



Important!

Please give copies to all your VW Technicians

Technical Bulletin

Subject: Ignition Coil Overlay Harness, Installing

Group: 97

Number: 04-02

Model(s): Golf, GTI, Jetta with 1.8L Turbo
(eng. code AWD, AWP, AWW)

2001, 2002

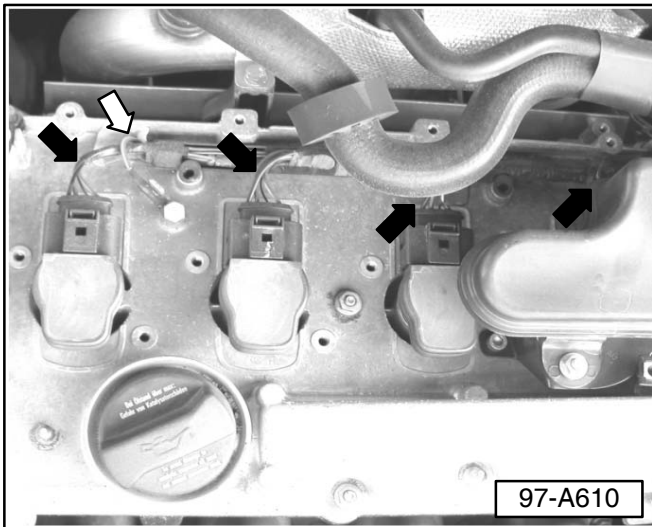
Date: Apr. 8, 2004

Supersedes T.B. Group 97 No. 04-01 dated Mar. 31, 2004 due to revision on Page 2 "deletion of 2001 Automatic" which mandates revisions on page 4 (see black Revision bars on right side of page 4). Also see Warranty Comment revision on page 8.

Condition

Malfunction Indicator Light (MIL) ON with One or more of the following Diagnostic Trouble Codes DTC(s) P0300, P0301, P0302, P0303, or P0304 stored in DTC memory.

Service



- Inspect wiring near connector (black arrows) of each ignition coil and ground wire (white arrow) for cracks in sheathing.

If wire sheathing is not cracked:

- Continue with diagnosis for DTC(s) as outlined in Repair Manual or Guided Fault Finding.

If cracks are found in wire sheathing for any ignition coil or the ground wire (white arrow):

Install Ignition coil overlay harness Part No: 1J0 971 658L as follows:

Unused wiring, terminating

During this repair, ALL unused wires in the vehicle must be terminated using a cut, stretch, fold, and tape technique as follows:

This prevents unused wires from coming in contact with ground or any other circuit.

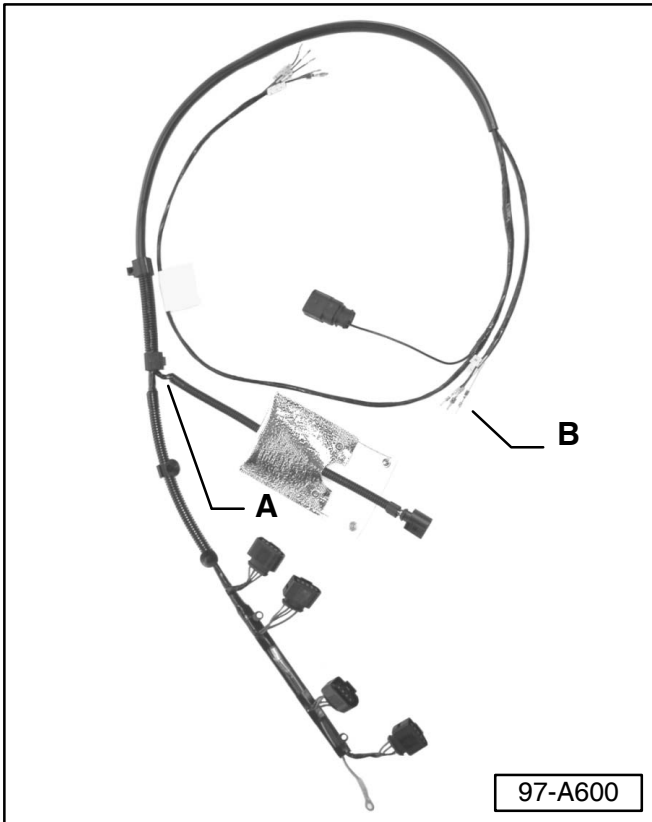
- Cut wires with suitable wire cutters.
- Stretch (pull) wire insulation with pliers to extend slightly beyond end of wire strands.
- Fold wire over upon itself.
- Tape wire using appropriate vinyl tape.



