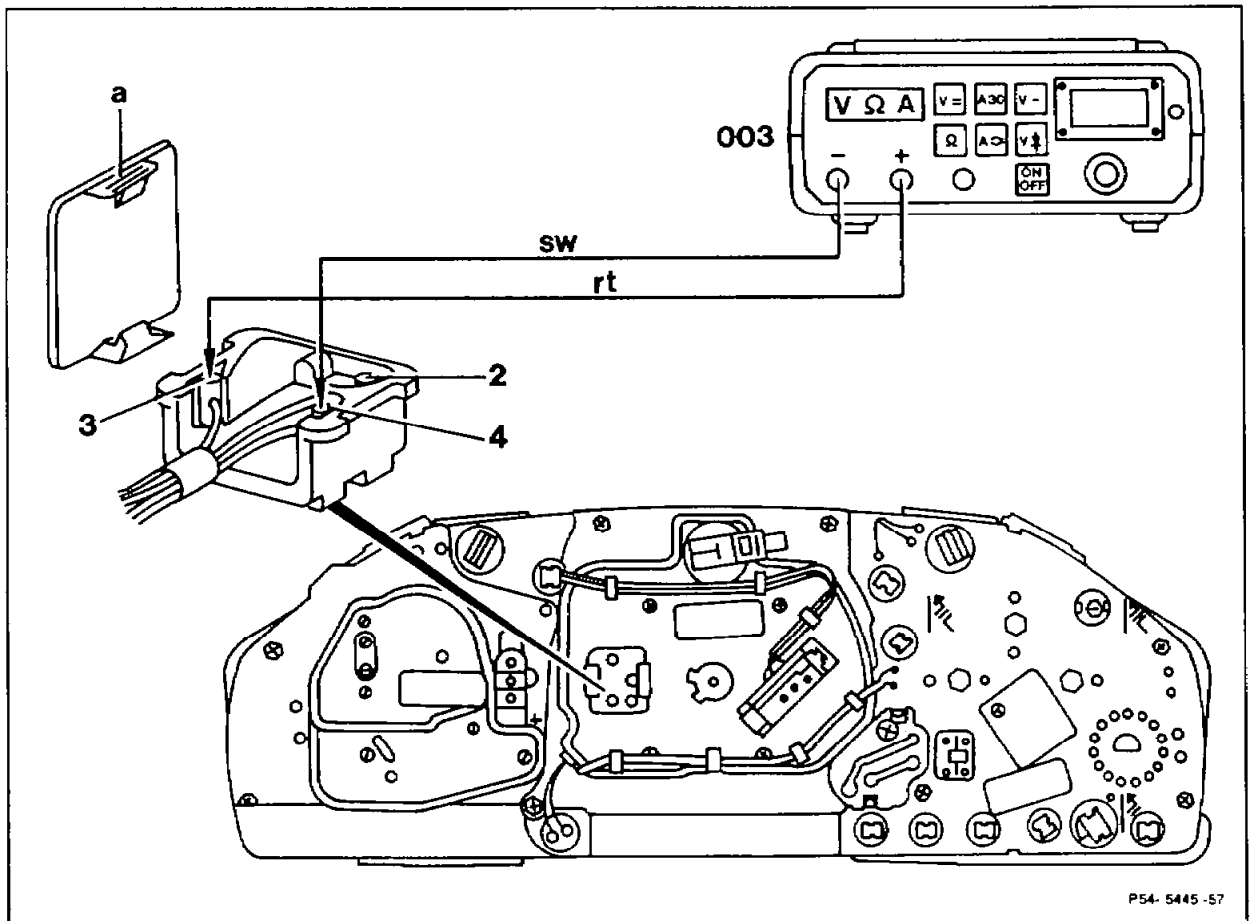


Operation no. of operation texts and work units or standard texts and flat rates:

A. Testing sensor with multimeter



P54- 5445 -57

Static test

- | | |
|--------------------------|--|
| Instrument cluster | remove, reinstall (54-6015). |
| Cover (a) | remove on connector housing. |
| Voltage | check with multimeter (003) between socket 4 (brown wire, ground) and socket 2 (black/violet wire with red dots, terminal 15). For this purpose turn key in ignition/starter switch to position 2. |

Specified value: Battery voltage
 Use electrical connection set 201 589 00 99 00 for testing.

Resistance measure with multimeter (003) between socket 4 (brown wire, ground) and socket 3 (white wire, sensor lead).

Specified value: $2\text{ k } \Omega \pm 200\text{ } \Omega$

Use electrical connection set 201 589 00 99 00 for testing.

