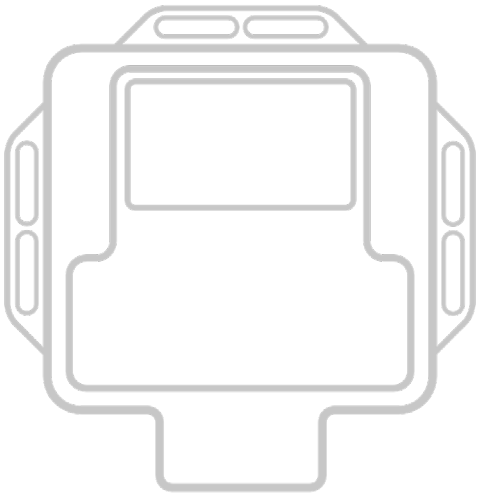
DTE SYSTEMS
CHIPTUNING No.1



# PowerControl

## Installation instructions

5139

ENG70369

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## >> *Scope of delivery*

- Tuning module
- Harness
- Dummy plug
- Fixing set
- Installation instructions

## >> *Preliminary*

**This tuning system is specifically customized and programmed for your vehicle.** Due to production variations of engines in general, the expected result of the tuning system 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, you can fine-adjust the system. (see chapter “Programs”).
**IMPORTANT: When changing the program in this case, contact your dealer or the 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.



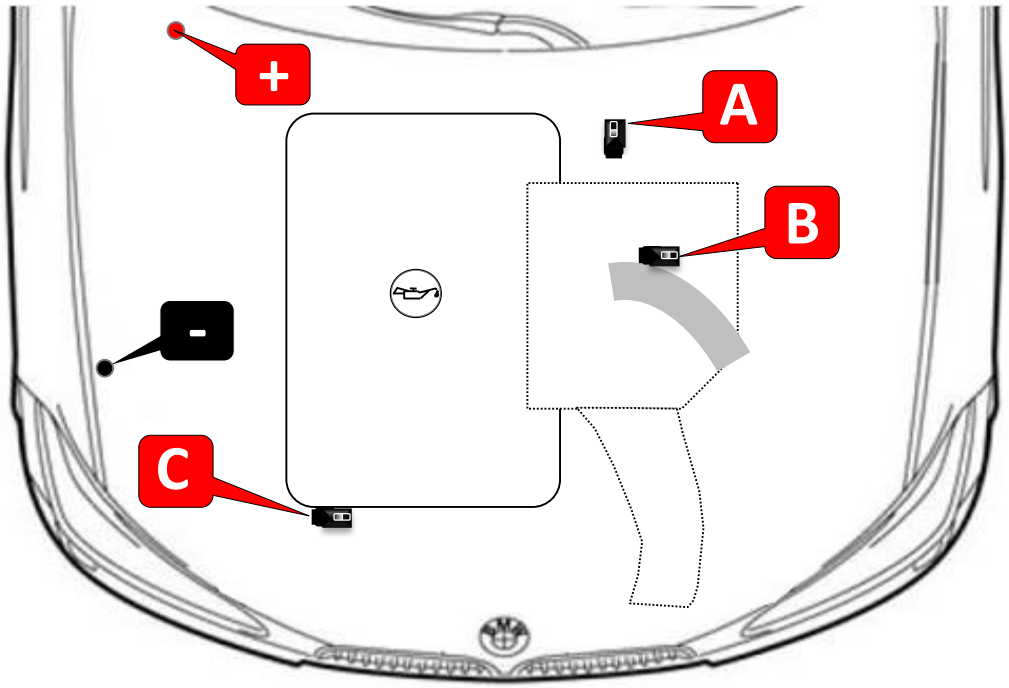

**(5)** Before every engine wash, remove the entire tuning system.

**(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*



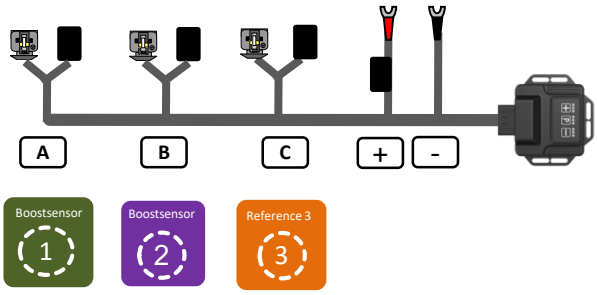

A Intake pressure sensor (4 pin)

B Boost pressure sensor (4 pin)

C Camshaft sensor(3 pin)

\+ - Power Supply

harness sticker



## >> *Programs*

You purchased a modern engine tuning 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 3 seconds.

