

Product Name: Kompakt BOV 2.0L VAG
 Product Description: 2.0L VAG OEM replacement BOV
 Product Number: TS-0203-1040/TS-0203-1240



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 an AN#3 fitting if desired.
- Make sure that the engine is cool before installing this product

RECOMMENDATIONS

- **Turbosmart recommends that your Blow off valve (BOV) is fitted by an appropriately qualified technician**
- **Turbosmart recommends that a boost gauge be permanently fitted to the vehicle**
- **Turbosmart recommends that this product is install on the car hoist/lift**

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

Quantity	Description	Use
1	Model specific BOV	Replaces standard electronic bypass valve
1	42 X 2 O-Ring	Sealing O-Ring
1	19 X 2 O-Ring	Sealing O-Ring
6	Shims	Increasing spring force for high vacuum engines (Dual port only)
3	M6X16 Socket head cap screws	Mounting the BOV to the compressor cover
1	Electronic plug	Blanking off OEM electronic by pass valve wiring loom
1.5m	5mm Black vacuum hose	Connects BOV to intake manifold
1	1/16" NPT Blank	Port blank for boost reference adapter
1	6.3mm hose tail fitting	Screwed into the boost reference adapter, provides boost reference for BOV
1	5mm hose tail fitting	Provides other devices such as boost gauges with vacuum/pressure source
1	Boost reference adapter	Adapter between intake manifold and oil air separator feed
1	Boost reference adapter collar	Connects boost reference adapter to intake manifold
2	M4 X 4 Grub screws	Clamps the boost reference adapter to collar
2	6mm spring clamps	Secures pressure lines
3	250mm cable ties	Fixing pressure lines in position

HOW TO INSTALL YOUR BOV

For detailed installation videos on a MK6 Golf GTI or Golf R, please go to our website.

MK6 Volkswagen Golf GTI (2010-2013)

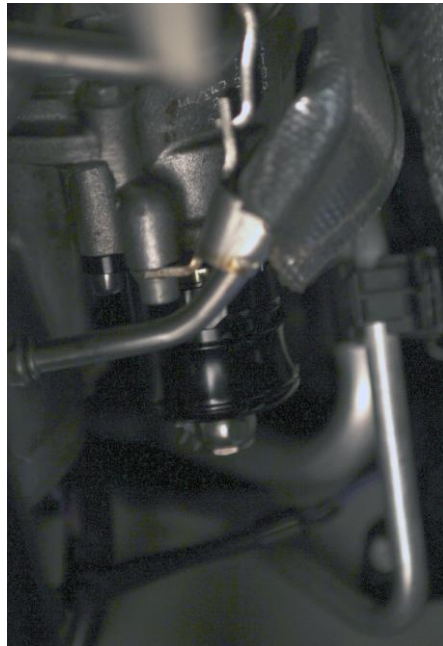


- (1) Unclip the recirculation hose by squeezing on the clip while pulling the hose
- (2) Push the supplied plastic collar over the barb
- (3) The boost reference adapter has 2 ports and is supplied with a 6.3mm nipple, a 5mm nipple and a blanking plug. The 6.3mm nipple needs to be used for the BOV vacuum/boost reference. The 5mm nipple can be used if you want to hook up a boost gauge or boost controller. If you are only installing the BOV, then use the blanking plug to block off the unused hole. When installing the boost reference adapter, push the adapter onto the barb until it bottoms out. The adapter might need to be rotated back and forth while pushing it onto the barb. Once it is home, with your fingers push the plastic collar back into the boost reference adapter so that the outer edge sits flush with the back end of the adapter. The plastic ring forms the surface for which the grub screws on the boost reference adapter screw into so that the barb is not damaged. Apply medium strength thread locker onto the grub screws and screw them into the plastic collar evenly. Make sure not to over tighten them as they will damage the intake manifold barb.

- (4) Reinstall the air recirculation pipe. Connect one end of the supplied vacuum hose to the 6.3mm nipple and secure that end with a spring clamp. Then run the vacuum hose to the back left hand side of the engine bay. The OEM diverter valve is located on the compressor cover of the turbocharger next to the fire wall of the engine compartment. Installing the BOV must be performed from under the car. The installation can be performed on the ground using a trolley jack and some car stands but it is highly recommended that the installation be performed on a car hoist/lift.



