



# GFB RESPONS TMS TR9007

## INSTRUCTION MANUAL



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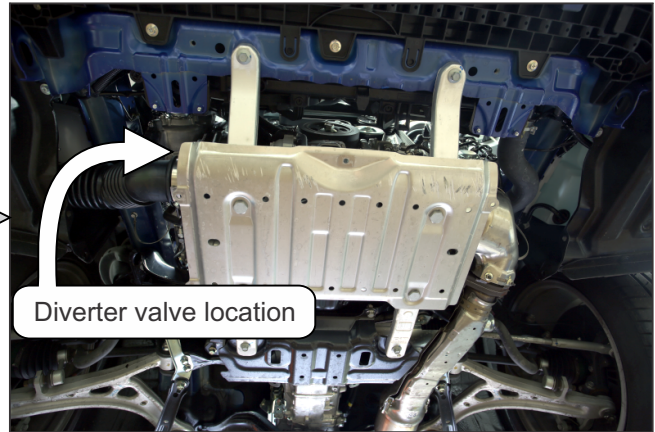
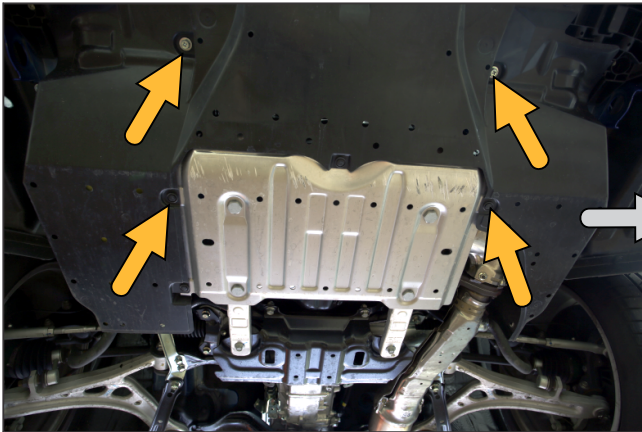
## INSTALLING THE VALVE

Note that installing the Respons T9007 must be done from underneath the car, which requires raising the car on ramps or axle supports, or a hoist.

### WARNING:

**NEVER** work under a car supported only with a jack.

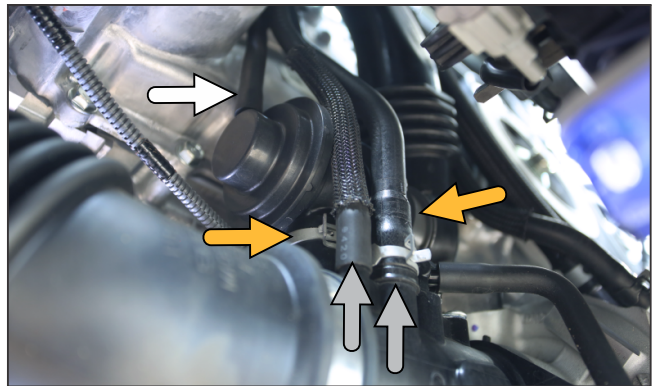
- 1) Remove the plastic section of the under tray by popping the plastic clips and the two bolts. Note that there are more plastic clips than indicated by the arrows.



- 2) Remove the two hoses in front of the diverter to gain access to the clamps behind. →

Remove the vacuum hose from the top of the diverter valve. →

Loosen the two hose clamps that retain the diverter valve. →



- 3) Using a 10mm socket, remove the two bolts that hold the turbo intake pipe onto the turbo. ←

Pull down on the pipe and push up on the diverter valve simultaneously to pop it out of the intake pipe. Then pull the diverter valve out of the vertical charge pipe and set aside.

- 4) Install the Respons TMS valve, then reconnect the vacuum hose, the two hoses in front of the valve, and the turbo intake pipe, making sure to replace and tighten all bolts and hose clamps.



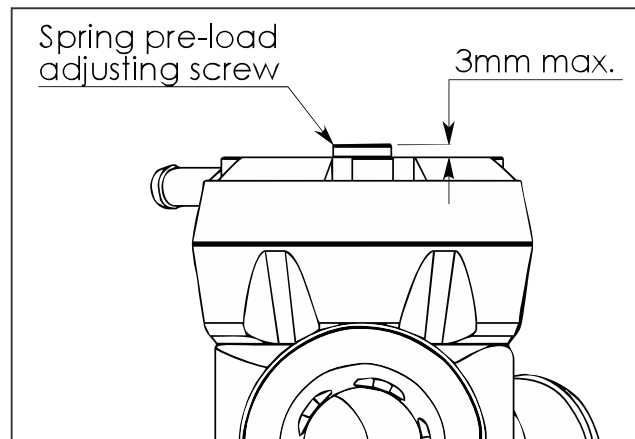
## ADJUSTING THE SPRING PRELOAD

Contrary to popular belief, the spring pre-load **DOES NOT need to be adjusted to suit different boost pressure**. The Respons TMS will stay shut under full throttle conditions regardless of boost pressure or spring pre-load.

