

Product Name: BMW Kompact BOV Kit
 Product Description: Model specific BOV Kit
 Product Number: TS-0203-1050/TS-0203-1250



IMPORTANT NOTES:

- Please thoroughly read and understand these instructions before commencing this installation.
- The thread on the cap for the vacuum source is AN#3. The standard swivel nipple can be changed to a AN#3 fitting if desired.
- This kit is designed to fit BMW 135, 335 and 1M equipped with the N54 twin turbo engine.

RECOMMENDATIONS

- **Turbosmart recommends that your Blow off valve (BOV) is fitted and adjusted by an appropriately qualified technician**
- **Turbosmart recommends that a boost gauge be permanently fitted to the vehicle**

Please check that the following items have been provided in your kit

Quantity	Description	Use
2	Kompact BOV	Replaces standard bypass valve
6	Shims (Dual Port only)	To increase spring force for high vacuum applications
2	Molded silicone pipes	To replace standard return pipes
2	Black Vacuum hose	To connect BOV vacuum nipple to factor vacuum tee piece
2	Port Blanking plugs (Dual Port only)	To blank off trumpets for recirculation only
4	Spring clamps	To secure vacuum hoses
4	Hose clamps	To secure Boost and exhaust hoses onto BOV

HOW TO INSTALL YOUR BOV
 (Installation pictures from a 135)

BLANK PLUG: The Dual port is supplied with a blanking plug for the vent to atmosphere side of the BOV to convert the BOV to full recirculation mode. Simply unscrew the trumpet and screw in the supplied blanking plug. Alternatively, the blanking plug can be used to convert the BOV into full vent to atmosphere mode by installing the screw in blank plug onto the plumb back side and by using a 2 x 25mm blanking plug for the plumb back hoses (sold separately – TS-0205-2013).

- 1) Remove top shroud cover by unscrewing the securing bolts.



- 2) Remove ECU and brake distribution block cover by unclipping them off the shroud.



- 3) Pull the wiring harness cover towards the front of the car to slide it off the clips on the shroud



- 4) Unclip the 3 clips on the shroud and remove the wiring.



- 5) Remove the securing bolts holding the shroud in and remove the shroud.



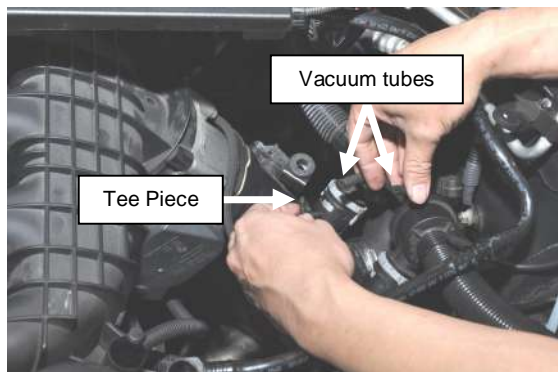
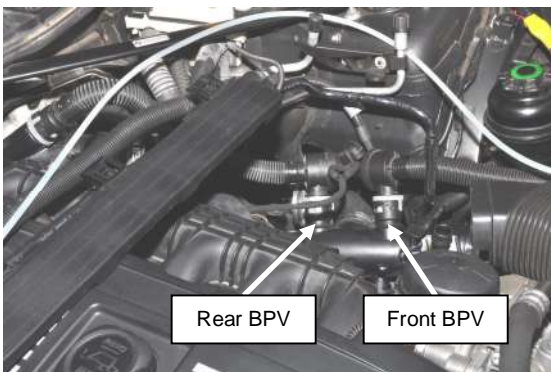
- 6) Undo the 2 intake hose clamps and remove the vacuum tube by pinching on the fitting.



- 7) Unclip the intake snorkel and remove air box by pulling it up off its rubber mounts



- 8) Locate the standard Bypass valves and remove their vacuum tubes off the tee piece

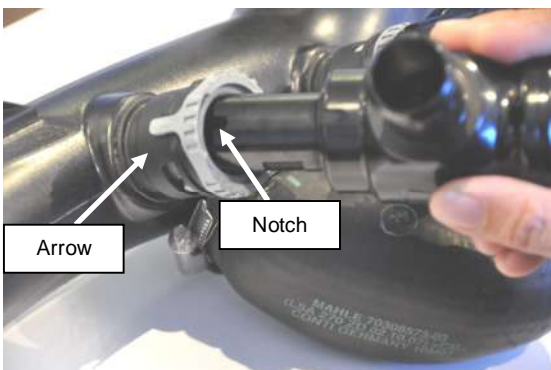


- 9) Remove the 2 standard bypass valves (BPV's) and their plumb back hoses by rotating the grey securing clips clockwise and pulling them out.



- 10) Once the standard bypass valves have been removed, rotate the grey securing clips on the charge pipe anti-clockwise to lock the clips.

- 11) Install the Kompact BOV's by lining up the notch on the inlet port with the securing clip arrow and pushing them into the charge pipe until a click is heard. Make sure that they are secure by gently pulling on the BOV to see if it is tight.



Front BPV

Rear BPV

12) Make sure the orientation of the recirculation ports on the BOV's look like the picture below.



13) Install the recirculation hoses. Secure hoses with supplied hose clamps.



Rear BOV recirculation hose



Front BOV recirculation hose

14) Connect the supplied vacuum tube to the tee piece and the Kompact BOV's. Use the 3mm spring clamps to secure the vacuum tube onto the standard tee piece and the 5mm spring clamps to secure the hose to the BOV nipples.



Tee Piece



15) After the BOV's have been installed, refit all other standard parts such as airbox and shroud in the reverse order of removal



- 16) Start the engine and check for leaks.

ADJUSTING YOUR BOV (DUAL PORT ONLY)

The aim of the adjustment on the Dual port is to make sure that the piston is hard closed at idle and that the piston closes fast enough to minimise backfiring and not stall the engine.

Adjustment to the BOV is made by rotating the cap. To increase the spring force on the piston, rotate the cap clockwise in the direction of hard as marked on the top of the cap. To decrease the spring force on the piston, rotate the cap anticlockwise in the direction of soft as marked on the top of the cap - **CAUTION** - Do not rotate the cap beyond the O-Ring groove. If the cap is fully wound down and the piston is still open at idle, remove the cap and install 2 shims to increase the force. Re install the cap and check that the piston is fully closed at idle. Add more shims if required. Once it is confirmed that the piston is fully closed at idle, perform the following adjustment procedure.

- Start with the BOV cap at the maximum soft position (The indicator O-Ring should be completely covered by the edge of the cap)
- With the engine at idle the exhaust port should be closed off by the piston – the piston should be hard against the seat and not floating or moving
- Free rev the engine and back off quickly, the engine should return to normal idle speed – if the engine drops below idle or stalls increase the spring tension by one turn
- Repeat this process until the engine free revs and returns to normal idle speed
- Test drive the car and ensure that when decelerating or changing gears that the engine has minimal backfiring and no stalling. If backfiring is excessive or stalling is noticed then check all connections made during the installation, otherwise increase the spring tension

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 / boost 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 – otherwise the hose is blocked.
- Check to see if the BOV is blocked or contaminated with dirt or debris.
- Ensure that the vacuum / boost source is not shared and that the vacuum source is directly from the inlet manifold.
- Check the seal between the intercooler flange and the BOV. Make sure the supplied gasket is installed and the BOV Flange is secured on the intercooler flange with the two factory bolts.
- Ensure the spring clamps are secured on silicon hoses and fittings.

The Turbosmart Pledge

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