

Figure 15-30/1 shows the design of a glow plug. The current flows through the power lead (1) or a connecting cable, depending on the location of the plug, to the center electrode (13) or the ring shoulder (3) of the outer electrode (11). The center electrode (13) and the outer electrode (11) are connected through the filament (6). The insulation between the two electrodes is handled by the insulating compound (12) and against the plug body (5) by the insulating compound (4). An additional plastics insulator (2) has been installed between the outer and the center electrode at the upper end of the glow plug. The connector insulator (10) separates the two power connections. The spring washer (8) installed in the insulator serves to secure the knurled nut (7) (see Figure 15-30/1).

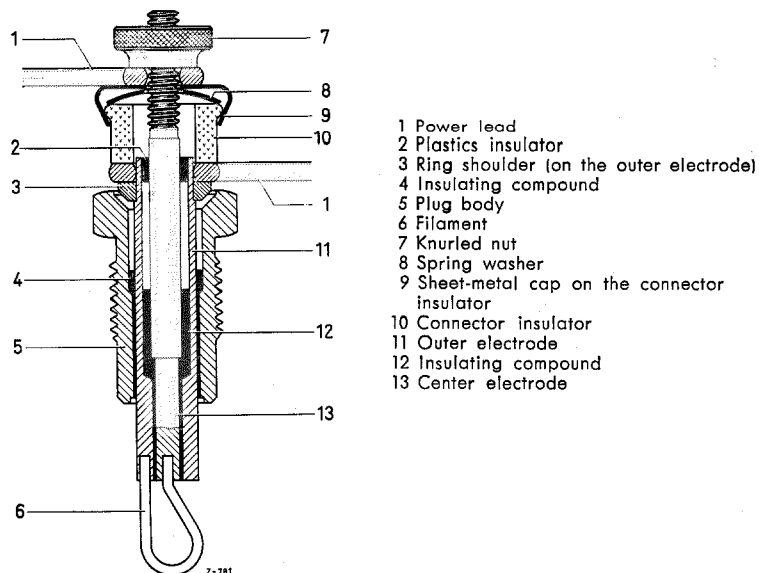


Figure 15-30/1

The operating life of the glow plug depends to a wide extent on the condition of the injection nozzles and the process of combustion. Too low injection pressures, sticking nozzle needles, coked and dribbling nozzles, and a too early beginning of injection can cause the premature breaking of the filament. Furthermore, the filament can burn out due to a short-circuit to ground caused by oil-carbon bridging.

During the pre-heating the temperature of the filament is approx. 900 to 1000° C, and in an engine under hot running conditions 600 to 800° C due to the combustion temperature. Temperatures above 800° C are harmful during continuous operation.

Type designation of the different glow plug versions:

Version with spiral-shaped filament and a rated voltage of 1.4 volt:

Bosch KE/GA 2/2
Beru 202/GE

636 Engine

0.9V - 12V

0-250-001-001

Version with loop-shaped filament and a rated voltage of 0.9 volt:

Bosch KE/GA 1/8
Beru 214/GE and/or lately Beru 214/GK