prestolite SERVICE MANUAL

STARTING MOTOR SECTION

(Issued 3-16-78)

ROTATION See Tabulation. VOLTS 6 POLES 4 BRUSHES 4

LUBRICATION

At overhaul, all bronze bearings should be well lubricated with medium engine oil.

Cover armature shaft at Drive End with a film of lubricant before assembling drive.

STARTING SWITCH

See Tabulation.

BRUSH SPRING TENSION

32 to 40 ounces with new brushes. This tension is measured with the scale hooked under the brush spring near the brush and the reading is taken just as the spring leaves the brush. The pull of the spring scale is to be at right angles to the line of force exerted by the brush spring.

TRANSMISSION

See tabulation for type.

COMMUTATOR END HEAD

Be sure felt oiling pad is in the outer end of the commutator end bearing before assembling the commutator end head on the motor.

POLE SHOE ASSEMBLY

Install pole shoes so that the long tip is to the trailing end.

END PLAY

.005" minimum.

POSITIVE SHIFT CLUTCHES

With the pinion thrown into full mesh position as controlled by the shift fork, a clearance should be maintained between the outer edge of the pinion and the thrustwasher or pinion stop. Adjustment for this clearance is made by screwing the button on the end of the switch plunger in or out as necessary.

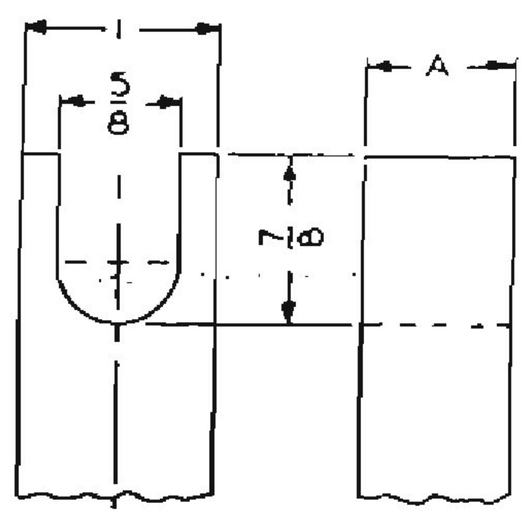
Starting switch plunger travel between "at rest" and "closed" positions should be approximately 15/32".

SWITCH TIMING

Be sure to adjust the full mesh pinion clearance so that with the switch closed and the plunger fully bottomed, a clearance of 3/32" ± 1/64" should be maintained between the outer edge of the pinion and pinion stop.

SWITCH ACTION TEST

To test switch action on clutch type motors, slip a steel spacer (See illustration for dimensions) over the armature shaft between the pinion and thrustwasher next to the outer pinion housing bearing. With this spacer in place, it should be possible to close the switch contacts by applying pressure to the yoke shift arm.



TEST SPECIFICATIONS

No Load with Bendix	5 volts, 65 maximum amperes, 4300 minimum RPM.
Stall Torque	2 volts, 335 maximum amperes, 6.0 minimum Lbs. Ft.

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Unit	Rot.	Starting Switch Type	Starting Switch Mounted	Transmission	Pinion Position*	Special Instructions
MCH-6106	CW	Manual	On Motor	Pos. Shift Clutch	1 5/16"-1 15/32"	Note 6
MCH-6110	CW	Manual	On Motor	Pos. Shift Clutch	1 5/16"-1 15/32"	Note 6
MCH-6117	CW		Separate	R. H. Outboard Bendix	1 9/32"-1 19/32"	Notes 1, 2, 3A
MCH-6203	CW	Solenoid	On Motor	R. H. Outboard Bendix	5/8" - 3/4"	Notes 3B, 4
MCH-6206	CW		Separate	R. H. Outboard Bendix	1 7/32"-1 11/32"	Notes 3C, 4
MCH-6207	CW		Separate	R. H. Outboard Bendix	5/8" - 3/4"	Notes 3B, 4
MCH-6207T	CW		Separate	R. H. Outboard Bendix	5/8" - 3/4"	Notes 3B, 4, 5
MCH-6208M	CCW	Solenoid	On Motor	L. H. Outboard Bendix	1 7/32"-1 11/32"	Notes 3C, 4, 5
MCH-6209M	CW	Solenoid	On Motor	R. H. Outboard Bendix	1 7/32"-1 11/32"	Notes 3C, 4, 5
MCH-6210	CW		Separate	R. H. Outboard Bendix	1 7/32"-1 11/32"	Notes 3C, 4
MCH-6215	CW	Solenoid	On Motor	R. H. Outboard Bendix	5/8" - 3/4"	Notes 1, 2, 3B
MCH-6215T	CW	Solenoid	On Motor	R. H. Outboard Bendix	5/8" - 3/4"	Notes 1, 2, 3B, 5

*This dimension is measured from the mounting face of the pinion housing to the outer edge of the pinion just before the pinion drops off of the spiral on Bendix types or with the over-running clutch in the "at rest" position. Check with the armature thrust to the commutator end and again with the armature thrust to the drive end. Adjust by installing MU-54, F (1/32" thick), MU-54A, G (1/64" thick), MU-54B, J (3/64" thick, MU-54L (1/16" thick) or MU-54K (5/64" thick) thrustwashers just inside either the commutator end head or intermediate bearing as required.

NOTE 1 - The intermediate bearing must be flush with the bearing bore on the outer end.

NOTE 2 - The drive end bearing must be flush with the bearing bore on the outer edge.