Dynamic test with multimeter

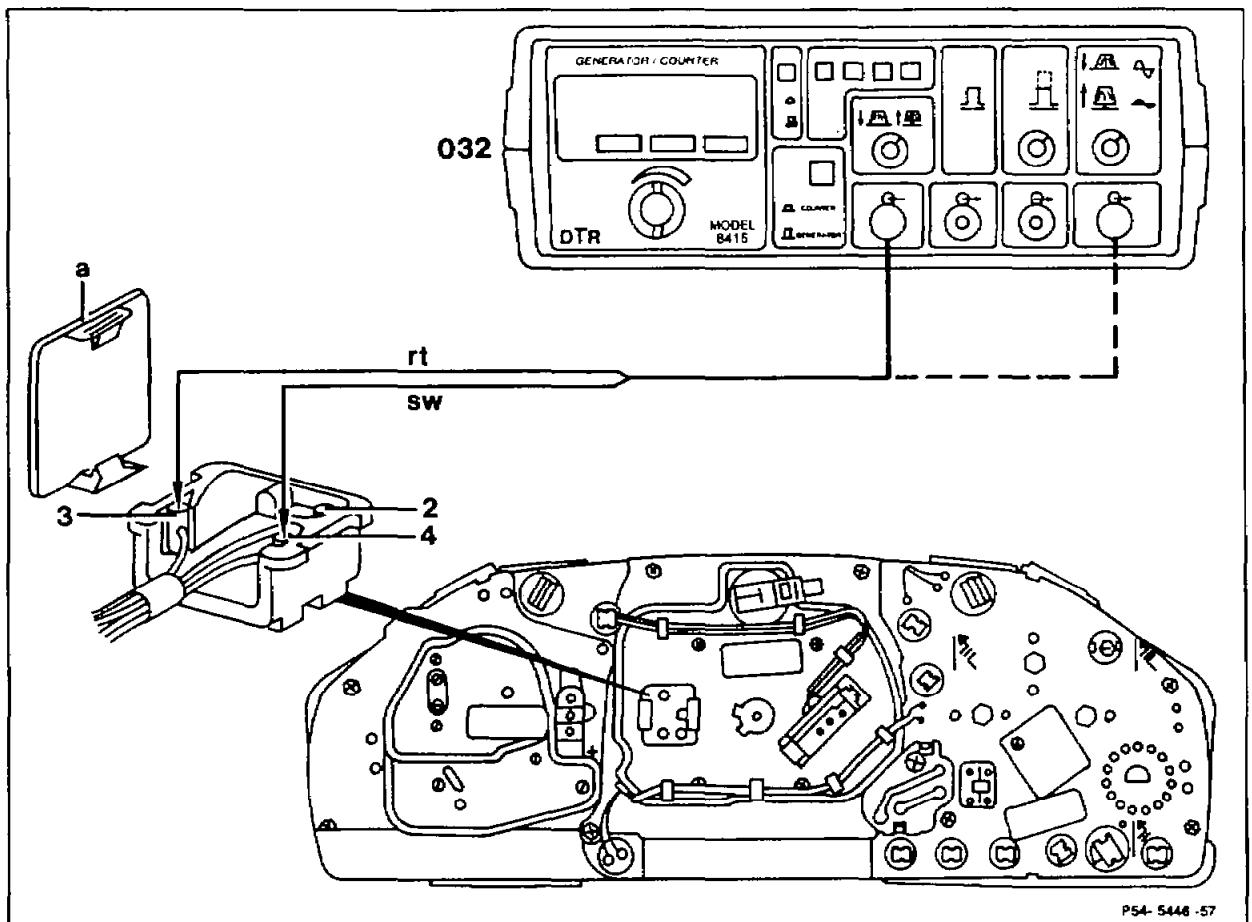
Multimeter (003) connect (see figure):
Red test wire to socket 3 (white wire, sensor wire).
Black test wire to socket 4 (brown wire, ground)
Use electrical connection set 201 589 00 99 00 for testing.

Multimeter (003) switch on (range: volt ~)

Vehicle drive on dynamometer or on road. The voltage should increase continuously at increasing speed up to approx. 40 km/h > 1 V.

Cover (a) on connector housing close.

B. Testing sensor and speedometer with frequency generator



Static test

Instrument cluster	remove, reinstall (54-6015).
Cover (a)	open on connector housing.
Voltage	check with multimeter (003) between socket 4 (brown wire, ground) and socket 2 (black/violet wire with red dots, terminal 15). For this purpose turn key in ignition/starter switch to position 2.
	Specified value: Battery voltage Use electrical connection set 201 589 00 99 00 for testing.
Resistance	measure with multimeter (003) between socket 4 (brown wire, ground) and socket 3 (white wire, sensor wire).
	Specified value: 2 k Ω \pm 200 Ω . Use electrical connection set 201 589 00 99 00 for testing.

Dynamic test with frequency generator

Frequency generator (032)	connect (see figure): Red test wire to socket 3 (white wire, sensor wire). Black test wire to socket 4 (brown wire, ground) Use electrical connection set 201 589 00 99 00 for testing.
Sensor	test (frequency generator in counter mode).
Vehicle	drive on dynamometer or on road. The frequency should increase continuously at increasing speed.
Key in ignition/starter switch	turn to position 2 (battery voltage).
Speedometer	test (frequency generator in alternator mode, sine wave function). The speed reading should increase at increasing frequency.

Special tool



Commercially available testers

Multimeter	e. g. Sun DMM-5 or Avometer 2003
Function generator	e. g. Dynatrade, DTR 8416