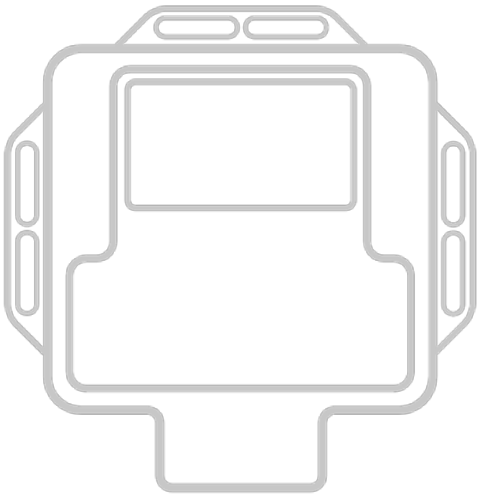
DTE SYSTEMS
CHIPTUNING No.1



# PowerControl

## Installation instructions

5067

ENG70082

## >> *Table of Contents*



## >> *Scope of delivery*

- Performance Pack
- Harness
- Dummy plug
- Fixing Set
- Sticker
- Installation Instructions

## >> *Preliminary*

**The Performance Pack is specifically tuned and programmed for your vehicle.** Due to production variations, the expected result of the Performance Pack can turn out differently (higher or lower). Also, the increased performance always depends on the maintenance condition and mileage of the vehicle.

If the power is too high, shown by a strong soot formation, disturbed engine run, engine misfire or the initiation of the engine emergency manifests itself: a program change is possible (see page 5). **IMPORTANT: When changing the program contact your dealer or manufacturer!**

## >> *General instructions*

**Read this installation guide carefully before starting the installation so that you will be able to use all the technical advantages of the systems and do not start with the installation before you have read and understood the instructions.**

If you comply with the advice given below (1) you will avoid an early termination of the product guarantee and you will be enjoying your product for years to come.

**(2)** Never install the system if the ignition is on. Pull the ignition key.

**(3)** After switching off the ignition, wait for 5 minutes until all electric devices are turned off.

**(4)** If possible, install the module in a dry area in the engine compartment. Humidity and wetness contain minerals which cause corrosion to the electronic circuits. Fix the harness and protect it from humidity.


**(5)** Before every engine wash, remove the entire tuning system.

**(6)** Do not fix tuning systems to engine parts that could heat up. Never fix the module directly or close to the engine (engine block). High temperatures can reduce the lifespan of electronic devices and can deform or melt specific plastics materials.

**(7)** Take care that the harness does not touch the parts in motion and the metal parts to avoid friction. Do not make any changes to the harness (do not make it any longer or shorter).

**(8)** In case of the malfunctioning of the system due to any non-compliance with the instructions during the installation of the tuning modules, the product guarantee will be terminated.

## >> *Installation*

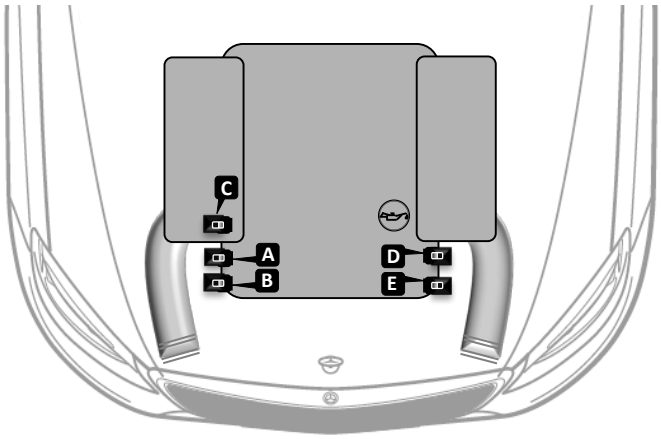
Remove the air intakes. Localise the intake manifold pressure sensors (**A & D**), the boost pressure sensors (**B & E**) and the camshaft sensor (**C**). Open each of the connectors and connect the cable adapter with these sensors.

**Advice!** You can't find the sensors? The 3-pin intake manifold pressure sensors are located in the front area at the intake manifolds behind the throttle body´s. The 3-pin boost pressure sensors are located in the front left and right area from the engine at the intercoolers before the throttle body´s. The 3-pin camshaft sensor is located under the left airbox.

