

Installation and configuration instructions for electrically controlled exhaust flaps

Please note that the installation must be carried out by a specialist company.



Scope of delivery:

dÄHLer Valve Control Module
Zip ties and adhesive 3 M strips
dÄHLer installation instructions

Info:

Any type of product modification is not permitted and will void the product guarantee.

Safety instructions

Assembly and disassembly must be carried out by an authorized specialist company by electronics or mechatronics specialists.

- De-energize before installing or opening the housing.
- Use at your own risk, no liability for damage.
- Please ensure that the seals are clean, intact and correctly positioned

Other

Engine Protection – YES
(No permanent closing possible)

These instructions describe the basic installation of your dÄHLer exhaust flap control module.

The distinction between the various vehicles is the installation location of the connections, the cable glands that may be required and the way to get to them.

Depending on the vehicle and specialist knowledge, the installation is differently complex, usually relatively simple. We would also be happy to support you with the installation if questions arise and you cannot find what you are looking for in these instructions.

Step 1

Before starting the installation on the vehicle, please make sure that the exhaust flap of your vehicle is working. The flap control can only work properly if everything is in order on the vehicle side. Troubleshooting after installation would be significantly more time-consuming. The flap must therefore open and close properly. How you can do this varies depending on the vehicle.

In any case, a visual inspection of the flap and exhaust system is possible on all vehicles. Whether the flap opens and closes has to be checked acoustically or visually. The point at which the exhaust flap opens is in some vehicles via the sport mode in parts and at some vehicles only possible automatically. If something is wrong, you will find possible solutions in the troubleshooting section.

Assembly points

The dÄHLer flap control module consists of the control unit and the cables including suitable connections. This results in the two / three points that you have to achieve during installation. The points for the actuator or drives are usually specified on the vehicle side. You can determine the space for the control unit yourself. There are also several options for vehicles with standard equipment. An extra power supply is not necessary.

Please do not put the control module under your vehicle. Ensure to find a place somewhere in the trunk and lead the cable from the inside to the outside.

Mount the control unit

The installation situation is different depending on the drive concept, front or rear engine. For vehicles with a front engine, the trunk behind a panel is a good place to install. An installation location that is as covered as possible should also be selected. In any case, it should be noted that the control unit is protected from moisture and extreme heat. For assembly, you can use the existing holes in the housing for screwing, our assembly straps or the enclosed Velcro tape. Fasten it securely so it won't fall or rattle.



Velcro Strips

Lay cable (option 1)

The dÄHLer flap control module has one or two connecting cables with suitable plugs for your vehicle. This line must be laid from the control unit to the actuator of the exhaust flap. Depending on the vehicle, there are one or two exhaust flaps and one or two solenoid valves. This is taken into account in the controls and only one control is required per vehicle. The actuators are usually mounted directly on the exhaust flap with a holder and appropriate mechanics. The exhaust flaps are located relatively close to the exit of the exhaust, behind or next to the rear silencer. In most cases, these are not directly visible, but can be found behind paneling parts. These panels have a few screws or clips to remove them. In very rare cases the actuators can be found far behind the bumper so that it has to be dismantled.

The line must be laid from the control unit to the actuator. If you have installed inside, look for a cable duct or unused sealing plug that leads from the inside to the outside. The cable has a diameter of 5mm, drill a 4 - 4.5 mm hole in the plug and feed the cable through. Lay the cables with sufficient distance to the exhaust or other parts that can get hot. Secure it with zip ties, the most suitable way is along the existing cables or cable guides.



Option 2 - under the car



Remove the undertray or loosen it so can fold it downwards as much as necessary (passenger's side)

Put the flap module in the right position and mark the 2 positions

Drill 2 holes for the zip ties (approx. 4 to 5 mm in diameter maximum)

