

GFB DV+

Installation Instructions

Part # T9366



THE ULTIMATE IN HIGH TECHNOLOGY PERFORMANCE

IMPORTANT! All GFB pistons are checked for fitment and tolerance before shipment. Please do not drop the GFB piston onto a hard surface as this may cause (invisible) damage that could result in boost leaks or sticking.

WICHTIG! Alle Kolben wurden vor Versand auf Freigängigkeit geprüft. Bitte achten Sie bei der Montage darauf, dass *der Kolben nicht auf den Boden fällt*, da dieser schon bei kleinster (evtl. Nicht sichtbarer) Beschädigung zur Undichtigkeit oder Kolbenklemmen führen kann!

INSTALLATION

WARNING:

GFB recommends that only qualified motor engineers fit this product. This product is intended for racing use only, and it is the owner's responsibility to be aware of the legalities of fitting this product in his or her state/territory regarding noise, emissions and vehicle modifications. GFB products are engineered for best performance, however incorrect use or modification of factory systems may cause damage to or reduce the longevity of the engine/drivetrain components.

GFB Limited Lifetime Warranty:

We live in a throw-away society, conditioned by cheap products and built-in obsolescence to expect eventual failure and discard something when it stops working or is superseded. However, pride in workmanship and our commitment to quality means that when we put our name to something, we are also staking our reputation on it.

That is why we back our products with the best Warranty in the business! You should expect a lifetime of use from a well-engineered product, so if your GFB product fails as a result of defective materials or faulty workmanship whilst you remain the original owner, we will repair or replace it (limited only to the repair or replacement of GFB products provided they are used as intended and in accordance with all appropriate warnings and limitations. No other warranty is expressed or implied).

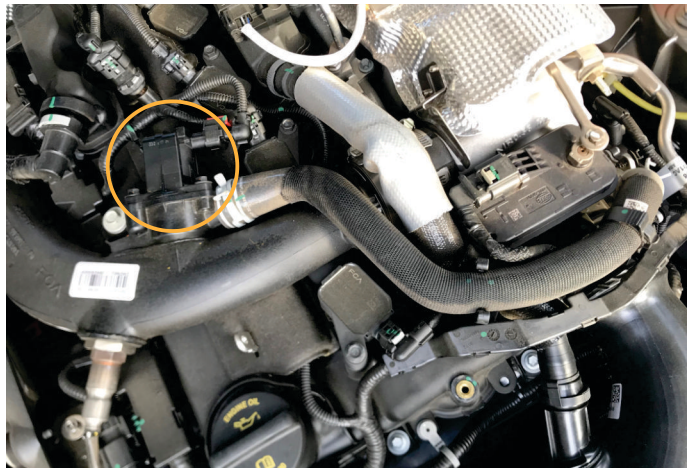
If a fault occurs as a result of usage outside of the terms of the warranty, or you are not the original owner, fear not, we can still help you. You should never need to throw a GFB product away, as spare parts are available and won't cost the earth.

Note that the DV+ part # T9366 includes coarse-threaded mounting screws designed for use on plastic mounting flanges. Please check the supplied screws against the factory diverter screws to ensure they are the correct type for your application.

The T9366 kit is used on a variety of makes and models. These instructions illustrate the installation process on an Alfa Romeo Giulia 2.0T, and a BMW X5M, however the procedure is the same regardless of the engine type, i.e. locate and remove the factory diverter valve/s, assemble the DV+ onto the factory diverter valve/s as shown on the next page, and re-install.

- **Giulia 2.0T:**

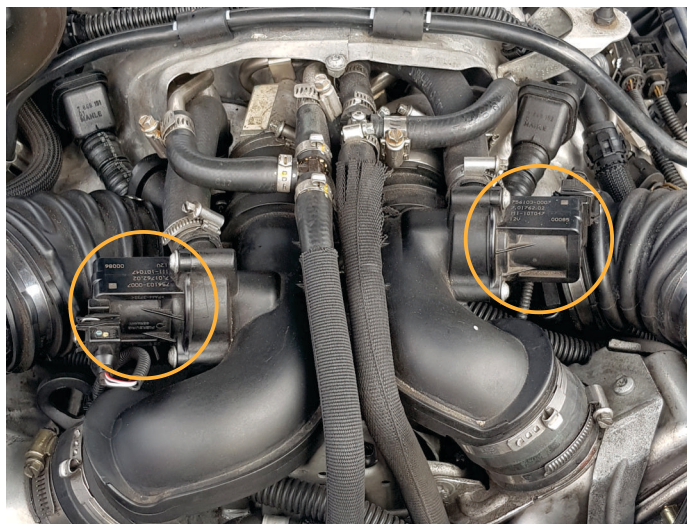
The factory diverter valve is easy to access, as it is mounted on the plastic charge pipe running across the top of the engine. Remove the engine cover, unclip the wiring connector, then remove the three screws holding the diverter (if access to the lower screw is too tight, remove the charge pipe from the engine first).



- **BMW X5M:**

Please note that for twin turbo applications like the X5M, two T9366 DV+ kits are required.

