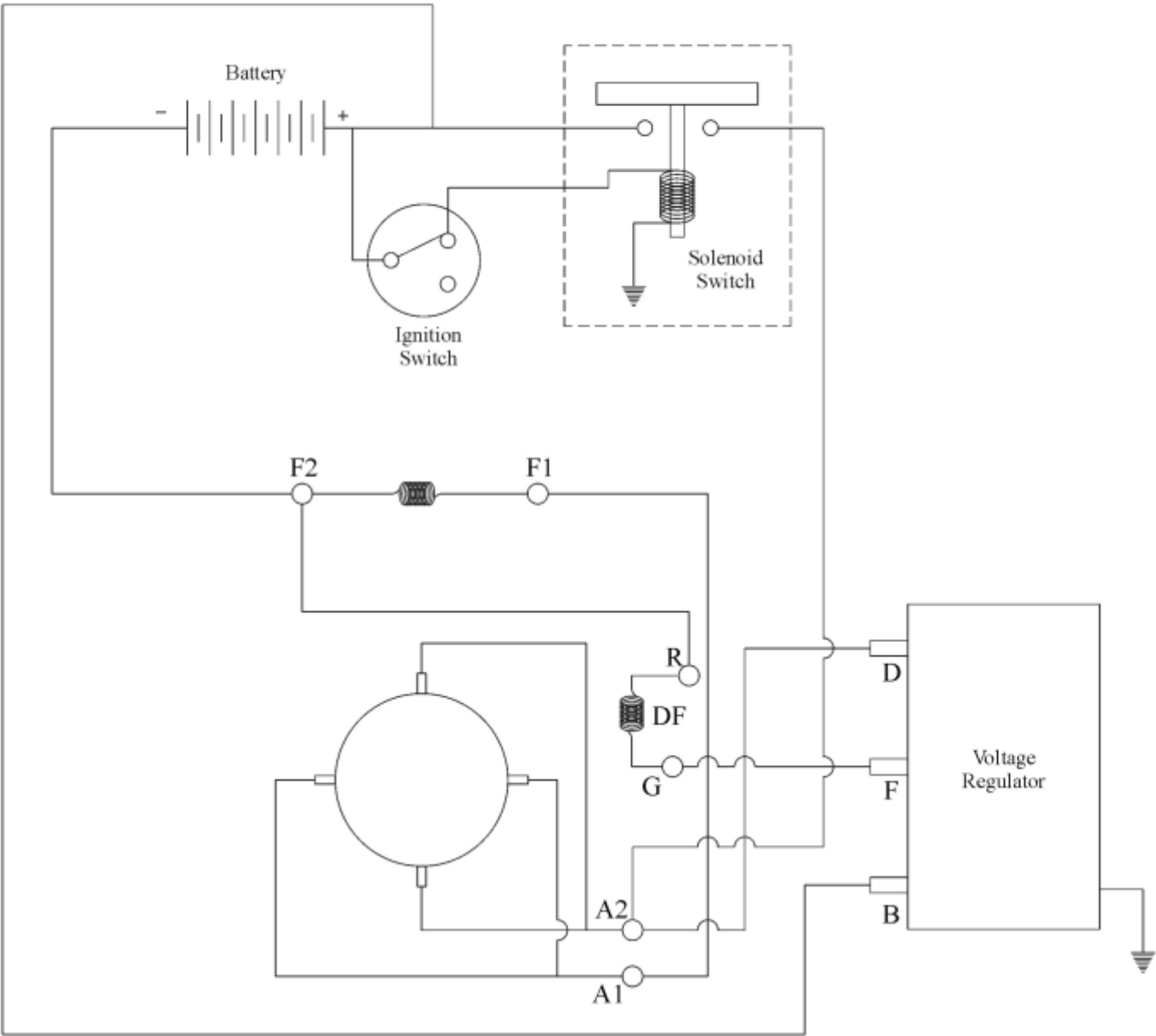
Date: 4/24/05


Scale: N/A

Tolerance N/A

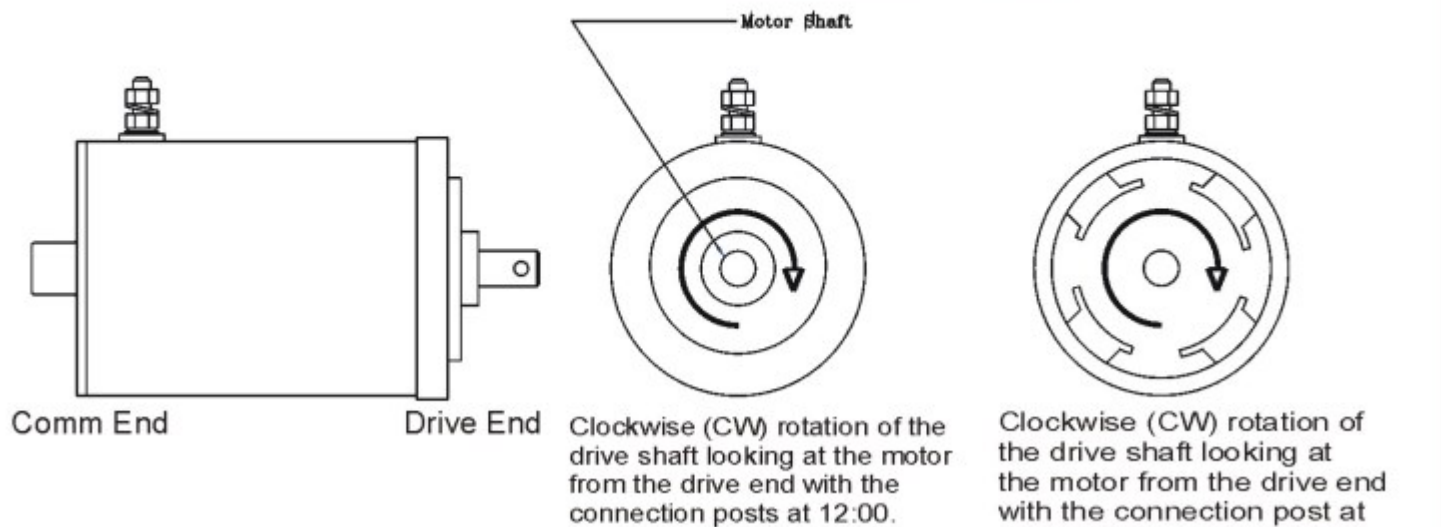
Dwn by: JEK

XOT Wiring



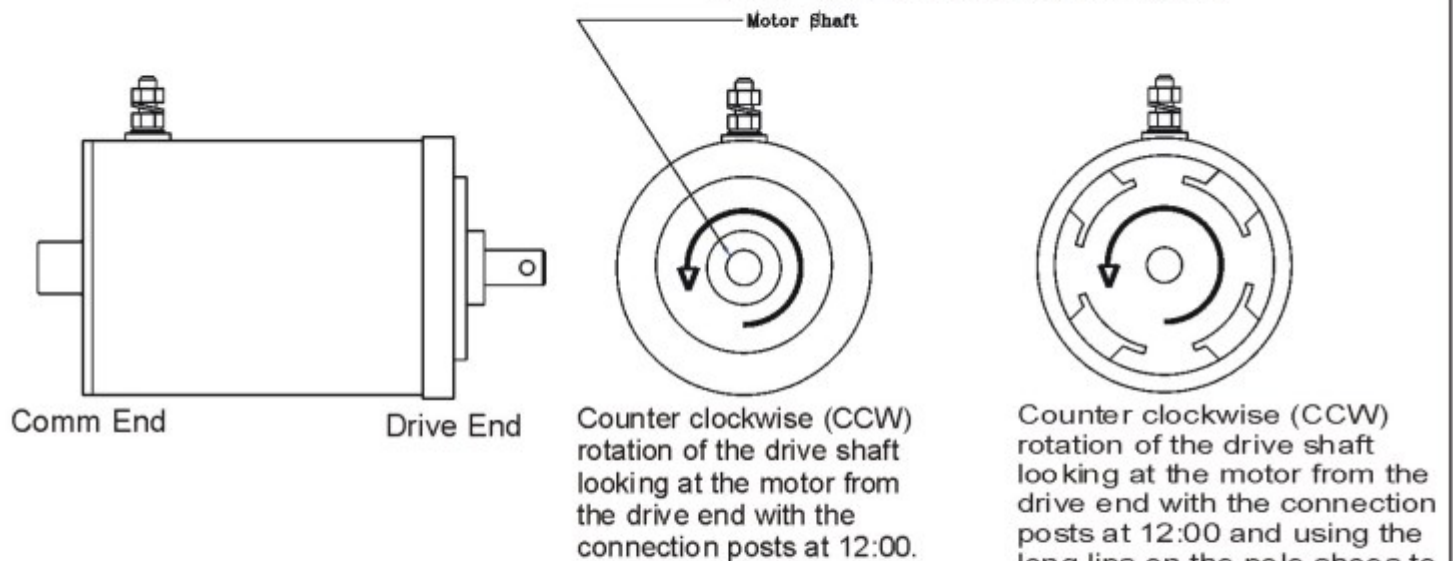
| | | |
|--|----------------------------|---------------|
| <div>Western Motors Service Co.</div> <div></div> <div>Rockford, Illinois</div> | <h1>Generator Diagram</h1> | |
| | Date: 1/24/08 | Scale: N/A |
| | Dwn by: JEK | Tolerance N/A |
| | | W-10704A |

Motor Viewed From the Drive End



How to determine CW rotation of a motor

Motor Viewed From the Drive End



How to determine CCW rotation of a motor

Western Motors Service Co.



