



561 065 760

Assembly Instructions

Installation of original remote start feature accessory, Volkswagen Passat

Scope of delivery:

- ◆ 1 x Wiring harness remote start feature with relay housing¹⁾
- ◆ 1 x Secondary wire (white/violet, from engine control unit to gearbox multi-pin plug)
- ◆ 1 x Contact switch -F266-
- ◆ 1 x Fixing material
- ◆ 1 x Installation instructions

1) See also Wiring harness remote start feature overview on page 2.

Special tools, test and measuring equipment, and other components required:

- ◆ Torx driver bits (set)
- ◆ Flat-headed screwdriver
- ◆ Side cutters
- ◆ -VAS 1978- wiring harness repair set
- ◆ Vehicle diagnosis, measurement and information system -VAS 505X-

Accessories²⁾:

- ◆ Vehicle key with remote start feature (4 buttons plus panic button)
- ◆ On-board power control unit³⁾

2) not included in the scope of delivery, please order separately using the vehicle's spare parts catalogue.

3) only for vehicles without factory-fitted fog lights, if necessary check with vehicle diagnostics, measurement and information system. The on-board power control unit fitted on the vehicle can be utilised on vehicles with factory-fitted fog lights (PR no. 8WH).

Procedure:

! WARNING

Improper installation procedures can cause serious personal injury.

- Installation should be performed only by a qualified technician.
- Read all instructions thoroughly before starting.
- Observe all safety precautions when working under a vehicle.
- Beware of sharp edges to help prevent cuts.
- Always wear safety glasses to help protect eyes.
- Always wear protective gear as gloves and use caution when using hand tools.

! WARNING

Using unsuitable or damaged sockets and connecting cables and disregarding accepted safety practices may cause short circuits, accidents, and serious or fatal personal injury.

- Never use damaged sockets and connecting cables. Check connectors and cables for damage before use.
- Never allow connectors to come into contact with moisture, water and other fluids.

i Note

- ◆ *The remote start feature can only be retrofitted on vehicles **with** an automatic transmission and **without** keyless access.*
- ◆ *The installation of the original retrofitting remote start feature must be carried out by a competent workshop. Special tools and the accompanying literature specific to the car are required for proper installation and function. Incorrect installation may damage the vehicle.*
- ◆ *Secure the wires so that they cannot come into contact with any rotating or other moving parts and so that they cannot chafe against any sharp metal or plastic edges.*
- ◆ *All rights to make technical changes without notice are reserved.*



1.1 Wiring harness remote start feature overview

1 - Relay housing

- ◆ Installation under the vehicle's relay housing
- ◆ With two relays plugged in
- ◆ With one empty relay socket

2 - Single wire to the rotary light switch

- ◆ Black/violet, 0.5 mm² without crimp contact

3 - Single wire to the start relay

- ◆ Red, 4.0 mm² with crimp contact and socket housing

4 - Multi-wire cable to the engine control unit

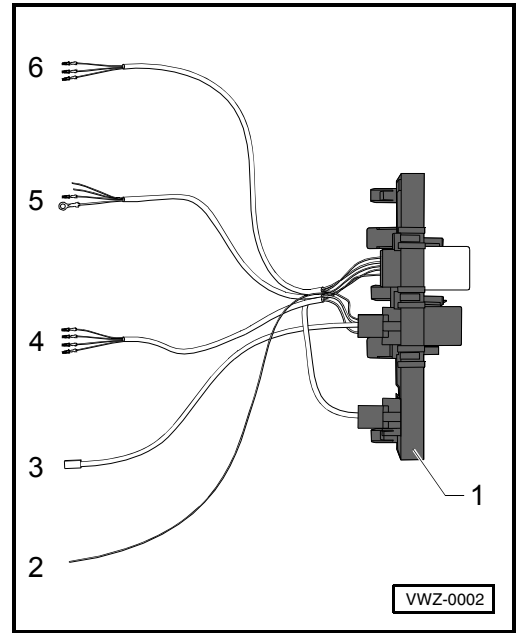
- ◆ Single wire blue/green, 0.5 mm² with crimp contact
- ◆ Single wire blue/red, 0.5 mm² with crimp contact
- ◆ Single wire red/black, 0.35 mm² with crimp contact
- ◆ Single wire red/white, 0.5 mm² with crimp contact

5 - Multi-wire cable to steering column control unit

- ◆ Single wire red/violet, 0.5 mm² without crimp contact
- ◆ Single wire red/black, 0.35 mm² without crimp contact
- ◆ Single wire black, 0.5 mm² with crimp contact
- ◆ Single wire brown, 0.5 mm² with ring eye

6 - Multi-wire cable to on-board power control unit

- ◆ Single wire black, 0.35 mm² with crimp contact
- ◆ Single wire red/blue, 0.35 mm² with crimp contact
- ◆ Single wire red/white, 0.5 mm² with crimp contact