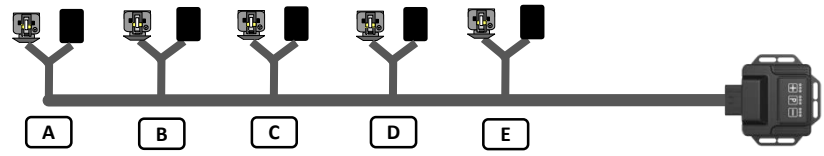
Note that you don't connect the adapter cable on other plugs. On the following pages you will find an illustrated guide.

Move the adapter cable not in parallel with injection pipelines or ABS-control device connecting leads. Keep to very big distances. Fix the cable harness with cable ties. Connect the module with the adapter cable. The module should be obstructed possibly against warmth and splash water protected.

## >> *Installation principle*




- A Intake manifold pressure sensor 1 (3 pin)
- B Boost pressure sensor 1 (3 pin)
- C Camshaft sensor (3 pin)
- D Intake manifold pressure sensor 2 (3 pin)
- E Boost pressure sensor 2 (3 pin)




cable harness sticker:

## >> *Programs*

You purchased a modern Chiptuning system for your vehicle that features DTE Systems‘ multi-map technology. specially designed for your vehicle and engine type. In the factory setting, the device already has been set-up specifically for your vehicle and engine type and is ready to use. Your tuning system includes 3 specific programs Sport, Dynamic and Efficiency that can be selected depending on your personal driving situation and optimization requirement.

**Remarks**

- The system‘s factory setting is adjusted to fit your personal vehicle, a further adjustment is not required.
- The LEDs are signaling an active tuning system and show the selected program.
- In case of blinking LEDs, the keypad lock is active (Fig. A).

**Setting an alternative program**

Deactivate the keypad lock by pressing and holding the **buttons + and –** for a minimum of 5 seconds.

**Important**: Press and hold buttons until all 9 LEDs are turned on at the same time.

Fig. A

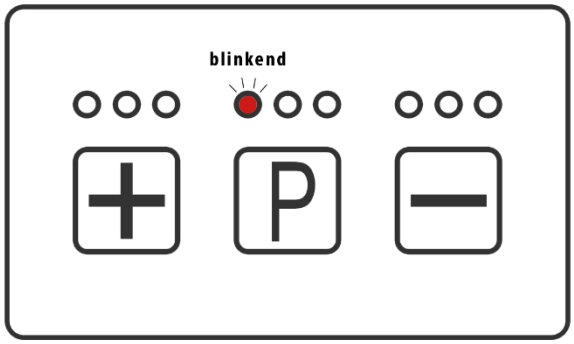
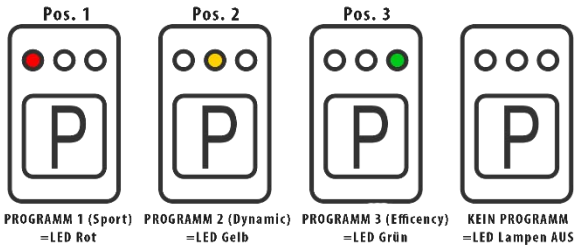



Fig. B




By pressing of **button P** you can switch between the activated **programs**. The colored LED are showing the active program (Fig. B):

**Sport** (Factory setting) – The Sport program provides full performance in every driving situation

**Dynamic** – The Dynamic program offers a balanced performance ideal for changing driving situation in city and autobahn traffic.

**Efficiency** (only for X and RX systems) – The Efficiency program optimizes the efficiency of the engine for a fuel-saving driving pattern

**Stock** – Your vehicle will be set into stock without any engine optimization (no LEDs when keypad is deactivated, 3 colored LEDs while keypad lock activated)

**Fine adjustments of performance levels**

- Engines can have stock tolerances in performance that require an adjustment of the multi-maps. **Important:** Only change the multi-maps after consultation of your authorized dealer.
- By pressing the **buttons + or –** every program can be adjusted to the specific characteristics of you vehicle. Colored LEDs indicate the selected performance level.

All settings are automatically saved after 10 seconds and the keypad lock will be re-activated.

## >> *Connecting smartphone app (only for X and RX systems)*

Your tuning system features a modern smartphone interface that allows to control the central functions of your tuning system via your smartphone. To pair your PowerControl device with your smartphone, please follow the steps below.