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Motor Rotation

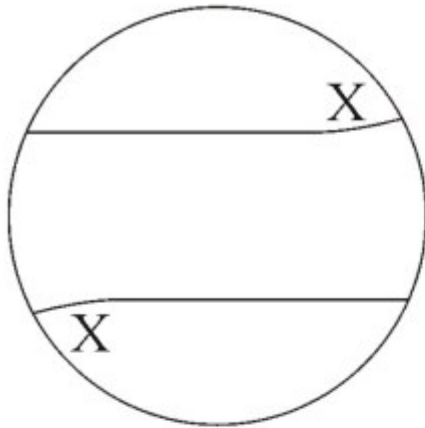
Date: 1/13/98

Scale: N/A

Tolerance N/A

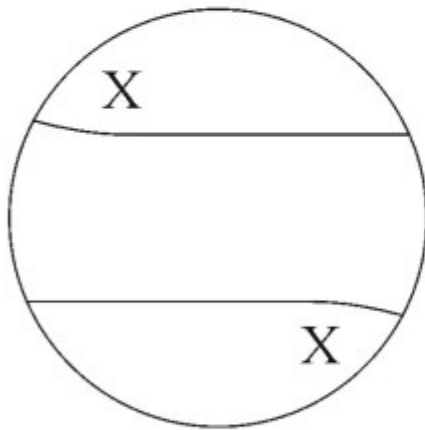
Dwn by: JEK

Motor Rotation



Look at the slot and see if it is worn or polished at the points marked by the "X". If the wear is at the indicated points then the motor rotation is clockwise.

CW



Look at the slot and see if it is worn or polished at the points marked by the "X". If the wear is at the indicated points then the motor rotation is counter clockwise.

CCW

Western Motors Service



Rockford, IL USA

Slot Shaft Wear

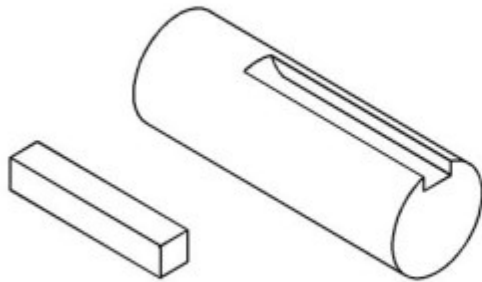
Date: 1/13/98

Scale: N/A

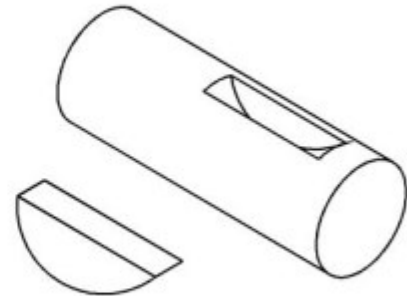
Tolerance N/A

Dwn by: JEK

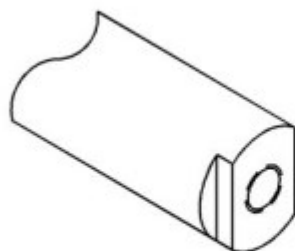
Slot Wear



Bar Key Shaft Design



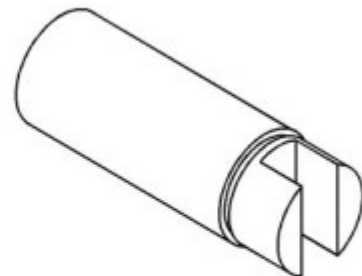
Woodruff Key Shaft Design



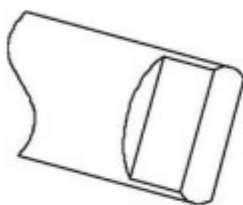
1/4 x 20 NC
Threaded Hole
1/2 inch deep



Amplex Shaft Design



Slot Shaft Design



Tang Shaft Design



Shaft Types

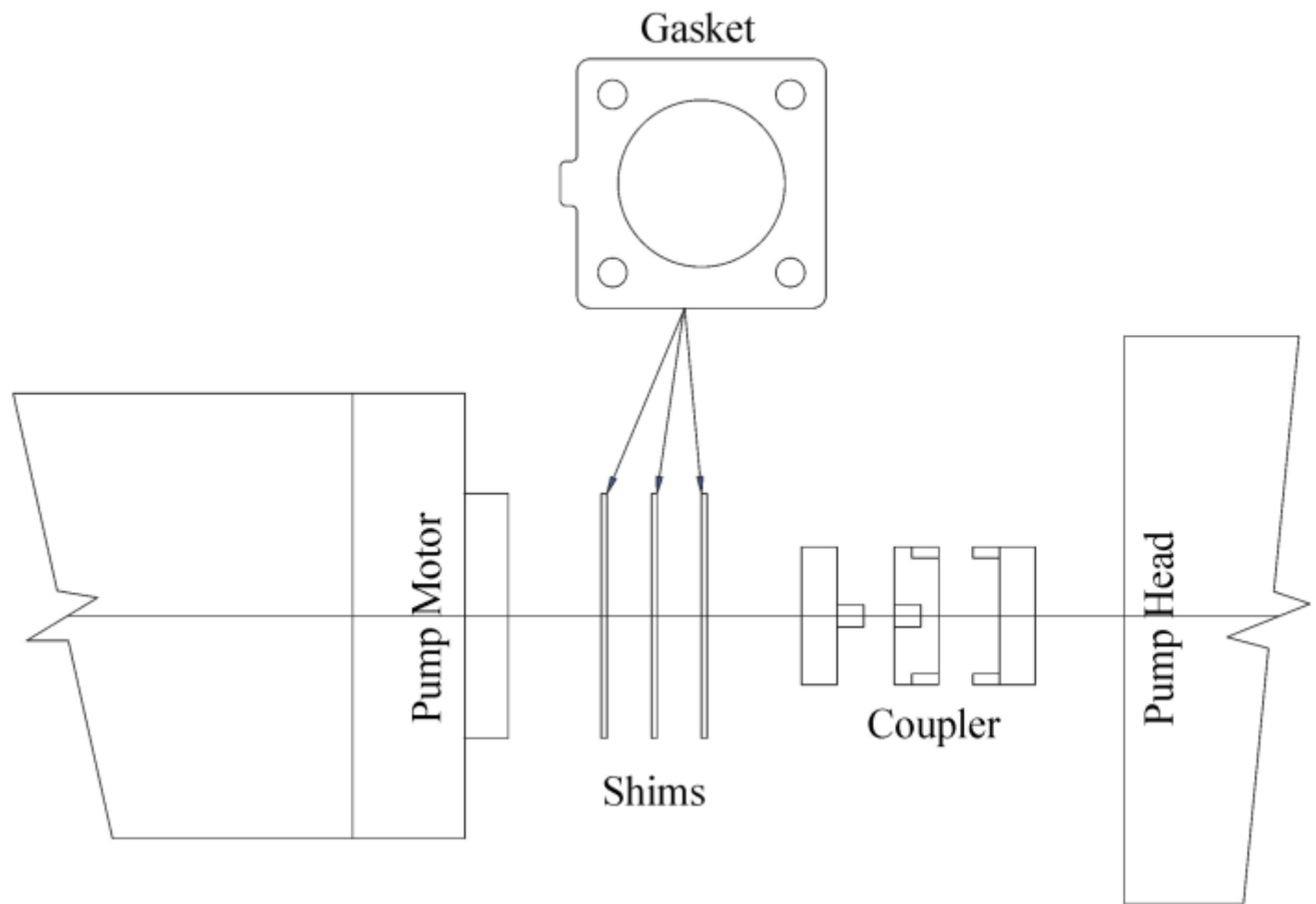
Date: 5/23/00

Scale: N/A

Dwn by: JEK

Tolerance N/A

Shaft Types



Notice: Very Important Installation Instructions

1. When the technician assembles the new motor to the pump head, make sure that you use the enclosed shims to shim the coupler to the proper tension.
2. There are 3 shims included, use however many are required to properly space the coupler.
3. Using too few shims could result in damage to the motor or the pump head.
4. Using too many shims could result in improper coupling of the motor to the pump head.

