



**GFB**  
GO FAST BITS

# GFB MACH 2 TMS TR9107

## INSTRUCTION MANUAL



Go Fast Bits P/L  
P.O. Box 1017  
Riverwood NSW 2210  
Australia

**GFB**  
GO FAST BITS

Ph: +61 (0)2 9534 0099  
Fax: +61 (0)2 9534 3999  
Email: [sales@gfb.com.au](mailto:sales@gfb.com.au)  
Web: [www.gfb.com.au](http://www.gfb.com.au)

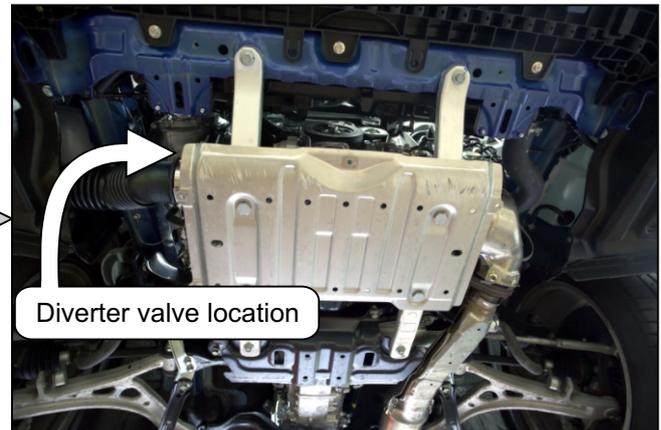
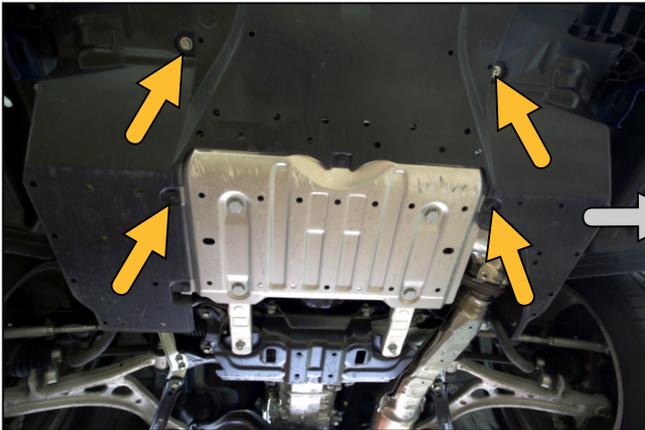
# REMOVING THE FACTORY VALVE

Note that installing the Mach 2 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.

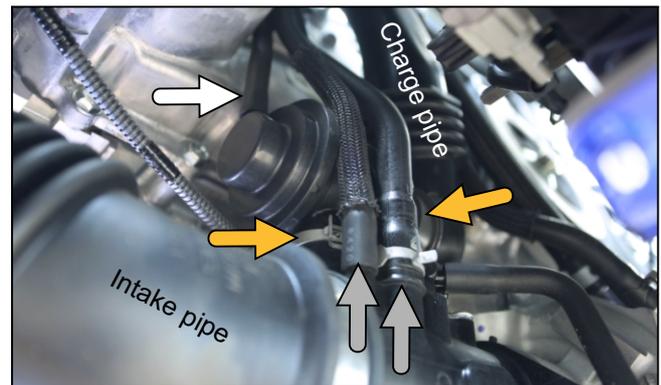
- 1) Remove the plastic section of the under tray by popping the plastic clips and the two bolts. Note that there are more plastic clips than indicated by the arrows.



- 2) Remove the two hoses from 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.

- 5) Install the Mach 2 in the reverse order i.e. insert the base into the vertical charge pipe first, then push the intake pipe up whilst aligning the recirc outlet.

Replace the turbo intake pipe bolts, and tighten both valve hose clamps.

Re-connect the two hoses that were removed in step 2, and then replace the under tray.



## ADJUSTING THE SPRING PRELOAD

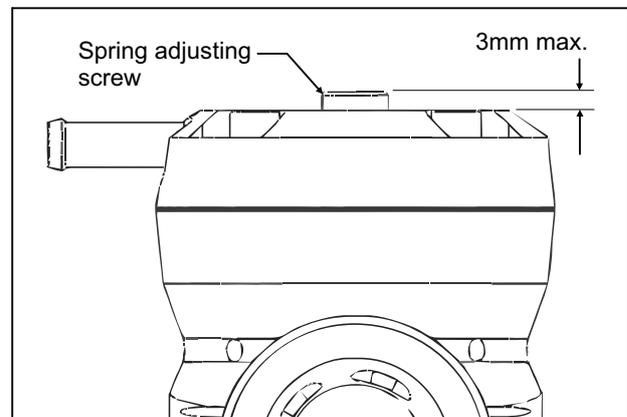
### PLEASE NOTE!

