GFB Deceptor Pro II T9503 Instructions

Applicable Vehicles:

- WRX MY01-07
- STi MY02-on
- Forester XT MY05-08

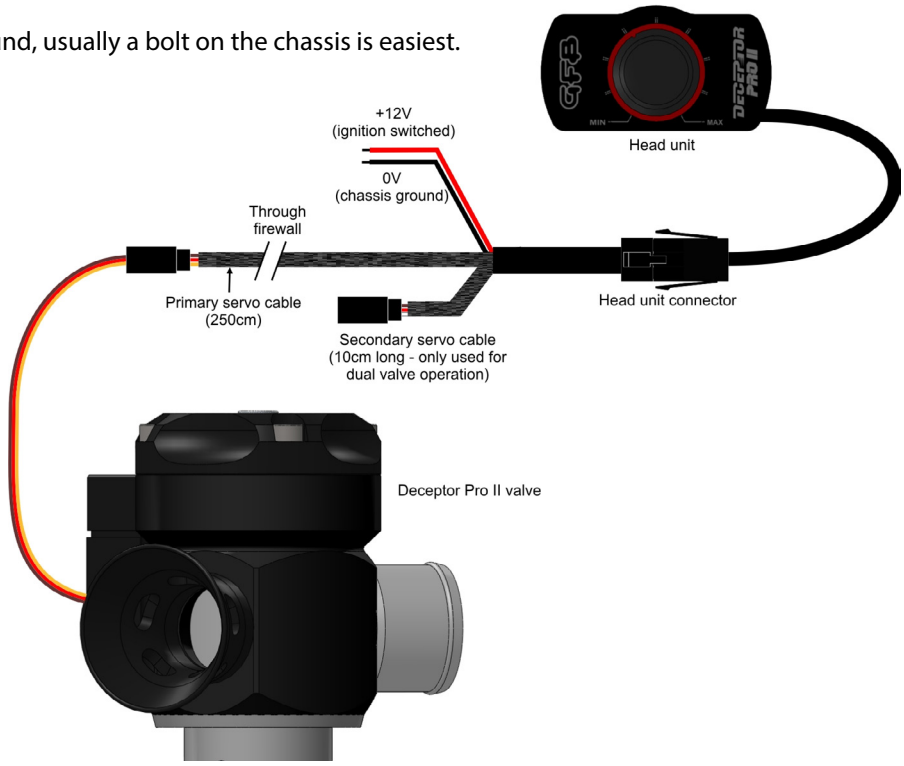
Included In T9503 Kit:

- Deceptor Pro II BOV
- Orange silicone 30 x 2 o-ring (installed on BOV flange)
- 5mm hex key
- 2x M8 x 20 countersunk socket mounting bolts
- In-car head unit
- Wiring loom
- Double-sided mounting tape

Connect the wiring loom red wire to an ignition switched 12V power supply inside the cabin – make sure this power supply is off when the key is turned off, otherwise the unit will be permanently powered.

Connect the black wire to chassis ground, usually a bolt on the chassis is easiest.

Find a suitable mounting location for the head unit. Clean both mating surfaces with methylated spirits or similar cleaner and secure the controller using the supplied double-sided tape. Press hard and hold the unit for 30 seconds. Note that it takes up to 24 hours for the tape to develop a strong bond.



Plug the head unit into the wiring harness connector.

Feed the primary servo cable (250cm section, covered with black mesh sleeve) through the firewall into the engine bay.

It is important to ensure that the lead is protected where it passes through the firewall to prevent wear or damage.

Basic Head Unit Operation

Push to activate,
turn to adjust

The head unit features a "sleep" mode that dims the dial lighting and reduces power to the servo motor after approximately 10 seconds.

When the unit is "sleeping" (i.e. dim lighting), press the dial briefly to wake it up, and then make position adjustments by rotating the dial. The unit will return to sleep mode after 10 seconds.