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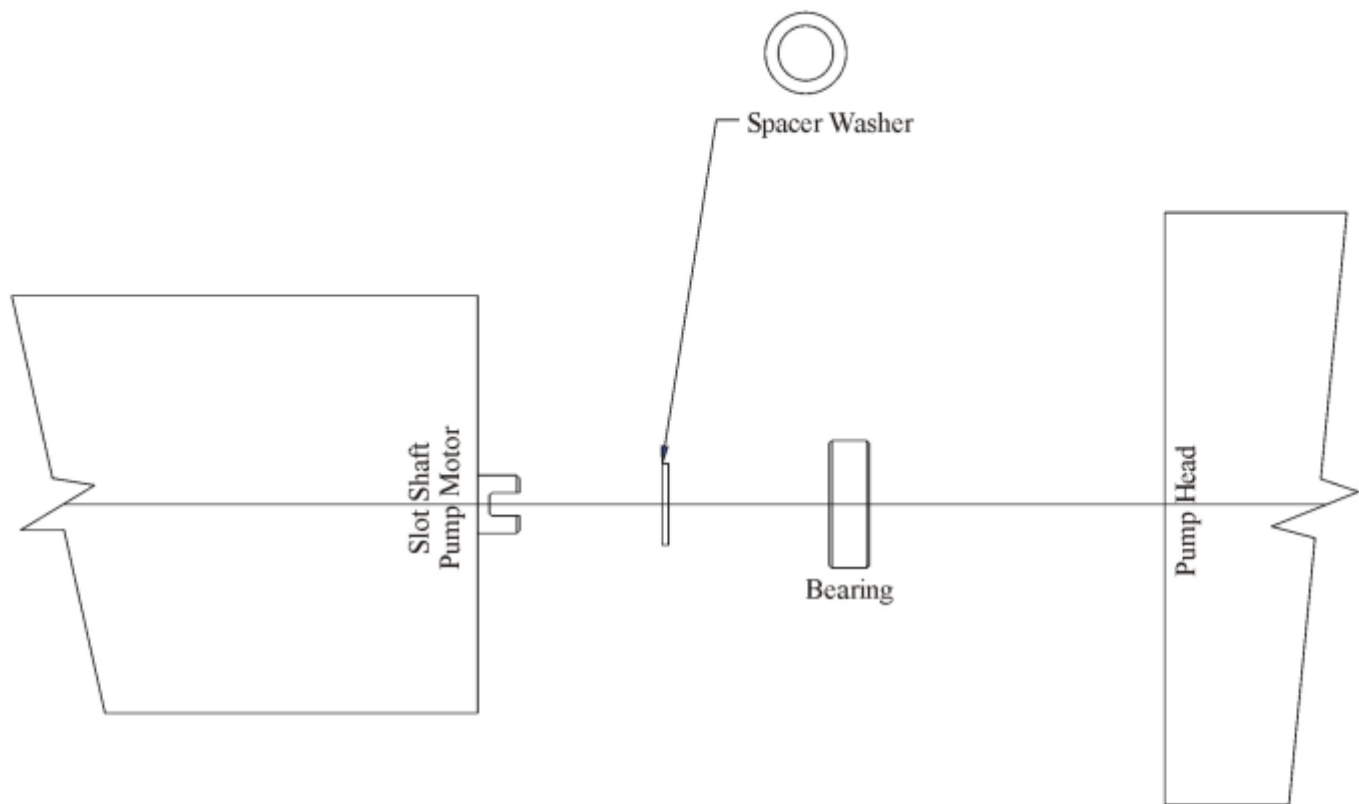
Amplex Assy

Date: 1/23/08

Scale: N/A
Tolerance: N/A

Dwn by: JEK

Amplex Assy



**** Notice** Very Important Installation Instructions**

1. When the technician assembles the new motor to the pump head make sure that they check the spacing to see if the spacer washer needs to be removed for correct fit.
2. The motor comes with one spacer washer behind the ball bearing.
3. Having too tight a fit could result in damage to the motor or the pump head.
4. Having too loose a fit could result in damage to the motor or the pump head.
5. For MTE style motors use the spacer washer.
6. For Monarch motors remove the washer.

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Rockford, Illinois

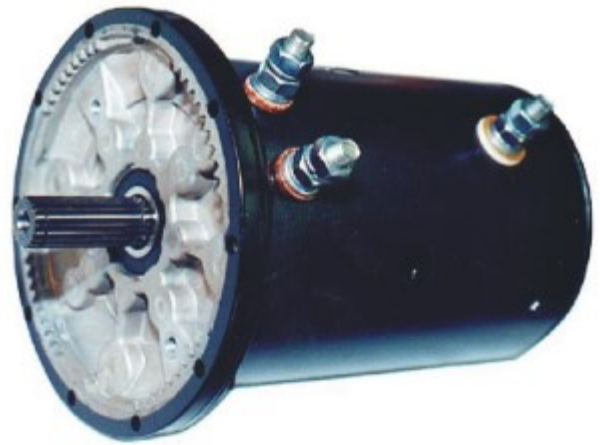
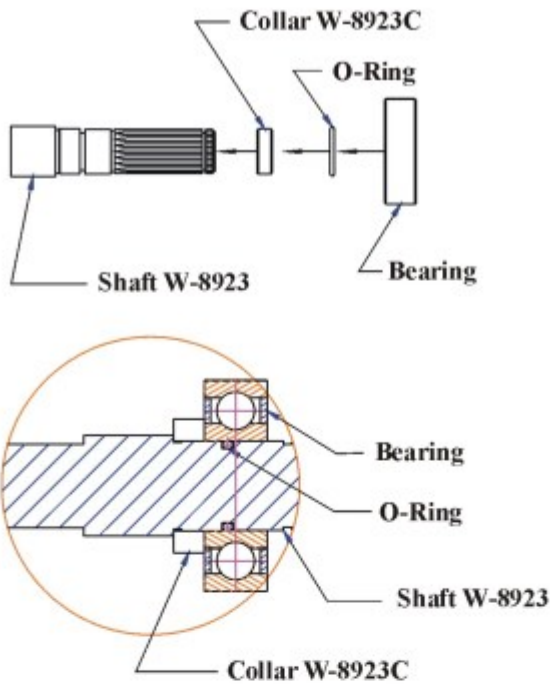
SS Motor Assembly

Date: 1/13/98

Scale: N/A
Tolerance N/A

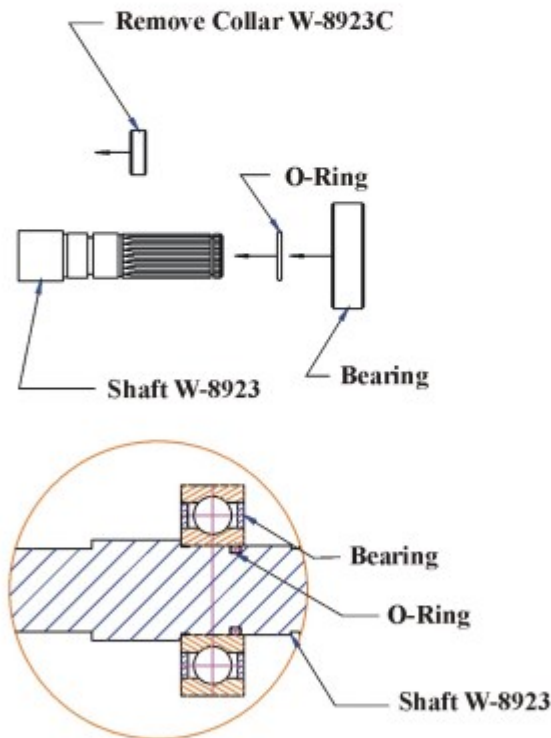
Dwn by: JEK

SS Motor Assy



Notes:

When Replacing a Motor with a Flange use the motor as it arrives with the collar, O-ring, and bearing. Install the motor flange then install the assembly on the winch



Notes:

When replacing a motor that does not have a flange, you must remove the bearing, O-ring and spacer, then install the O-ring and bearing, leaving off the collar. The assy should now look like the bottom drawing. Now the motor will fit the winch correctly

This information applies to
The following units:
W-7923, W-7924, W-8923,
W-8923-DBB, W-9120, and
W-8921