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

Fig. A

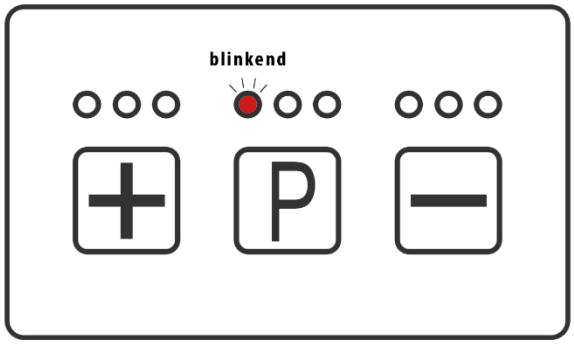
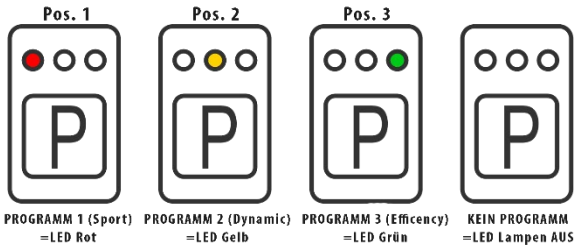



Fig. B




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 60 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 3 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 3 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 most smartphones with Google Android 7.0 or higher with Bluetooth LE. Please check the website for specific compatibility for your smartphone. We recommend to use the latest operating system version 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. Keep distance as low as possible and 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.

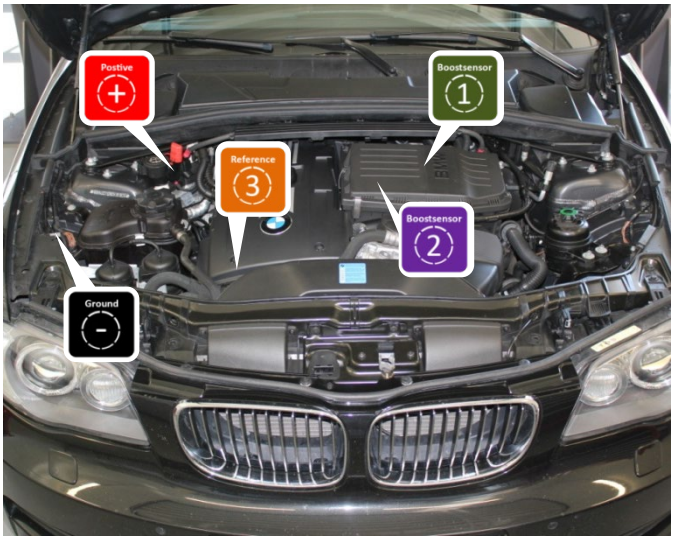
**Legal notice**

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.

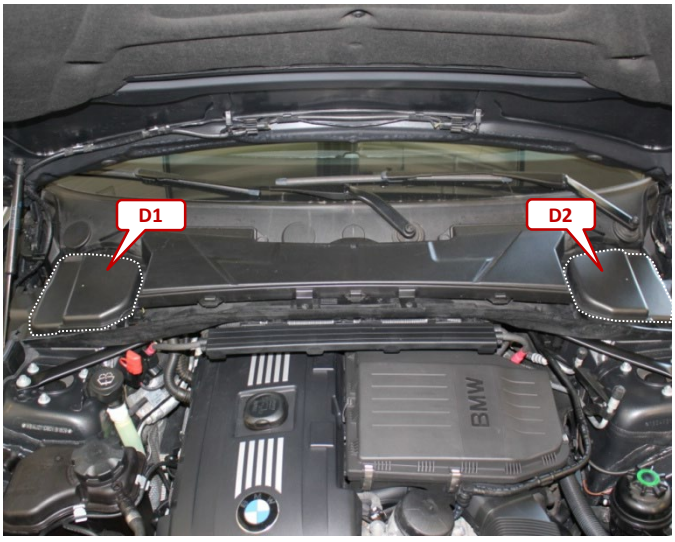
| Error descriptions* | Problem solution |
|---|---|
| „The engine doesn´t start.“ | ▪ Check all connected components.<br>Are the adapter plugs in the right position?<br>▪ Is a plug twisted connected? If possible?<br>▪ Do the LED`s work properly (see chapter „Program Changing“)?<br>*Error persists >* 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. 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 tuning module by one or two levels (see chapter „Program“).<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 tuning module by one or two levels (see chapter „Program“).<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 tuning module by one or two levels (see chapter „Program“).<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 tuning module 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?“ | ▪ Change program to stock (see chapter “Program”)<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 tuning module of all connected components **or** use included dummy plug. |
| | |