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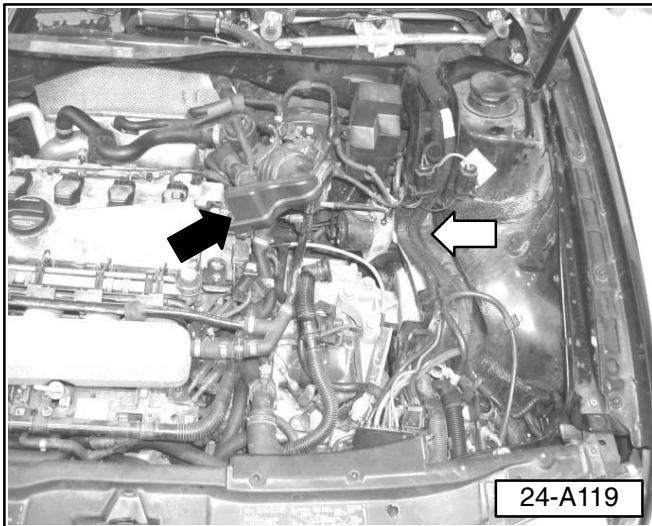
Engine overlay harness, preparation (2002 automatic transmission vehicles only)

Prior to installing the engine overlay harness, prepare the harness as follows:

- ◆ Speed sensor wiring will not be used.
- ◀ – Cut speed sensor wiring approx. 40mm from breakout -A- and tape back to harness using method as described in “Unused wiring, terminating”.
- Cut pins 2 and 3 of short harness for 14 pin connector breakout -B- and tape back to harness using method as described in “Unused wiring, terminating”..

Ignition coil harness, removing

- Obtain radio code and preset radio stations.
- Disconnect battery ground (GND) strap.
- Remove air cleaner housing (see Repair Manual Group 24).
- Remove battery and battery tray (see Repair Manual Group 27).
- Remove engine wiring harness covers.
- Remove upper engine cover.
- Remove air cleaner air duct to left fender.
- ◀ – Remove vacuum reservoir (black arrow) (can be left connected to vacuum hose as shown).
- Remove wiper arms and cowl trim panel (see Repair Manual, Group - 92).
- Open engine harness cable duct (white arrow) exposing engine harness routing to plenum.
- Disconnect connectors to all four ignition coils.

