

# GFB Respons TMS

Part #T9014



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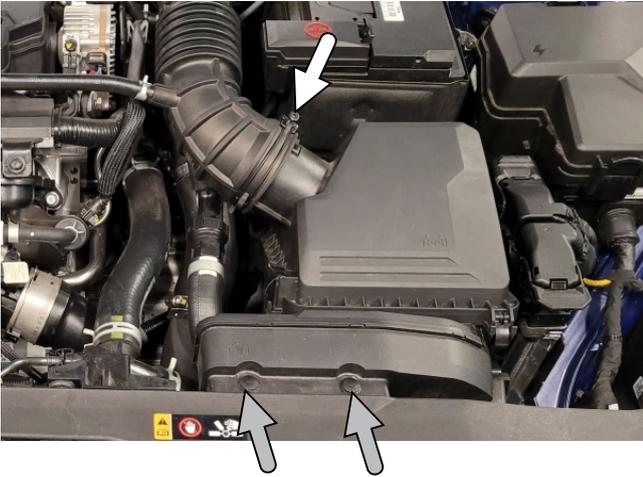
TURBO MANAGEMENT SYSTEMS



PERFORMANCE WITHOUT COMPROMISE

## Installation

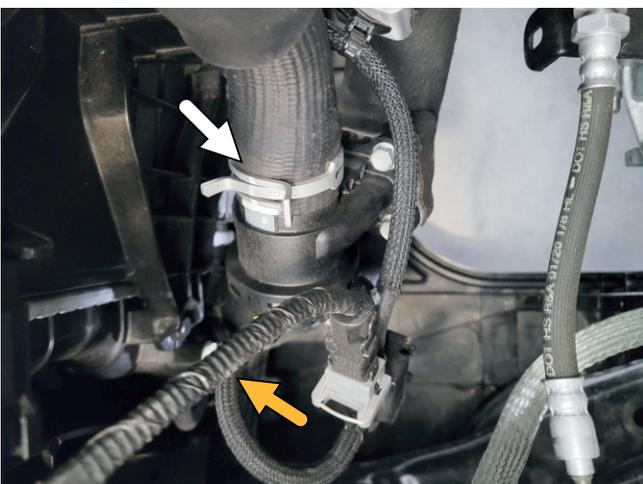
1) Remove Airbox: Loosen the intake hose clamp (⇐⇒), then unclip and remove the airbox lid and filter (→):



2) Remove the two plastic clips on the intake, followed by the 3 bolts that hold the lower half of the airbox (→). Carefully remove it from the car and set aside:



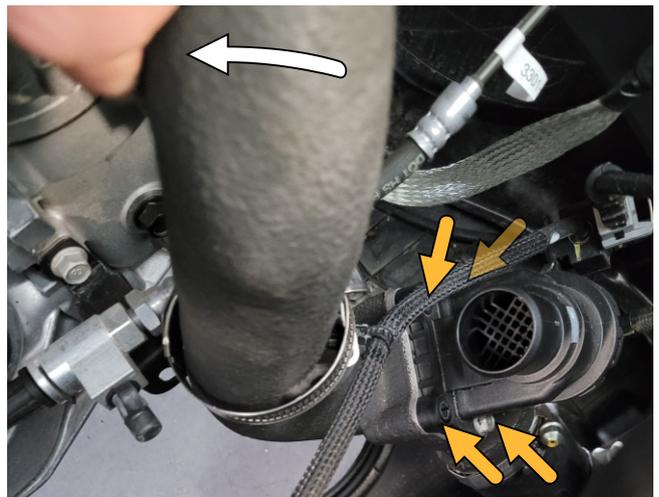
3) Remove the recirc hose (⇐⇒) and vacuum hose (→) from the factory valve:



4) Loosen the top clamp (→) on the metal intercooler pipe, then pull it free of the hose:



5) Bend the top of the pipe towards the engine (⇐⇒) to allow access to remove the four screws on the factory diverter valve (→):



6) Install the GFB valve using the supplied screws. A 5mm T-handle hex key helps with the rear screws:



- 7) Fit the recirc and vacuum hoses and their clamps to the Respons valve.
- 8) Push the top of the metal intercooler pipe back into its hose, and tighten the clamp.
- 9) Re-install the airbox, intake hose, and intake snorkel in the reverse order of removal.



## Adjusting the Spring Pre-Load

The spring pre-load **DOES NOT** need to be adjusted to suit different boost pressure. **All GFB valves will stay shut** under full throttle conditions **regardless** of boost pressure or spring pre-load.