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

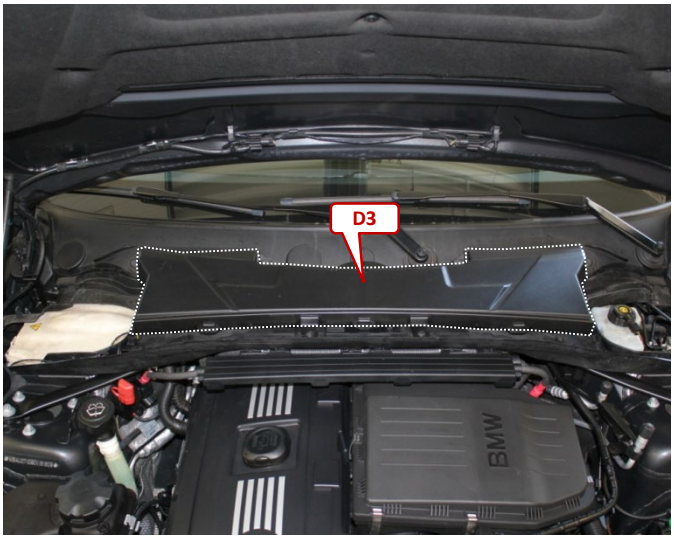
## >> *Installation example*




Open the engine hood. Remove the engine cover. Connect the system to these three sensors: Intake manifold pressure sensor after throttle body, boost pressure sensor before Throttle body and camshaft sensor in the front area from the engine compartment. . Connect the power supply to the + 12 V connection and to the car body mass.




Open the cover (**D1** & **D2**).




Remove the cover  in the middle (**D3**).

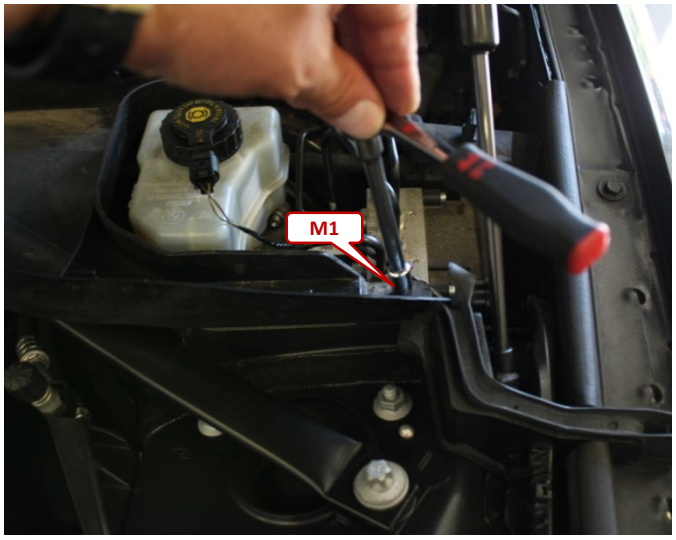
## >> *Installation example*





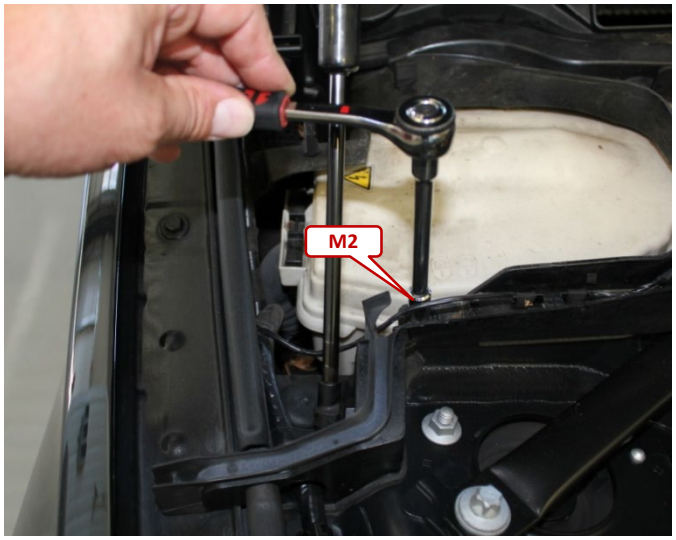


Pull out carefully the cable duct.




Solve the screw (**M1**) on the right side.

## >> *Installation example*




Solve the screw (**M2**) on the left side.

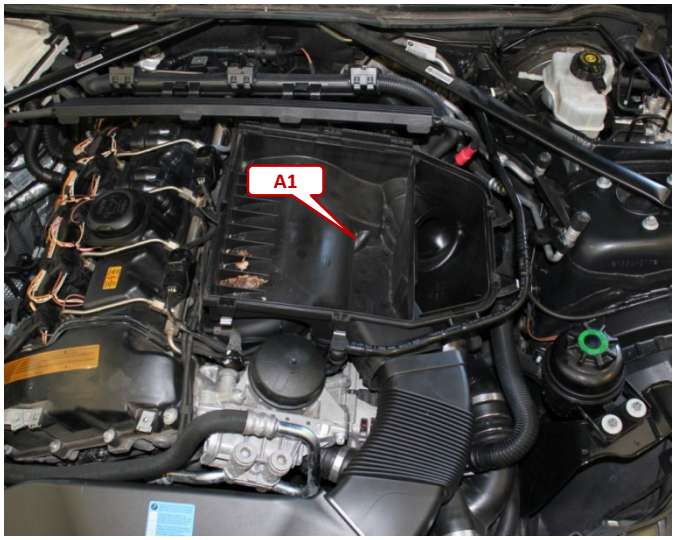


Disconnect the plug on the left side.