**Apple iPhone**

- Download the „PowerControl“ app by DTE Systems for free via the Apple iTunes store on your smartphone.
- Turn on ignition to start your PowerControl module. You will see blinking LEDs.
- Deactivate the keypad lock by pressing and holding the **buttons + and –** for a minimum of 5 seconds. Your module now is in pairing mode.
- Open the PowerControl app and follow the instructions inside. Your smartphone will now connect to your PowerControl system. In case you are asked for a **PIN code**, please enter **000000** .

**Android**

- Download the „PowerControl“ app by DTE Systems for free via the Google Play store on your smartphone.
- Turn on ignition to start your PowerControl module. You will see blinking LEDs.
- Deactivate the keypad lock by pressing and holding the **buttons + and –** for a minimum of 5 seconds. Your module now is in pairing mode.
- Open Bluetooth settings inside the Android‘s settings menu.
- The PowerControl module is visible in pairing mode with the name DTE-xxxxxxxxx. **Pair the DTE device**. In case you are asked for a **PIN code**, please enter **000000** . For questions to pair a Bluetooth device with your Android phone, please consult your smartphone manufacturer.

**Compatibility**

The PowerControl App is compatible with all Apple iPhones (later than 4S) with iOS 10 or later as well as smartphones with Google Android 7.1.1 or higher with Bluetooth LE. We recommend to use the latest operating system version (Android 7 or higher) to prevent limited compatibility with Bluetooth LE standards. For further information please read instructions inside the app or in the app stores carefully. Features might vary depending on your smartphone‘s and vehicle‘s capabilities.

Your tuning system is equipped with one of the strongest certified Bluetooth LE radio modules to achieve the best possible connection quality. Prevent massive metallic components like main engine block or turbos to be located between module and the car‘s interior to improve reception. Strong Bluetooth radio emitter in your surrounding might temporarily affect the radio connection and remote functions of the app, however, they will not compromise the functionality of your tuning system.

**Legal notice**

Usage of smartphones while driving is not allowed in many countries. Please comply to national legislation applicable to you. For usage we recommend to have a fixed smartphone mount in which the phone is placed before driving and instruments are preset.

| **Error descriptions*** | **Problem solution?** |
|---|---|
| „The engine doesn´t start.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Is a plug twisted connected? If possible?<br>▪ Do the LED`s work properly (see chapter „Program Changing“)?<br>*Error persists >* Replace module with enclosed blind plugs and start again.<br>*Error fixed?* Module is defective: Contact the vendor / manufacturer |
| „The engine doesn`t run smoothly. The engine is bucking.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Has the program been changed?(see chapter „Program Changing“)?<br>▪ *Error persists >* Contact the vendor / manufacturer |
| „The fail-save program runs immediately.<br>The Malfunction Indication Light (MIL) flashes in the Instrument Cluster.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Reduce the Performance Pack by one or two levels (see chapter „Program Changing“).<br>▪ *Error persists >* Contact the vendor / manufacturer |
| „The fail-save runs in higher RPM.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Reduce the Performance Pack by one or two levels (see chapter „Program Changing“).<br>▪ *Error persists >* Contact the vendor / manufacturer |
| „The engine shows no extra performance.“ | ▪ To obtain the maximum benefit, use a higher-octane fueled (98 ROZ or higher)<br>▪ Reduce the Performance Pack by one or two levels (see chapter „Program Changing“).<br>▪ *Error persists >* Contact the vendor / manufacturer |
| „The engine produces too much soot.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Reduce the Performance Pack by one or two levels (see chapter „Program Changing“).<br>▪ *Error persists >* Contact the vendor / manufacturer |
| „How can I get back to the original performance of the engine?“ | ▪ Press and hold the buttons (+) and (-) for three seconds.<br>Your vehicle is now in production configuration.<br>*or*<br>▪ Follow the steps below:<br>**1.** Turn off the ignition.<br>**2.** Wait until all electrical consumers are off.<br>**3.** Remove the Performance Pack of all connected components **or** use included dummy plug. |
| | |

* The fault description applies to both diesel and gasoline engines.

## >> *Installation example*


Open the engine hood and remove the air intakes (**L1 & L2**).

The intakes are only inserted.