1.2 Installation overview

1 - Steering column control unit

- ◆ installed underneath the steering column

2 - On-board power control unit

- ◆ mounted on the relay and fuse box holder

3 - Start relay 1

- ◆ mounted in the relay and fuse box holder

4 - Rotary light switch

- ◆ on the driver's side dashboard

5 - Relay and fuse box holder

- ◆ in the passenger-side footwell

6 - Cable inlet

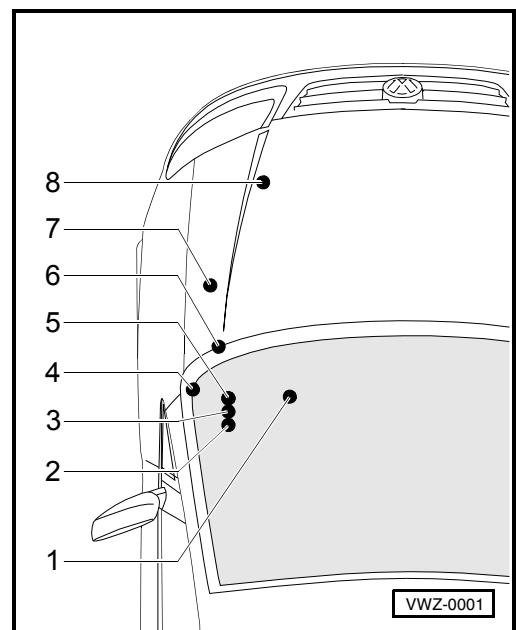
- ◆ from the interior to the engine compartment

7 - Engine control unit

- ◆ next to the relay and fuse box holder in the engine compartment

8 - Gearbox multi-pin plug

- ◆ DSG[®] automatic transmission: underneath the air filter housing
- ◆ automatic transmission: On top of the gear box next to the gearshift





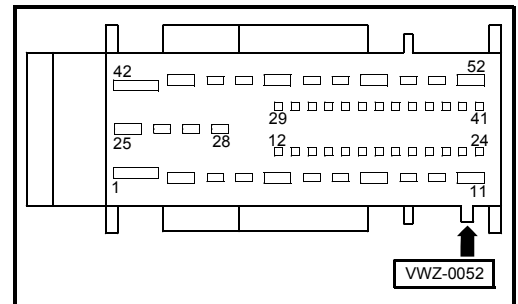
1.3 Overview of the crimp contacts on the plug connectors

On-board power control unit:

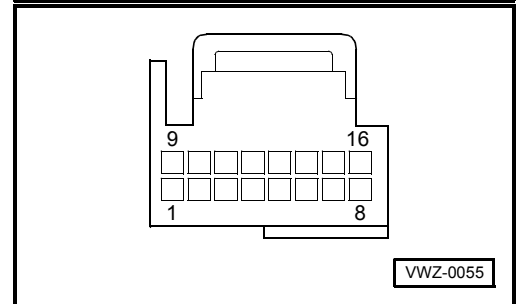


Note

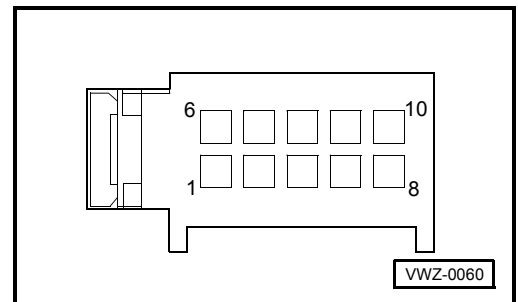
The three plug connectors on the on-board power control unit are different colours and have different mechanical encodings -Arrow-. The numbering on the plug connectors is identical.



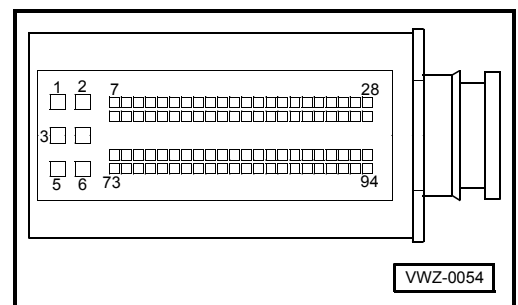
Steering column control unit:



Rotary light switch:

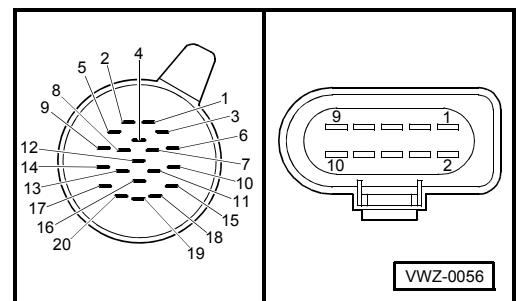


Engine control unit:



Gearbox control unit:

- ◆ Figure left: DSG® automatic transmission
- ◆ Figure right: Automatic transmission



1.4 Preparatory work

- Disconnect battery.
- ⇒ ELSA; repair group 27
- Disconnect the left dashboard relay housing.
- ⇒ ELSA; repair group 97
- Remove the engine cover.
- ⇒ ELSA; repair group 10
- Remove air cleaner.
- ⇒ ELSA; repair group 23



1.5 Adapt the vehicle wiring harness

- Adapt the vehicle wiring harness as shown on the table and tick off every work step in the "Completed" column of the table.