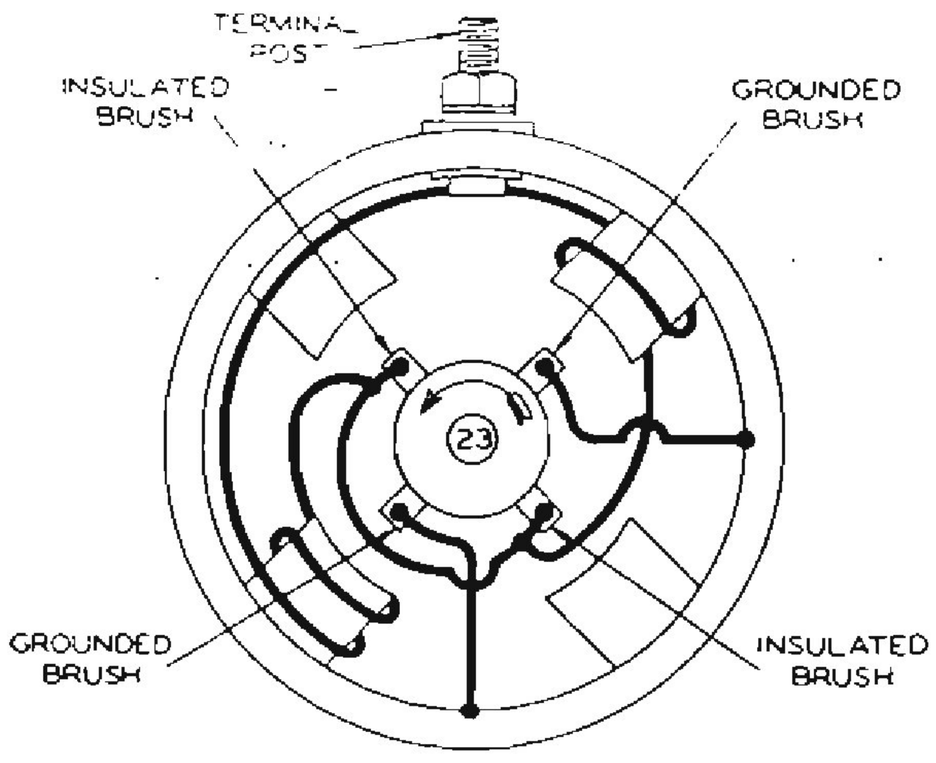
NOTE 3 - With drive extended, the pinion should be as indicated below when measured from the motor mounting face to the edge of the pinion. Adjust in the same manner as the "retracted" position, keeping both positions within limits.

A - 1 59/64" to 2 3/64"
B - 1 3/8" to 1 1/2"
C - 1 31/32" to 2 3/32"

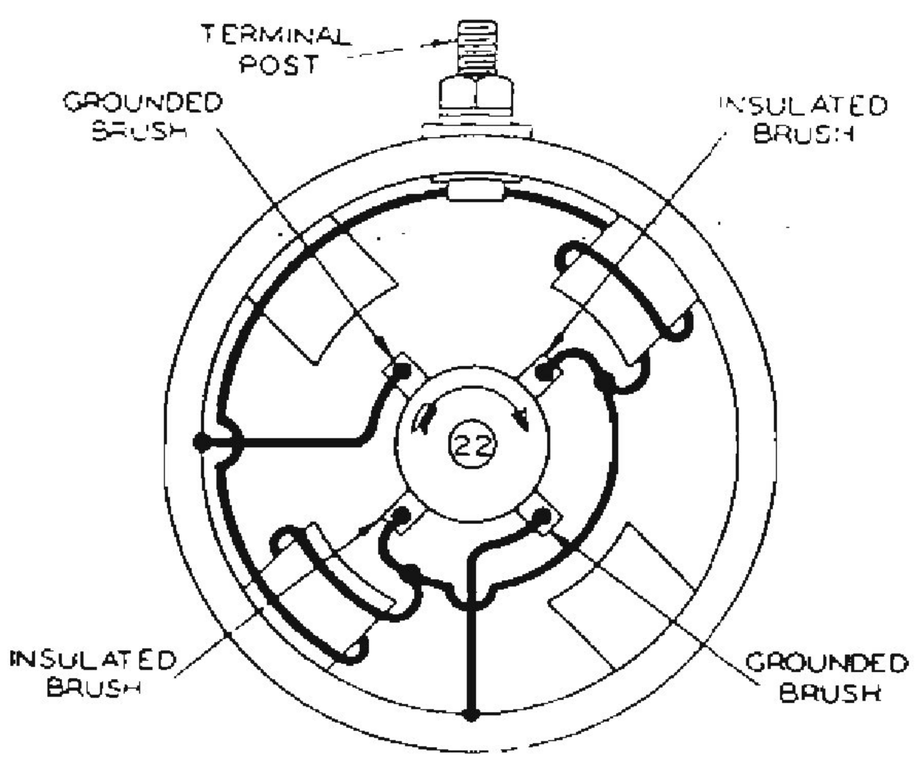
NOTE 4 - The intermediate bearing must be flush with the bearing bore on the inner end.

NOTE 5 - After installation of new field coils, paint the inside of the frame and soak the field coils with air-drying, fungus-resistant insulating varnish. Keep varnish off of brush leads and pilot seats. When re-using the old armature, the core windings and front face of commutator should be given the same treatment, being careful to keep the commutator brush surface and the bearing surfaces clean.

NOTE 6 - End Play - .005" minimum to .030" maximum.



Internal Wiring of CWDE Motors



Internal Wiring of CCWDE Motors

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