WARNING: *Do not attempt to manually rotate the noise adjustment, always apply power and use the controller to change the venting bias. When testing your Deceptor Pro II, DO NOT put fingers or foreign objects through the atmosphere or recirc ports. Doing so may result in personal injury or damage to the valve.*

Installing the BOV

On Impreza models without an electronic throttle, it is necessary to move the intercooler to gain access to the hose clamp under the factory valve. It does not need to be removed completely, it just needs to slide back far enough to reach under. These instructions take you through it step-by-step.

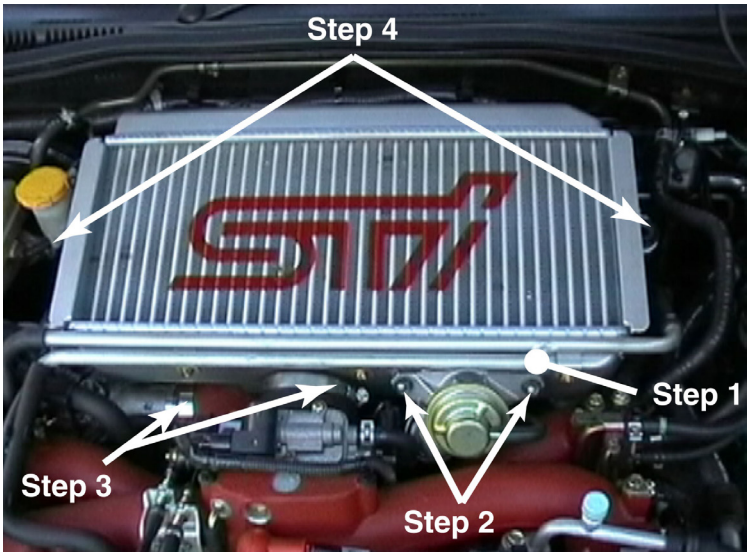
For Impreza models with an electronic throttle and also Forester XT models, it is usually possible to access the clamp without shifting the intercooler. In this case, simply ignore the steps 1, 3, 4 & 5.

1. Remove the breather hoses from the aluminium tubes that run across the front of the intercooler (two on the left, and one on the right).

2. Using a 12mm socket or wrench, undo and remove the two bolts holding the factory bypass valve (as shown opposite, labelled step 2), leaving it supported by the hoses.

3. Loosen the throttle body hose clamp closest to the intercooler, and the clamp holding the hose onto the outlet of the turbo (as shown opposite, labelled "step 3").

4. Undo and remove the two intercooler mounting bolts (again with the 12mm socket or wrench - shown opposite, "step 4").



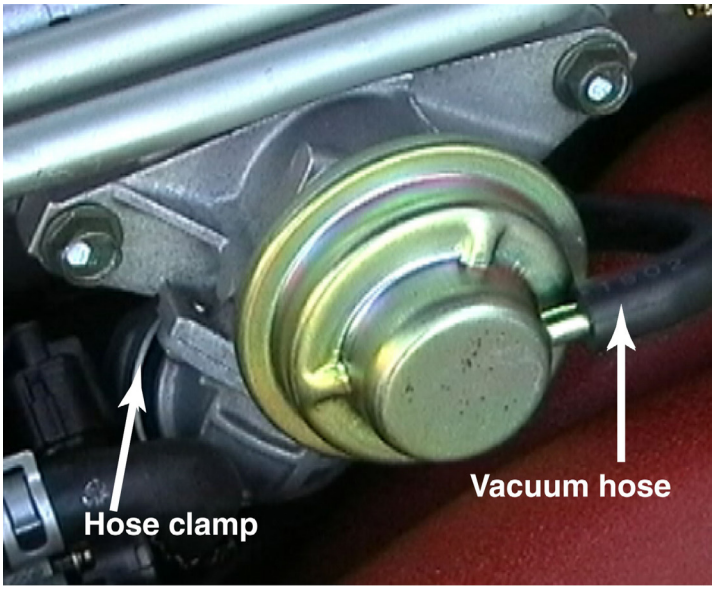
5. Carefully slide the intercooler back just enough to access the hose clamp on the BOV (figure 2). Take care when handling the intercooler since the cooling fins are very fragile, and also take care not to bend the hose from the turbo too much - the WRX has a corrugated plastic turbo hose and it is possible to crack this hose if you bend it too much.