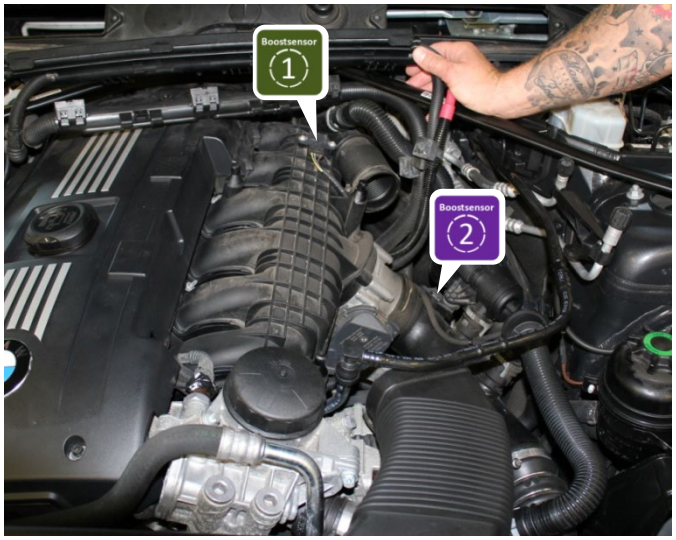



Take the cable duct from the bracket and lift the center cover out. Remove the air filter cover (**A**).

## >> *Installation example*




Remove the air filter box (**A1**).




Localise the intake manifold pressure sensor and the boost pressure sensor.




The 4 pin intake manifold pressure sensor is located directly at the intake manifold.

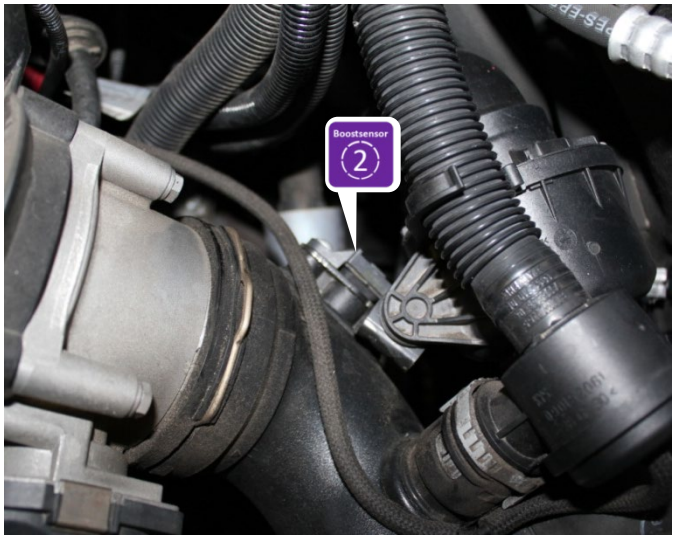
## >> *Installation example*




Disconnect the intake manifold pressure sensor connector by unlocking the locking lever from the sensor. **There are two different connection variants. Use the correct plug. Both plugs are included.**




Connect the correct adapter cable connection to these sensor.

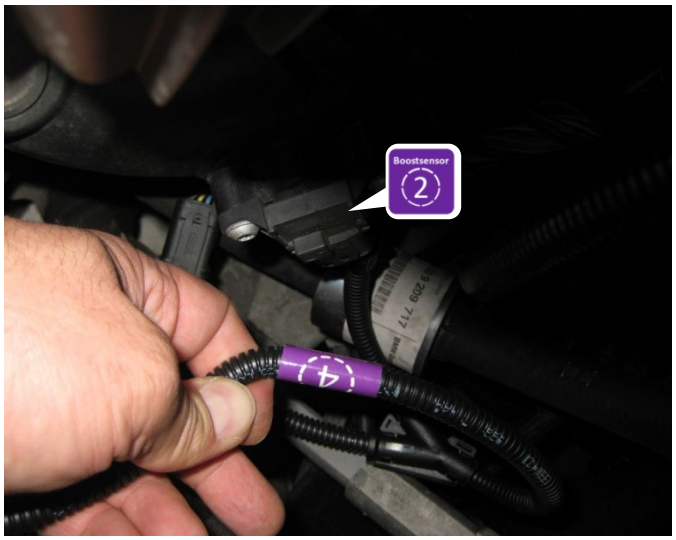



Localise the right area from the engine compartment. The 4-pin boost pressure sensor is located at the pressure pipe before the throttle body.

