

Product Name: **Big Bubba BPV/Bubba Sonic VTA**  
 Product Description: 50mm Bypass valve/Blow off valve  
 Product Number: TS-0204-12XX / TS-0204-13XX



**IMPORTANT NOTES ON YOUR BOV**

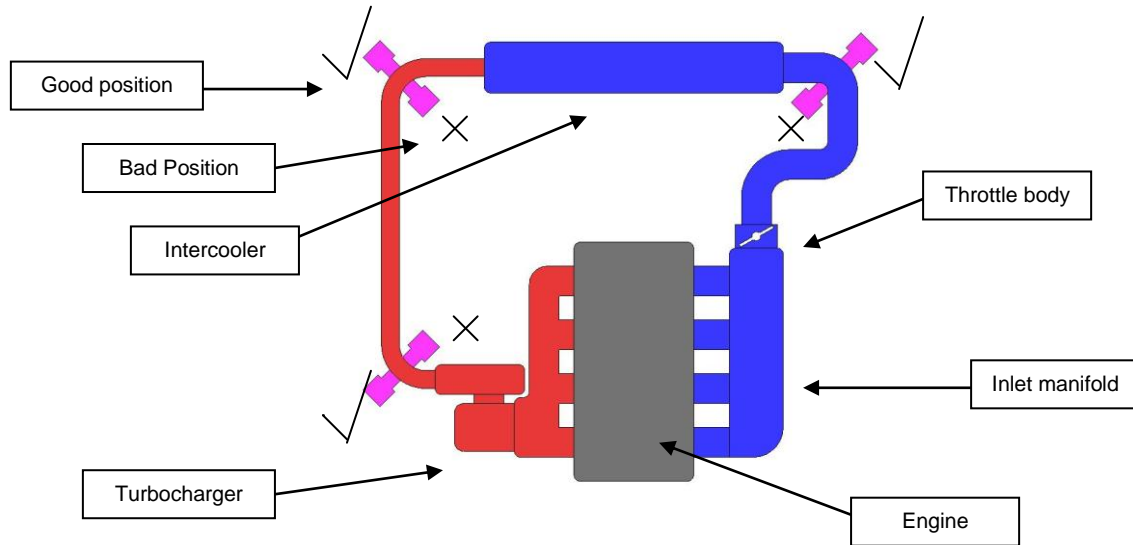
- Use only silicone hose that is the correct size and pressure/vacuum rating for your application when fitting your BOV
- Ensure that all plumbing is secured with suitable clamps or the correct fittings are used
- Your BOV should be mounted at least 100mm from any high heat source or adequately shielded

**RECOMMENDATIONS**

- **Turbosmart recommends that your BOV is fitted and adjusted by an appropriately qualified technician**

**HOW TO INSTALL YOUR BOV**

- Allow the engine to cool down before installing your BOV
- Identify a suitable location along the intercooler/intake piping for the BOV – this will need to be between the outlet of the turbo and the throttle body ideally between the throttle body and the intercooler (See diagram below).

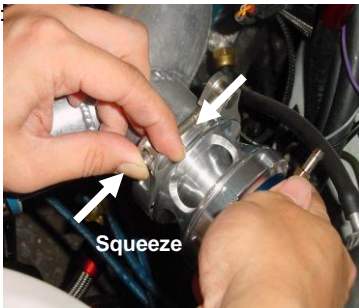


- Remove the BOV from the weld on adapter by removing the V-Band clamp. The V-band clamp is removed by opening the screw until it has reached the end stop, then pushing the head of the screw in a “syringe” like motion and lifting the BOV off the weld flange.

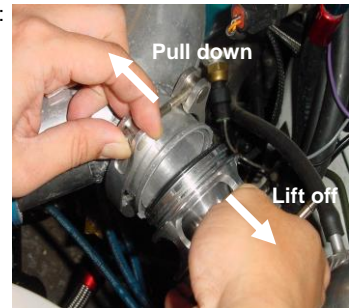
Step 1:



Step 2:



Step 3:



- Weld the adapter onto the intake pipe in your ideal position, then allow the adapter to cool down
- Put the V-Band clamp over the adapter before re-installing the O-Ring seal and the BOV
- Open the V-Band clamp and place in position. Tighten the V-Band clamp screw until it is finger tight then turn an additional 2.5 turns or 4 Nm (3 ft/lbs) with an allen key. Be sure not to over tighten the screw as this will cause damage to the V-Band clamp
- Identify a standalone vacuum / pressure source from a port after the throttle body and connect with correctly sized hose to the vacuum/boost port on the cap of the BOV. Ensure this line is as short as possible
- Secure all silicone hose ends with correct clamps
- Start the engine and check for air leaks in the system