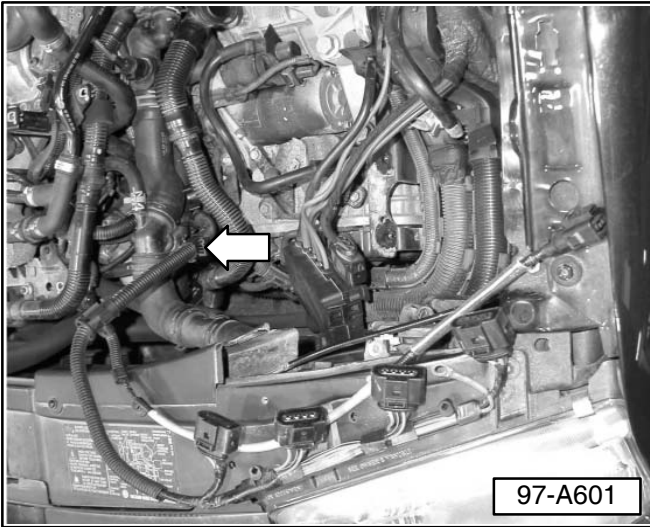




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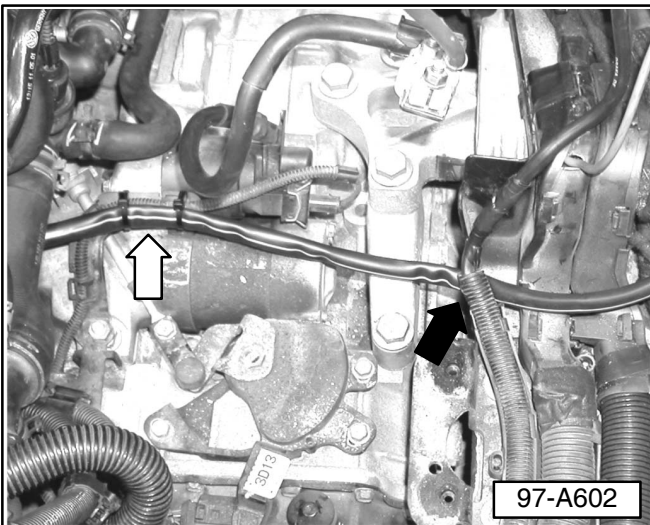
- Remove ignition coil Ground (GND) fastener.
- Remove ignition coil harness fasteners at cylinder head valve cover.
- Remove connector for speed sensor (man. trans. only).
- Remove coil harness (noting harness routing and fastener locations).
- ◀ - Cut ignition coil harness approx. 40mm from breakout point of main harness (arrow).

Note:

Leave enough wiring to terminate as described in "Unused wiring, terminating".

Ignition coil overlay harness, routing (automatic transmission)

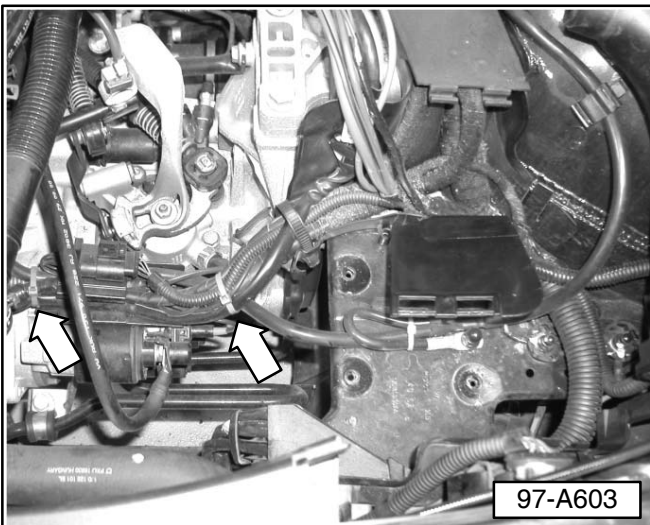
- Route harness to ignition coils using original routing.
- Route coil overlay harness under wire harness (black arrow) to main harness duct.
- Connect speed sensor connector (**2001 vehicles only**).



- ◀ - Secure harness to existing harness at starter using 2 new cable-ties as shown (white arrow).

Ignition coil overlay harness, routing (manual transmission)

- Route harness to ignition coils using original routing.
- Connect speed sensor connector.
- Route harness along existing harness to main harness duct.



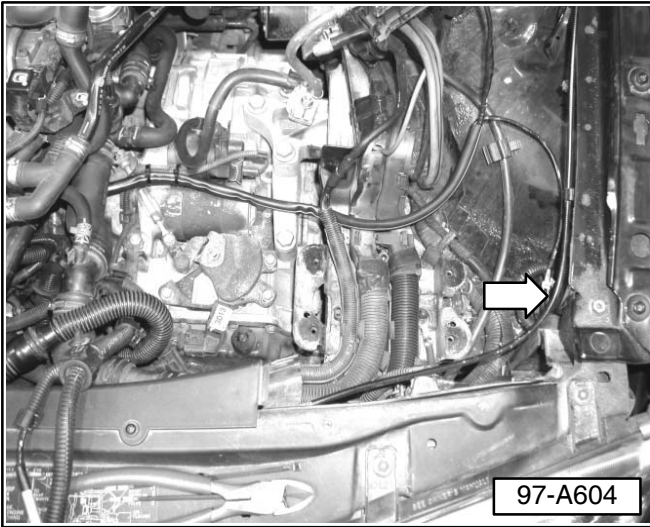
- ◀ - Secure harness to existing harness at starter using 2 new cable-ties (white arrows).



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Ignition coil overlay harness, installing terminals in 14-pin connector (all vehicles)

- ◀ – Route short breakout of overlay harness to 14 pin connector on right inner fender well (arrow).
- Remove cover for 14 pin connector.
- Remove 14 pin connector from holder.



- ◀ – Open secondary lock for 14 pin connector (slide past lock tabs using small screw driver).

