The spring tension and the mass of the regulator weights are so selected that an increase in engine speed will automatically lead to increased ignition advance angle. As the rotational speed is reduced, the centrifugal forces decrease, the springs become compressed returning the weights to their position, and the ignition advance angle diminishes.

Servicing the Contact Breaker

When operating the motorcycle, it is necessary to:

1. Check whether the contacts are firmly secured.
2. Make sure that the friction parts are clean and properly lubricated.
3. Every 1000 km, check the contacts for good condition and adjust the clearances, if necessary. When cleaning the contacts, remove a pimple on one of them. It is not advisable to completely eliminate a crater (recess) on the other contact. The contacts should be ground with a needle file or a piece of 1 mm thin abrasive disk, or a fine-grained sand paper No. 150. Following that, clean and wash the contacts (using a clean petrol).

Lubricate the breaker lever axle with a drop of machine oil. Three or four drops of the same oil will suffice to lubricate the felt. The axles of the plate and the holes of the weights should be lubricated with grease ЦИАТИМ-201.

Operation of the Ignition System

When the ignition is switched on, the circuit of the ignition coil primary winding becomes energized and at the same time the circuit of the battery charge control lamp closes (the lamp lights up).

When the contact breaker points are opened, a high-tension current (10 000 to 15 000 V) necessary to ignite the fuel mixture is generated in the secondary winding. The sparks are simultaneously produced between the electrodes of the plugs of the left- and right-hand cylinders: one of the sparks is produced when the compression stroke comes to an end in one of the cylinders, the other spark being generated during exhaust stroke. As soon as the engine crankshaft attains a certain speed, the relay contacts close and the power supply for the primary winding is switched over from the battery to the generator.

Headlamp, Dashboard, Motorcycle and Sidecar Lamps, Horn, and Stop Light Switch

The motorcycle is equipped with a headlamp type ФГ137. The headlamp contains a high and lower beam lamp and parking lamp. The battery charge control lamp, oil pressure warning lamp, indicator lamp of gearshift mechanism neutral position, turn indicator and high beam switched on lamps, interrupter-relay of turn indicators.

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