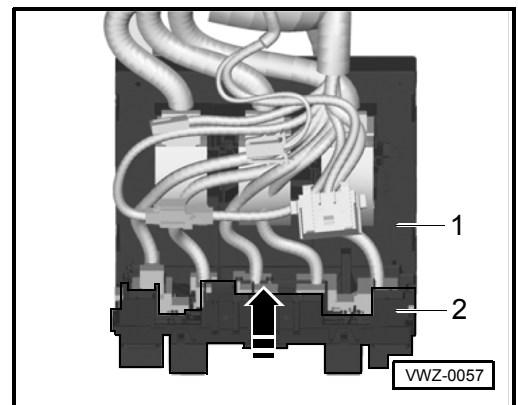
Component	Adaptation step	Completed
On-board power control unit	– Press the crimp contact on the brown plug connector out of chamber C30 and insulate it.	
	– Press the crimp contact on the brown plug connector out of chamber C31 and insulate it.	
	– Press the crimp contact on the brown plug connector out of chamber C14 and push it into the white plug connector in chamber B13 until it locks in place.	
	– Press the crimp contact on the white plug connector out of chamber B29 and insulate it.	
	– Press the crimp contact on the white plug connector out of chamber B28 and push it into the black plug connector in chamber A3 until it locks in place.	
Steering column control unit	– Press the crimp contact out of chamber A14 and push it into chamber A7 until it locks in place.	

1.6 Additional relay housing

Note

The illustration shows the on-board power control unit -1- in the left footwell from below.

- Attach the relay housing -2- included in the scope of delivery to the on-board power control unit -1- and lock it in place.
- ⇒ ELSA; repair group 97

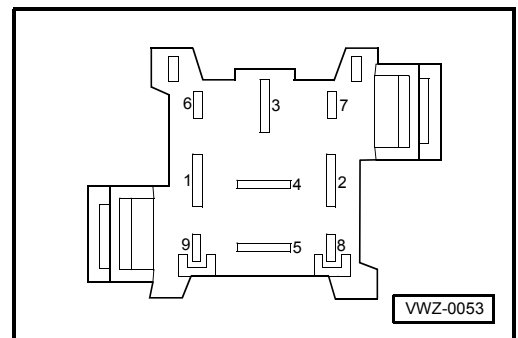


- Identify the vehicle's starter relay 1.

Note

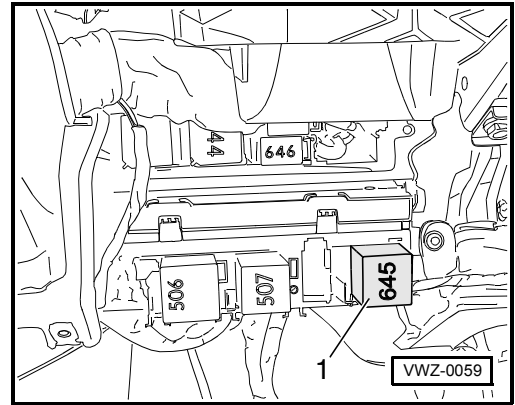
Two relays printed with "645" are mounted on the relay and fuse box holder. Use the colours of the connecting wires to reliably identify starter relay 1: red/black wire in chamber 1, black wire in chamber 3 and red wire in chamber 5.

- Unlock starter relay 1 and pull it out of the relay housing.
- Press the crimp contact out of chamber A5 on the now empty connecting socket on starter relay 1.
- Lock the pressed out crimp contact into place on the connector included in the scope of delivery.
- Lock the connector into place on the on the connector housing for the red single wire (⇒ Wiring harness remote start feature overview, -3-).





- Plug the unplugged starter relay -1- into the empty right-hand relay socket on the additional relay housing.



1.7 Connect the remote start feature wiring harness in the vehicle interior

- Connect the remote start feature wiring harness from the scope of delivery in the interior of the vehicle in accordance with the tables and tick off every work step in the "Completed" column of the table.

! WARNING

Never unplug the connector on the airbag control unit or connect parts of the wiring harness to wires leading to the airbag control unit.

