

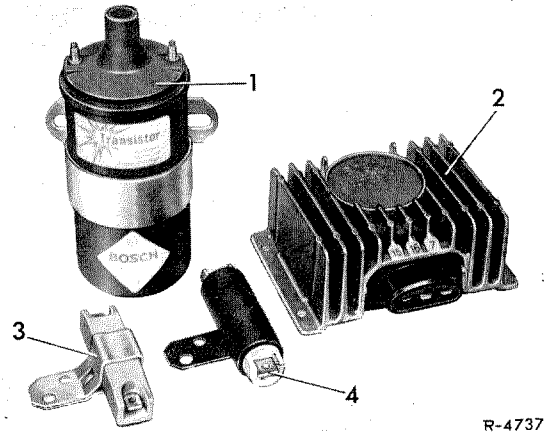
## Ignition Coil

The design and the external dimensions of the ignition coil are similar to those of a standard high-performance ignition coil. But the layout of the winding is different. The transmission ratio is approx. 1 : 185 as compared with 1 : 100 for conventional ignition coils.

External identification: colour blue.

### Series Resistances

The design of the resistances 0.4  $\Omega$  and 0.6  $\Omega$  corresponds to the ignition coil series resistances used up to now.



R-4737

Fig. 15-20/1

- |                 |                                  |
|-----------------|----------------------------------|
| 1 Ignition coil | 3 Series resistance 0.6 $\Omega$ |
| 2 Switchgear    | 4 Series resistance 0.4 $\Omega$ |

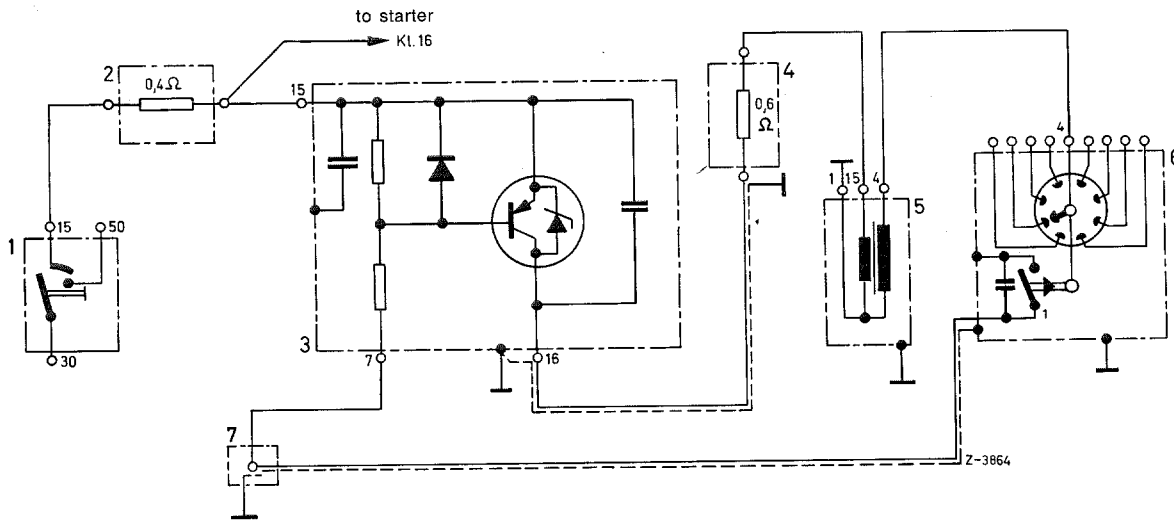


Fig. 15-20/2

Wiring diagram of transistorized coil ignition

- |                                  |                                  |                        |  |
|----------------------------------|----------------------------------|------------------------|--|
| 1 Ignition starting switch       | 3 Switchgear                     | 5 Ignition coil        | 7 Cable connector (terminal 7 switchgear ignition distributor) |
| 2 Series resistance 0.4 $\Omega$ | 4 Series resistance 0.6 $\Omega$ | 6 Ignition distributor |  |

## B. Testing of Transistorized Coil Ignition in Vehicle

### Testing of Switchgear with the Engine Stopped

Measure voltage on primary winding of ignition coil with a voltmeter.

#### Measuring the Voltage

Switch-off ignition, check whether breaker contact is closed. If not, keep rotating engine until contact is closed.

Connect black cable of voltmeter to ground, red cable to terminal 15 of ignition coil (Fig. 15-20/3).

Switch on ignition and read voltage on voltmeter.

Rated value: **2.6–3.5 Volt**

Open make-and-break contact. The voltage should return to zero.

## Testing of Ignition Coil

Disconnect all connections on ignition coil. The primary resistance between terminal 1 and 15 is

**0.38–0.43  $\Omega$  at 20° C.**

Connections 1 and 15 should not be connected to ground.

Measure with a conventional resistance measuring bridge. The ohm ranges in a standard multiple tester are generally too inaccurate for such tests.

At an ignition coil temperature of approx. 80° C the resistance measured is approx. 25% higher.

## Testing of Series Resistances

Disconnect connecting lines.

Test terminals for body contact. Measure resistance with a measuring bridge.

1. Rated value **0.4  $\pm$  0.05  $\Omega$**  at 20° C.

Resistance (2) between ignition switch and switchgear.

2. Rated value **0.6  $\pm$  0.05  $\Omega$**  at 20° C.

Resistance (4) between switchgear and ignition coil.

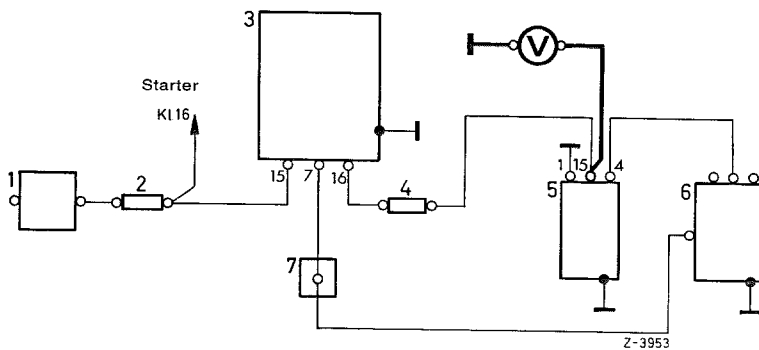


Fig. 15-20/3

- 1 Ignition starting switch
- 2 Series resistance 0.4  $\Omega$
- 3 Switchgear
- 4 Series resistance 0.6  $\Omega$
- 5 Ignition coil
- 6 Ignition distributor
- 7 Cable connector (terminal 7 switchgear ignition distributor)