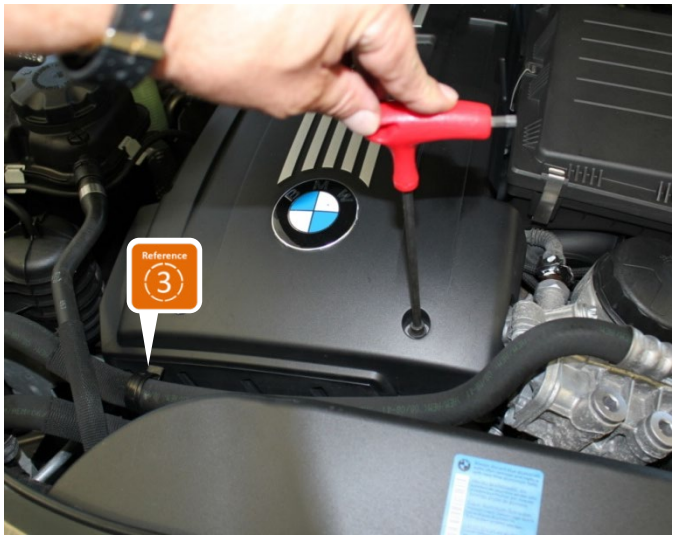
## >> *Installation example*




Disconnect the boost pressure sensor connector by unlocking the locking lever from the boost pressure sensor.

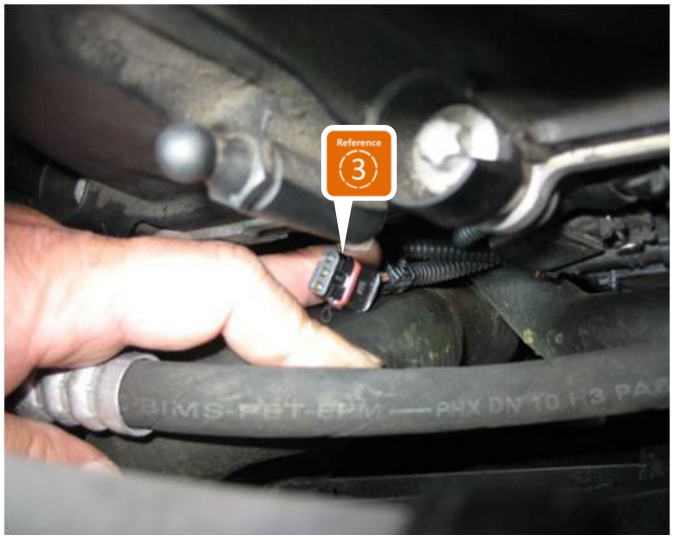



Connect the correct adapter cable connection to these sensor.




The 3-pin camshaft sensor is located in the front left area from the engine. Remove the engine cover to get better access to the camshaft sensor.

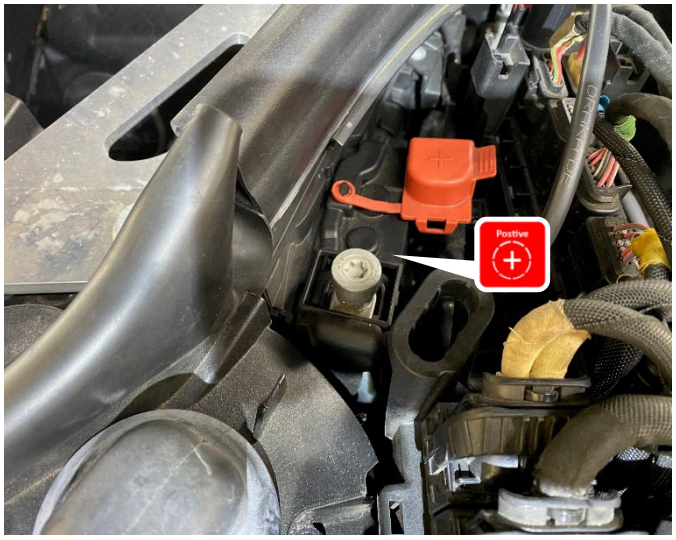
## >> *Installation example*




Disconnect the 3-pin camshaft sensor connector by unlocking the locking lever.




Connect the camshaft adapter in between both connections.




Connect the red cable to + 12 V connection.

