GFB DV+

Installation Instructions

Part #T9367

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.

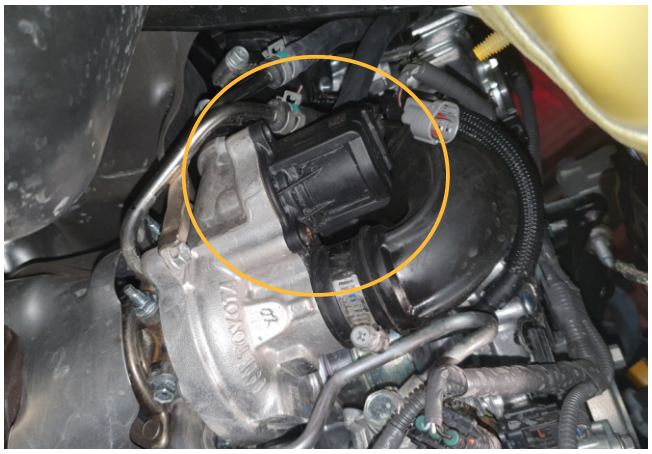
WICHTIG! Alle Kolben wurden vor Versand auf Freigängigkeit geprüft. Bitte achten Sie bei der Montage darauf, dass *der Kolben nicht auf den Boden fällt*, da dieser schon bei kleinster (evtl. Nicht sichtbarer) Beschädigung zur Undichtigkeit oder Kolbenklemmen führen kann!

Factory Diverter Removal/Disassembly

Transverse Engines
(e.g Toyota C-HR with 8NR-FTS):

The OEM diverter valve is found on the front of the turbo, which is down low, between the engine and firewall. Access in this case is from underneath the car.

Use of a vehicle hoist, ramps or axle stands is required - do NOT work under a vehicle supported only by a jack.



Longitudinal Engines
(e.g Lexus IS200t with 8AR-FTS):

The OEM diverter valve is mounted on the front of the turbo, on the side that is closest to the engine. DV+ installation can usually be performed from above, but due to the tight location it is usually necessary to remove the turbo intake pipe, or use a flexible driver attachment to access the screws.

Factory Diverter Disassembly:

Pull the piston and spring out of the body (⇨), then remove the o-ring (keep the o-ring safe, it will be re-used in the DV+ installation).

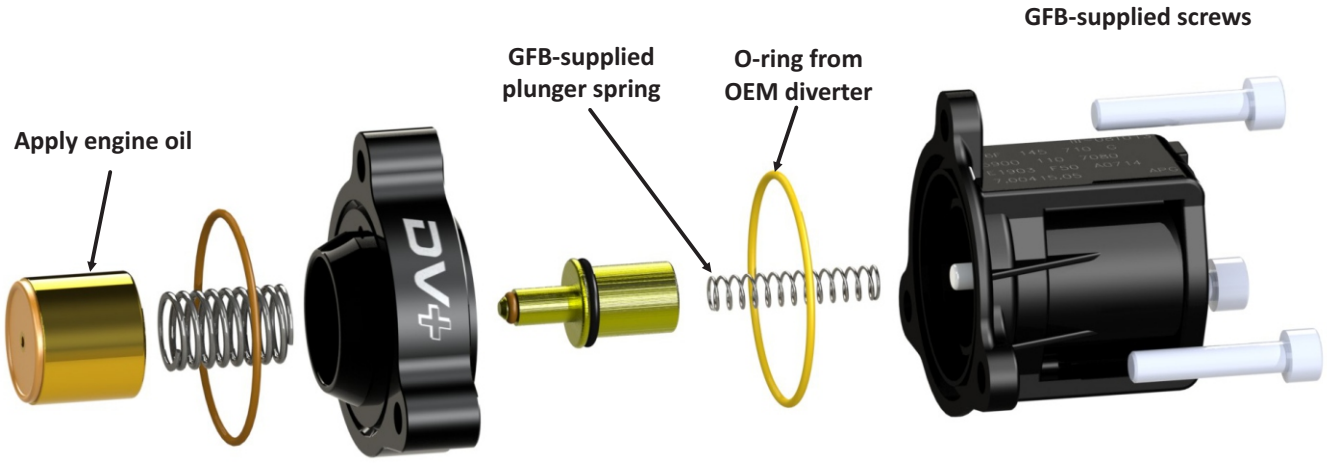
PLEASE NOTE: The remaining black plastic protrusion and blue piston ring MUST BE REMOVED before you continue (➡).

