Assembly Instructions

ABT-AEC for PL 48

- Audi A4
- Audi A5
- Audi S4
- Audi S5

Version 07.03.2014

Assembly Instructions for

ABT-AEC for PL 48

Vehicles: Audi A4, A5, S4, S5

Assembly time: approx. 120 min

Attention: To guarantee optimal function and security of the ABT AEC it is necessary to thoroughly read through the assembly instructions prior to work and to operate the installation as described.

Important steps to take before assembling the ABT AEC

Before starting the installation, the error memory of the vehicle in which the AEC will be installed has to be read out.

Error log entry:

- Please follow the manufacturer's instructions to resolve errors.
- After the rectification it is necessary to once again take a test drive of minimum 30 km.

Install the ABT AEC only into vehicles which are error-free at the time of installation!

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1. Information about electrical consumption

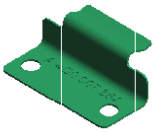
Power upgrades provided by an AEC increase the electrical consumption of a vehicle. An additional electric current flows. Besides this, the total current is depending on the car type, additional equipment or similar. In individual cases, considerable higher power consumption is possible.
The total power consumption determines how long a vehicle can be started without recharging the battery. Furthermore, this time is depending on the age and charging condition of the battery as well as on the outside temperature.
For vehicles which are used only sporadically, it is generally recommended to recharge the battery periodically. Thus the battery's durability can be prolonged.

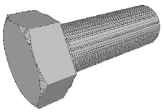
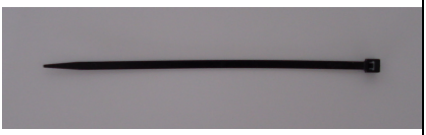
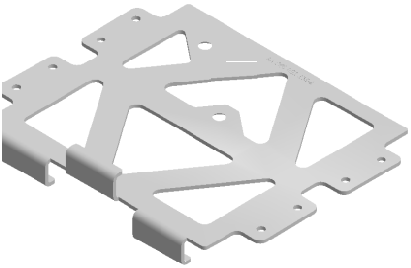
In case the vehicle is not in use for longer than one week, we recommend replacing the AEC with a bridge adapter. In doing so, the additional power consumption is prevented. Due to the adapter, the vehicle remains ready to start and is in its original state.
This bridge adapter can be obtained separately.
While staying in countries with bad fuel quality we also recommend the usage of the bridge adapter.

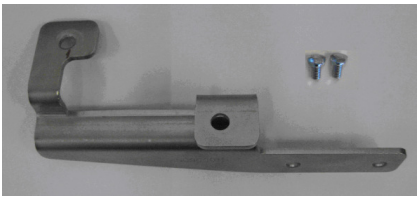
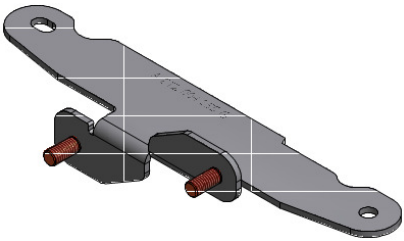
2. Scope of delivery

Please check if delivery is complete before starting the installation. In case the delivery is incomplete, please contact our service team at ABT Sportsline.

Quantity	Figure	Description
1		ABT Engine Control
1		Wiring harness; Contains optional 2 coding plugs (for 1,8 / 2,0 petrol engine): • 1,8: black • 2,0: red-brown
1		"ABT Power" sticker
1		ABT information sticker

1		ABT service book
1		"98 ROZ Super Plus" sticker (gas engine only)
4		Retaining clip 12 mm
8		Lens head screw M5
8		Spring ring M5
2		Screw nut with corrugated disc M6

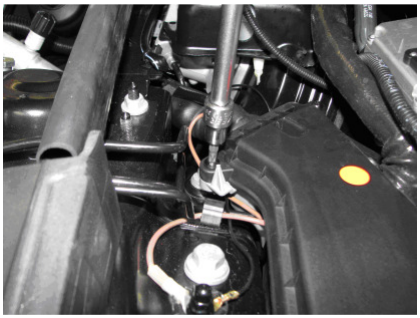
1		Hexagon bolt M6
8		Screw nut M5
1		Large diameter washer M6
12		Flat washer M5
1		Plastic washer nut
5		Cable tie
1	(ohne Abbildung)	Washer for S5
1		Adapter plate

1 1 1		Additional bracket A Additional bracket B Additional bracket C
1		Auxiliary heating set 1 (only for vehicles with auxiliary heating system): • Bracket for auxiliary heating • 2 screws M6x10 • 2 screw nut with corrugated disc M6
1		Auxiliary heating set 2 (only for vehicles with auxiliary heating system): • Bracket for auxiliary heating

3. Preparations at the vehicle

Remove the water tank cover.

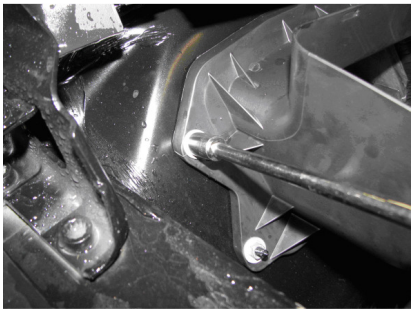
Remove the splash water tank.



Remove the electrical box cover.

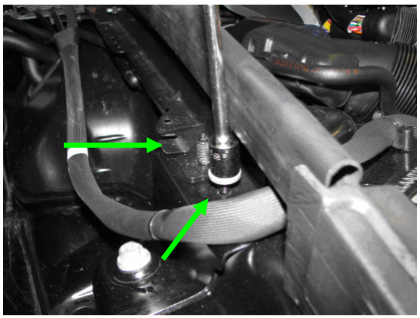
Turn off the ignition. Disconnect and remove the serial control unit.

Disconnect the air quality sensor from the ventilation shaft. Remove the protective grid.

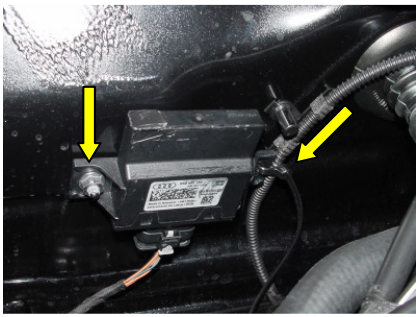


Remove the ventilation shaft.