Rather, the spring pre-load affects how easily the valve opens when you lift the throttle, and how long it stays open when it vents. Adjusting the spring is a simple matter of ensuring the valve opens enough to release the air, but not long enough to cause idling problems.

The screw in the centre of the head is the spring adjuster. Use the supplied 5mm hex key to make adjustments. It is easiest to do this from above the valve by removing the intake air snorkel at the front of the engine bay, so you can reach down to adjust it.

The softest spring setting is achieved when the top of the adjustment screw is 3mm above the head of the valve (figure 4). Do not set the screw more than 3mm above the head.



- Set the spring to the softest setting, and move the noise adjusting ring to at least 50% atmosphere venting so you can hear when the valve vents
- Start the car and let it warm up. Make sure the A/C is off
- Give the engine a good hard rev. The valve should blow off, then close before the revs drop back down to idle.
- If the valve stays open and blows off for too long, and is still open when the revs drop back to idle, the engine will “stumble”. If this happens, wind 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 and then rise again, tighten the spring 1-2 turns
- If a loud flutter is heard when lifting off sharply after accelerating hard above 3500RPM, 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 perfectly normal and is not detrimental to the turbo

A video example of setting up the spring pre-load can be seen at:  
<http://www.youtube.com/watch?v=iqQR5WUF9lc>

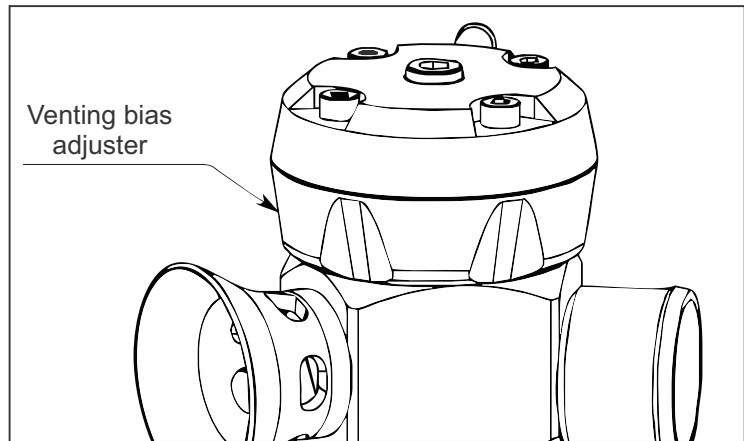
Do not be afraid to experiment with the spring pre-load adjustment, you can't cause any damage by doing so, and getting the setting right to suit your car can help to optimise throttle response. What you are looking for is a setting somewhere in between too soft (which can cause bogging, poor idle, or backfiring), and too hard (which will cause significant fluttering).

## 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 anti-clockwise will open up the trumpet outlet more, making the valve louder, whilst clockwise will open up more of the recirc outlet for quiet operation. Turning the valve fully clockwise until it stops will close off the trumpet completely, and the valve will operate like a factory bypass valve.

Conversely, turning it fully anti-clockwise will make it vent completely to atmosphere, which is the loudest setting.



Typically, most un-modified engines will allow 100% atmosphere venting with no problems. However, some combinations of modifications can result in backfiring if high proportion of atmosphere venting is used, 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.

Do not be afraid to experiment with the spring and noise settings, no harm will come to the engine if wrong setting is used.

## MAINTENANCE

GFB blow-off valves are designed to be as maintenance-free as possible. In most cars the small amount of crankcase and rocker-cover oil vapor that is directed into the intake system is enough to keep the piston well lubricated indefinitely. However, if you notice the sound of the valve changing over time (e.g. slow response time, intermittent operation), or if you can see that the piston is not moving smoothly, it may require a clean and re-lube.

**Cleaning Procedure:** Remove the four screws holding on the cap, taking care as the spring will try to push the cap off as the last screw is removed. Remove the spring and the brass piston, and wipe any grime from the inside of the valve and the piston with a rag. Apply normal engine oil to the piston and the inside of the bore, and re-assemble.

**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.**