Contrary to popular belief, the spring pre-load **DOES NOT** need to be adjusted for different boost pressures. The Mach 2 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.

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 as shown to the right. Do not set the screw more than 3mm above the head.



The recirc versions of the Mach 2 are supplied with GFB's softer spring (part # 6116), which cannot be used for atmosphere venting because the piston will usually hover slightly open at idle (similar to the factory valve).

Because the Mach 2 is fully recirculated, it does not affect the engine idle, fuel mixture, or cause backfire no matter where the spring adjustment is set.

Therefore it is possible to use the Mach 2 straight out of the box without any spring pre-load adjustments, however you can use the adjustment to fine-tune throttle response if you wish. Generally speaking, the ideal setting is the hardest spring pre-load you can run without causing compressor surge (fluttering sound when lifting off the throttle).

To set the spring pre-load for maximum throttle response:

- Set the spring to the hardest setting (adjust the screw all the way down).
- Start the car and drive it until it is warm, and make sure the A/C is off.
- Accelerate moderately in a high gear to about 3000RPM and then ease off the accelerator, keeping the clutch engaged - these are the conditions most likely to cause compressor surge. If you hear a fluttering sound as you lift off, turn the adjustment screw in the “-” direction one turn at a time until the noise disappears. This is now the ideal setting for best throttle response.

Note that all cars have a different threshold for compressor surge, so it is possible that you may be able to leave the valve in the hardest setting without hearing surge.

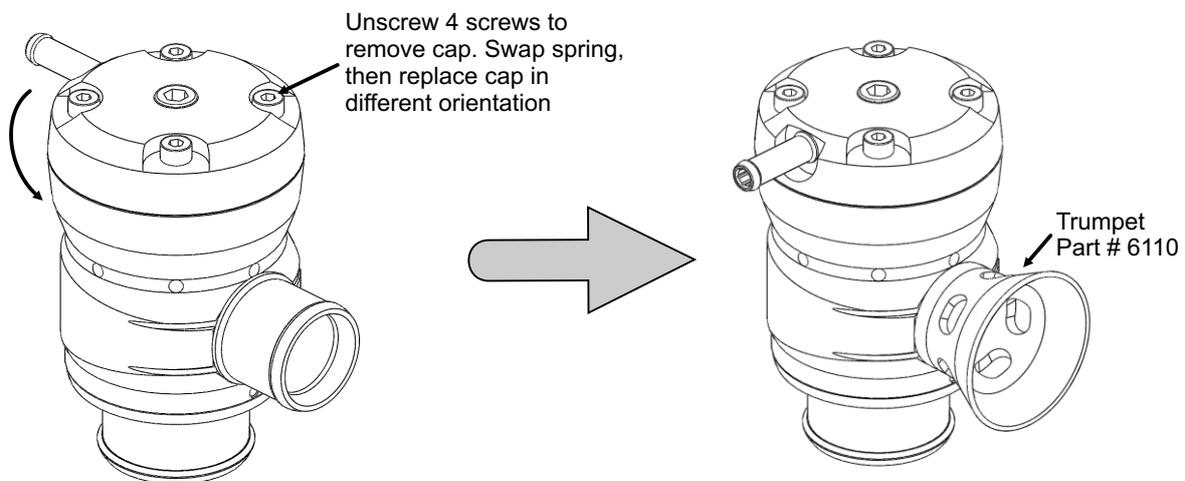
Do not be afraid to experiment with the spring pre-load adjustment, you can't cause any damage by doing so, and getting the setting right to suit your car can help to optimise throttle response.

## CONVERTING TO ATMO VENTING

If you want to change your Mach 2 to 100% atmosphere venting for a blow-off sound, simply purchase GFB's atmo conversion kit part # 5925, and re-orient the flange and cap as shown below.

The kit includes a hose plug to block the recirc hose, a trumpet to replace the Mach 2 recirc outlet, and a firmer spring to ensure the piston stays closed at idle.

You will also need to re-orient the cap 90 degrees counter-clockwise so the trumpet points to the side, rather than straight down onto the intake pipe. To do this (and to install the harder spring), use a 3mm metric hex key to remove the 4 screws holding the cap on. Hold the cap down as you remove the last screw, as the spring may try to push it off. Remove the cap, replace the spring, then re-install the cap in the orientation shown below:



## 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.**