6. Remove the vacuum hose from the factory valve, then use pliers to open the recirculation hose clamp and remove the factory valve from the car.

7. If the factory gasket is stuck to the intercooler, it should be removed. If it does not come off cleanly, it will be necessary to scrape any remaining gasket material off the flange so the o-ring can seal properly. Take care not to drop any gasket material into the intercooler hole.

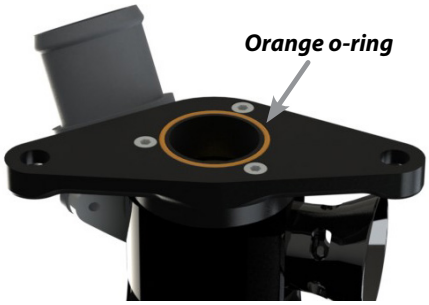
8. On the factory valve, remove the recirc elbow by unscrewing the two phillips-head screws holding it on. Fit the recirc elbow and o-ring to the outlet of the Respons as shown, using the factory screws.

9. At this point you must remove the trumpet from the Respons valve (simply unscrew it) to allow the mounting bolt to be inserted into the flange.



Installing the BOV - Continued

10. Check that the orange o-ring is installed in the groove on the underside of the BOV flange as shown.



11. Push the recirc elbow into the recirc hose and rotate the valve so that the flange mounting holes are horizontal, then replace the hose clamp.

12. Bolt the valve onto the intercooler using the supplied M8 x 20 mounting bolts and replace the intercooler.

13. Push the vacuum hose onto the nipple on the top of the valve, then screw the trumpet back in place.

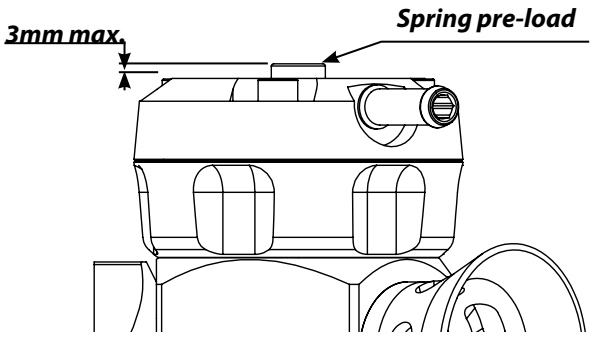
14. Connect the Deceptor Pro II's lead to the plug from the controller, ensuring that the whole cable is secured in the engine bay and under the dash away from direct heat sources or moving parts.

15. Perform a final check to make sure the turbo, throttle body, and recirc hose clamps are tight, the three breather hoses are reconnected to the pipes running across the intercooler, and that all bolts are tight.

Spring Adjustment

Contrary to popular belief, the spring pre-load ***DOES NOT*** need to be adjusted to suit different boost levels. **All GFB valves *will stay shut* under full throttle conditions *regardless* of boost pressure or spring pre-load.** The spring pre-load affects how easily the valve opens when you lift off the throttle, and how long it stays open.

The screw in the centre of the cap is the spring pre-load adjustment screw, and the direction of adjustment is labelled. Use the supplied 5mm hex key for this screw. The softest spring setting is achieved when the adjustment screw is 3mm above the head of the valve. Exceeding 3mm may cause the screw to rattle loose and fall out whilst driving.



» Set the spring to the softest setting, and set the venting bias to at least 50% so you can see the piston.

» Start the car and let it warm up, make sure the A/C is off.