Wire colour	Connection on the plug connectors for the on-board power control unit (⇒ Wiring harness remote start feature overview, -6-)	Completed
red/blue	- Lock the crimp contact on the red/blue wire into place in the white connector in chamber B14.	
black	- Lock the crimp contact on the black wire into place in the brown connector in chamber C31.	
red/white	- Lock the crimp contact on the red/white wire into place in the brown connector in chamber C34.	

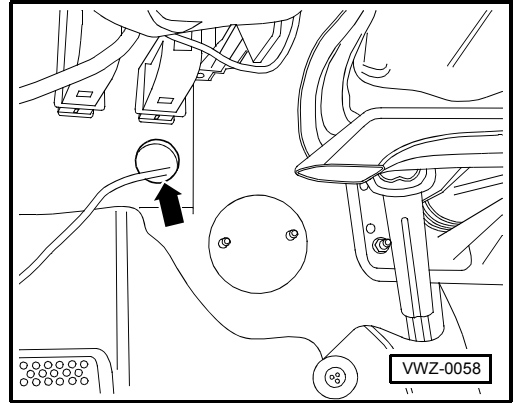
Wire colour	Connection on the plug connector for the steering column control unit (⇒ Wiring harness remote start feature overview, -5-)	Completed
black	- Lock the crimp contact on the black wire into place in the connector in chamber A14.	
red/black	- Cut the wire to the plug connector for chamber A6 approx. 50 mm (2 inches) in front of the plug connector. - Remove the installation on both ends of the wire and connected together with the wiring harness' red/black wire in a red crimp splice. - Shrink the crimp splice with a hot air gun.	
red/violet	- Cut the wire to the plug connector for chamber A1 approx. 50 mm (2 inches) in front of the plug connector. - Remove the insulation on both ends of the wire and connect it together with the wiring harness' red/violet wire in a red crimp splice. - Shrink the crimp splice with a hot air gun.	
brown	- Screw the ring eye on the brown wire onto the steering column earthing point	

Wire colour	Connection to the vehicle's rotary light switch (⇒ Wiring harness remote start feature overview, -2-)	Completed
black/violet	- Disconnect the plug connector on the vehicle's rotary light switch. - Cut the wire to the plug connector for chamber A4 approx. 50 mm (2 inches) in front of the plug connector. - Remove the insulation on both ends of the wire and connect it together with the wiring harness' black/violet wire in a red crimp splice. - Shrink the crimp splice with a hot air gun.	



1.8 Lay the remote start feature wiring harness in the vehicle's engine compartment and connect it

- Lay the wiring harness included in the scope of delivery from the vehicle's relay housing through the rubber grommet -Arrow- in the bulkhead to the engine compartment.
- Lay the wiring harness to the engine control unit and attach it to the existing cables and the vehicle's holders using cable ties.
- Connect the wiring harness to the larger of the two plug connectors on the engine control unit in accordance with the corresponding table. Tick off each work step in the "Completed" column of the table. Cross out tables which are not required.



Note

Before plugging in additional crimp contacts the blind plugs must be removed from the corresponding chamber of the plug connector.

Applies to: Vehicles with 2.0l TDI engine

Wire colour	Handling (⇒ Wiring harness remote start feature overview, -4-)	Completed
red/black	- Lock the crimp contact on the red/black wire into place in the connector on the engine control unit in chamber K45.	
red/white	- Lock the crimp contact on the red/white wire into place in the connector on the engine control unit in chamber K88.	
blue/red	- Lock the crimp contact on the blue/red wire into place in the connector on the engine control unit in chamber K25.	
blue/green	- Lock the crimp contact on the blue/green wire into place in the connector on the engine control unit in chamber K26.	

Applies to: Vehicles with 2.5l FSI engine

Wire colour	Handling (⇒ Wiring harness remote start feature overview, -4-)	Completed
red/black	- Lock the crimp contact on the red/black wire into place in the connector on the engine control unit in chamber K23.	
red/white	- Lock the crimp contact on the red/white wire into place in the connector on the engine control unit in chamber K74.	
blue/red	- Lock the crimp contact on the blue/red wire into place in the connector on the engine control unit in chamber K76.	
blue/green	- Lock the crimp contact on the blue/green wire into place in the connector on the engine control unit in chamber K75.	

Applies to: Vehicles with 3.6l FSI engine

Wire colour	Handling (⇒ Wiring harness remote start feature overview, -4-)	Completed
red/black	- Lock the crimp contact on the red/black wire into place in the connector on the engine control unit in chamber B23.	
red/white	- Lock the crimp contact on the red/white wire into place in the connector on the engine control unit in chamber B24.	
blue/red	- Lock the crimp contact on the blue/red wire into place in the connector on the engine control unit in chamber B74.	
blue/green	- Lock the crimp contact on the blue/green wire into place in the connector on the engine control unit in chamber B52.	



