# prestolite SERVICE MANUAL

GENERATOR SECTION

(Issued 3-16-78)

VOLTS 6 — RATED OUTPUT See tabulation. — VENTILATED See tabulation.

ROTATION See tabulation. — BRUSHES 2 — POLES 2

CONTROL Vibrating current-voltage regulator.

GROUND POLARITY See tabulation. — BEARINGS Ball at drive end. Absorbent bronze at commutator end.

LUBRICATION — Periodically add 5 drops of medium engine oil to end head oilers. At overhaul, pack open ball bearings 1/4 to 1/2 full with a good ball bearing lubricant. NOTE - Some ball bearings are sealed, these units are prelubricated and require no additional lubrication.

BRUSH SPRING TENSION — 35 to 53 ounces with new brushes. Measure brush spring tension with the scale hooked in the hole in the end of the brush arm and pulled on a line perpendicular to the top of the brush. Take the reading just as the arm leaves the brush.

FIELD COIL DRAW (70°F.) — 1.3 to 1.5 amperes at 5.0 volts.

MOTORING DRAW (70°F.) — 3.9 to 4.4 amperes at 5.0 volts. (Have field terminal grounded to frame.)

OUTPUT TESTS (70°F.)

(17) 7.2 volts, 8.0 amperes at 1400 maximum RPM.
8.0 volts, 17.0 amperes at 1700 maximum RPM.
(35) 7.2 volts, 18.0 amperes at 1450 maximum RPM.
8.0 volts, 35.0 amperes at 2100 maximum RPM.
(40) 7.2 volts, 20.0 amperes at 1450 maximum RPM.
8.0 volts, 40.0 amperes at 2100 maximum RPM.

| Unit | Rated Output (Amperes) | Vent. | Rot. | Ground Polarity | Internal Wiring | Special Instructions |
|---|---|---|---|---|---|---|
| GDZ-4801A, C, K, LP, S, S-1 | 35 | Yes | CW | Positive | Fig. 1 | Notes 1, 2 |
| GDZ-4801L | 35 | Yes | CW | Negative | Fig. 1 | Notes 1, 2 |
| GDZ-4806B | 35 | Yes | CW | Positive | Fig. 1 | Note 3 |
| GDZ-4806BT | 35 | Yes | CW | Positive | Fig. 1 | Notes 3, 4 |
| GDZ-4809 | 35 | Yes | CW | Positive | Fig. 1 | Notes 2, 3 |
| GDZ-4811A | 35 | Yes | CW | Positive | Fig. 1 | Notes 1, 2 |
| GDZ-4812S | 35 | Yes | CCW | Positive | Fig. 2 | Notes 1, 2 |
| GDZ-4813A, B, C, D, G, S | 35 | Yes | CW | Positive | Fig. 1 | Notes 1, 2 |
| GDZ-4817A | 35 | Yes | CW | Negative | Fig. 1 | Notes 1, 2 |
| GDZ-4819CM | 17 | No | CCW | Positive | Fig. 2 | Notes 1, 2, 5 |
| GDZ-4822A, B | 17 | No | CW | Positive | Fig. 1 | Notes 1, 2 |
| GDZ-4823AM | 17 | No | CW | Positive | Fig. 1 | Notes 1, 2, 5 |
| GDZ-4824 | 17 | No | CW | Positive | Fig. 1 | Note 1 |
| GDZ-4825 | 17 | No | CCW | Positive | Fig. 2 | Note 1 |
| GDZ-6001A | 35 | Yes | CW | Positive | Fig. 1 | Note 1 |
| GDZ-6001A | 40 | Yes | CW | Positive | Fig. 1 | Note 1 |
| GDZ-6001D, G, H | 35 | Yes | CW | Negative | Fig. 1 | Note 1 |
| GDZ-6001DT, HT | 35 | Yes | CW | Negative | Fig. 1 | Notes 1, 4 |
| GDZ-6001E | 35 | Yes | CW | Positive | Fig. 1 | Note 1 |
| GDZ-6001HPT | 40 | Yes | CW | Positive | Fig. 1 | Notes 1, 4 |
| GDZ-6003 | 17 | No | CW | Positive | Fig. 1 | Note 1 |
| GDZ-6004 | 17 | No | CW | Positive | Fig. 1 | Notes 1, 4 |
| GDZ-6004T | 17 | No | CW | Negative | Fig. 1 | Notes 1, 4 |
| GDZ-6005 | 17 | No | CCW | Positive | Fig. 2 | Note 1 |

Printed in U.S.A.