Note that this plastic protrusion is thin and brittle, and damage may occur if levered directly. If it breaks, you'll still be able to continue with the DV+ installation as this part isn't used, but you won't be able to re-install the factory diverter again.

One method to remove without damage is to install a hose clamp over the plastic protrusion as shown, then lever the clamp instead of the plastic.

DV+ Installation

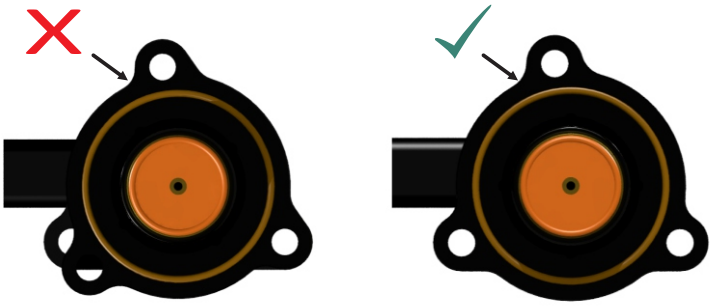
Insert the GFB supplied plunger spring (**DO NOT re-use the factory spring**) and plunger into the solenoid, and check that it slides freely. Now fit the DV+ body and factory yellow o-ring onto the plunger/spring/solenoid assembly as shown below:



During assembly, check that the piston slides freely in the body without sticking or binding. It is a very close fit and can sometimes be difficult to get started into the bore, but once in it should move without needing to be forced. Apply a thin smear of engine oil onto the piston (it is NOT necessary to re-apply at a regular interval).

The DV+ body will usually "snap" onto the solenoid, making it easier to fit the assembly onto the car. However, variations in the factory solenoid's moulded plastic sometimes mean the assembly may be loose, needing to be held together whilst installing onto the engine.

Note that the bolt holes are NOT SYMMETRICAL. When you assemble the DV+ onto the solenoid, check the alignment of the holes - if they do not line up properly, rotate the DV+ body until the bolt holes line up correctly before continuing.



Install the DV+ assembly onto the turbo, making sure the orientation is correct according to the asymmetrical bolt holes.

Clip the electrical connector back on, and replace any other parts that were removed during installation.

WHAT TO EXPECT FROM YOUR DV+

The DV+ is designed to offer three key improvements over the OE diverter:

Longevity: If you've ever replaced a factory diverter, chances are it won't be your last. Fitting a DV+ is good insurance and pays for itself after one or two factory diverter replacements.

Boost holding: The OEM diverter valve uses a plastic piston with a plastic "seal". Unfortunately, these two parts that are responsible for sealing boost pressure don't do a very good job of it. Because the parts are moulded plastic, and minimum friction is required for the solenoid to have a hope of opening and closing the valve, the fit of the OEM piston and seal is very loose, meaning it does a poor job of sealing the boost pressure.

The DV+ however will seal properly even up to 50psi, ensuring all of your hard-earned boost gets to the engine. Of course, the performance benefits you notice from the driver's seat will depend entirely on the condition of the factory diverter you replace. For example, if your factory valve is not (yet) leaking significantly, there will be no change to your peak boost.

However, if your factory diverter is leaking only a small amount, a DV+ may show the same peak boost, but with an improvement in the amount of boost held to redline. If your factory valve is leaking significantly, fitting the DV+ will result in higher peak boost pressure, as well as less drop-off at high RPM.

Throttle response: The DV+ will preserve as much boost pressure as possible when the throttle is lifted. This means that when you lift off to shift, or when using slight on-off-on throttle modulation (causing the diverter valve to open and close), the DV+ can help recover boost faster than the OEM diverter.

WARRANTY

WARNING:
GFB recommends that only qualified motor engineers fit this product. GFB products are engineered for best performance, however incorrect use or modification may cause damage to or reduce the longevity of the engine/drive-train components.

GFB LIFETIME WARRANTY:
Our commitment to quality means that when we put our name to something, we are also staking our reputation on it. That's 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.

TECH SUPPORT:
We want you to get the best advice, first time. That's why our engineers are available to answer any technical questions you may have. Head to www.gfb.com.au/contact-us to get in touch.