

GFB Hybrid

Installation Instructions

Part #T9204



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TURBO MANAGEMENT SYSTEMS



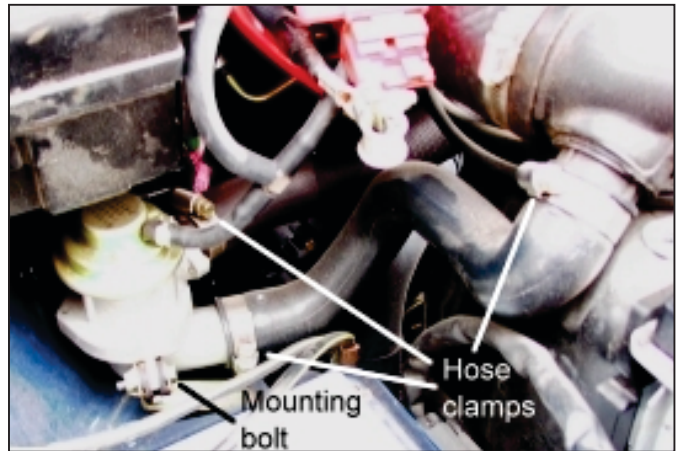
PERFORMANCE WITHOUT COMPROMISE

INSTALLATION

For Nissan Silvia/200SX S14-15 models with SR20DET engine. Please read notes on venting configurations (page 4) and decide which you will use before installation.

1) Unclamp the battery and remove it. This will make access much easier, but before doing so check that it will not affect any aftermarket alarm, stereo or other electrical accessories.

2) Loosen the hose clamps shown opposite. Using a 10mm socket, undo the two mounting bolts holding the factory valve to its bracket. The second bolt is much easier to undo if the rubber recirc hose is removed from the valve and bent out of the way.



3) Remove the vacuum hose from the top of the factory valve (this hose is a tight fit, try using a flat screwdriver to push the hose off, rather than pulling it).

4) Pull the plastic pipe off the fitting on the intercooler pipe so that the factory valve and plastic pipe can be removed as shown.



5) Remove the factory valve from the lower elbow by undoing the 3 screws on the underside of the flange.

6) Fit the GFB Hybrid onto the elbow in the same orientation as the factory valve, ensuring that the orange factory o-ring and screws are used.

8) Fit the assembled valve back into the car in the reverse order of removal, making sure to check all hose clamps are tightened, and then re-install the battery.



ADJUSTING THE SPRING PRELOAD

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.**

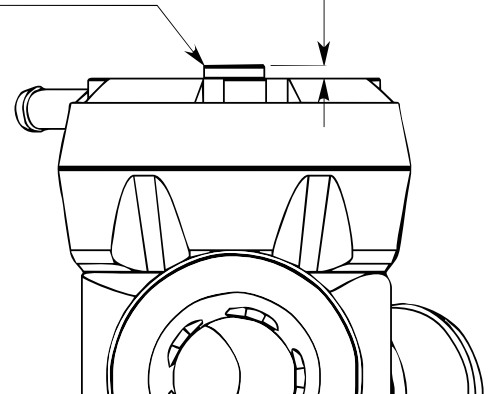
The spring pre-load affects how easily the valve opens when you lift off the throttle, and how long it stays open. When the Hybrid is configured with the atmosphere venting port open, the spring pre-load must be adjusted to ensure the valve opens easily enough to release the air, but not long enough to cause idling problems. When running in full recirc mode the spring pre-load will not affect the idle regardless of the setting.

For atmosphere-venting configuration:

- Use the supplied 5mm hex key to make spring pre-load adjustments. The recommended starting point is to have the top of the pre-load adjusting screw level with the cap (3 turns clockwise from the softest setting shown opposite).
- Start the car and let it warm up for a couple of minutes. Make sure the A/C is off.
- Give the engine a rev by pulling on the throttle cable - stab it hard then lift off quickly. The valve should audibly blow off immediately after closing the throttle, and should stop venting before the engine drops back to idle.
- If the valve is still venting when the engine drops back to idle, it may cause it to "stumble" or stall. If this happens, turn the adjustment screw clockwise one turn at a time until the engine returns smoothly to idle after revving.
- For the final adjustment, take the car for a drive. Accelerate moderately in 2nd gear to about 3500RPM then pull up to a stop quickly whilst watching the tacho - if the revs dip below idle, tighten the spring 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, especially if a pod filter and/or front-mount intercooler is fitted. This is a result of the different way in which this valve operates compared to the factory unit (this difference is what allows the GFB valve to vent to atmosphere), and is not detrimental in any way.

Spring pre-load
adjustment screw

3mm max.



Note there is no harm to the engine when experimenting with the spring pre-load, 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 get it wrong, there may be negative drivability effects such as backfiring, stalling, or poor throttle response, in which case keep making adjustments until you find what works best for your car.

A video example of setting up the spring pre-load can be found using the QR code opposite or the link below:

gfb.com.au/downloads/gfb-tv?video=KgGRfR6jt-c



CHANGING THE SOUND

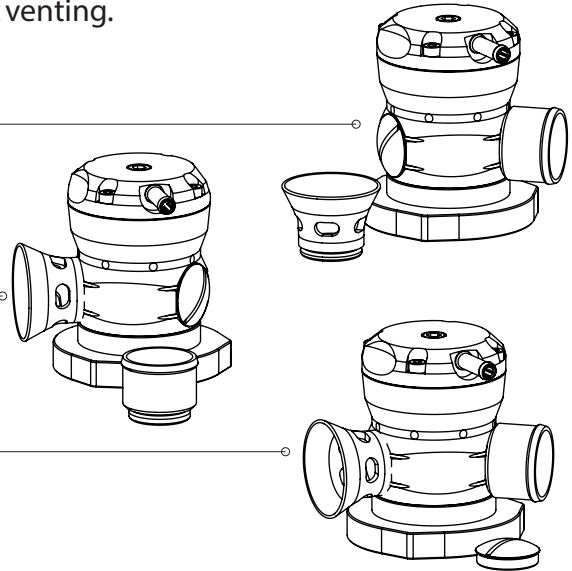
The GFB Hybrid is supplied with a plug set that allows you to configure the valve in 3 different ways, depending on your preference.

Typically, most engines will allow 100% atmosphere venting with no problems, however some combinations of modifications can result in backfiring or stalling with full atmosphere venting. In this case the solution is to revert back to 50/50 or full recirc venting.

For silent, fully recirculated operation, leave the recirc hose connected and swap the trumpet for the threaded plug.

For full atmosphere venting and maximum noise, plug the recirc hose with the supplied hose plug, and install the screw-in plug in place of the Hybrid's recirc outlet.

For 50/50 venting and a moderate sound, keep the recirc hose connected and the trumpet installed.



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.