

CONTROL BOX

MODEL RB340

DESCRIPTION

The control box is an electro-magnetically operated three-bobbin unit operating on the current-voltage system of generator output regulation, which provides a more efficient utilisation of generator capacity.

The unit comprises two separate vibrating armature regulators and a cut-out relay, one regulator being responsive to changes in current and the other to voltage. Toothed adjustment cams which can be operated by a special tool, provide a means of adjusting the electrical settings.

Preliminary checking of charging circuit

Before disturbing any electrical adjustments, examine as under to ensure that the fault does not lie outside the control box:—

1. Inspect the generator driving belt. This should be just taut enough to drive without slipping.
2. Inspect the wiring of the charging circuit and carry out continuity tests between the generator, control box and ammeter.
3. Check earth connections, particularly that of the control box.
4. Check the battery by substitution or with an hydrometer and a heavy discharge tester.
5. Check the generator by disconnecting the generator cables and linking the larger generator terminal "D" to the smaller terminal "F" and connecting a first grade moving coil 0—20 voltmeter between this link and earth and running the generator up to about 1000 r.p.m when a rising voltage should be shown.
6. In the event of reported undercharging, ascertain that this is not due to low mileage.

VOLTAGE REGULATOR

Open circuit settings

| <i>Ambient Temperature</i> | <i>Voltage Setting</i> |
|----------------------------|------------------------|
| 10°C. (50°F.) | 14.9—15.5 |
| 20°C. (68°F.) | 14.7—15.3 |
| 30°C. (86°F.) | 14.5—15.1 |
| 40°C. (104°F.) | 14.3—14.9 |

Method of adjustment (See Fig. 12)

Checking and adjustment should be completed as quickly as possible in order to avoid errors brought about by heating of the operating coil.

1. Withdraw the cables from control box terminal blades "B".

If the ignition switch is fed from terminal "B", it will be necessary to join the ignition and battery feeds together with a "jumper" lead, to enable the engine to be started.

2. Connect a first grade 0—20 moving-coil voltmeter between control box terminal "D" and a good earthing point.

A convenient method of making this connection is to withdraw the ignition warning light feed from control box terminal "WL" and to clip the voltmeter lead of the appropriate polarity to the small terminal blade thus exposed—this terminal being electrically common with terminal "D".

3. Start the engine and run the generator at 3000 r.p.m.
4. Observe the voltmeter pointer.