1.9 Connect the additional engine control unit – gearbox wire

- Connect the white/violet additional wire included in the scope of delivery in accordance with the corresponding table and tick off the work step in the "Completed" column of the table. Cross out tables which are not required.

Applies to: Vehicles with 2.0l TDI engine

Handling	Completed
– Lock the crimp contact on the additional wire into place in the connector on the engine control unit in chamber K44.	
– Lay the additional wire to the gearbox multi-pin plug and attach it to the existing cables and the vehicle's holders using cable ties.	
– Cut the wire to the gearbox control unit chamber A17 approx. 50 mm (2 inches) in front of the plug connector.	
– Remove the insulation on both ends of the wire and connect it to the additional wire from the engine control unit in a red crimp splice. – Shrink the crimp splice with a hot air gun.	

Applies to: Vehicles with 2.5l FSI engine

Handling	Completed
– Lock the crimp contact on the additional wire into place in the connector on the engine control unit in chamber K20.	
– Lay the additional wire to the gearbox multi-pin plug and attach it to the existing cables and the vehicle's holders using cable ties.	
– Cut the wire to the gearbox control unit chamber C2 approx. 50 mm (2 inches) in front of the plug connector.	
– Remove the insulation on both ends of the wire and connect it to the additional wire from the engine control unit in a red crimp splice. – Shrink the crimp splice with a hot air gun.	

Applies to: Vehicles with 3.6l FSI engine

Handling	Completed
– Lock the crimp contact on the additional wire into place in the connector on the engine control unit in chamber B39.	
– Lay the additional wire to the gearbox multi-pin plug and attach it to the existing cables and the vehicle's holders using cable ties.	
– Cut the wire to the gearbox control unit chamber A17 approx. 50 mm (2 inches) in front of the plug connector.	
– Remove the insulation on both ends of the wire and connect it to the additional wire from the engine control unit in a red crimp splice. – Shrink the crimp splice with a hot air gun.	

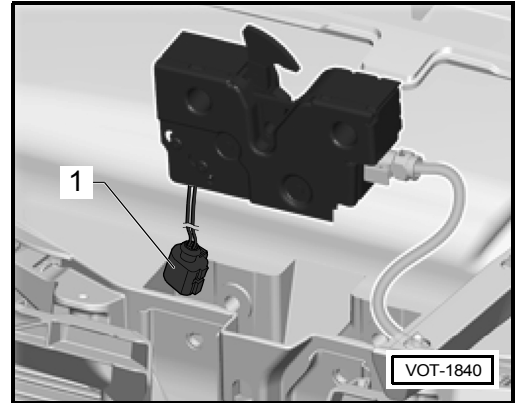


1.10 Installing the contact switch -F266-

- Remove the vehicle's hood lock.
- ⇒ ELSA; repair group 55
- Fit the contact switch included in the scope of delivery in the hood lock. Pull the pin connector -1- for the contact switch through the installation bay for the hood lock.
- ⇒ ELSA; repair group 55
- Lay the wires for the contact switch parallel to the control wire or the hood lock.

Note

- ◆ *The anti-theft warning system connection to the vehicle wiring harness is located in the engine compartment on the cooler intake near the left headlight.*
- ◆ *The connections for the anti-theft warning system are protected against moisture by adhesive tape.*
- Connect the pin connector -1- to the anti-theft warning system connection.
- Secure the wire for the contact switch to the existing holders or vehicle wiring using the cable ties supplied.



1.11 Coding the remote start feature

- Connect the battery
- ⇒ ELSA; repair group 27

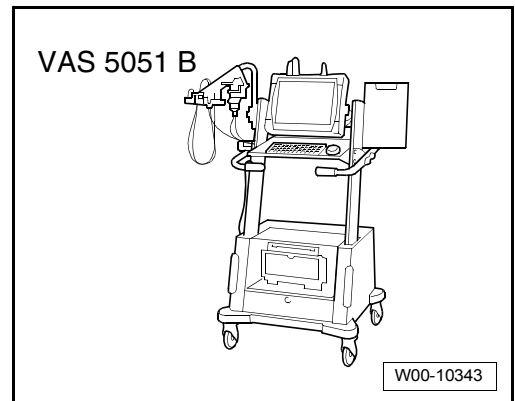
Note

- ◆ *After connecting the battery, ensure that the vehicle accessories (radio, clock, electrical windows) are checked in accordance with the workshop manual.*
- ◆ *After fitting is completed, the ESP light may light up. In this case, basic setting of the steering angle sensor -G85- must be carried out.*
- Connect a vehicle diagnostics, measurement and information system -VAS 505X- to the vehicle.
- ⇒ Electrical system, repair group 97; wiring, vehicle diagnostics, measurement and information systems; connecting a vehicle diagnostics, measurement and information system -505X-.
- Select the operating mode "Guided Troubleshooting" and then the respective vehicle within the vehicle diagnostics, measurement and information system -VAS 505X-.
- After querying the control units, select the "Functions/ component selection" via the button "Jump" and then sequentially the following menu options:
 - ◆ Software version management
 - ◆ Adapting Software
 - ◆ Perform conversion / retrofit
- Enter the ? character action code "????".