Distance between holes should be 8.5 cm

Positioning of the dÄHLer Flap Module



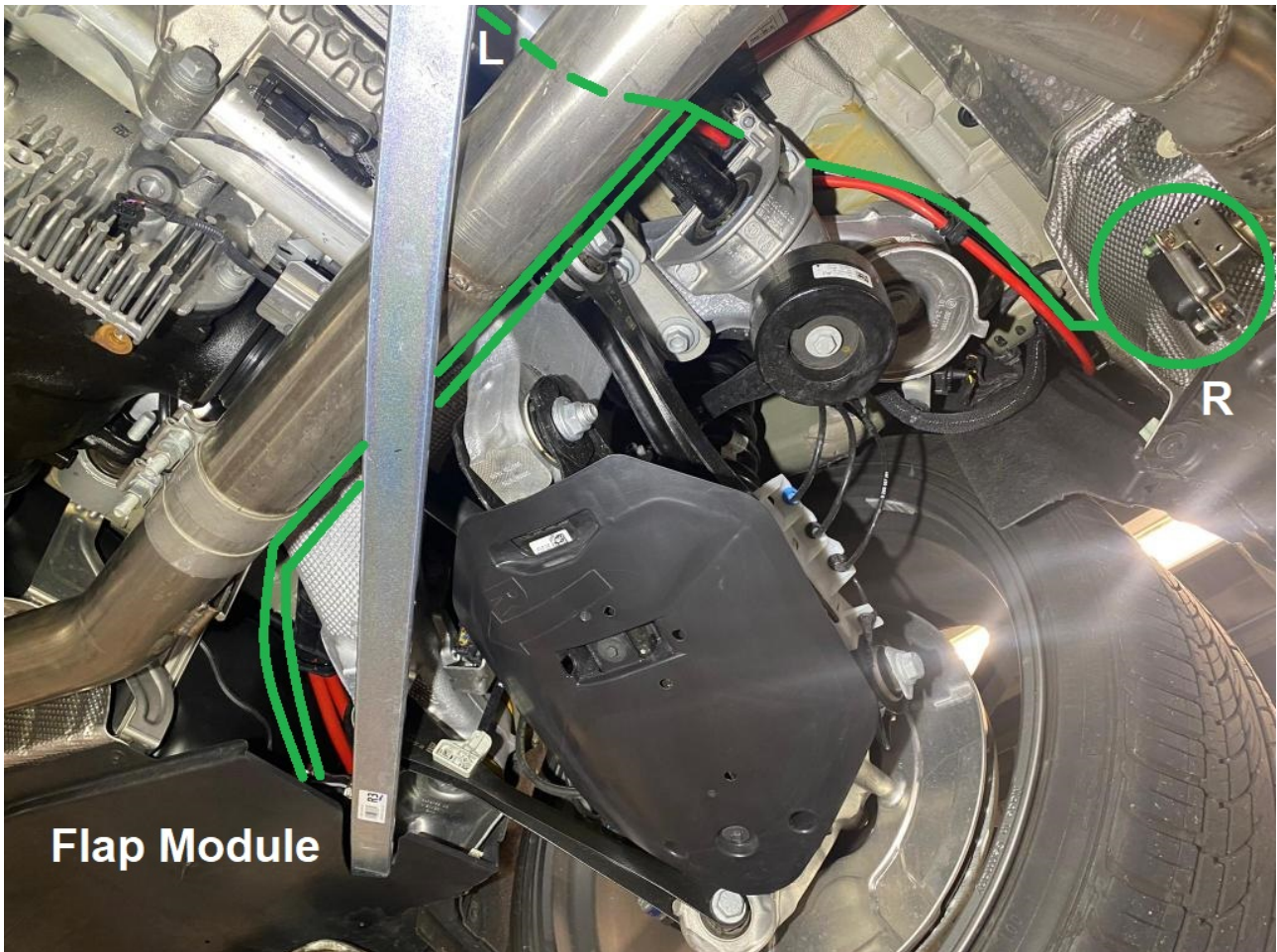
Clean the undertray (you may use a special cleaner to ensure it's free of crease and oil)

Put the 2 in delivery included 3M Velcro strips on the underside of the dÄHLer flap module

Stick the dÄHLer flap module between the 2 drilled holes

Ensure to secure the dÄHLer flap module with zip ties

How to lay the cable



Start from the dÄHLer flap module and follow the original BMW cable (red color)

Split the cables (see picture) -> 1 goes to the right flap R and ones goes to the left flap F

Stay with the cable close to the underbody

Secure the flap control cable with zip ties along the original BMW cable or any matching part.

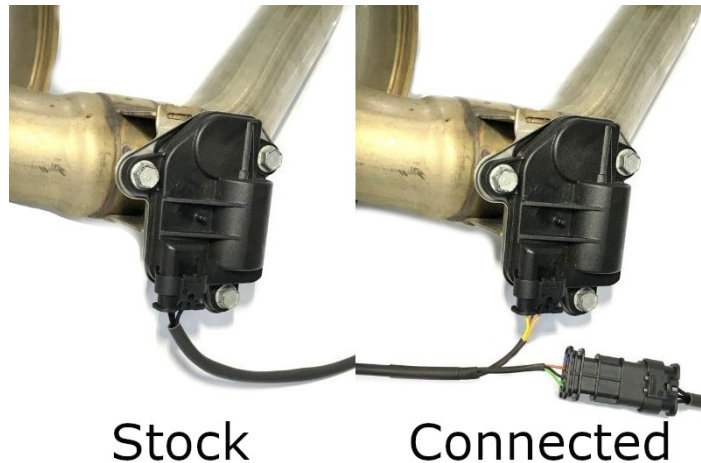
If possible, hide the cable behind covers or shields under the car.