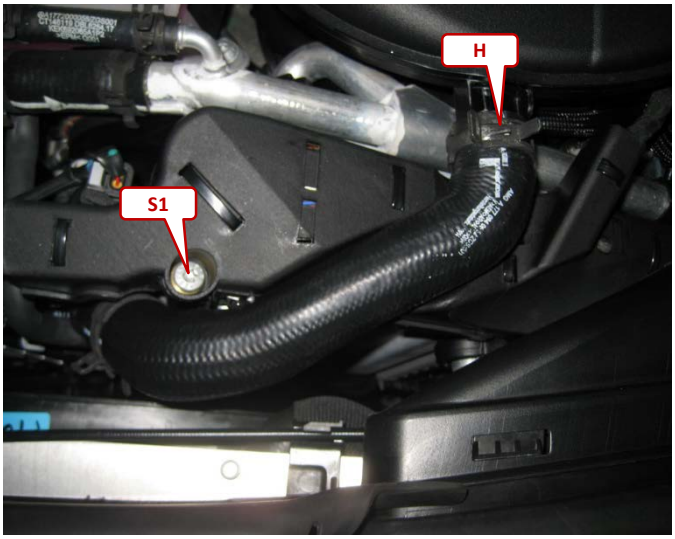

Connect the system to these five sensors:

Intake manifold pressure sensor 1 & 2,
boost pressure sensor 1 & 2 and
camshaft sensor.

Following pictures show the engine without the cable duct to clarify where the sensors are.

## >> *Installation example*

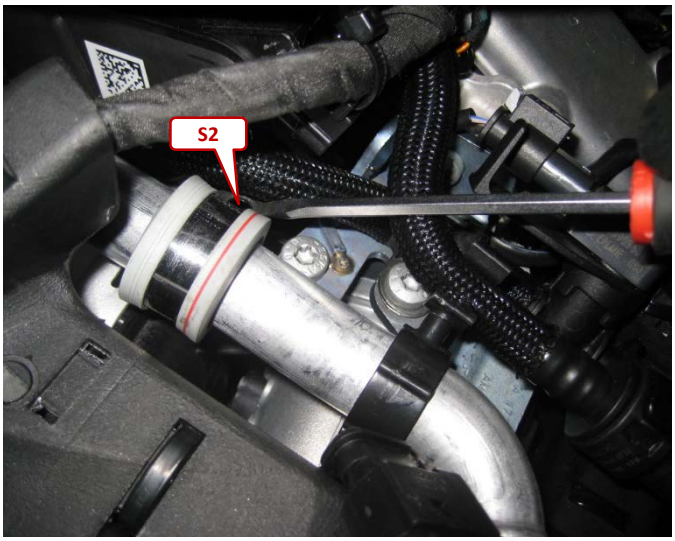
>> ***Installation example***




## Driver´s side:

Solve the hose clamp (**H**) and remove the hose from the airbox.

Solve the screw (**S1**) from the cable duct.

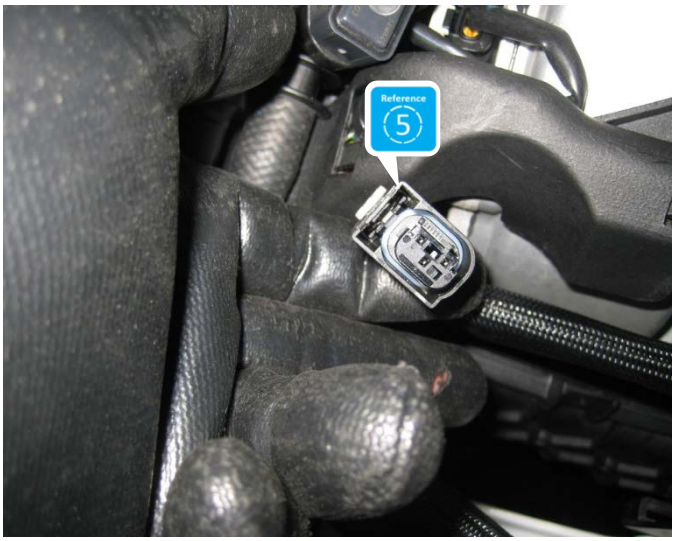



Solve the screw (**S2**) from the tube clamp.