The online connection is created after code entry and the software update carried out.

- Quit the "Guided Troubleshooting" using "Jump".

All error memory entries are deleted.















1.12 Concluding work and checking the remote start feature

- Teach in all of the new vehicle keys.
- ⇒ Vehicle electronics; Electrical system; repair group 96; lights, lamps, switches - internal; anti-theft protection; immobilizer; ignition key; ignition key adaptation
- Separate the connection to the vehicle diagnostics, measurement and information system -VAS 505X-.

The prerequisite conditions for all of the following work steps described in the "Remote start feature" chapter of the vehicle manual must be complied with!

- Perform a function and safety check on the "Remote start features":
 - ◆ Check that the engine starts with the vehicle key in the ignition switch.
 - ◆ Lock the vehicle from the outside by pressing the  button on the vehicle key.
 - ◆ Start the engine with the buttons on the vehicle key as follows: Press the  button once and then press the  button twice within 3 seconds.
 - ◆ Check whether the engine can be switched off by pressing the  button on the vehicle key.
 - ◆ Lock the vehicle from the outside again by pressing the  button on the vehicle key.
 - ◆ Start the engine with the buttons on the vehicle key again: Press the  button once and then press the  button twice within 3 seconds.
 - ◆ Check whether the engine can be switched off by pressing the  button on the vehicle key.
 - ◆ Briefly start the engine using the vehicle key in the ignition switch and switch it off again. Then leave the vehicle key in the ignition switch. Check whether the engine can be started as described above by pressing the  and  buttons on the vehicle key. This should not be possible if the vehicle key is in the ignition switch!
- Secure the Park Distance Control wiring harness to existing wires or brackets to help prevent rattles.
- Replace all disassembled components in reverse order.

When handing over the vehicle, please refer the customer to the "Remote start feature" chapter in the vehicle manual and provide them with these installation instructions.







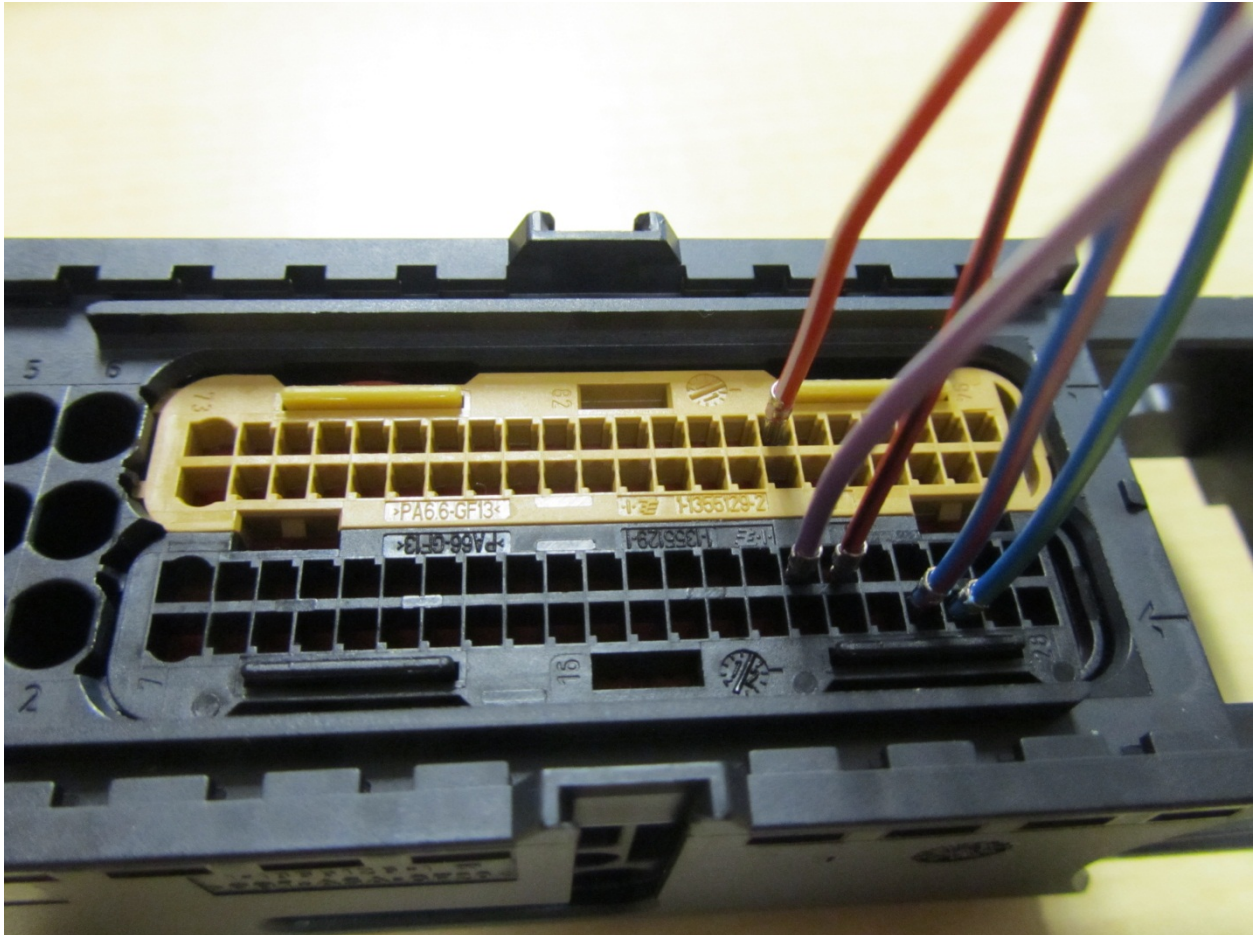
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Original retrofitting remote start feature, 02.2012