CAUTION:

Ensure to stay away with flap control cable from any hot sources, any sharp or moving parts.

Connect

To do this, loosen the plug on the actuator. The plug has a plastic nipple that you have to push down to pull out. Now plug one end into the actuator and the other into the connector that you removed earlier. The plugs are provided with seals, make sure that they do not get dirty and that they click into place correctly so that no water can enter.



Switching functions

OPEN: always open, no more control of the exhaust flap from the vehicle side

CLOSED = Stock: 100% control of the exhaust flap from the vehicle.

The CLOSED = Stock function corresponds to the state that the vehicle would have if there was no additional one Exhaust flap control is installed. The stock control usually makes the engine control unit and can depend on several factors. E.g., RPM, speed, driving mode or temperature.

Remote control

Your remote control has two. You can use it to activate the corresponding switching functions. The two-button remote control has two symbols for open and close. The symbol for open is always the function OPEN. The symbol for close is by default the SERIES function. With the appropriate setting, the key for closing can also be assigned the function Closed.



Troubleshooting the vehicle

The test points are aimed at do-it-yourselfers. If there is something wrong with the vehicle, we recommend that you always visit a specialist workshop in case of doubt and have the defect repaired before installing the flap control.

If an exhaust flap does not work, there can be several reasons, here are some test points for electrically controlled exhaust flaps. These test points relate to the vehicle's exhaust flap and not to the flap control.

Experience has shown that when a valve control does not work, errors are very often in the vehicle. Defects are naturally more common in older vehicles, but they can also occur in newer vehicles.

Exhaust flap Visual inspection for damage. The exhaust flap is usually located relatively close to the exit of the exhaust pipe on the rear muffler or, viewed from the vehicle, at the bottom at the rear.

Check the vehicle cable connections for damage, any kind of damage can cause an error here. The same goes for the seals and contacts on the plugs. The seals must be intact and clean. The plug contacts are metallic blank and not oxidized.

Check freedom of movement. The freedom of movement of electric exhaust flaps can only be checked by removing the actuator, since the actuator cannot move it manually or can be damaged by manual action. Please note that the actuator can normally only be installed using a service function using the diagnostic device. Installation is also possible without, but it is very difficult to reinsert the spring correctly. A sign of a stuck exhaust flap would be e.g. B. in some vehicles, when the flap is in the half-open position.

These are just a few important and basic checkpoints. A complete test description would be too extensive for this point and only possible for a specific vehicle.



General information

The remote control has an LED that lights up each time a button is pressed. Battery voltage in the remote control 2x 3V = 6V.

Note

Before start you need to put the car in Comfort mode while setting up, do not use Sport mode.

Flap Control S

(Standard)

You can switch the exhaust flap to OPEN permanently and back to STOCK function with the 2-button remote control.

With the OPEN function the flap stays open until you either close it via remote or turn off engine. With the STOCK function the BMW engine control unit takes over the opening and closing. The start setting is predefined to STOCK and cannot be changed.

The OPEN and CLOSE functions must always work immediately if the control is correctly connected and a click can be heard in the control device when switching.

Flap Control X

(Extra Features)

In addition, Stage 2 has the functions of Stage 1 and the following:

Start mode adjustable via remote control or memory function

You can use the remote control to specify the function in which the vehicle should start. Or you can activate the memory function and the device always remembers the last driver's setting even after an engine stop (OPEN or STOCK).

Settings via the remote control (Control Module X)

You can set the following for Flap Control X: Last status or specific specification.

If you would like to specify a specific setting for the start, press the corresponding button on the remote control for approx. 2-3 seconds. To confirm the successful saving, the exhaust flap opens and closes twice.

If you want the flap control to remember the setting every time the vehicle is switched off, press the SERIE / LOCK SYMBOL button on the remote control for 5-6 seconds.

As a confirmation, the exhaust flap opens and closes three times.

Carry out these settings with the remote control relatively close to the control so that a constant signal is transmitted during the actuation time. The confirmation only takes place when the engine is running, but the settings are also saved when the engine is not running.

In a few cases it can happen that the OPEN and CLOSE buttons are interchanged. Then please send us the last 7 digits of the chassis number by email and you will receive simple instructions on how to change it. It is also possible to learn a new remote to

Please note that it is a motorsport part and not a spare part or accessory. This means that it may be necessary to coordinate components of your vehicle with one another. This is not necessary for most of our controls, for a few it is necessary to make sensible adjustments to some vehicles in order to achieve better performance.

If the engine control of your vehicle actively uses the exhaust flap for the combustion process, the software of the engine electronics may need to be adapted.

Technical changes and errors reserved!