If available, unscrew the alarm system horn from the chassis. The horn can remain connected.



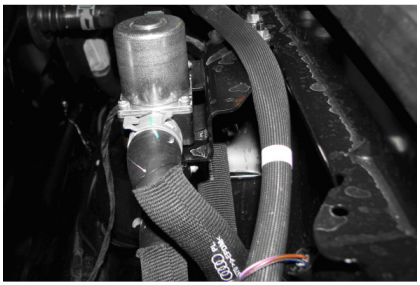
Unscrew the marked nut. Apply the bracket “B” (see picture p. 23). If it is blocked by the marked guide lug, bend it over.



If the vehicle contains a soundgenerator then first unmount it. Mount it again more to the center of the vehicle with one of the original screws and a cable tie (see arrows).

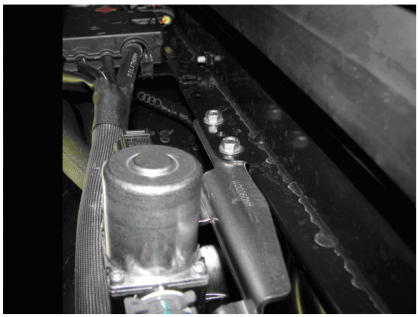
4. Auxiliary heating bracket 1

For pre-facelift-vehicles with auxiliary heating system.



The serial bracket of the auxiliary heating valve has to be removed.

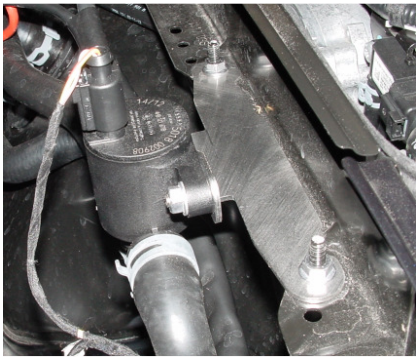
Unscrew the bracket.



Attach the bracket of the auxiliary heating by means of the two screws M6x10.

5. Auxiliary heating bracket 2 (valve bracket)

For facelift-vehicles with and without auxiliary heating system. 2 variants are possible: one variant matches the auxiliary heating set 1, the other variant matches the auxiliary heating set 2.

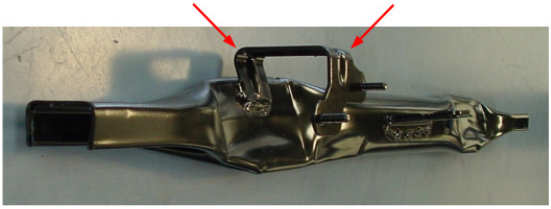


The serial bracket of the auxiliary heating valve has to be removed. Mount the bracket of the auxiliary heating valve by means of the stud bolt of the body. Then mount the auxiliary heating valve on the bracket. Use the screw nut with corrugated disc M6 and the original screws.

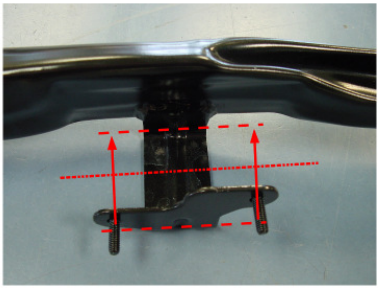
Cut the water protection as shown in the picture.

6. Alteration of the heating bracket for convertible

In the convertible car the heating bracket is welded on the strut brace. This bracket has always to be adapted so that the bracket for the AEC and the ECU has enough space.



Dismount the strut brace as described in the repair guide. The bracket has to be straightened at the marked positions.



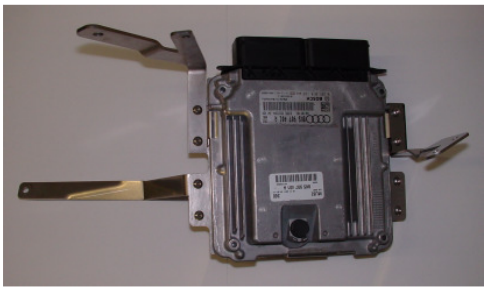
Now fold the bracket in the middle. The Fixing should be as near as possible to the strut brace.
Mount the strut brace in the vehicle.

This picture shows an adapted strut brace.

7. Determine the size oft he ECU

Place the ECU on the adapter plate. Check the size of the ECU compared to the adapterplate. If the ECU's multipoint connector rises above the end of the adapter plate, then go to chapter 8 (AEC assembly for large ECU). Otherwise go to chapter 9 (AEC assembly for small ECU).

The following picture help you with the choice:



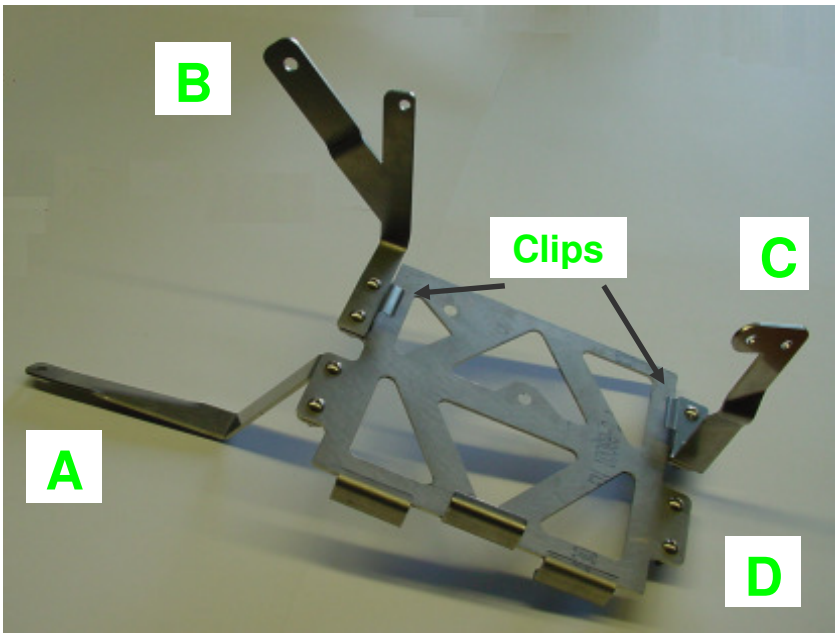
Large ECU: larger than adapter plate.

Small ECU: smaller than adapter plate.