ECM connector pin configuration

TDI



Red/Black wire T94/45 (Remove and insolate wire already in this location if applicable)

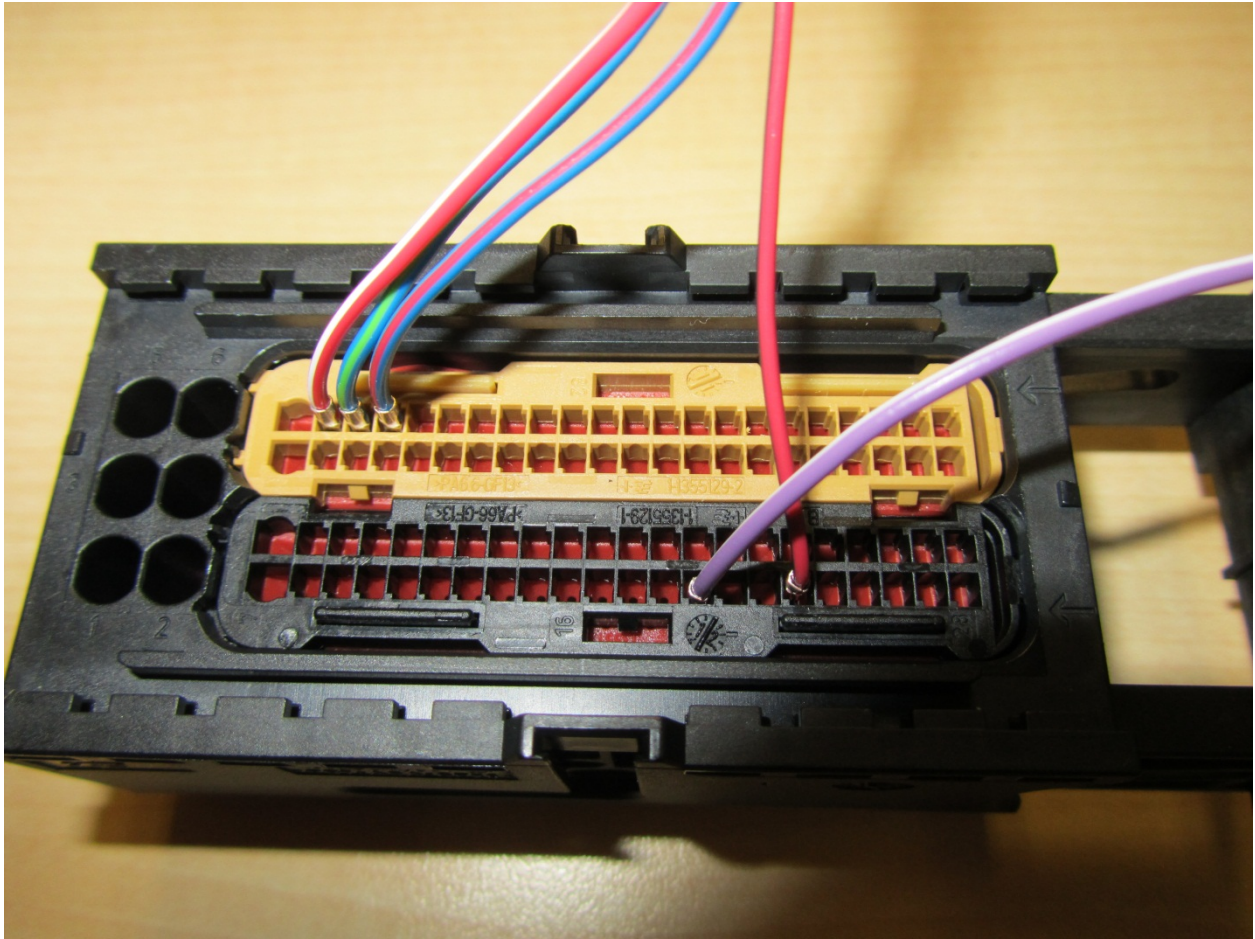
Red/White wire T94/88

Blue/Red wire T94/25

Blue/Green wire T94/26

Violet/White wire T94/44

2.5 FSI



Red/Black wire T94/23 (Remove and insulate wire already in this location if applicable)