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Rockford, Illinois

Wiring Diagram

Date: 1/13/98

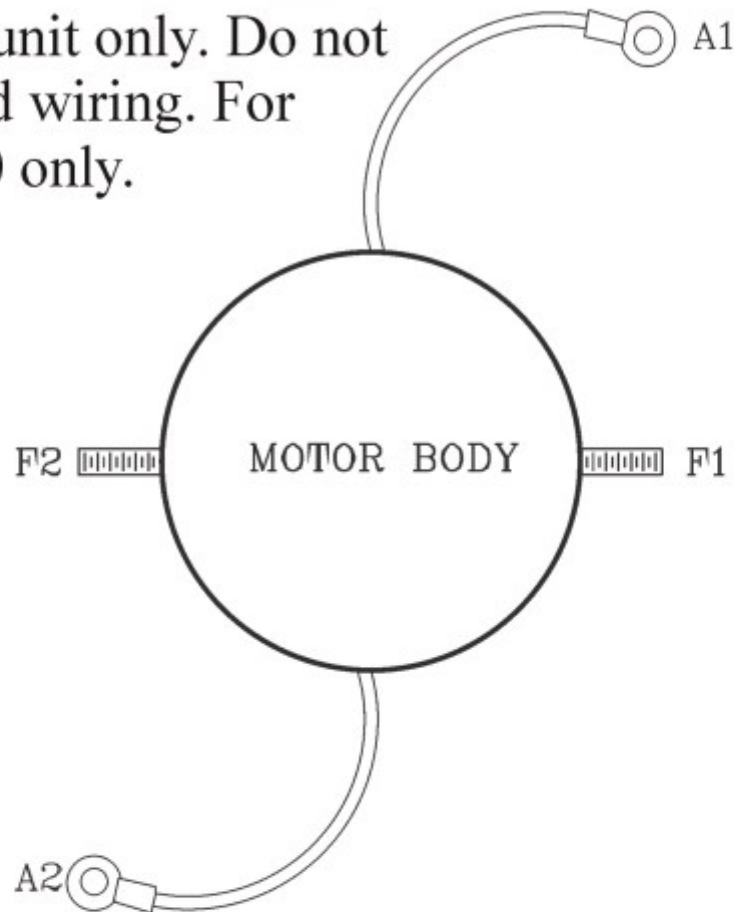
Scale: N/A
Tolerance N/A

Dwn by: JEK

W-8923 Assy

Note:

This diagram is for bench testing the unit only. Do not use for field wiring. For the W-6850 only.



For the W-6850 only

| CCW | CW |
|------------------|------------------|
| A2 battery - neg | A1 battery - neg |
| F1 battery + pos | F1 battery + pos |
| A1 jump to F2 | A2 jump F2 |

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Rockford, Illinois

AutoCrane Test

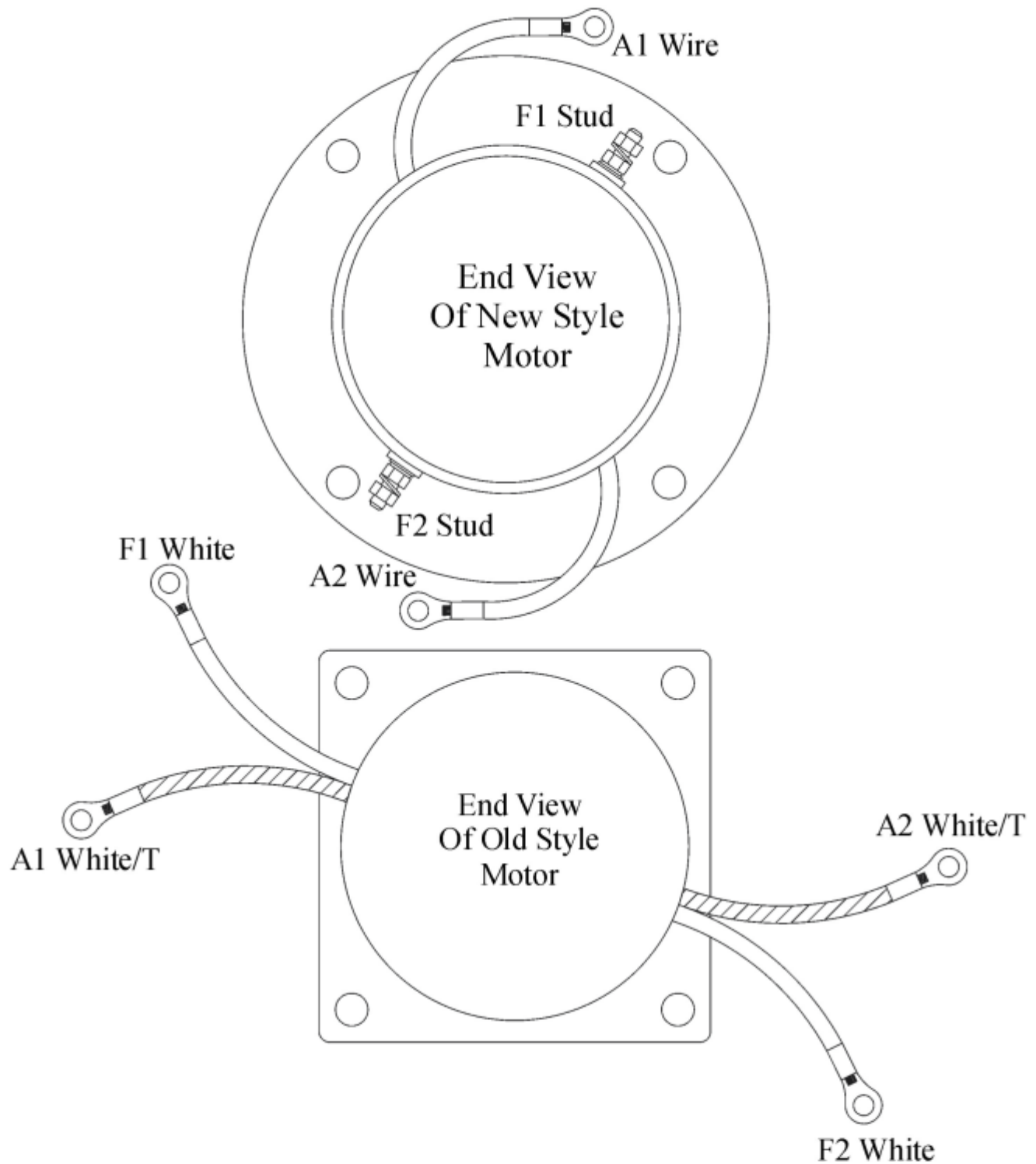
Date: 1/13/98

Scale: N/A

Tolerance N/A

Dwn by: JEK

Auto Crane Test



Western Motors Service Co.



Rockford, Illinois

Wiring Diagram

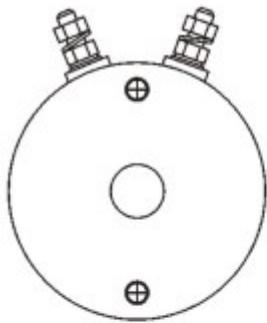
Date: 10/25/02

Scale: N/A

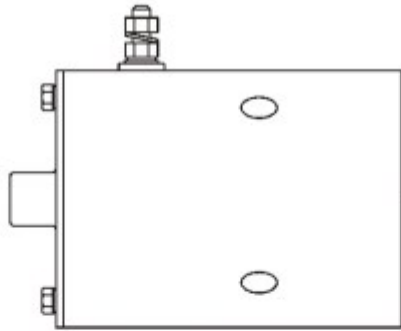
Tolerance N/A

Dwn by: JEK

W-6850 WD

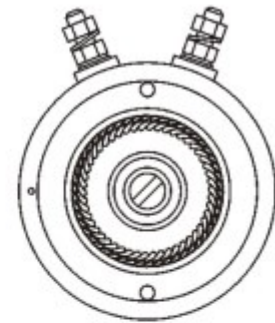


Com End
Thru bolts at the 6 & 12 Position
Looking from the Com end

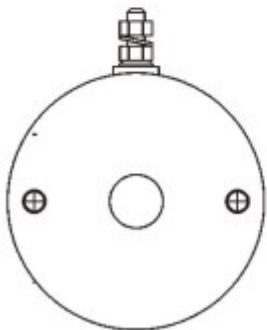


Com End

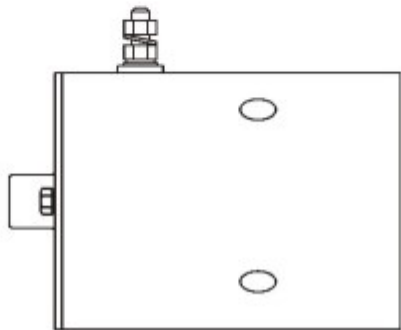
Drive End



Drive End

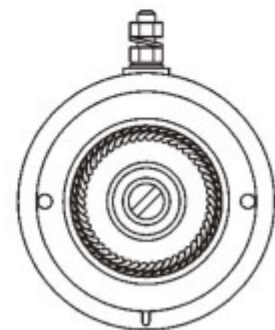


Com End
Thru bolts at the 3 & 9 Position
Looking from the Com end

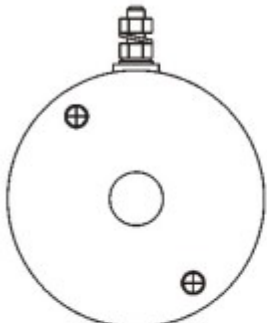


Com End

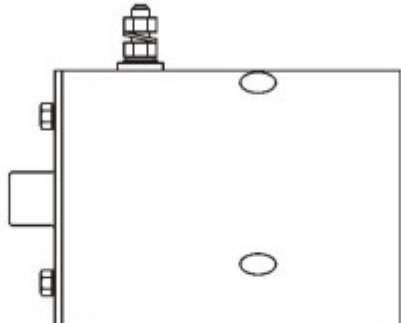
Drive End



Drive End

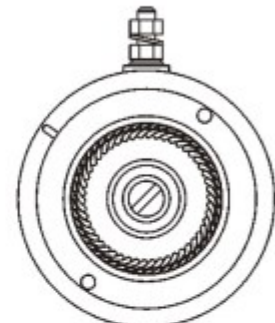


Com End
Thru bolts at the 5 & 11 Position
Looking from the Com end



Com End

Drive End



Drive End

Western Motors Service Co.