2002 Automatic transmission vehicles only

- Remove male terminal from cavity 7 of the 14 pin connector using the appropriate tool from the VAS 1978 Wiring harness repair kit.
- Terminate removed wire as described in “Unused wiring, terminating” (see page 1).
- Insert terminal 7 from Ignition coil overlay harness into cavity 7 of the 14 pin connector.

2001 Automatic transmission vehicles only

- Remove male terminals from cavities 2, 3 and 7 of the 14 pin connector using the appropriate tool from the VAS 1978 Wiring harness repair kit.
- Terminate removed wires as described in “Unused wiring, terminating” (see page 1).
- Insert terminals 2, 3 and 7 from Ignition coil overlay harness into cavities 2, 3 and 7 of the 14 pin connector.
- Assemble 14 pin connector secondary lock.
- Install cover for 14 pin connector over existing and new wire.



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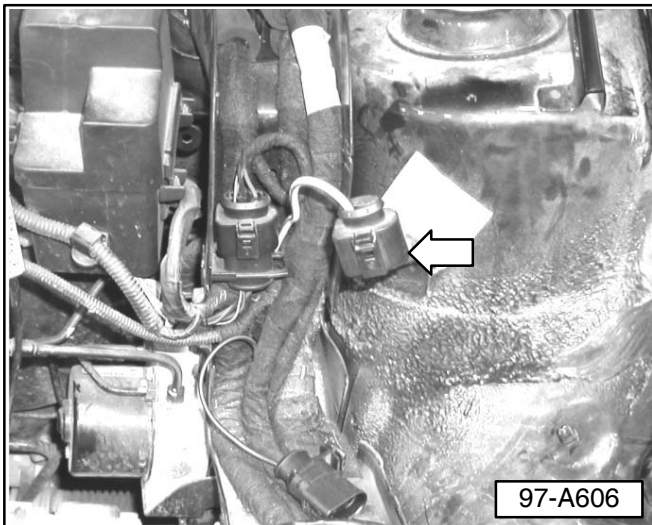
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- Install 14 pin connector into holder.

Manual transmission vehicles only

- Remove male terminals from cavities 2, 3 and 7 of the 14 pin connector using the appropriate tool from the VAS 1978 Wiring harness repair kit.
- Terminate removed wires as described in "Unused wiring, terminating" (see page 1).
- Insert terminals 2, 3 and 7 from Ignition coil overlay harness into cavities 2, 3 and 7 of the 14 pin connector.
- Assemble 14 pin connector secondary lock.
- Install cover for 14 pin connector over existing and new wire.
- Install 14 pin connector into holder.

Overlay harness connecting to 2-pin connector (all vehicles)



- Route overlay harness in harness duct along existing harness connector (arrow) near strut support.
- Separate connector as shown.
- Connect overlay harness connector.
- Cut existing unused connector and terminate wire as described in "Unused wiring, terminating" (see page 1).

Overlay harness routing to ECM (all vehicles)

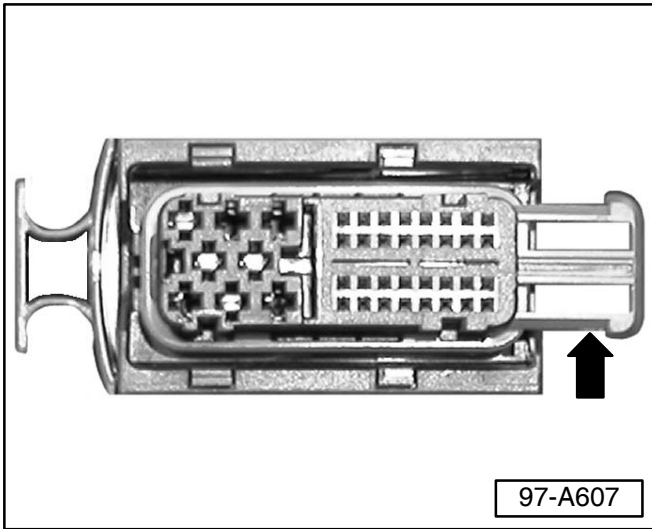
- Route overlay harness along existing harness to plenum opening.
- Continue routing overlay harness along existing wiring harness to Electronic control Module (ECM) located in the plenum.