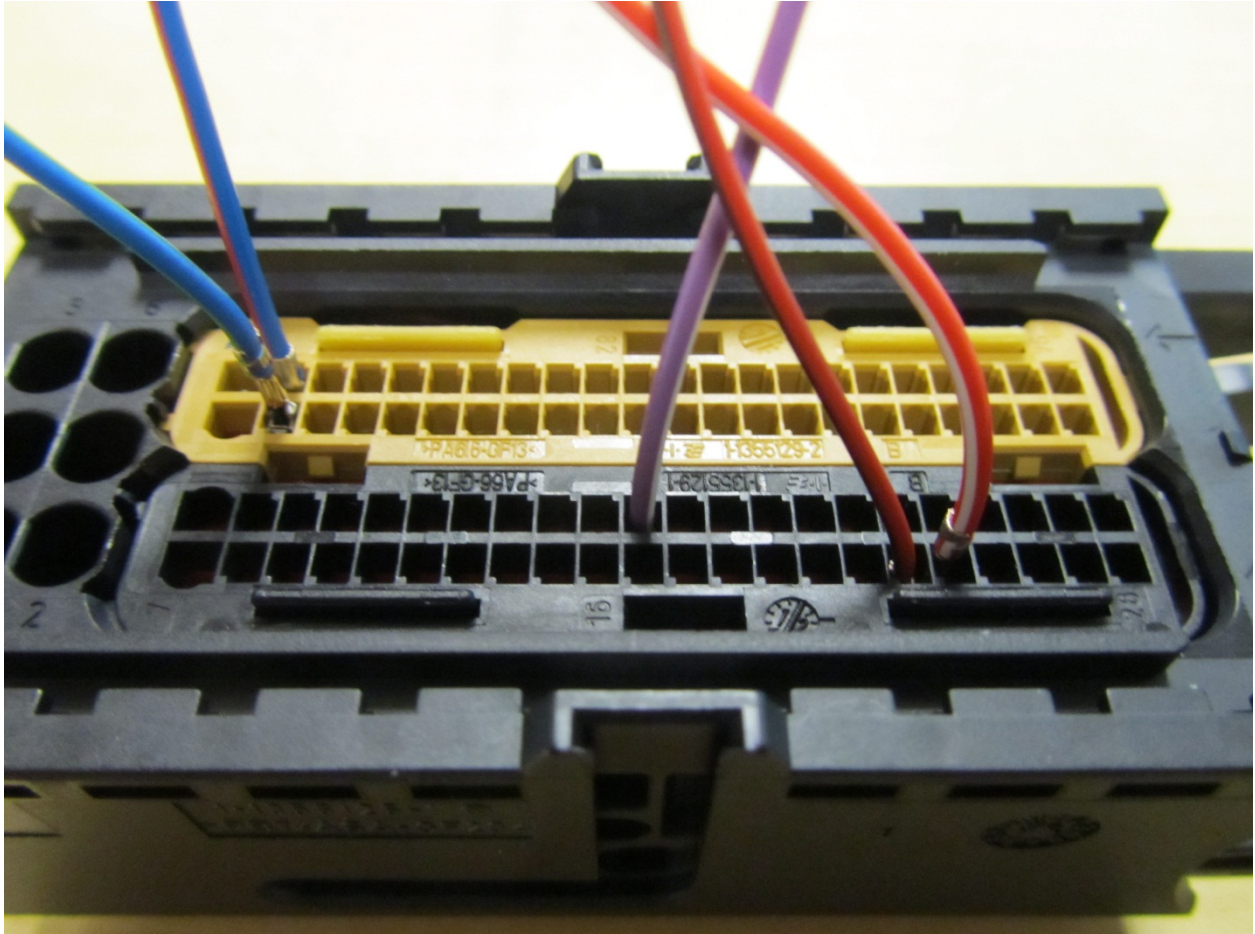
Red/White wire T94/74

Blue/Red wire T94/76

Blue/Green wire T94/75

Violet/White wire T94/20

3.6 FSI



Red/Black wire T94/23 (Remove and insolate wire already in this location if applicable)

Red/White wire T94/24

Blue/Red wire T94/74

Blue/Green wire T94/52

Violet/White wire T94/39