NOTE 1 - Before assembling the armature and C. E. plate, remove the felt wick. Have the armature shaft oiled and the felt wick soaked in oil when assembled. After assembling, be sure the felt wick lies on the bottom of the oil pocket and fill the oiler with light engine oil until the oil pocket is filled to overflow hole.

NOTE 2 - When assembling the terminal posts, the flats on the screw head must be assembled parallel to the center line of the frame.

NOTE 3 - These generators have ball bearings in the commutator end head.

NOTE 4 - After inspection of the various parts, paint terminal stud and brush holder insulation with red glyptol. Cover glyptol and all metal surfaces except pilots, head seats, threads, commutator and bearing surfaces with air-drying, fungus-resistant insulating varnish. Allow varnish to soak into field coils and armature windings; then drain and dry thoroughly before assembling generator.

NOTE 5 - After installing new field coils in corrosion resistant generators, paint the inside of the frame and soak the field coils with air-drying varnish. Keep varnish off of brush leads, pilot seats and threads. When reusing the old armature, its core and windings should be given the same treatment; being careful to keep the commutator and bearing seats clean.

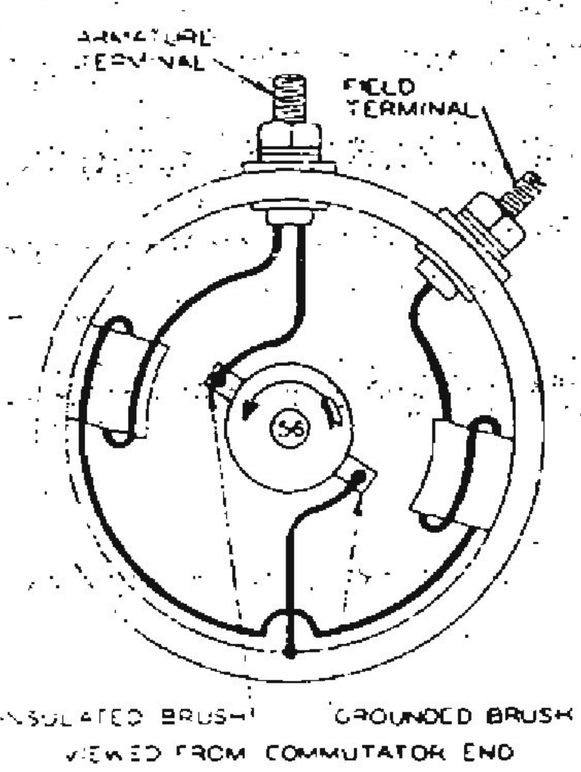


Figure 1.

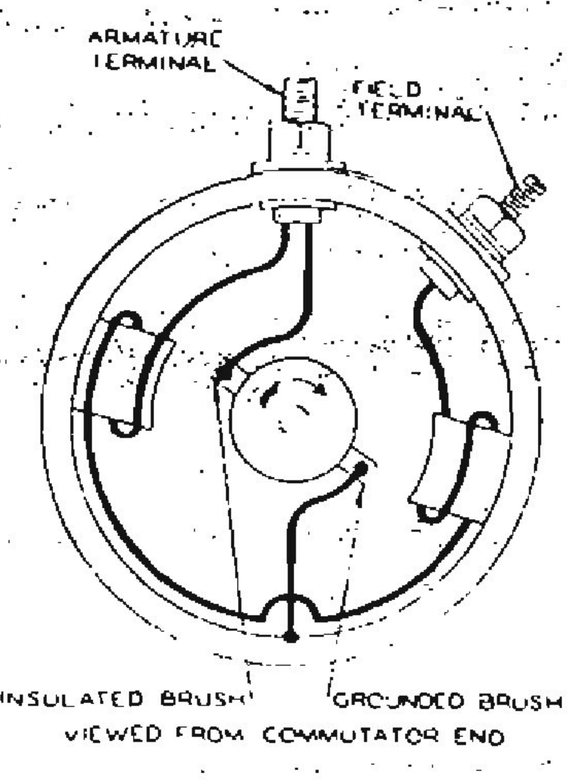


Figure 2.