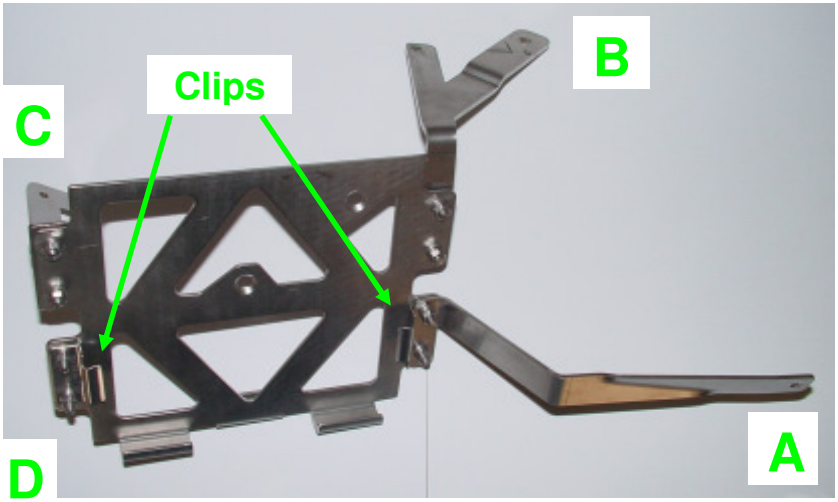
8. AEC assembly for large ECU

8.1. Adapter plate

First of all, the mounting plate must be assembled. In doing so, take notice of the following figures.



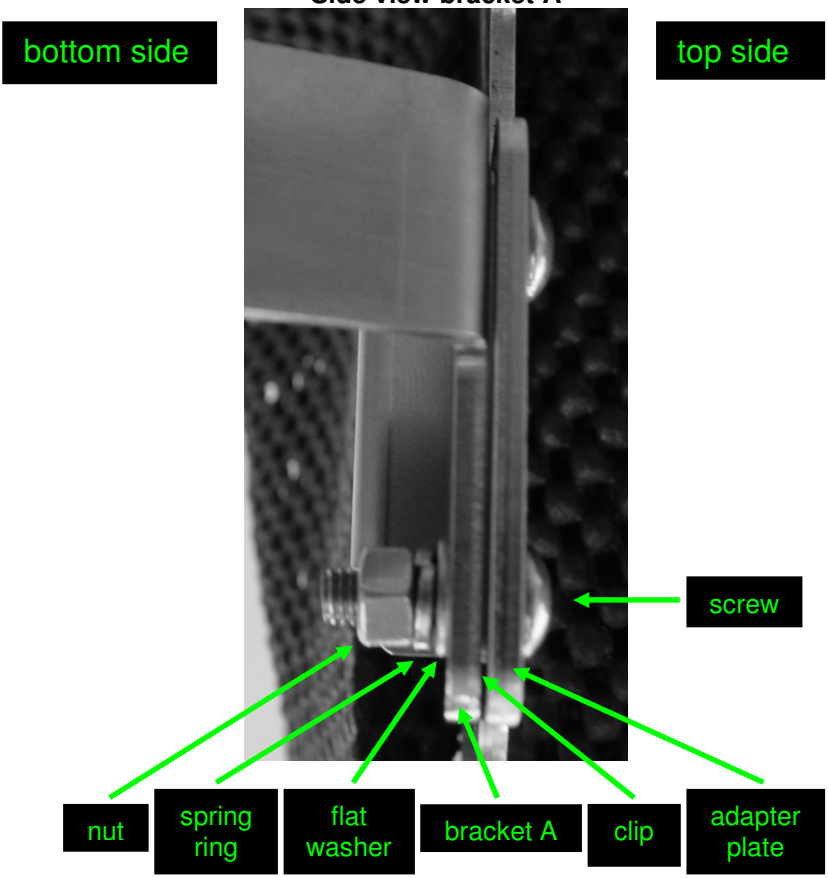
Top side: Labeling of the adapter plate



Bottom side: Positions of the countersinks

8.2. Bracket A

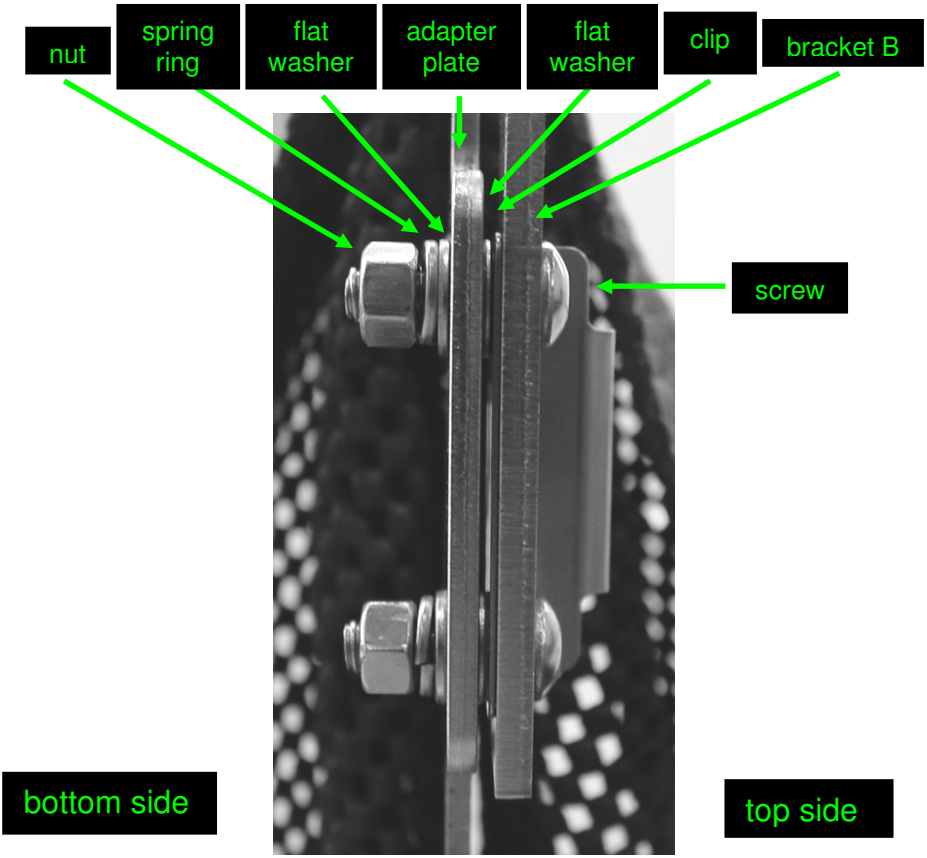
Side view bracket A



Parts list bracket A:

- 2 nuts
- 2 spring rings
- 2 flat washers
- bracket A
- 1 clip
- 2 screws

8.3. Bracket B

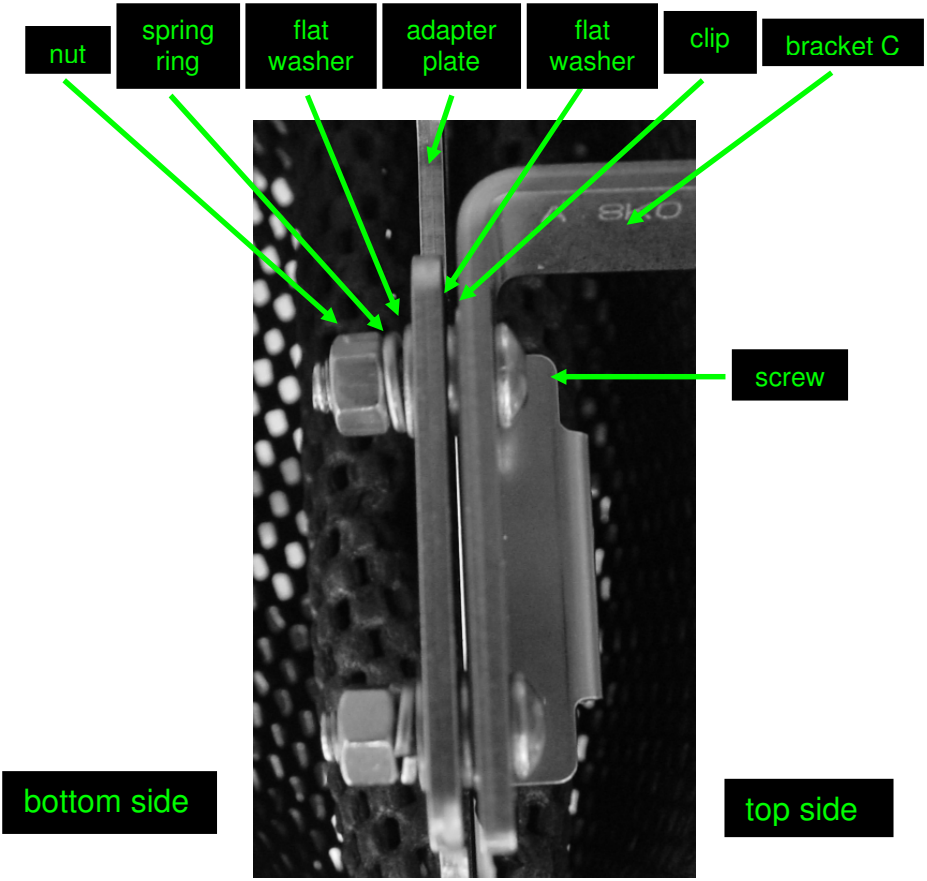


Side view bracket B

Parts list bracket B:

- 2 nuts
- 2 spring rings
- bracket B
- 4 flat washers
- 1 clip
- 2 screws

8.4. Bracket C

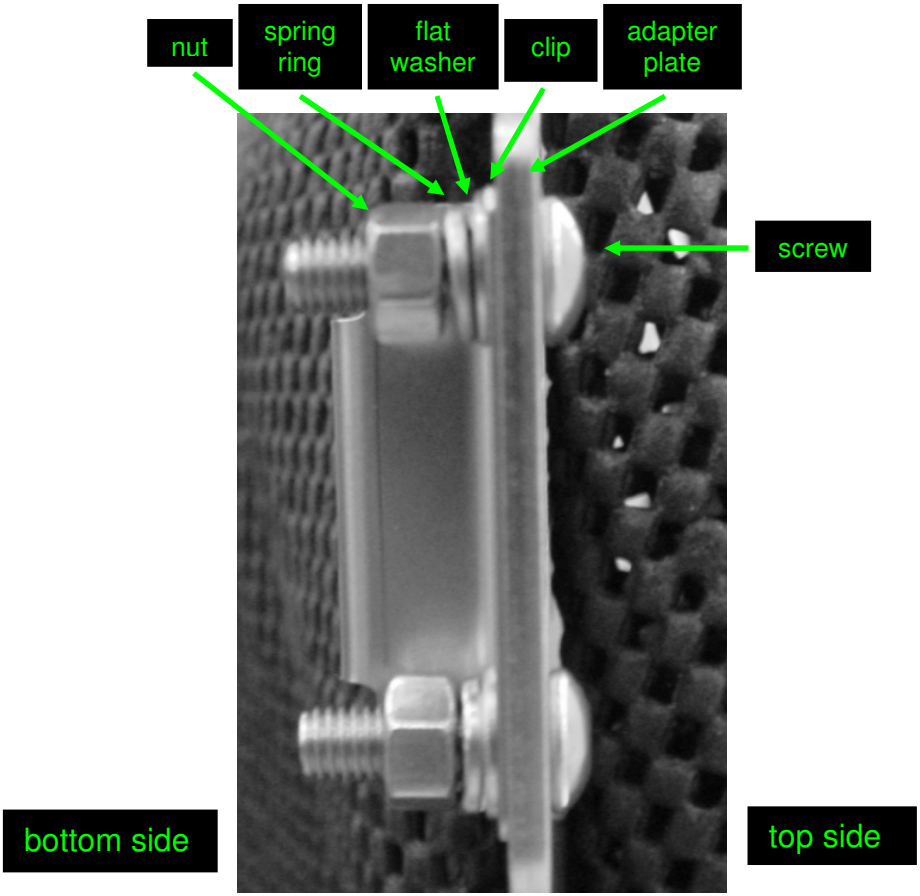


Side view bracket C

Parts list bracket C:

- 2 nuts
- 2 spring rings
- Bracket C
- 4 flat washers
- 1 clip
- 2 screws

8.5. Bracket D

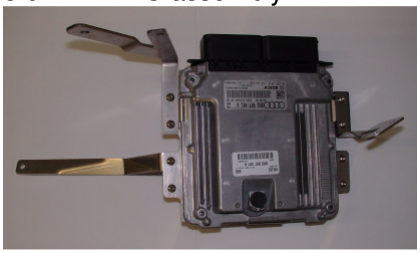


Side view bracket D

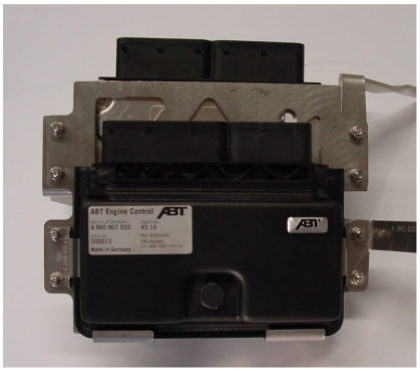
Parts list bracket D:

- 2 nuts
- 2 spring rings
- 2 flat washers
- 1 clip
- 2 Sscrews

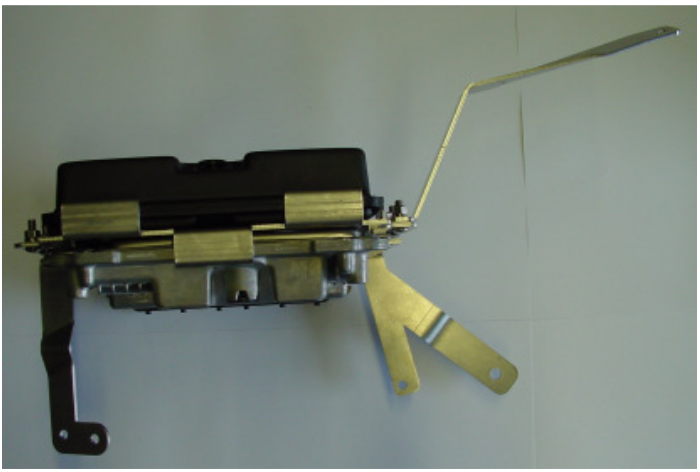
8.6. AEC assembly



Insert the engine control unit on the top side into the clips.



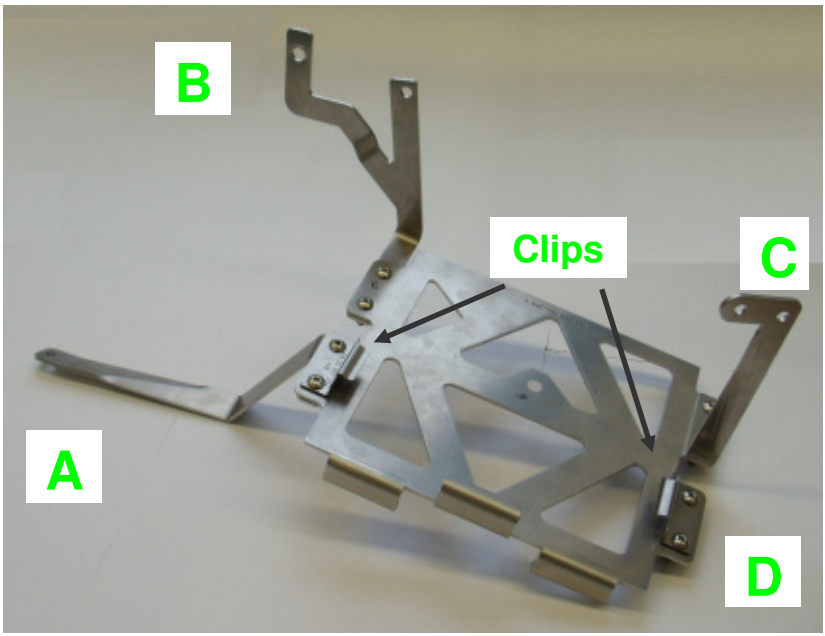
On the bottom side, insert the AEC into the clips.
Tighten the screws.



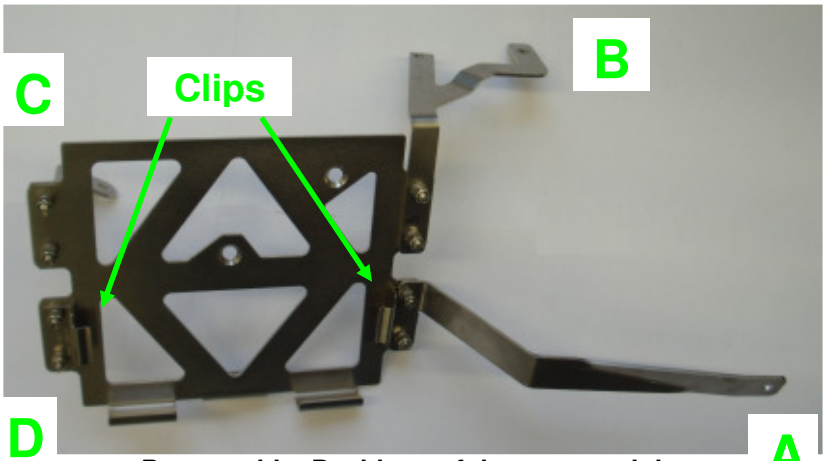
9. AEC assembly for small ECU

9.1. Adapter plate

First of all, the mounting plate must be assembled. In doing so, take notice of the following figures.