» Look at the piston through the trumpet. If it is hovering open, wind the adjustment screw in the "+" direction until the piston closes fully. If it is already closed, proceed to the next step.

WARNING: For this next step, keep your face away from the trumpet when revving the engine. View the piston from a safe distance away from the blast of air.

» Stab the throttle hard and lift off quickly. The piston should lift and vent, then close slowly and smoothly. The harder you stab the throttle, the further the piston will open, but typically it will not fully open when free revving as the turbo doesn't generate significant boost until the engine is under load.

» If the piston stays open too long, it can cause the engine to "stumble" or dip as it returns to idle. If this happens, turn the adjustment screw in the "+" direction one turn at a time until the engine returns smoothly to idle after revving.

» For the final fine-tune, take the car for a drive. Watch the tacho as you pull up to a stop - if the revs dip below idle, tighten the spring another 1-2 turns.

» If a fluttering sound is heard when lifting off sharply from full boost, wind the adjustment screw in the "-" direction one turn at a time until the noise disappears. Note that it is not uncommon to hear a slight fluttering at low RPM under certain conditions. This is a result of the different way in which this valve operates compared to the factory unit, and is not detrimental in any way.

Spring Adjustment Continued

There is no harm to the engine when experimenting with the spring pre-load and venting bias adjustments, in fact we encourage you to do so. Every car responds differently, and getting the spring pre-load right will usually offer a noticeable throttle response improvement over the factory valve. If you notice any negative drivability issues such as backfiring, stalling, or poor throttle response, keep making adjustments until you find what works best for your car.

A detailed video example of setting up the spring pre-load can be found using the QR code opposite or the link: http://gfb.com.au/downloads/gfb-tv?video=KgGRfR6jt-c

Adjusting the Noise

When powered up the dial backlight will glow bright red, and will then automatically dim 10 seconds later to reduce unnecessary glare, and will also reduce power to the motor – this is the "sleep" mode. To wake the unit up, simply press the dial briefly before making adjustments.

The position of the dial is directly proportional the venting bias - turning the dial fully anti-clockwise sets the valve to 100% recirc, fully clockwise results in 100% atmosphere venting, and any ratio is possible between these limits.

The head unit also has a range limiting feature. This can be used to limit the maximum atmosphere-venting bias of the Deceptor Pro II. For example, if you prefer that the maximum atmosphere venting bias is 60%, you can program the controller so that full travel on the dial gives you only 60% movement at the valve. This is particularly useful on cars that, through experimentation, find that full atmosphere venting does not agree with them.

To use this feature, set the dial in a position that you want as your maximum atmosphere-venting limit, then press and hold the dial until the lights flash. The unit will record this new position as the maximum atmosphere-venting limit. Now when you turn the dial fully clockwise, the Deceptor Pro II will only open as far as the point which you have just set. For example, if you pushed the button with the dial set in the middle (50% atmosphere venting), full travel of the dial will now move the valve from full recirc to 50% atmosphere-venting only.

Every time the button is pushed, the position of the dial will determine the maximum venting bias of your Deceptor Pro. So to re-set the range to maximum again, simply turn the dial fully clockwise, then press and hold the dial.

Typically, many Subaru engines will allow 100% atmosphere venting with no problems provided the spring pre-load is set correctly (see below). However, some combinations of engine modifications may result in backfiring when the valve vents to atmosphere, in which case the solution is simply to dial back the amount of air vented to atmosphere until the problem is resolved – this is one of the key benefits of the venting bias adjustment feature.

Customer Support

No-one knowns a GFB product like the engineers who designed it, who are always available to help with any enquiries or issues you may have with the installation or use of your GFB products:

Email: support@gfb.com.au Ph: (within Australia): 02 9534 0099 Ph: (international): +612 9534 0099

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/drive-train components.

GFB recommends that only qualified motor engineers fit this product. Warranty is for the period of one year from the date of purchase and is 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.

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