Rockford, Illinois

Thru Bolt Locations

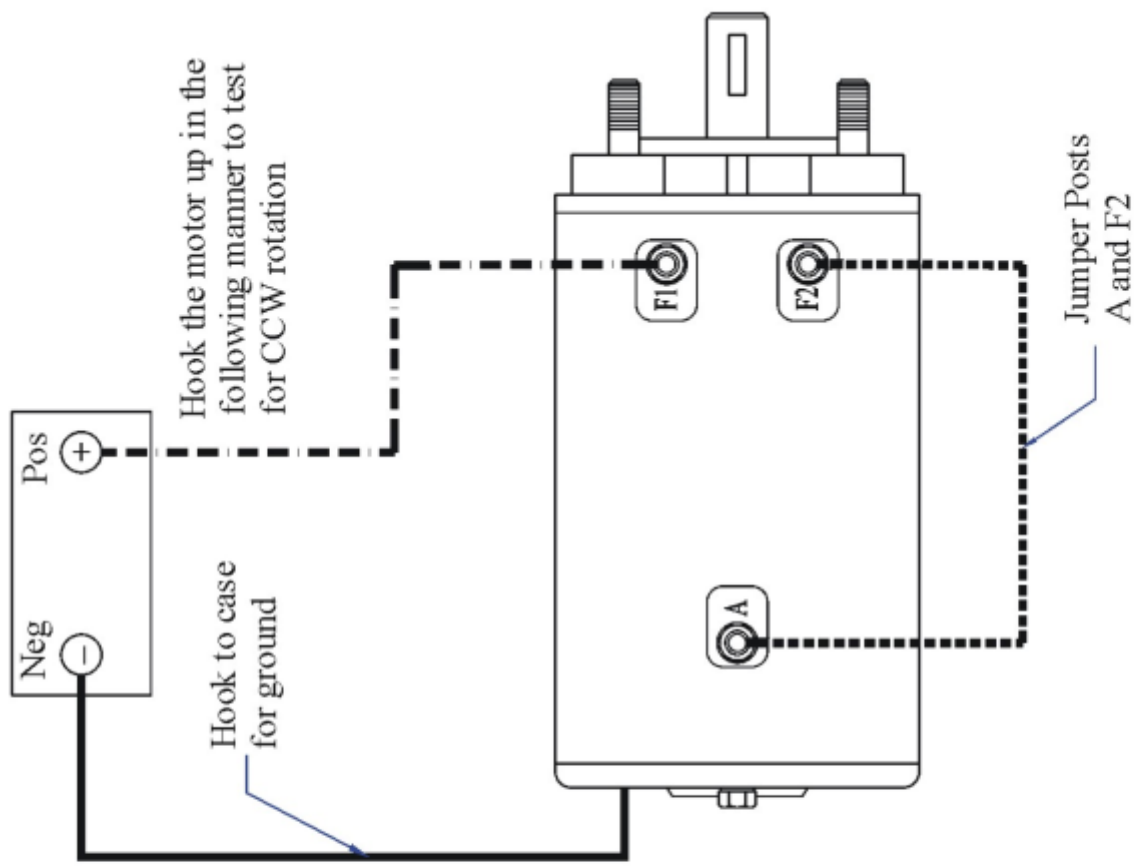
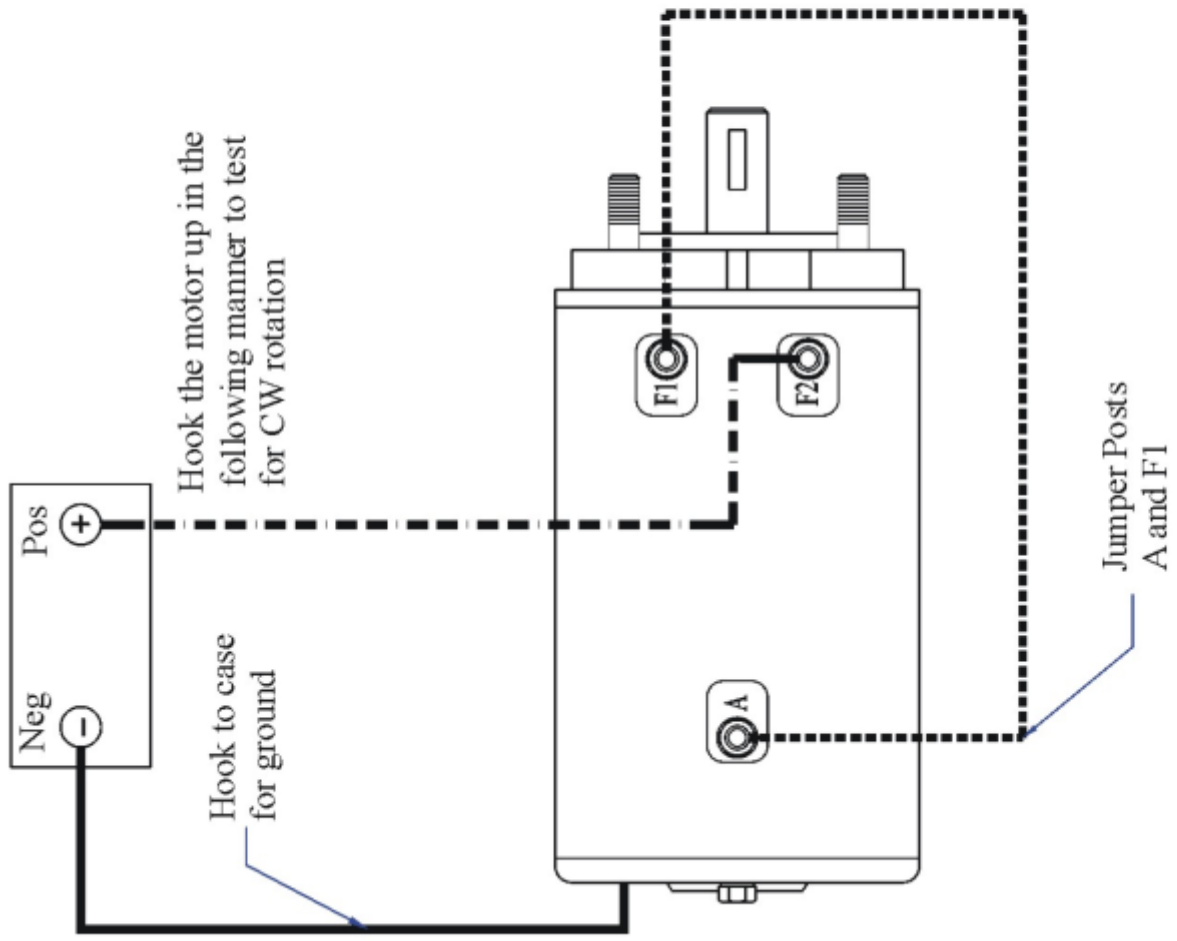
Date: 1/13/98