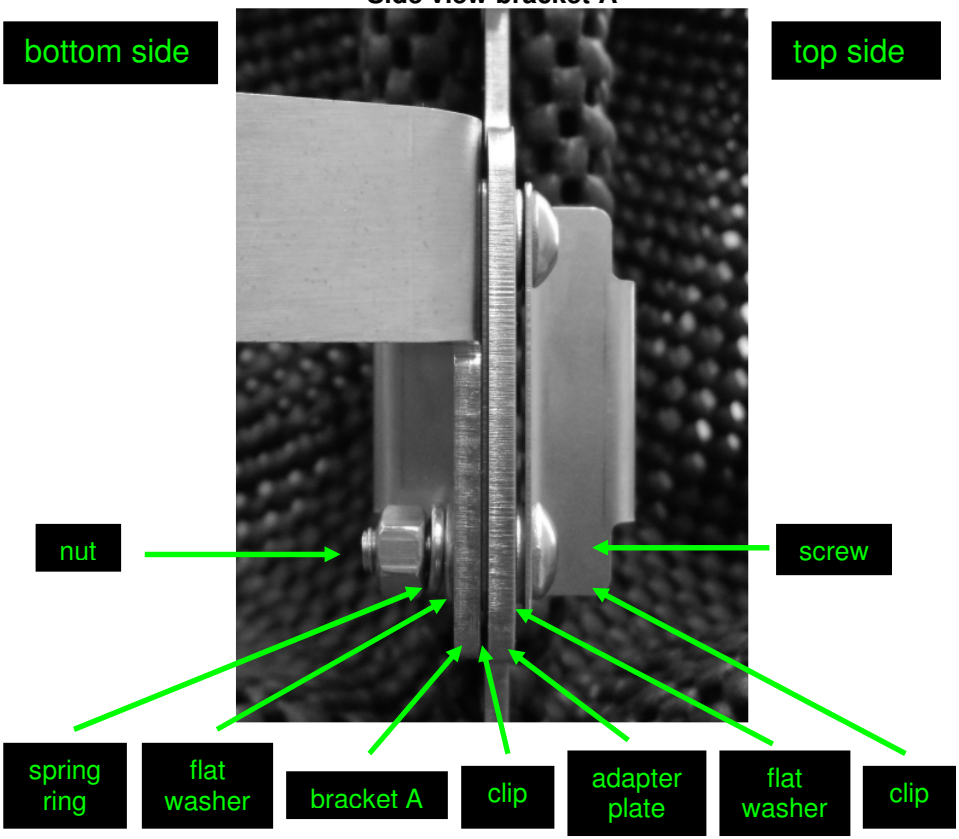
Top side: Labeling of the adapter plate



Bottom side: Positions of the countersinks

9.2. Bracket A

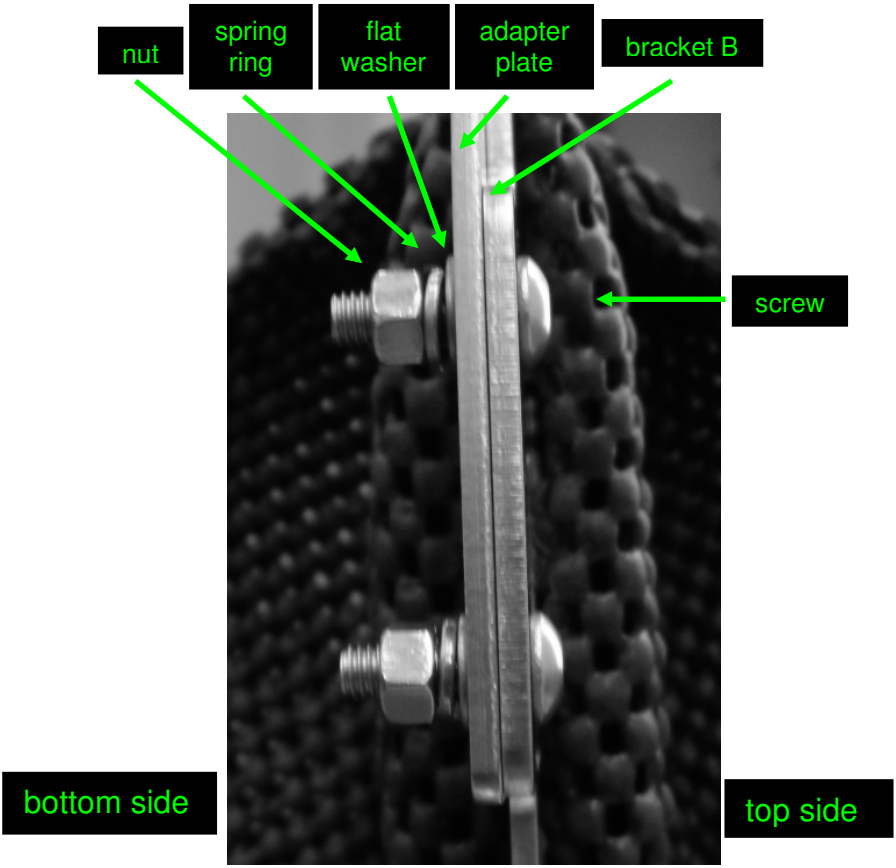
Side view bracket A



Parts list bracket A:

- 2 nuts
- 2 spring rings
- 4 flat washers
- bracket A
- 2 clips
- 2 screws

9.3. Bracket B

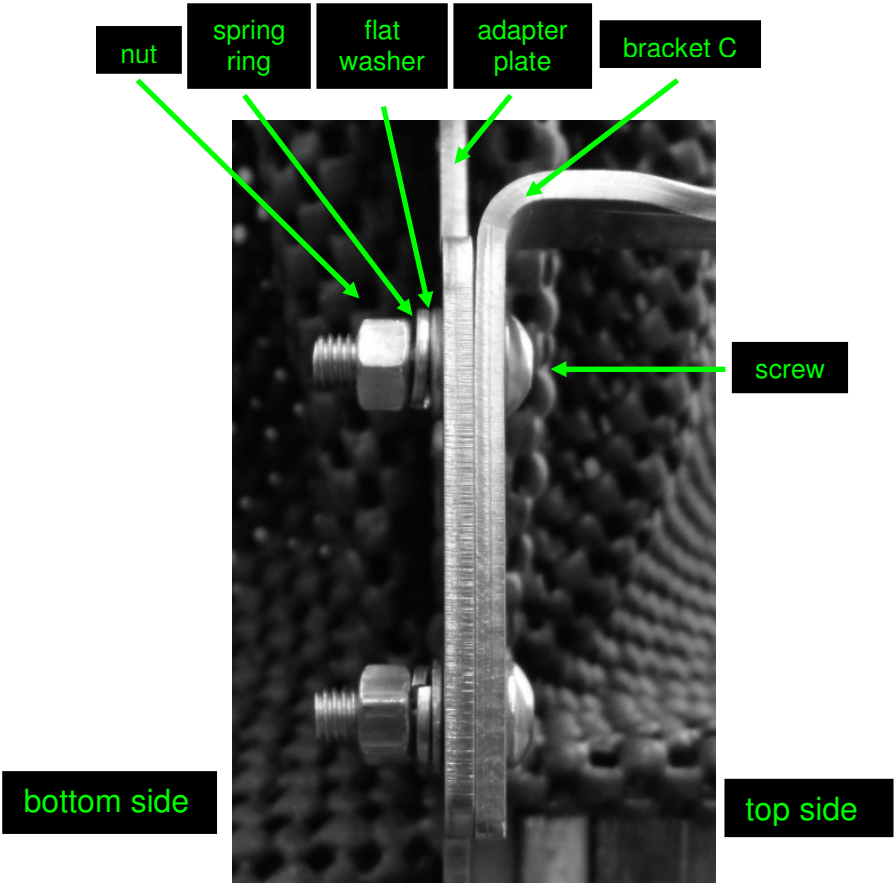


Side view bracket B

Parts list bracket B:

- 2 nuts
- 2 spring rings
- bracket B
- 2 flat washers
- 2 screws

9.4. Bracket C

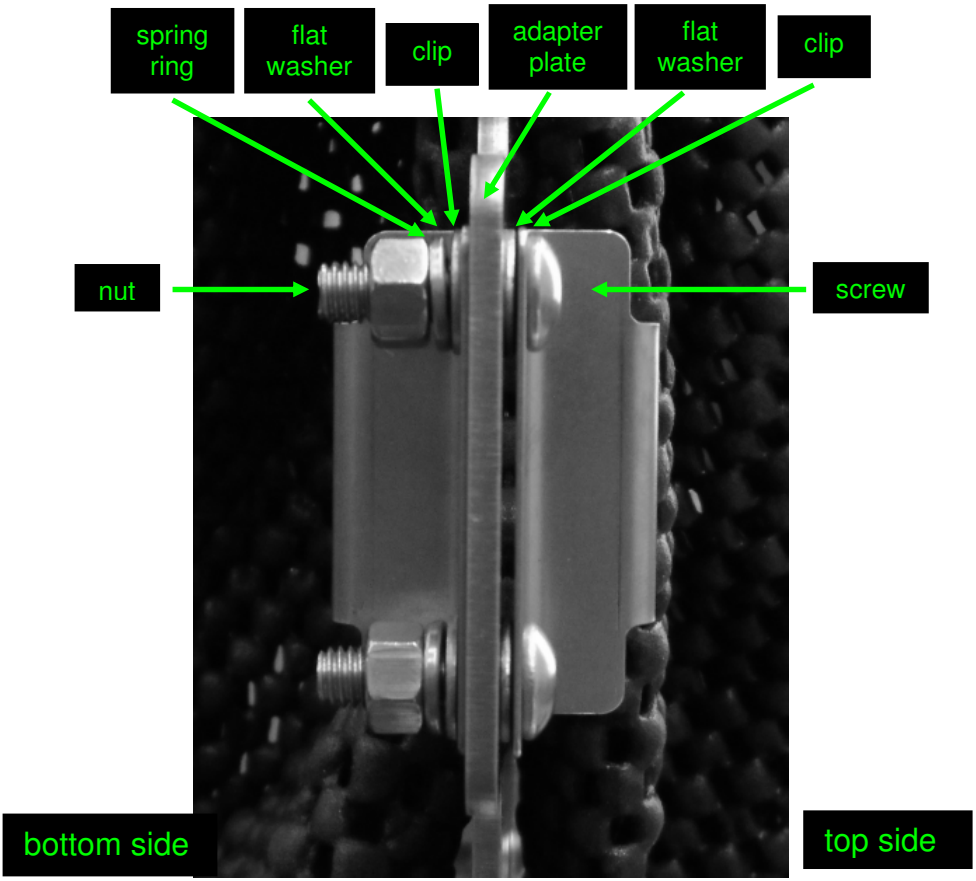


Side view bracket C

Parts list bracket C:

- 2 nuts
- 2 spring rings
- Bracket C
- 2 flat washers
- 2 screws

9.5. Bracket D



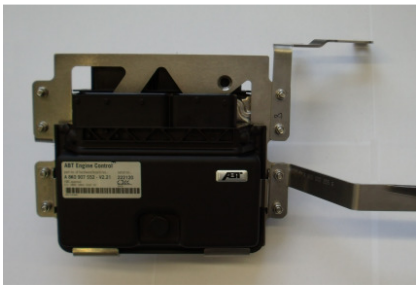
Side view bracket D

Parts list bracket D:

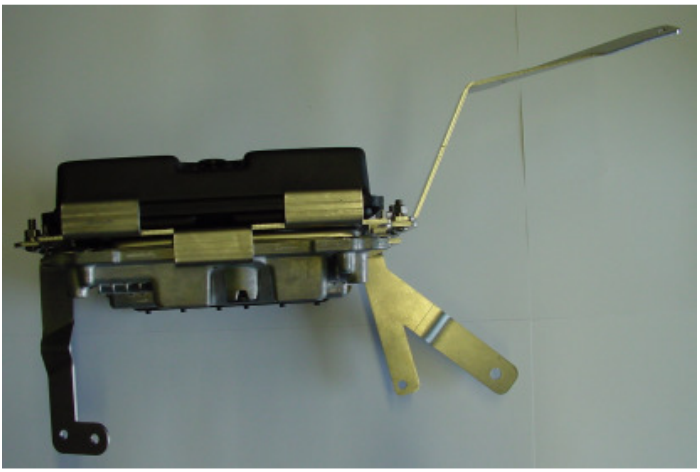
- 2 nuts
- 2 spring rings
- 4 flat washers
- 2 clips
- 2 screws

9.6. AEC assembly

Insert the engine control unit on the top side into the clips.

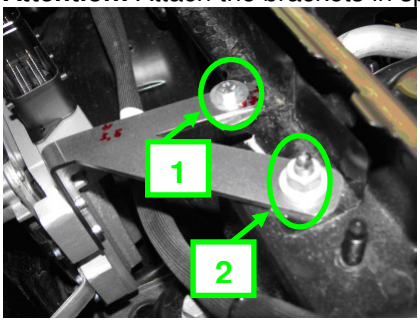


On the bottom side, insert the AEC into the clips.
Tighten the screws.



10. AEC installation

Attention: Attach the brackets in specified order!

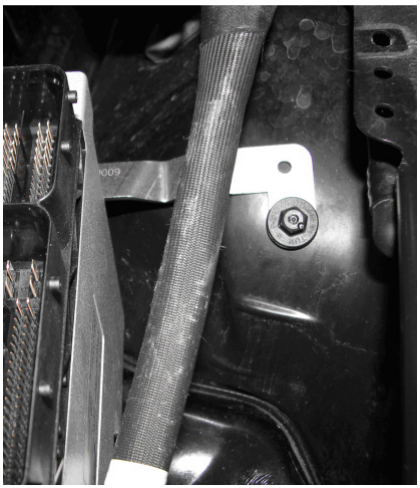


Fasten **bracket B** to bolts and bore hole in the water box (below windscreen).

