

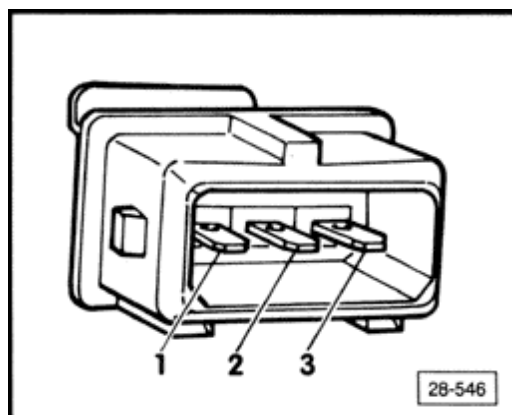
Engine speed (RPM) sensor, checking and adjusting

Notes:

- ◆ To functionally check the engine speed sensor
⇒ Repair Group 01, Read measuring value block, display group 003.
- ◆ Component locations ⇒ [page 28-1](#) .

Checking

- Make sure sensor is correctly installed and securely connected.
- Disconnect (gray) engine speed sensor harness connector.



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- Switch Fluke 83 multimeter to resistance range and connect between terminals 1 and 2 of engine speed sensor connector using jumper wires from VW 1594 connector test kit.

Specified value: approx. 1 Ω

If the specified value is not obtained:

- Replace engine speed sensor.

If the specified value is obtained:

- Connect multimeter between terminals 1 and 3, then between terminals 2 and 3.

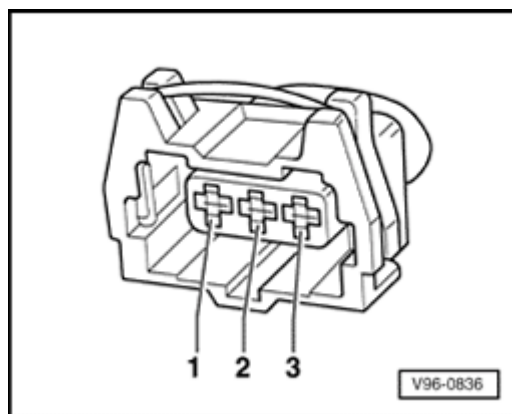
Specified values: infinite Ω (open)

If the specified value is not obtained:

- Replace engine speed sensor.

If the specified value is obtained:

- Check wiring between engine speed sensor harness connector and ECM harness connector as follows:
- Connect VAG 1598/19 test box to ECM harness connector ⇒ [page 01-255](#) .



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- Check engine speed sensor shielding for continuity between connector terminal 3 and engine Ground (GND).

Specified value: max. 1 Ω

- Check engine speed sensor ground (GND) wire for continuity between connector terminal 1 and test box socket A11.

Specified value: max. 1 Ω

- Check engine speed sensor signal wire for continuity between connector terminal 2 and test box socket A9.

Specified value: max. 1 Ω

If the specified values are not obtained:

- Eliminate short circuit to Ground (GND).

RPM sensor terminal number	ECM connector A or Engine Ground (GND)
1	A11
2	A9
3	Engine Ground (GND)

If no malfunction is found:

- Check condition of starter ring gear teeth (starter must be removed).
- Turn engine slowly and check ring gear at edge surface, also check for broken or damaged teeth, and replace if necessary.

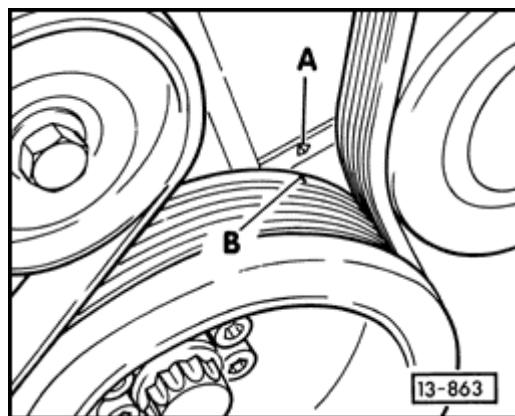
If no malfunction was found in any of these checks:

- Replace ECM ⇒ [page 01-265](#) .

Adjusting

Note:

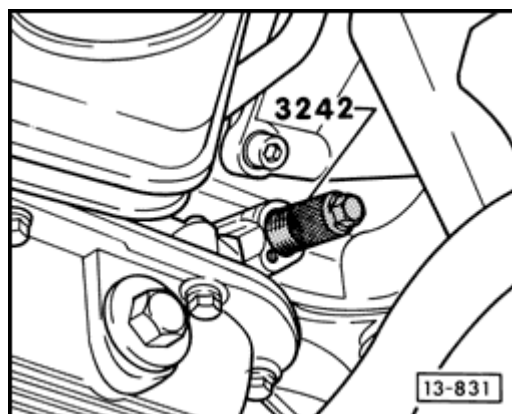
The bracket for the engine speed sensor is movable via slots. Bracket position is adjusted at the factory and should not be changed. If for any reason the bolts were loosened, and the bracket moved, adjust as follows:



- Turn crankshaft to TDC position.

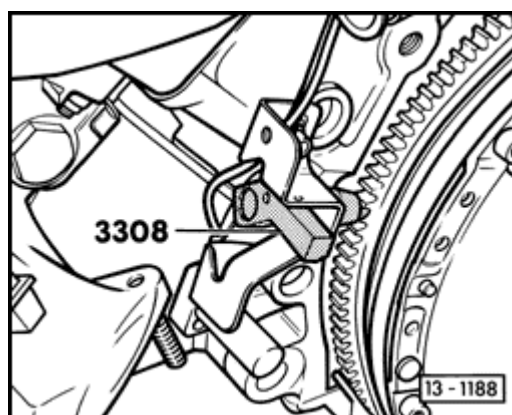
- Remove engine speed sensor from left side of cylinder block.

TDC opening in cylinder block must be located behind hole for crankshaft position sensor (which can be seen and felt).



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- Thread in crankshaft mounting tool 3242 into hole of removed crankshaft position sensor and tighten slightly.
- Remove engine speed sensor and heat shield.
- Loosen bracket.



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- Insert adjustment tool 3308 (must lock into ring gear).
- Tighten bracket.
- Install sensor and attach heat shield.