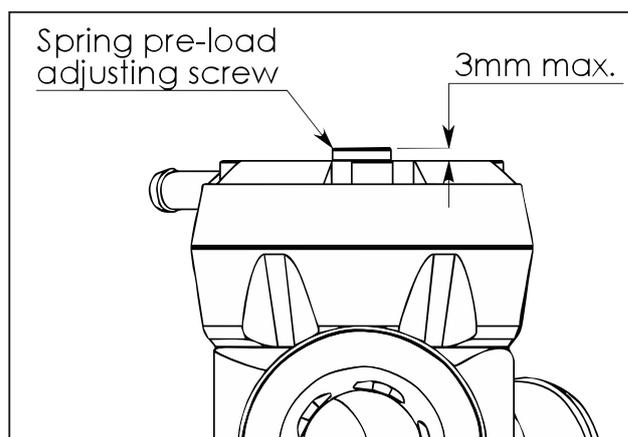
Because Hyundai uses an ECU-controlled solenoid valve to switch the top port of the BOV from boost to vacuum when it requires it to open, the conditions under which the BOV vents are largely determined by the ECU. However, the duration of the sound and how easily it blows off is controlled by the spring pre-load.

The ECU typically triggers the solenoid immediately on throttle lift off (even if the throttle is only slightly lifted), but usually only above a certain RPM and load. Therefore, the Respons may appear to vent at odd times, or at low load it may appear not to vent at all, this is normal and is determined by the ECU.

Since there is no MAF sensor on this car, the ECU is completely unaffected by atmosphere venting or spring pre-load, and therefore the spring pre-load can simply be set to your preference to control how easily the valve blows off when you lift off the throttle.

The screw in the centre of the Respons cap is the spring adjuster, which requires the supplied 5mm hex key for adjustments. The softest spring setting is achieved when the top of the adjustment screw is 3mm above the head of the valve as shown opposite. Do not set the screw more than 3mm above the head.

Start by setting the venting bias adjustment to full atmosphere (so you can hear the valve venting during setup - see next page for venting bias adjustment), then set the spring pre-load screw level with the top of the valves.



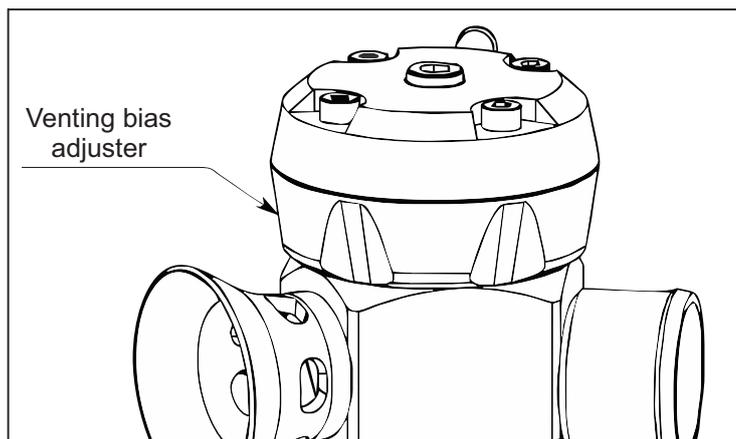
Take the car for a drive, and take note of how easily the valve vents when you lift off. Making the spring softer will allow the valve to open easier and vent longer, and increasing the pre-load means you will need to drive the car harder (i.e. more boost) before you start to hear the valve venting, and the blow-off sound will be shorter in duration.

## Adjusting the Sound

The unique patented venting bias adjustment feature on the GFB Respons lets you vary the amount of air vented to atmosphere or recirc, thereby changing the volume of the sound.

Turning the venting bias adjuster fully clockwise opens the trumpet port and gives the loudest sound, whilst setting it fully anti-clockwise results in 100% recirculation venting, which is the same as the stock valve and is the quietest

operation (you may still hear the recirc venting if you have an aftermarket intake fitted). You can set the adjustment anywhere in between for a variable venting ratio and to control the sound volume.



Do not be afraid to experiment with the spring and noise settings, as the air/fuel ratio cannot be affected regardless of the BOV settings, and it is not possible to damage the engine or turbo with BOV adjustments.

If you want a different sound, the GFB Whistling trumpet (part #5702) can be purchased separately. It changes the venting sound from a "whoosh" to a high-pitch whistle.



## 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](http://www.gfb.com.au/contact-us) to get in touch.