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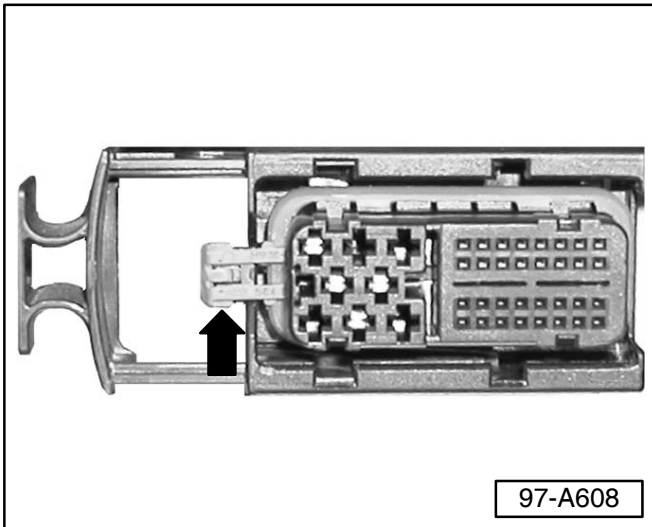
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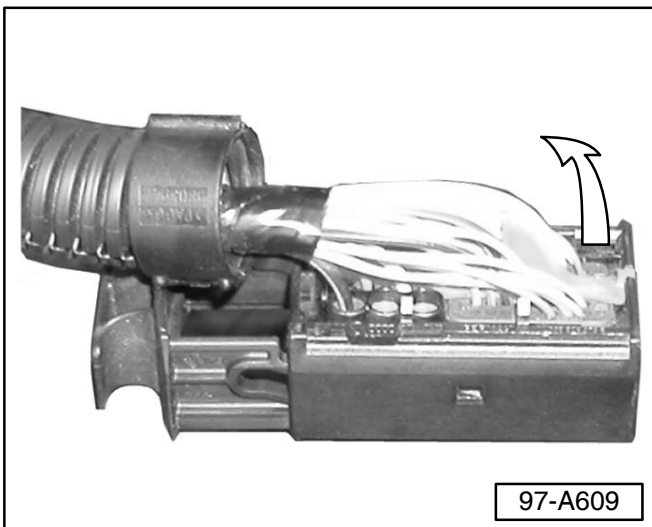


Electronic control module (ECM), installing overlay harness

- Remove smaller (40-pin) connector from ECM.
- Cut cable-tie for cover, then remove cover.
- ◀ - Remove purple secondary lock for 32-pin connector block (arrow).



- ◀ - Remove purple secondary lock for 8 pin connector block (arrow).



- ◀ - Remove purple secondary lock for wiring seals in direction of arrow.
- Remove seals.



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- Locate and remove terminals from pin locations 94, 95, 102, 103 and 121 using the appropriate tool from the VAS 1978 Wiring harness repair kit.

Note:

Terminal numbers located at each end of the connector blocks are very small and hard to see.

Once located, note the color(s) of the wires at the appropriate pin location for easier identification when removing.

- Feed overlay harness wires through protective tubing of ECM connector.
- Insert appropriate wires (numbered for correct locations) from overlay harness through the seals and into the appropriate locations in the connector block (making sure they are securely fastened).
- Terminate wiring removed from ECM connector as described in “Unused wiring, terminating” (see page 1).
- Reinstall secondary locks (previously removed).
- Reassemble the connector and cover using a new cable-tie.
- Reinstall connector onto ECM.
- Install coil connectors.
- Install Ground (GND) fastener
- ◆ Torque = 10Nm
- Install overlay harness fasteners to cylinder head (making sure that harness fits neatly into channel).



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With overlay harness completely installed:

- Install air duct.
- Install engine wiring harness covers.
- Install engine harness cable duct.
- Install cowl panel.
- Install wiper arms (see Repair Manual, Group - 92).
- Install battery tray and battery (see Repair Manual Group 27).
- Install upper engine cover.
- Install air cleaner housing (see Repair Manual Group 24).
- Connect battery ground (GND) strap.

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| When procedure applies to vehicles within the New Vehicle Limited Warranty, use the following: | |
| Part Identifier: | 9716 |
| Labor Operation: | 97169999 |
| Does not include Restoring Electrical Power | Maximum A-Time allowed = 300 TU |
| Claim Comment: Type As Per Technical Bulletin V970402 in comment section of Warranty claim. | |