

## SECTION L

## THE ELECTRICAL EQUIPMENT

## THE DYNAMO.

## Type.

The dynamo is a Lucas Model C39PV, Service No. 22257A. These identification marks are stamped on the yoke.

## To Test on Vehicle.

The cutting-in speed is from 1,050 r.p.m. to 1,200 r.p.m. at 13 dynamo volts.

The output is 17 amps. at 1,800 r.p.m. to 2,000 r.p.m. at 13.5 dynamo volts taken on a resistance load of .8 ohms without regulator.

- (a) Make sure that the driving belt is not slipping, and it should be capable of being deflected approximately .50 at the centre of its run between the pulleys with moderate hand pressure, and gently pulling the dynamo outwards by hand until the correct tension is obtained. The slotted link bolt must then be tightened, followed by the two upper bolts.
- (d) Check that the dynamo and control box are connected correctly. The dynamo terminal "D" should be connected to the control box terminal "D" and the dynamo terminal "F" connected to control box terminal "F".
- (c) After switching off all lights and accessories, disconnect the cables from the terminals of dynamo marked "D" and "F" respectively.
- (d) Connect the two terminals with a short length of wire.
- (e) Start the engine and set it to run at normal idling speed.
- (f) Clip the negative lead of a moving coil type voltmeter, calibrated 0-20 volts, to one dynamo terminal and the other lead to a good earthing point on the dynamo yoke.

- (g) Gradually increase the engine speed, when the voltmeter reading should rise rapidly and without fluctuation. Do not allow the voltmeter reading to reach 20 volts. Do not race the engine in an attempt to increase the voltage. It is sufficient to run the dynamo up to a speed of 1,000 r.p.m.

If there is no reading—check the brush gear.

If the reading is low (approximately 1 volt) the field winding may be faulty.

- (h) Remove the dynamo cover band and examine the brushes and commutator. Hold back each of the brush springs and move the brush by pulling gently on its flexible connector. If the movement is sluggish remove the brush from its holder and ease the sides by lightly polishing on a smooth file. Always replace brushes in their original positions. If the brushes are worn so that they no longer bear on the commutator, or if the brush flexible has become exposed on the running face, new brushes must be fitted. If the commutator is blackened or dirty, clean it by holding a petrol-moistened cloth against it while the engine is turned slowly by hand cranking. Re-test the dynamo; if there is still no reading on the voltmeter, there is an internal fault and the complete unit should be replaced. If the dynamo is in good order, leave the temporary link in position between the terminals and restore the original connections, taking care to connect the dynamo terminal "D" to the control box terminal "D" and the dynamo terminal "F" to the control box terminal "F". Remove the lead from the "D" terminal on the control box and connect the voltmeter between this cable and a good earthing point on the vehicle. Run the engine as before. The reading should be the same as that measured directly at the dynamo.

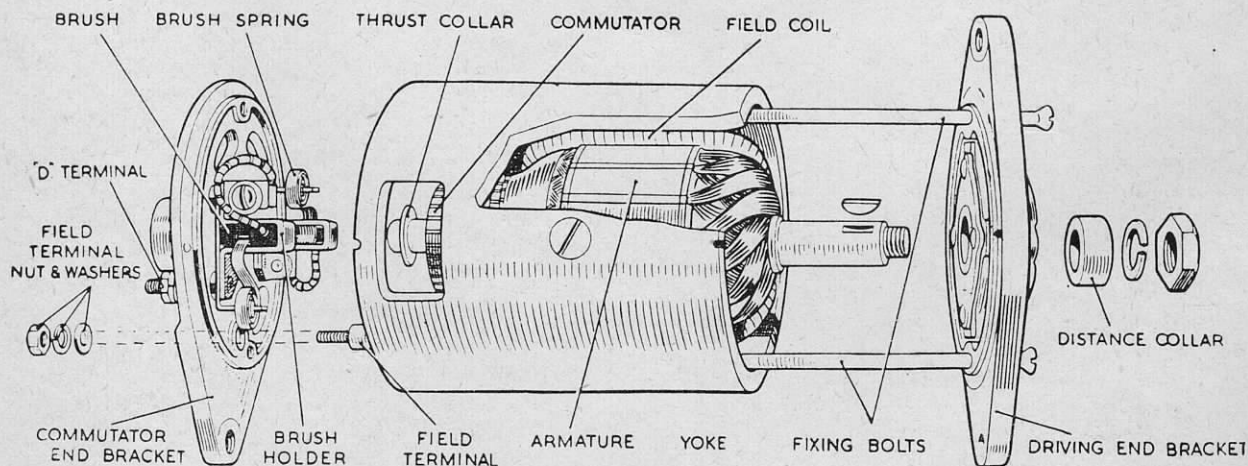


FIG. 41.—The dynamo components.