Scale: N/A

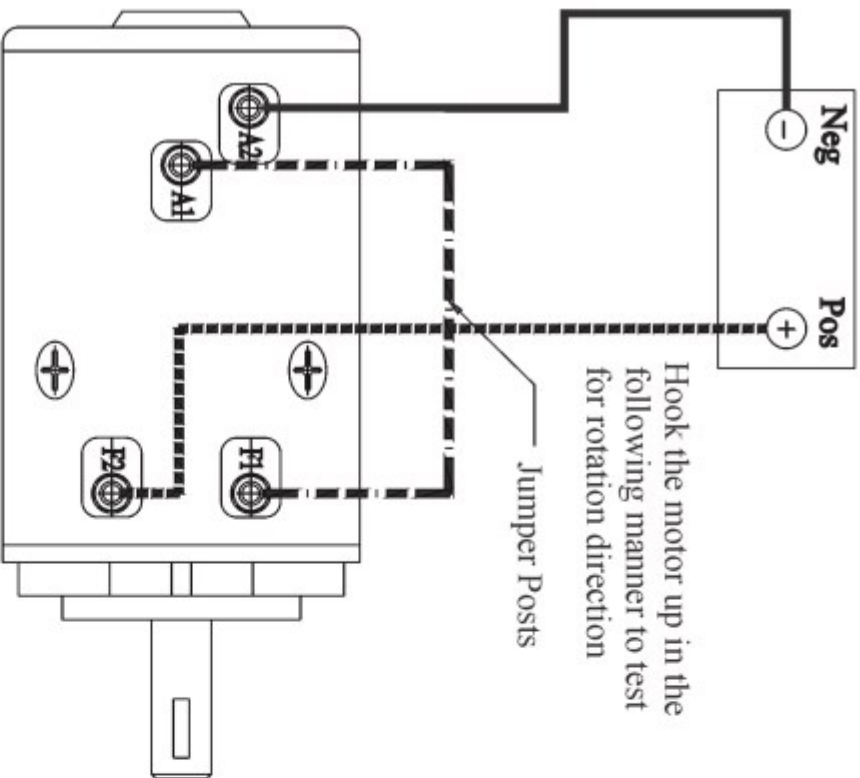
Dwn by: JEK

Tolerance N/A

Thru Bolts

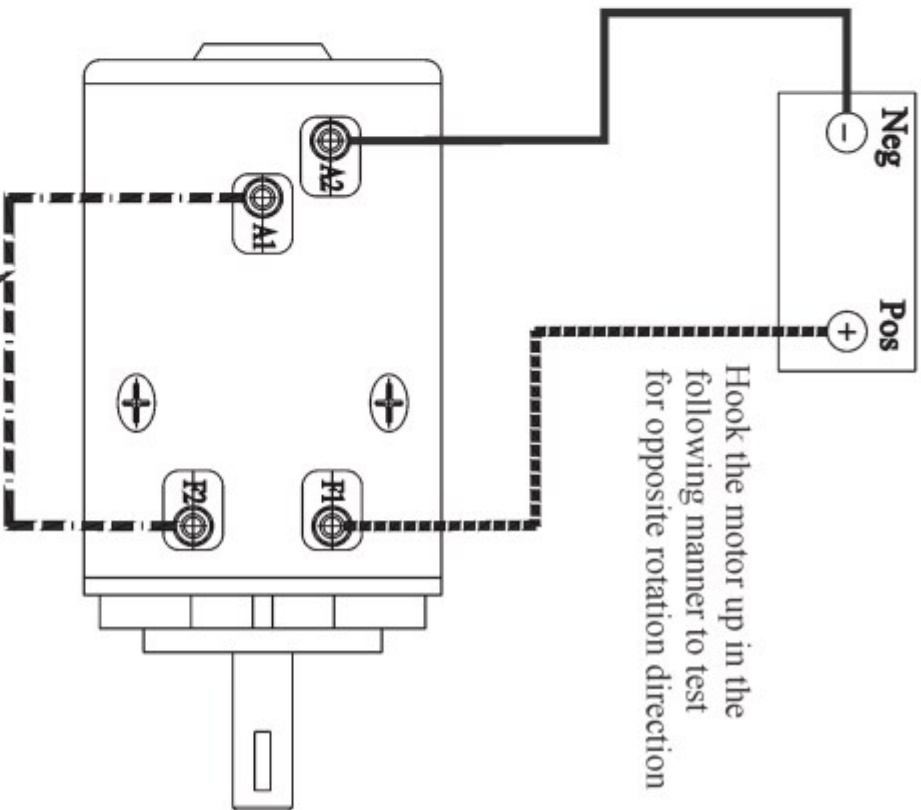


| | | |
|---|----------------------------|---------------|
| Western Motors Service Co. WMS1 Rockford, Illinois | Test Wiring Diagram | |
| | Date: 1/13/98 | Scale: N/A |
| | Dwn by: JEK | Tolerance N/A |
| | | 3 Post Winch |



Hook the motor up in the following manner to test for rotation direction

Jumper Posts



Hook the motor up in the following manner to test for opposite rotation direction

Jumper Posts

Notes:

Hook up 4 post motors for testing as illustrated above

Western Motors Service Co.



Rockford, Illinois

Drawing Title:

Wiring Test Setup

Date

4/26/05

Scale: N/A

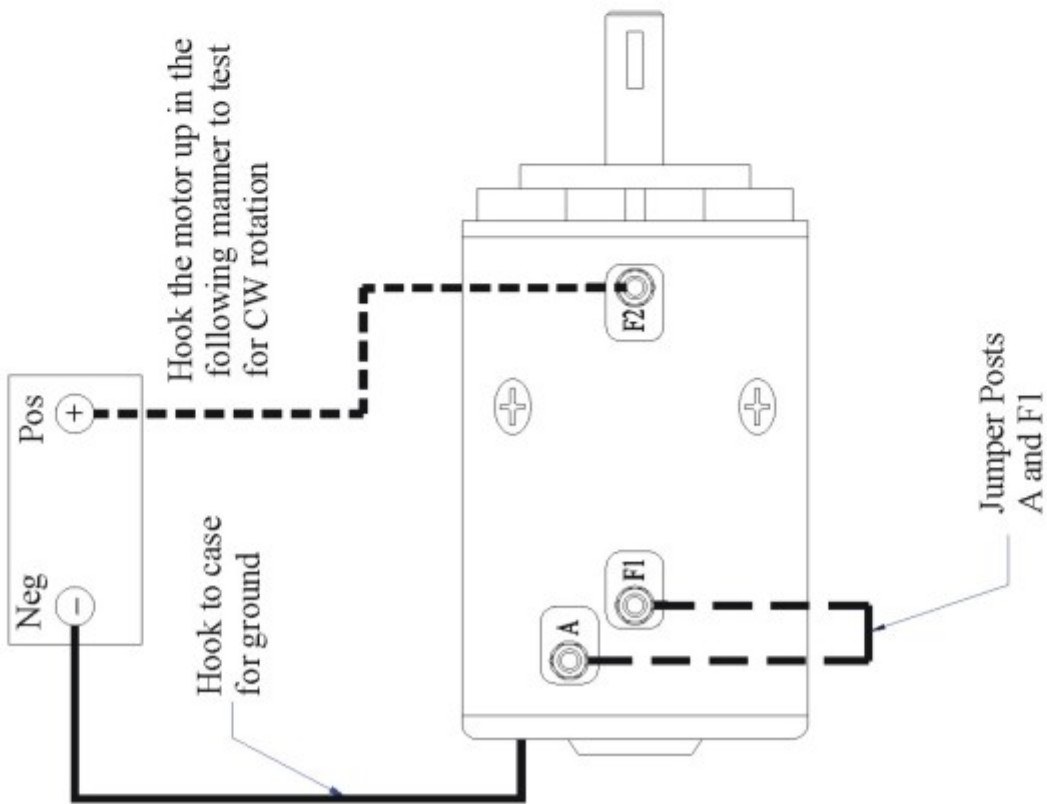
Drawn By:

JEK

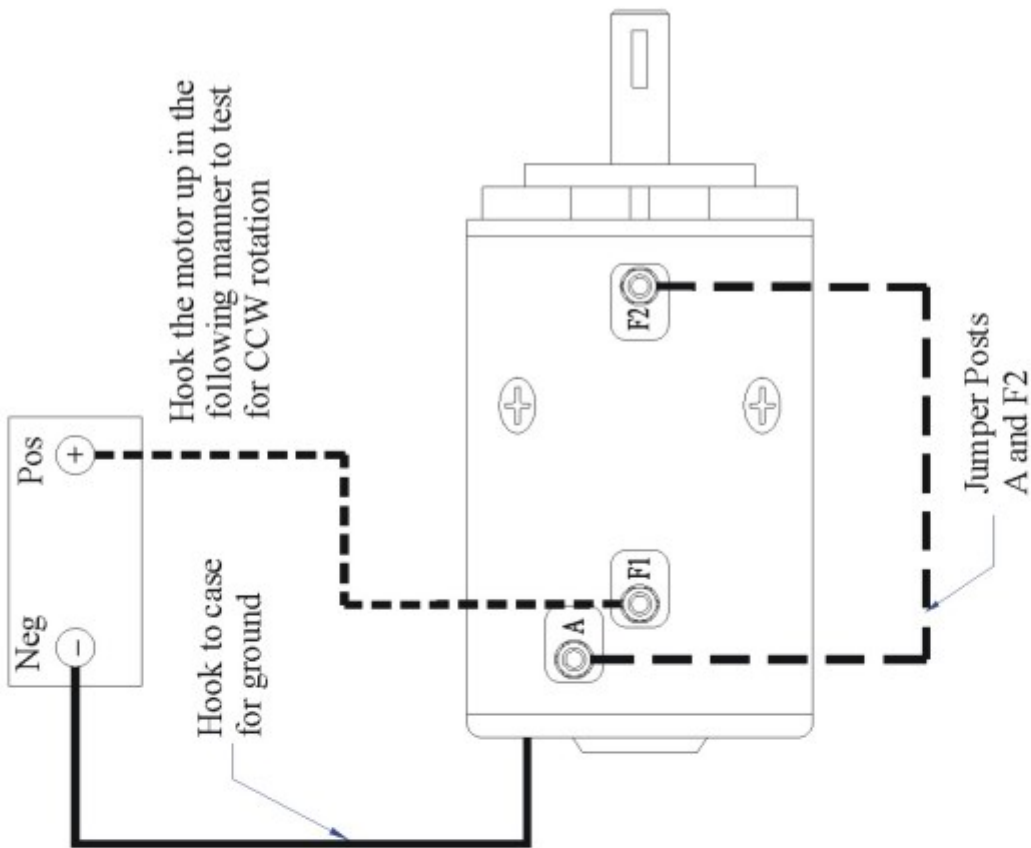
Tol: $\pm .005$

Dwg.# 4 post test

CW



CCW



Notes:

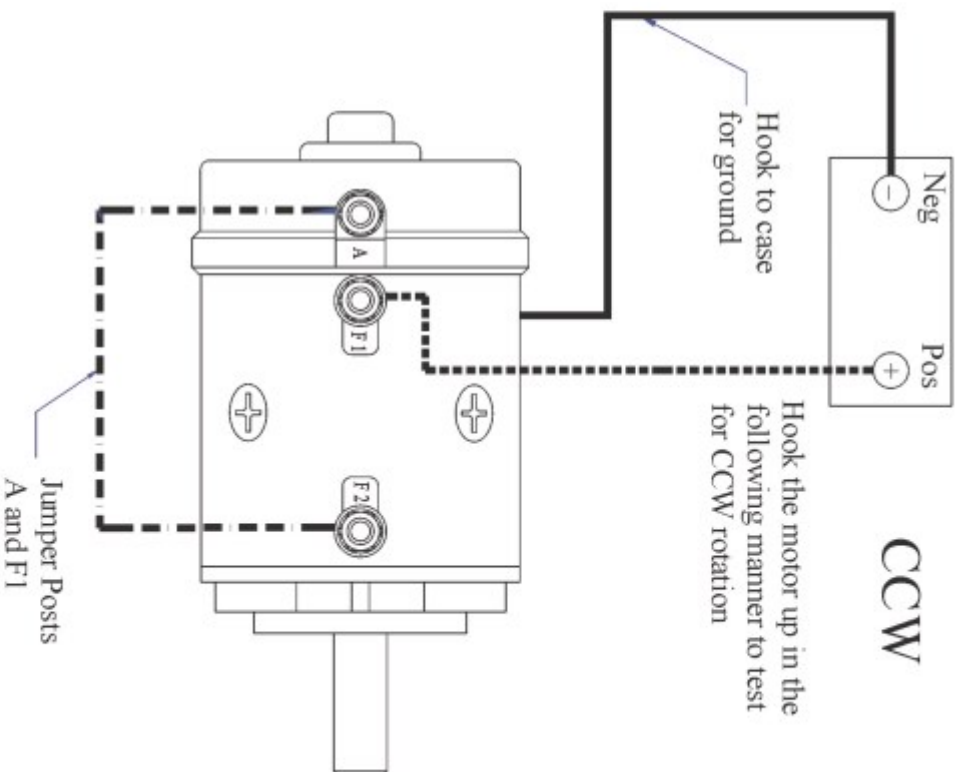
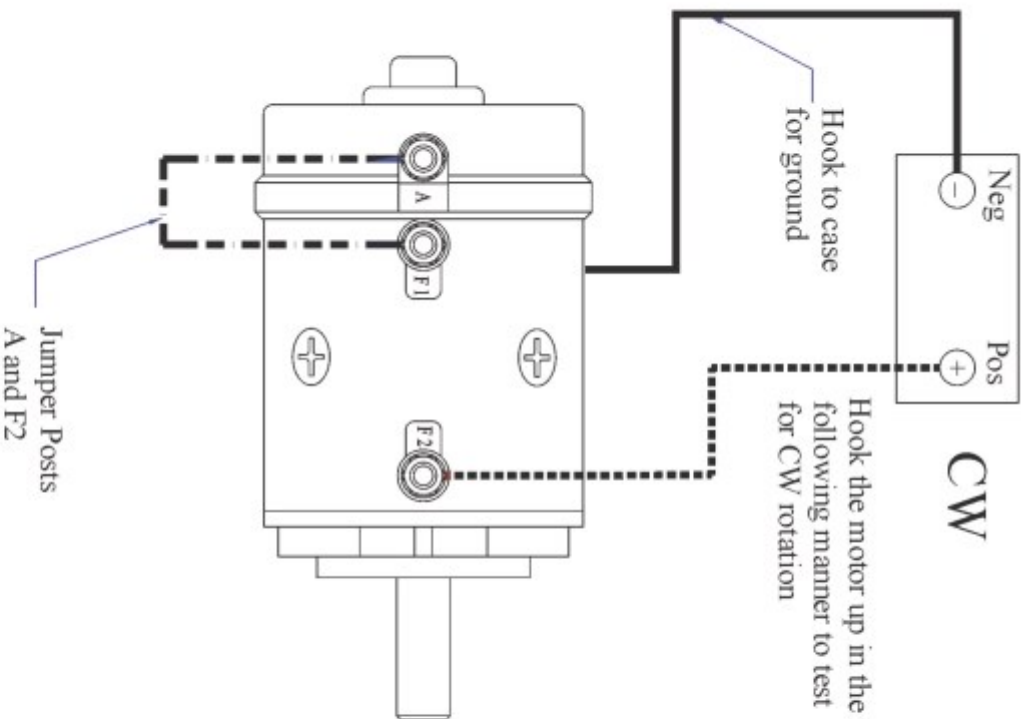
Hook up 3 post motors for testing as illustrated above.

Western Motors Service Co.



Wiring Test Setup

| | |
|--------------|----------------|
| Date: 4/2/05 | Scale: N/A |
| Down by: JEK | Tolerance: N/A |
| | W-7618 |



Notes:

Hook up 3 post motors for testing as illustrated above

Western Motors Service Co.

WMSI

Rockford, Illinois

Drawing Title:

Wiring Test Setup

Date

5/2/00

Scale: N/A

Drawn By:

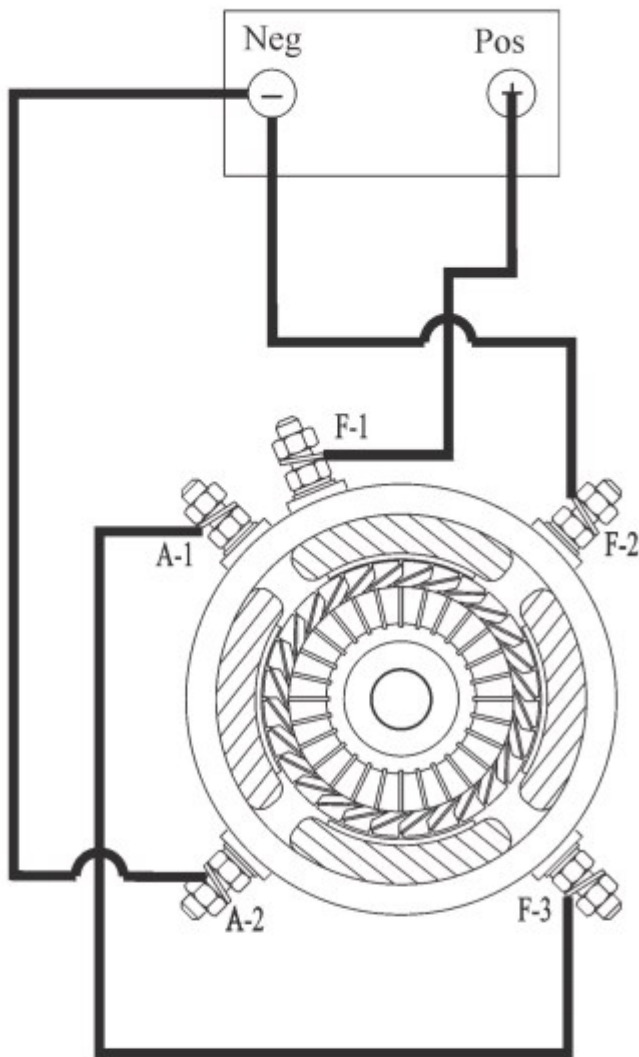
JEK

Tol: $\pm .005$

Dwg.#

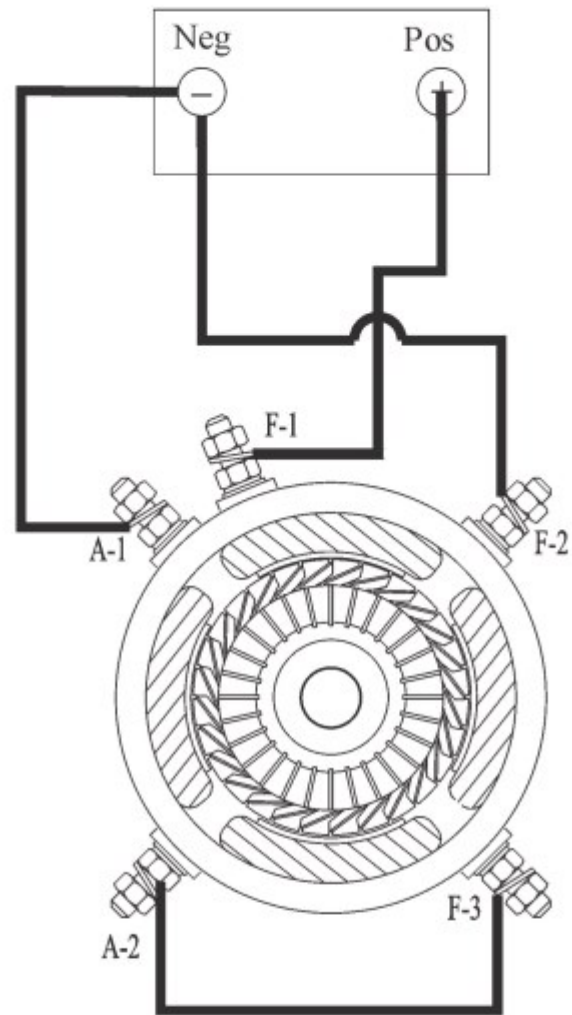
XOT Test Dia

Clockwise at the drive end



Viewed from the commutator end

Counter clockwise at the drive end



Viewed from the commutator end

Notes:

Hook up 5 post motors for testing as illustrated above

Western Motors Service Co.



Rockford, Illinois

Bench Test Diagram

Date: 4/26/05

Scale: N/A

Tolerance N/A

Dwn by: JEK

W-7101

NOTES

NOTES

CATALOG TEXT_COLOR_INFOMATION

Black = 6V <> Blue = 12V <> Bright Red = 24V <> Green = 36V, 48V or 72V

THIS NEW 2015 CATALOG IS USING DIFFERENT TEXT COLORS TO REPRESENT AT A GLANCE THE DIFFERENT VOLTAGES OF THE PARTICULAR ITEM SUCH AS DC MOTORS, STARTER MOTORS AND THE COMPONENT PARTS OF THE MOTORS, STARTERS etc.

“ALL” 6V ITEMS IN THE CATALOGS, MOTORS AND THE COMPONENT PARTS WILL HAVE THIS “BLACK” TEXT COLOR ABOVE THE PARTICULAR PART NUMBER WHICH WILL SHOW THIS COLOR REPRESENTS A ITEM THAT IS “6V”

“ALL” 12V ITEMS IN THE CATALOGS, MOTORS AND THE COMPONENT PARTS WILL HAVE THIS “BLUE” TEXT COLOR ABOVE THE PARTICULAR PART NUMBER WHICH WILL SHOW THIS COLOR REPRESENTS A ITEM THAT IS “12V”

“ALL” 24V ITEMS IN THE CATALOGS, MOTORS AND THE COMPONENT PARTS WILL HAVE THIS “BRIGHT RED” TEXT COLOR ABOVE THE PARTICULAR PART NUMBER WHICH WILL SHOW THIS COLOR REPRESENTS A ITEM THAT IS “24V”

“ALL” 36V, 48V OR 72V ITEMS IN THE CATALOGS, MOTORS AND COMPONENT PARTS WILL HAVE THIS “GREEN ” TEXT COLOR ABOVE THE PARTICULAR PART NUMBER WHICH WILL SHOW THIS COLOR REPRESENTS A ITEM THAT IS 36V, 48V OR 72V OR ARE MISC.

**BELOW ARE EXAMPLES OF THE CATALOG TEXT_COLOR_INFOMATION
SHOWING THE DIFFERENT VOLTAGES AND THEIR ASSOCIATED COLORS**

Black = 6V <> Blue = 12V <> Bright Red = 24V <> Green = 36V, 48V or 72V

***6V* (CCW) (4) FIELD SLOT SHAFT MOTOR**

“WMS” PART NUMBER, MZ4186RM

REPLACES NUMBERS, MZ4186, 46-160, MZ-4186

(APPLICATIONS) (J. S. BARNES, HALDEX etc.)

(*REMANUFACTURED MOTOR WITH CORE CHARGE*)

Motor diameter is 4”



***12V* “CW” (DBB) MOTOR WITH .625” DIA. SHAFT**

“WMS” PART NUMBER, W-6020

REPLACES, W6020, 6031, 8076, MDT-6020, MDT-6020S

(APPLICATIONS)

(MONARCH & NU-STAR EQUIPMENT)

(THE RAISED RING DIAMETER ON DRIVE END IS 3”/ 76.2mm)



SHAFT IS 1.5”/ 38.1mm LONG

***24V* (CCW) DBB, SLOT SHAFT
MOTOR WITH “INSULATED” GROUND AND WITH
(2) TERMINAL POSTS AT THE COMM END**

“WMS” PART NUMBER, W-8263

REPLACES NUMBERS, IM-0137, W-8963, 11216206, W8263, 56021303

(THRU BOLTS ARE AT THE 3 & 9 POSITION)



***48V* (CW) HD (4.5” DIA.) “PM” MOTOR
AMPLEX SHAFT TYPE MOTOR**

“WMS” PART NUMBER, W4BD-2744

REPLACES, 378274, W4BD2744, 2200952, 4BD-02744, 220-0952

(APPLICATIONS) HALDEX BARNES PUMPS

(3.7HP) (OVERALL LENGTH OF MOTOR IS 14.2”/ 360.68mm)





WESTERN MOTORS SERVICE CO.

1211 23rd AVE.

ROCKFORD, IL. 61104 USA

Phone number; 800-810-0401 <> 815-986-2214

E-mail; westernmotors@wms1.com <> Fax # 815-986-2566

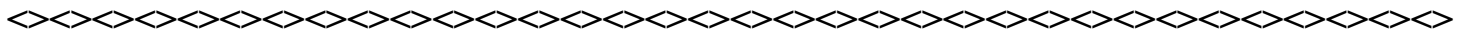
WESTERN MOTORS IS ONE OF THE LARGEST MANUFACTURER / SUPPLIERS OF SPECIALTY DC MOTORS IN NORTH AMERICA. WE CARRY A LARGE INVENTORY OF OEM AND REPLACEMENT 12V THRU 72V DC MOTORS AND COMPONENT PARTS FOR, PUMP MOTORS, WINCH MOTORS, SNOW PLOW MOTORS, SPREADER MOTORS, EMERGENCY VEHICLES, OIL FIELD INDUSTRY, MARINE APPLACATIONS AND MUCH MORE.

WE THANK YOU ALL VERY MUCH FOR YOUR CONTINUED BUSINESS

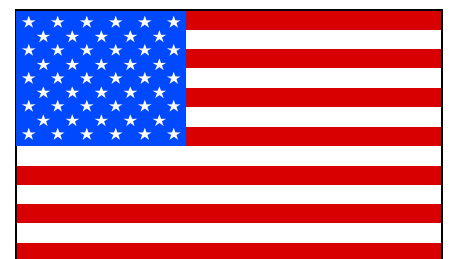
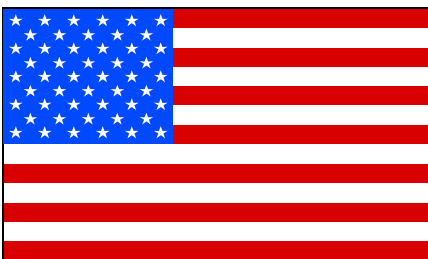
Sales and support; Rick Sr., Rick Jr., Kim, Janet, Diane, Cindy, Steve, Jeremy, and Marty

Cindy's direct toll free line = 855-772-2170

Marty's direct toll free line = 800-810-4177



**(FOR ALL OBSOLETE, SPECIAL, CUSTOM & UNITS THAT ARE NO LONGER AVAILABLE)
WE WILL CONTINUE TO OFFER OUR COMPLETE CUSTOM MANUFACTURING
OF NEW MOTORS AND REMANUFACTURING SERVICE FOR OBSOLETE ITEMS
AT 1255 23rd AVE, ROCKFORD, IL. 61104**



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| WA-2102 | PG# 8 |
| WA-2104 | PG# 8 |
| WA-2133 | PG# 10 |
| WA-2246 | PG# 14 |
| WA-302 | PG# 2 |
| WA-302-BBE | PG# 2 |
| WA-302-E | PG# 2 |
| WA-302D | PG# 2 |
| WA-303 | PG# 3 |
| WA-304 | PG# 3 |
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| WA-805 | PG# 5 |
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| WA-507 | PG# 13 |
| WA-5106 | PG# 1 |
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| WA-850 | PG# 5 |
| W-9234 | PG# 10 |
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