- (5) From under the car, unplug the oil temperature sensor harness from the oil sump
- (6) Remove the harness bracket from the front sub frame and put it aside. From this point, you should see the OEM diverter valve.



- (7) Unplug the harness from the OEM diverter valve and remove the 3 mounting screws. Remove the OEM diverter valve. Install the Turbosmart BOV in the same location. Make sure that the vent to atmosphere port down towards the ground. Secure the valve with the supplied screws.
- (8) Run the vacuum hose from the boost reference adapter to the BOV nipple and secure the line with a spring clamp.
- (9) Plug the diverter valve wiring harness with the supplied block off plug and secure the plug to the closest wiring harness on the firewall with a cable tie.
- (10) Remount the oil temperature sensor bracket and plug the harness back into the sensor.
- (11) Secure the vacuum hose from the boost reference adapter to the BOV with cable ties.
- (12) Start the car and check for leaks and idling issues.

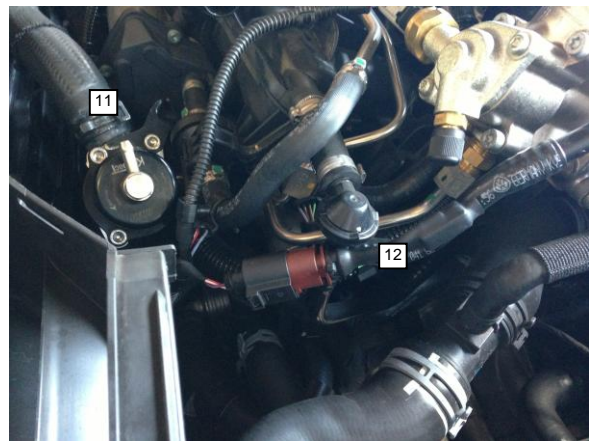
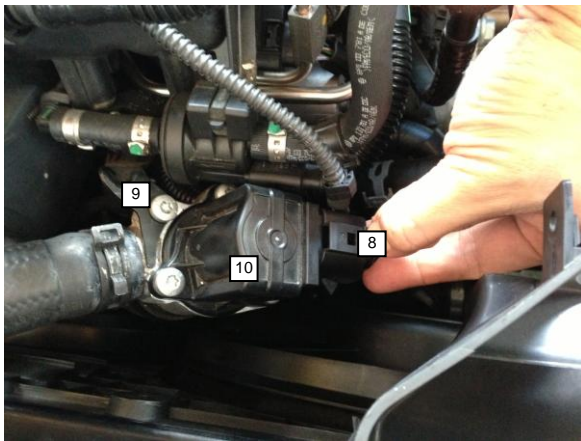
MK6 Volkswagen Golf R (2010-2013)

Remove engine cover/airfilter box assembly by the following steps:

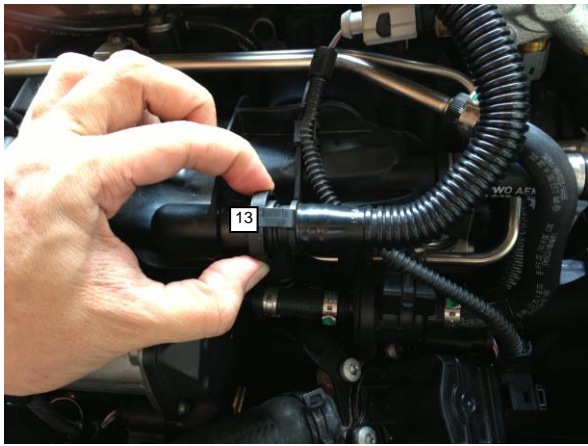
- (1) Unclip intake cover by pulling the cover up
- (2) Using a torx driver, remove the torx screws which secure the intake snorkel to the front intake mount and lift the snorkel above the intake mount
- (3) Unclip the airflow meter plug and unhook the wiring from the engine cover, move the harness out of the way
- (4) Unclip turbo intake pipe by prying open the 2 metal straps. Pull the intake pipe out of the airflow meter
- (5) Unclip the recirculation pipe from the straps by lifting the tabs on the straps
- (6) Top remove engine cover, pull the engine cover up at (6) and (7) to pull the cover off the rubber mounts. Take care when popping the cover off the mounts
- (7) Pull the engine cover towards you to pop the cover off the rear mounts