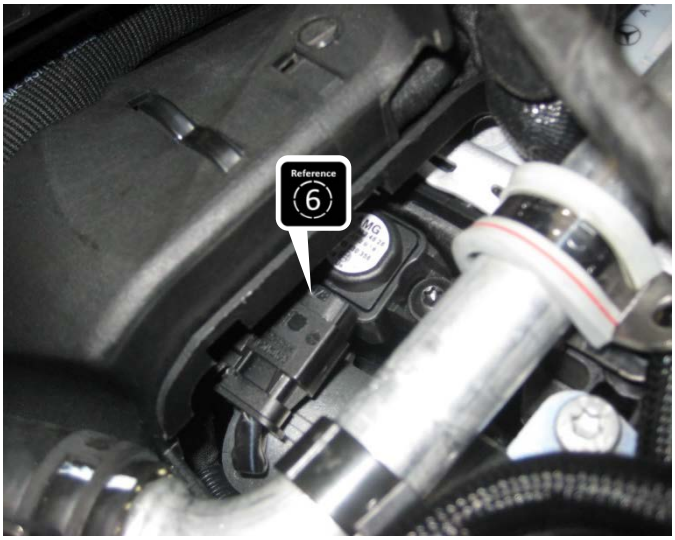

Solve the screw (**S3**) from the cable duct in front of the valve cover.

## >> *Installation example*


Pull the cable duct back to get access to the intake manifold pressure sensor 2.

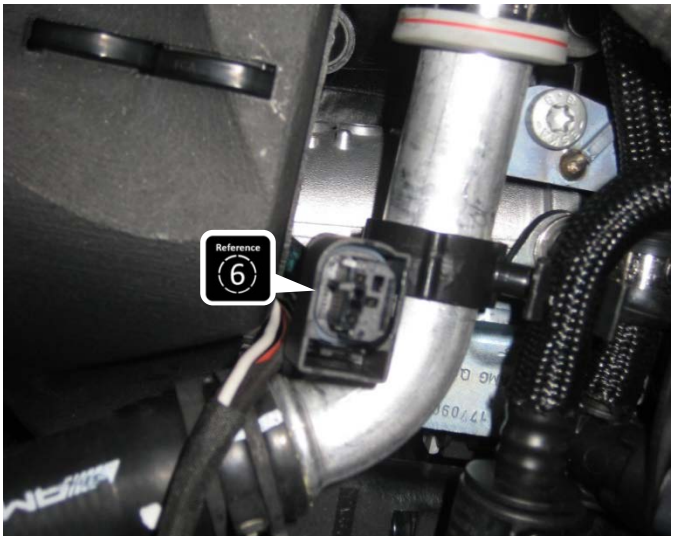



Open the plug by pulling the locking lever and connect the adapter in between both connections.

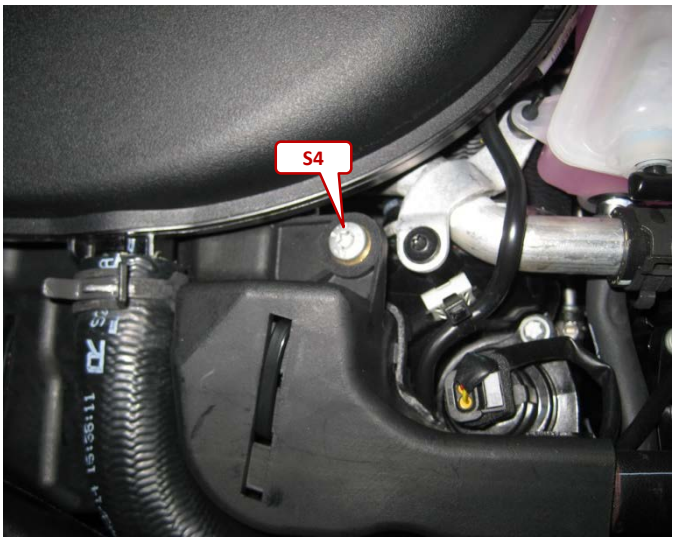



The boost pressure sensor 2 is located under the cable duct behind the tube clamp.