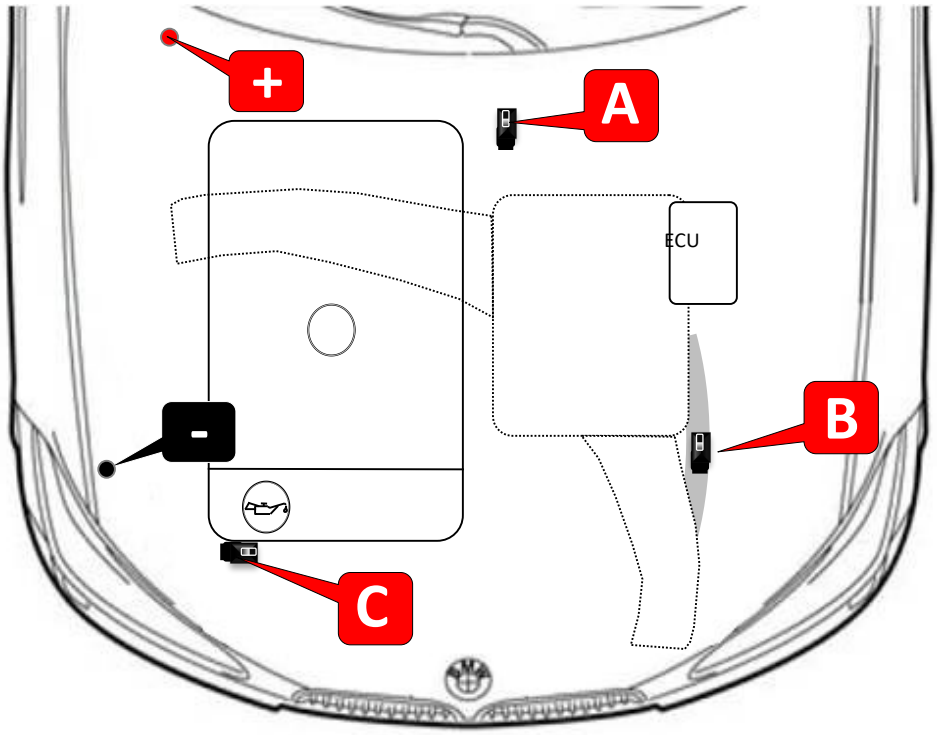
## >> *Installation example*




Connect the black cable to the car body mass.

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.

## >> *Installation*



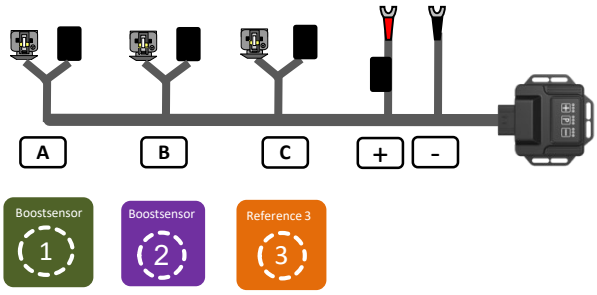

A Intake pressure sensor (4 pin)

B Boost pressure sensor (4 pin)

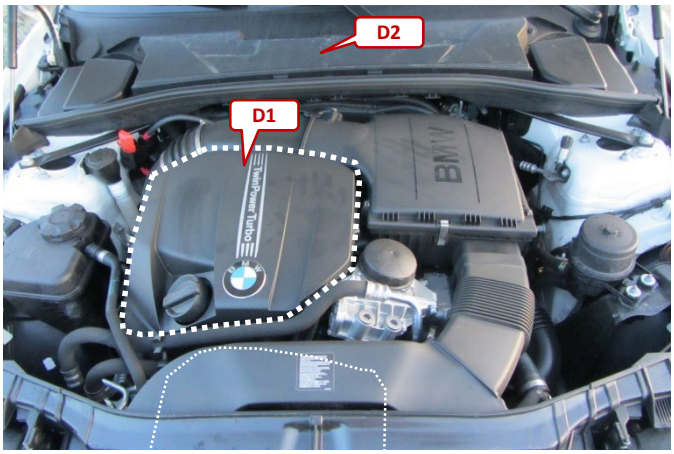
C Camshaft sensor(3 pin)