The factory diverter valves are located under the engine cover, mounted to the two plastic charge pipes as shown. Unclip the wiring connector, unscrew the mounting screws, then remove the diverter valves.



ASSEMBLING THE DV+

Piston type OEM diverter (typically Alfa Romeo):

Remove the yellow o-ring from the factory diverter. Take care to avoid damage, as the o-ring will be re-used on the DV+. Now pull the piston out of the diverter body, then remove the spring.

CAREFULLY pry the piston sleeve out of the diverter body, using the inside lip near the blue seal or the lip where the o-ring was. Lever it gently and work your way around so it pops out evenly. Note that this piece is fragile and can break easily - if this happens, you'll still be able to carry on with the installation, but you won't be able to re-fit the factory piston again.

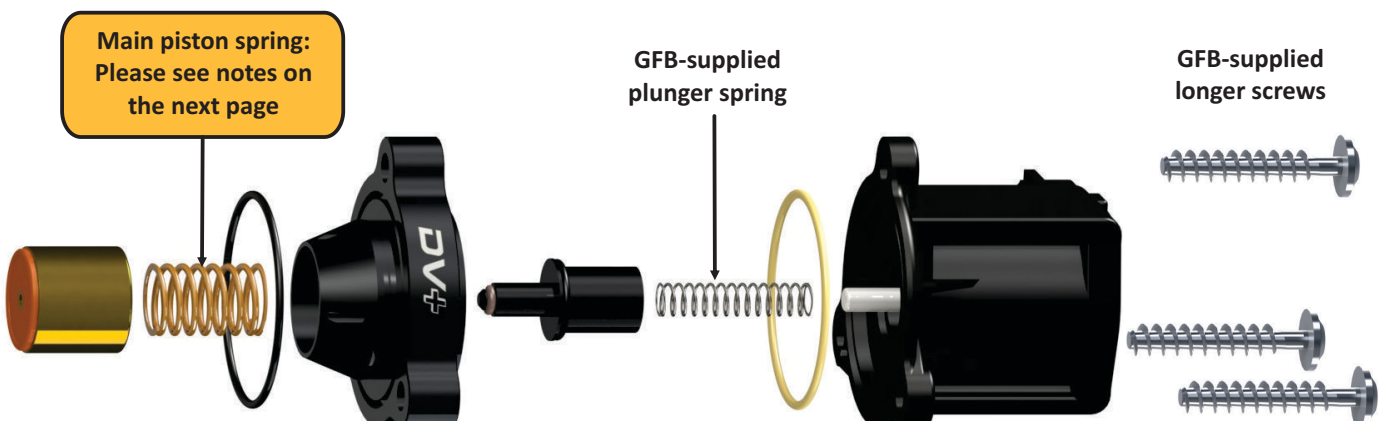


Diaphragm type OEM diverter (typically BMW):

Remove the yellow o-ring from the factory diverter. Take care to avoid damage, as the o-ring will be re-used on the DV+. CAREFULLY pry the diaphragm shield of the diverter body, using the lip where the o-ring was. Remove the valve/diaphragm and spring.



Assemble the GFB parts onto the factory solenoid body as shown in the exploded view below, making sure to use the GFB-supplied plunger spring, and the yellow o-ring removed from the factory valve. Apply some engine oil to the piston during this process, and check that the piston moves freely.



INSTALLATION - CONTINUED

- Install the DV+ assembly onto the plastic mounting flange using the supplied longer screws (Torx T25 driver is required), making sure to hold the piston so it doesn't fall out during this process.
- Clip the electrical connector/s back on, then re-install the turbo intake pipe and any other parts that have been removed during the installation process.



USING THE MAIN SPRING

The DV+ can be configured in two different ways, depending on your desired outcome. Fitting the DV+ with the main spring installed as shown on the previous page can be thought of as a "Sport" mode, offering the best possible throttle response and boost recovery during on/off throttle applications (i.e. during gearshift with a manual transmission).

Using the main spring means the DV+ can open and close progressively in response to how much boost pressure is present, unlike the factory diverter which just opens fully when directed by the ECU regardless of whether there is boost to vent or not. Because this operation method is different from the factory diverter, it is not unusual or detrimental to hear a different sound from the intake when lifting off the throttle at low RPM, especially if you have an aftermarket intake or a larger turbo installed.

Additionally, in some rare cases this different operating method may be mis-interpreted by the ECU as a faulty diverter valve (it simply sees the diverter doing something different - it doesn't know the diverter is actually attempting to improve throttle response), resulting in fault code P2261 being recorded. This does not indicate that the DV+ is faulty, nor does it cause any issues to the turbo or engine.

If the fault code or different sound occurs and you want to prevent it, or you simply want a direct replacement for the factory diverter that is stronger, holds boost better, and lasts longer, you can choose to install the DV+ WITHOUT the main spring behind the piston. This configuration can be thought of as an improved "Standard" mode, which behaves just like the factory diverter, but with the added benefits of better boost-holding, strength, and reliability.