## >> *Installation example*

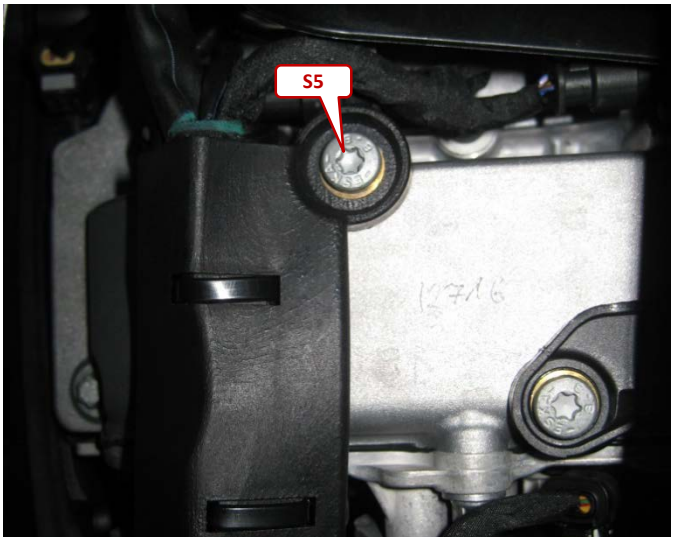



Open the plug by pulling the locking lever and connect the adapter in between both connections.




**Passanger´s side:**

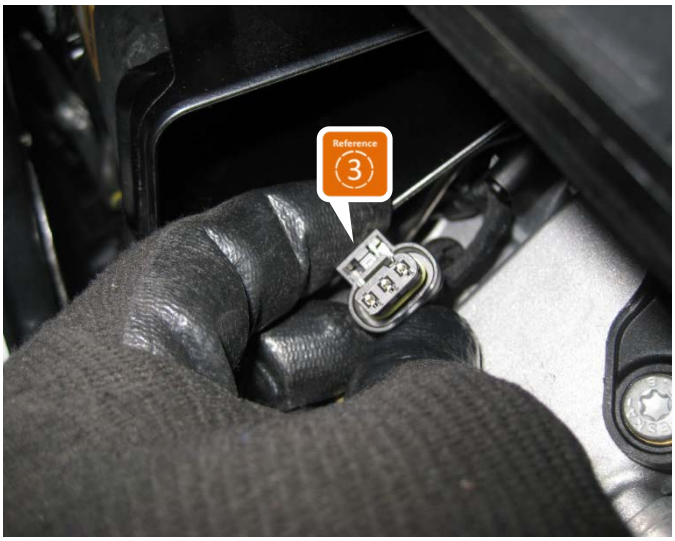
Solve the screw (**S4**) from the cable duct.




Solve the screw (**S5**) from the cable duct in front of the valve cover.

## >> *Installation example*

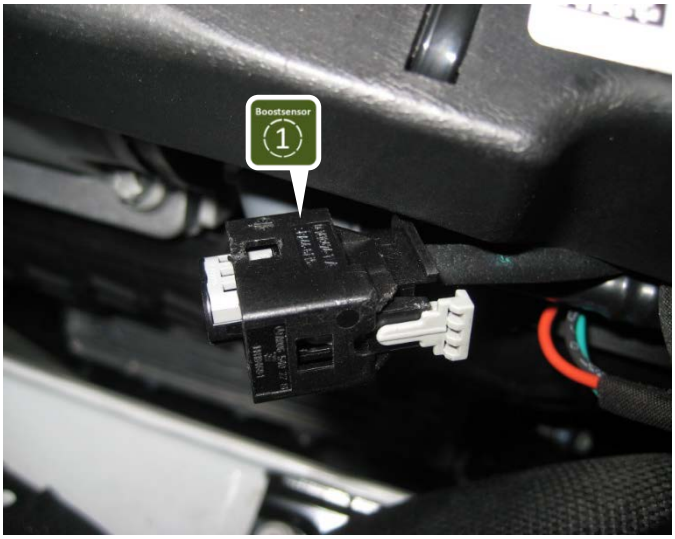

The camshaft sensor is located under the intake from the airbox.




Open the plug by pulling the locking lever and connect the adapter in between both connections.


The intake manifold pressure sensor 1 is located on the left side from the intake manifold as on the driver´s side.

## >> *Installation example*




Open the plug by pulling the locking lever and connect the adapter in between both connections.


The boost pressure sensor 1 is located under the cable duct.

On this side you can see the sensor through the recess of the cable duct.


Open the plug by pulling the locking lever and connect the adapter in between both connections.

Move the adapter cable not in parallel with injection pipelines or ABS-control device connecting leads. Keep to very big distances. Fix the adapter cable with cable ties. Connect the module with the adapter cable. Check all connections again and reassemble the vehicle in reverse order.