\+ - Power Supply

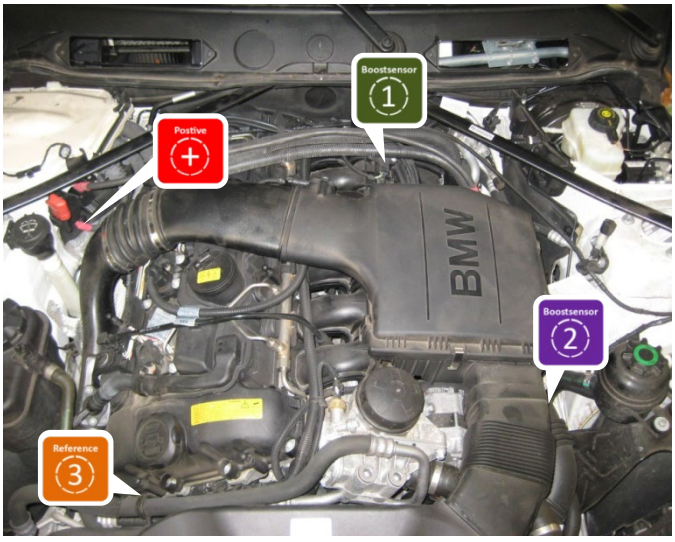
harness sticker



## >> *Installation example*




Open the engine hood. Remove the engine cover (**D1**) and the entire rear cover (**D2**). To remove the rear cover (**D2**), remove at first the both plastic cover on the left and on the right side. Disconnect both connectors on each side. Remove the plastic cover in the middle. Open the screws from the metal cover and pull it carefully out to the front.

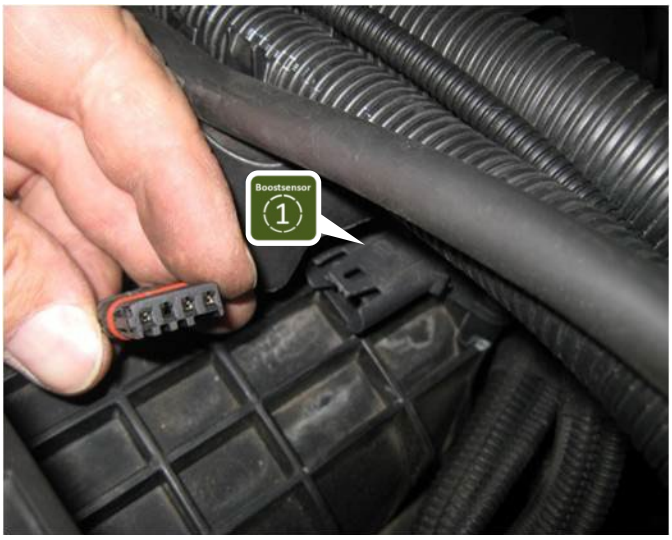



Connect the system to these three sensors: Intake manifold pressure sensor after throttle body, boost pressure sensor before throttle body and camshaft sensor in the rear area from the engine compartment. Connect the power supply to the + 12 V connection and to the car body mass.




Localise the top right area from the engine compartment. The 4-pin intake manifold pressure sensor is located behind the air filter box under a plastic cover. To get access to the boost pressure sensor lift the plastic cover a little bit up.

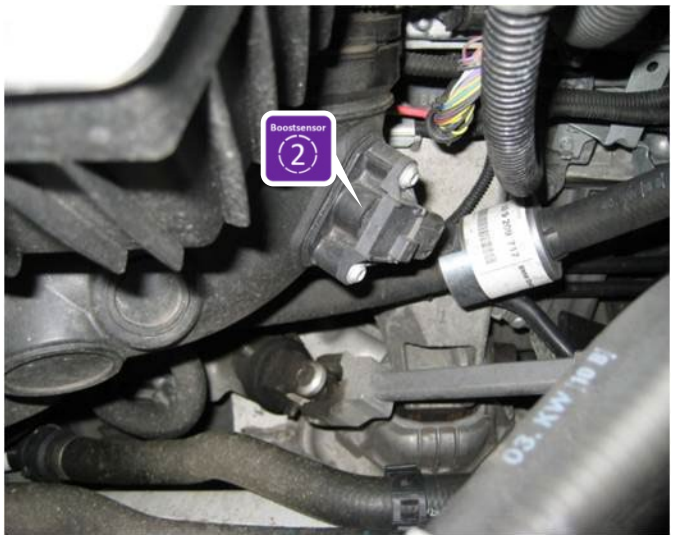
## >> *Installation example*




Disconnect the sensor connector by unlocking the locking lever from the intake manifold pressure sensor.

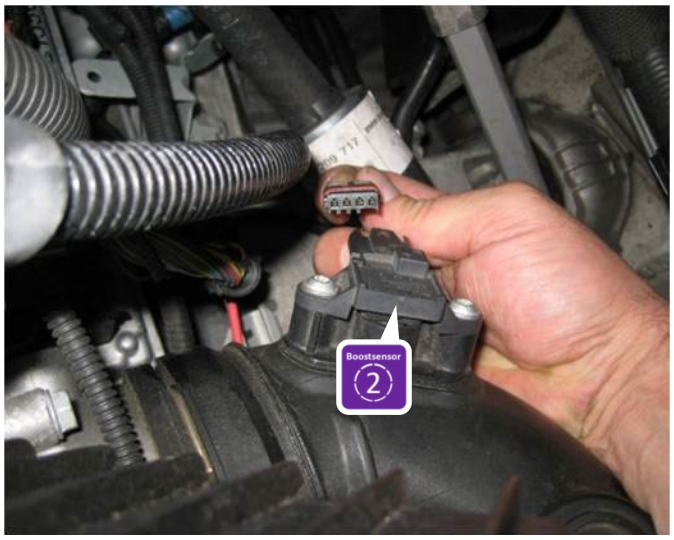



Connect the correct adapter cable connection to these sensor.