Marking 1: Use screw, large diameter washer and disc nut M6.

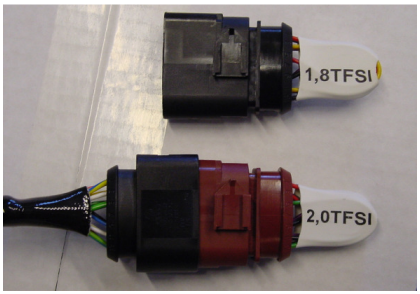
Marking 2: Use serial nut.

For Audi A5 / S5 convertible:
Bracket B is to be installed below the strut bar.
Insert the spacer at position 2.



Attach bracket C to the water box (below windscreen). Use the plastic washer nut.

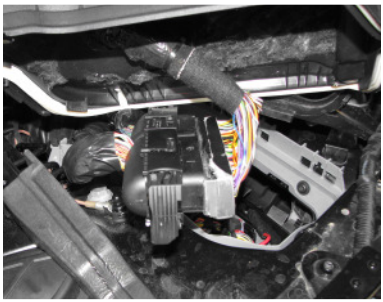
Fasten bracket A to the bolt under the ventilation box. Reinstall the horn of the alarm system. In case the vehicle is not equipped with an alarm system, an additional disc nut is included in delivery.



For 1.8 and 2.0 Otto-engine: Depending on the engine type, connect the right coded plug to the Abt wiring harness.

The meaning of colors:

- 1.8: black
- 2.0: red-brown

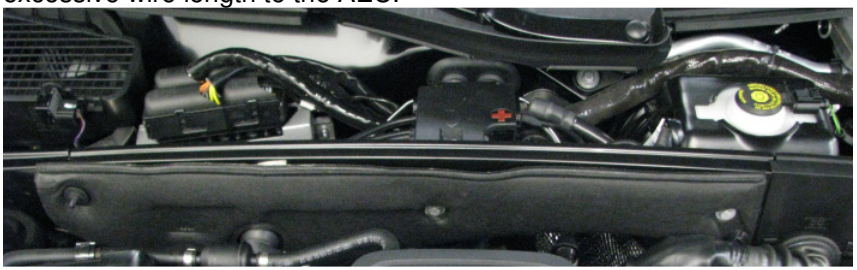


Connect the ABT wiring harness to the serial plugs in the electrical box.

Reattach the cover.
Attention:
Do not pinch any cable!

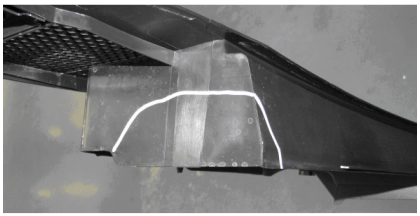
Connect both control units to the ABT wiring harness. Connect the AEC to the cables marked with 'AEC'.

Run all wires as shown in the figure and fix it with cable ties. Tie excessive wire length to the AEC.



11. Water box cover

The water box cover must be processed as follows.



Cut the marked areas of the water box cover

12. Completion

Reinstall all serial parts to the vehicle.

For 3,0 Otto engines:
Reconfigure the throttle valve and the control butterfly valve via diagnosis system.

Read out the error memory and delete it if necessary.

Start the engine.

Take a test drive (gasoline engine with 98-octane Super Unleaded).

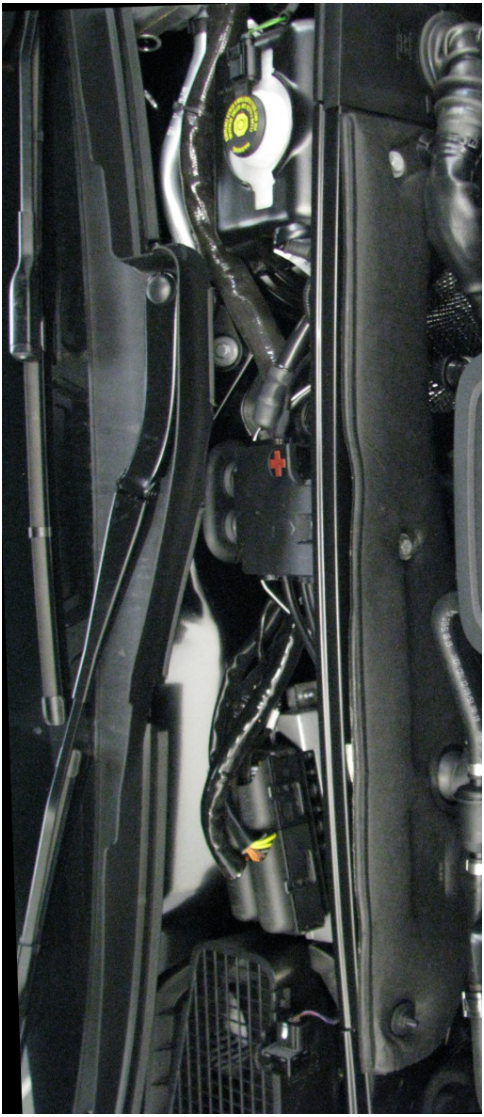
Attach the sticker "Abt Power" to the engine cover and the information sticker to the lock carrier.

Only gasoline engines: Apply the '98 ROZ Super Plus' sticker in the fuel filler flap.

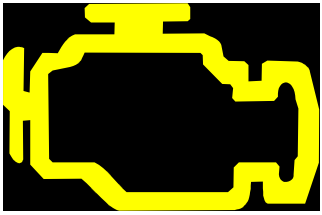
Hint:
The AEC can be left built in for manufacturer service updates.
The communication with the tester is not affected by the AEC.

If the MIL-lamp and EPC-lamp is blinking by turns, an error correction is necessary in the ABT AEC. Then please contact ABT Sportsline.

13. Overall view

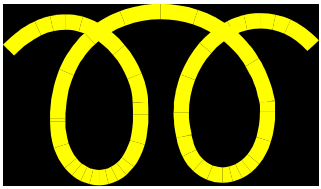


14. Warning lamps



Malfunction-Indicator-Lamp (MIL)

Electronic Power Control (EPC)



Control lamp "Preheat"

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