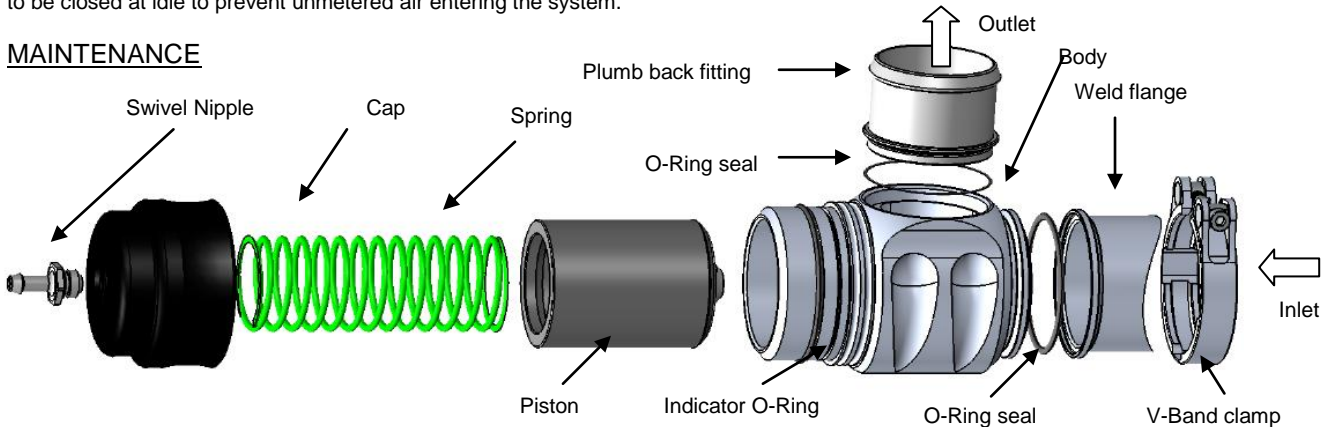
**SPRING ADJUSTMENT**

The purpose of the spring is to control the position of the piston at engine idle. Different vehicle setups need different piston positions to function properly.

The **Big Bubba BPV** is preinstalled with a spring which will hold **12 InHg** (TS-0204-2202) and is designed to be **OPEN at idle**. It does not need to be adjusted if the BOV is being used in a recirculation application or Supercharger application. A 7 InHg spring (TS-0204-2201) is available if higher valve response is needed or your engine's vacuum level is very low.

The **Bubba Sonic VTA** is preinstalled with a spring which will hold **17 InHg** (TS-0204-2203) with the cap at its lowest position and is designed to be closed at idle. A **21 InHg** (TS-0204-2204) spring is available if your engine produces high vacuum and the valve needs to be closed at idle to prevent unmetered air entering the system.

## MAINTENANCE



Turbosmart recommends that the following maintenance procedure is carried out at six monthly intervals or at higher intervals if the environment is very dusty or wet. Regular maintenance will ensure that your BOV is operating at its peak performance and will extend the working life of the product.

- Remove the cap of the BOV by rotating in an anti-clockwise direction – **CAUTION**, the cap is under spring force, remove with care!
- Carefully remove the piston and thoroughly clean the piston and the bore of the BOV
- Inspect the surface of the piston and the bore of the BOV for scoring or excessive wear, silver coloured marks on the bore are an indication of excessive wear
- Check the Base O-ring and the Cap O-ring for any damage – replace if necessary
- Lubricate the bore and the piston with Uni-Glide™, hydraulic oil or sewing machine oil – **DO NOT** use grease or viscous oils
- Re-assemble the BOV in the reverse order

## TROUBLE SHOOTING

The following points should be checked if you find that your engine is dipping below normal idle, stalling or if the BOV is functioning poorly. Please note, the following checks will cure 99% of problems experienced with a BOV.

- Check the vacuum hose for splits, cracks, loose connection, kinking or any obstruction – old or fatigued hose may collapse under vacuum causing an obstruction
- With the engine running remove the vacuum / pressure hose from the nipple in the cap of the BOV, there should a loud hissing sound. The engine should idle poorly, double check by covering the end of the hose with your finger. If this does not occur, the hose could be blocked or crimped. Check the hose and replace if necessary.
- Ensure that the vacuum / pressure source is not shared and that the vacuum source is directly from the inlet manifold
- Check the seal between the adapter and the BOV – ensure that there is no gap between the BOV base and the weld flange
- Check the join between the adapter and the intercooler pipe for leaking

# The Turbosmart Pledge

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*Happy motoring!*  
**The Turbosmart Team**

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