B. OM 621

On the OM 621 the glow starter and stop switch features a push pull switch contrary to the rotary-type switch on the OM 636.

The mechanical-electric glow starter and stop switch has four switch positions, i. e., stop position, driving position, pre-glowing position and starting position. The glow starting and stop switch also features a lock which allows removing of the key only in stop position. All these functions are idential with those of the former rotary-type switch.

The Figure 15–33/3 shows the electric wiring diagram for the parts involved in the starting procedure. In this wiring diagram the push pull switch (2) is in driving position (F). Only if the main switch (1) is switched on, the entire system is ready for operation. This is done by turning the key in position "drive" (see Figure 15–33/3).

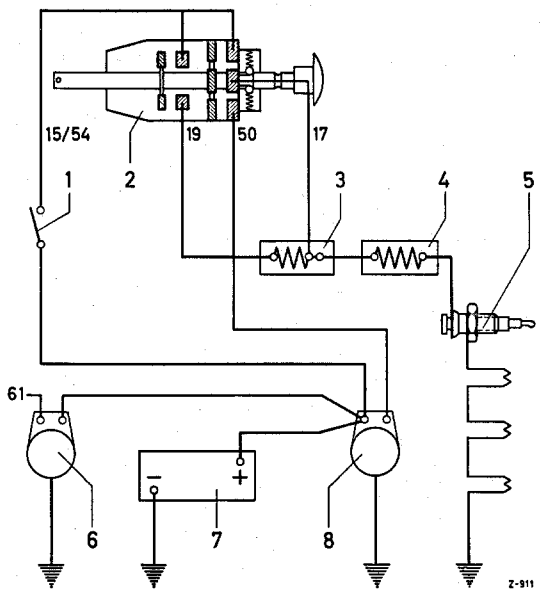

Figure 15–33/3

1 Main switch
2 Push pull switch
3 Glow plug control
4 Resistor
5 Glow plug
6 Generator
7 Battery
8 Starter

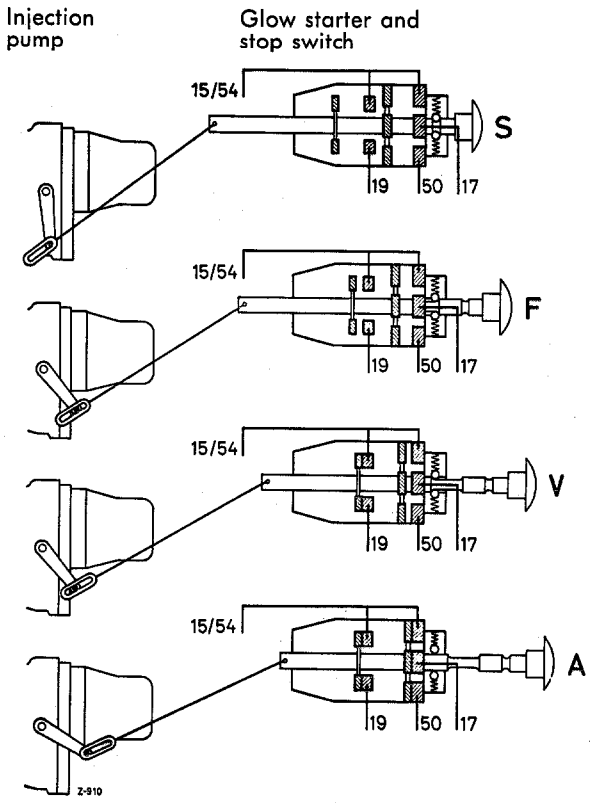

Figure 15–33/4

S = Stop position
F = Driving position
V = Pre-glowing position
A = Starting position

Description of the four switching positions:

1. S = Stop position

If in stop position, the knob of the push pull switch (2) is completely pushed in, consequently the adjusting lever of the injection pump is completely pushed forward via the Bowden cable. In this position, the control rod is completely in direction "stop", the plungers of the elements are in no-delivery position, the fuel supply to the engine is shut off and stops. In this position, the terminals 19, 50 and 17 are de-energized (see Figure 15–33/3 and 15–33/4).

The key on the steering lock can be removed.

2. F = Driving position

If in driving position, the oblong hole of the Bowden cable has such a position on the adjusting lever that the oblong hole lug does not contact the pin of the adjusting lever, which is not actuated then. After pulling out of the stop position, the knob engages into the next indent and remains there as long as the engine is running. The terminals 19, 50 and 17 are de-energized.

The key cannot be removed from the steering lock.

3. V = Pre-glowing position

If in pre-glowing position the same is valid for the Bowden cable and the adjusting lever as for F = driving position.

After pulling out the knob of the push pull switch (2) from the driving position into the pre-glowing position, a slight resistance is to be felt. In this position, the switch (2) must be kept so long until the pre-glowing procedure is finished (depending on outside temperature and operating temperature of the engine). In this position, the terminal 19 is energized and heats the glow plugs (5) via the glow plug control (3) and the resistor (4). The terminals 50 and 17 are de-energized (see Figure 15–33/3 and 15–33/4).

4. A = Starting position

After the pre-glowing procedure, the knob is completely pulled out to the stop overcoming the slight resistance, where it is kept until the engine starts.

If in starting position, the pin of the adjusting lever is situated on the other side of the oblong hole lug (contrary to the stopping position) and pulls the adjusting lever completely rearwards. Then the control rod is moved in direction "full" beyond the full load stop and the injection pump injects the starting quantity.

If in starting position, the terminal 19 and the terminals 50 and 17 are energized. Via terminal 50, the starter (8) is put into operation (see Figure 15–33/3 and 15–33/4).

Also in starting position, the glow plugs (5) are further energized via the terminal 17, however the glow control light (3) is bridged via the lead (17) and therefore it is de-energized (see Figure 15–33/3). By bridging the glow control light, the glow plugs are supplied with more current for starting and thus improve the starting procedure.

When the knob of the push pull switch is released after the engine has started, the switch automatically returns to driving position by the force of a spring.