Localise the right area from the engine compartment. The 4-pin boost pressure sensor is located at the pressure pipe before the throttle body.

## >> *Installation example*




Disconnect the boost pressure sensor connector by unlocking the locking lever from the boost pressure sensor.

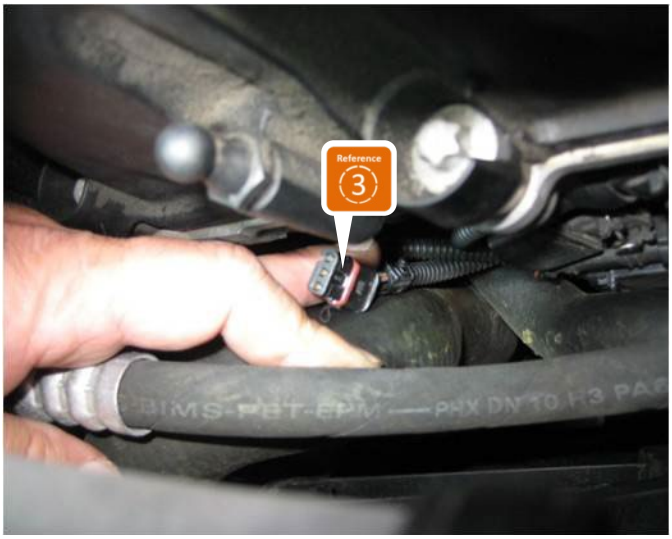



Connect the correct adapter cable connection to these sensor.

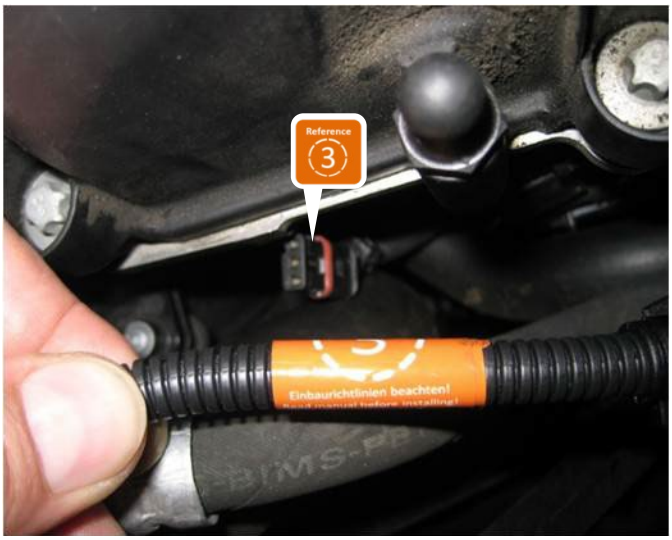



The 3-pin camshaft sensor is located in the front left area from the engine. It is located below the oil filler.

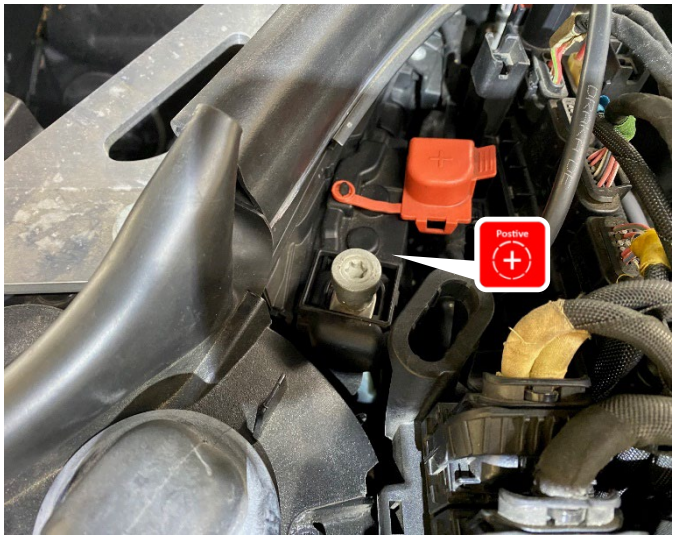
## >> *Installation example*




Disconnect the 3-pin camshaft sensor connector by unlocking the locking lever.




Connect the correct adapter cable connection to these sensor.




Connect the red cable to + 12 V connection.

## >> *Installation example*




Connect the black cable to the car body mass.

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.