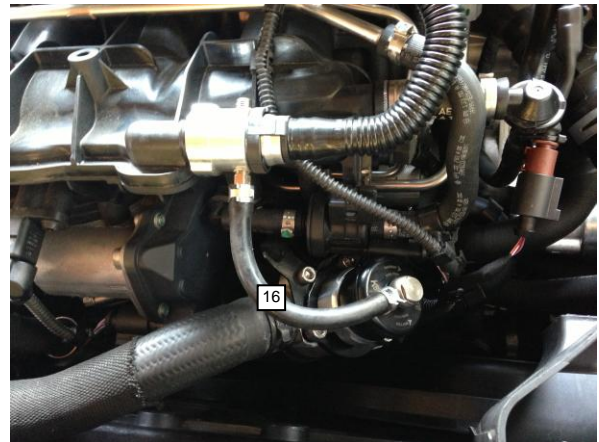
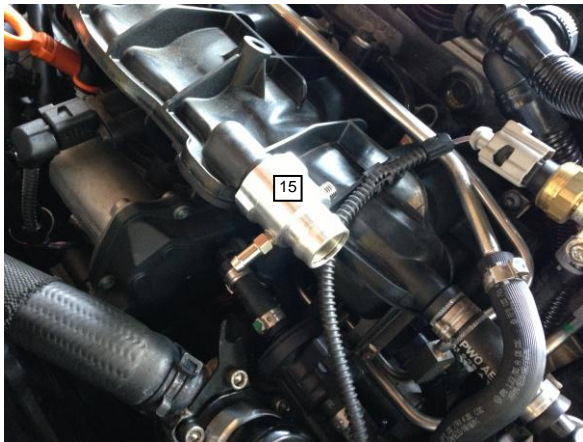
- (8) Unclip wiring harness off the OEM diverter valve
- (9) Remove torx screw from the bracket holding the diverter valve assembly
- (10) Remove remaining torx screws to remove the OEM diverter valve.



- (11) Install the TurboSMART BOV in the reverse order of removing the OEM valve. Make sure that the flat on the flange is towards the recirculation port (11) in the housing.
- (12) Install the electronic plug and cable tie the plug to plastic tubing (12)



- (13) Unclip the recirculation hose by squeezing on the clip while pulling the hose
- (14) Push the supplied plastic collar over the barb



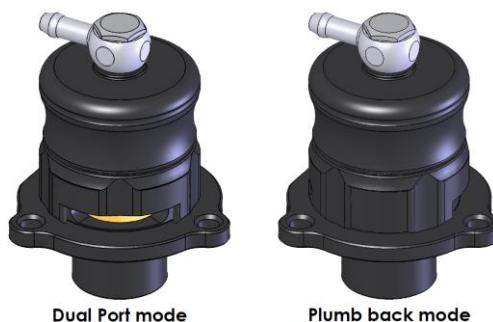
- (15) The boost reference adapter has 2 ports and is supplied with a 6.3mm nipple, a 5mm nipple and a blanking plug. The 6.3mm nipple needs to be used for the BOV vacuum/boost reference. The 5mm nipple can be used if you want to hook up a boost gauge or boost controller. If you are only installing the BOV, then use the blanking plug to block off the unused hole. When installing the boost reference adapter, push the adapter onto the barb until it bottom out. The adapter might need to be rotated back and forth while pushing it onto the barb. Once it is home, with your fingers push the plastic collar back into the boost reference adapter so that the outer edge sits flush with the back end of the adapter. The plastic ring forms the surface for which the grub screws on the boost reference adapter screw into so that the barb is not damaged. Apply medium strength thread locker onto the grub screws and screw them into the plastic collar evenly. Make sure not to over tighten them as they will damage the intake manifold barb.
- (16) Reinstall the air recirculation pipe. Cut a piece of silicone tube from the supplied length and connect the BOV to the boost reference adapter. Secure all hose ends with the supplied spring clamps
- (17) Reinstall the engine cover in the reverse order. Start the car and check for leaks or idling issues.

MK5 Volkswagen Golf GTI (2006-2009)

For installation on this vehicle, follow points (1) to (7) on the Golf R instructions to remove the engine cover and install the boost reference adapter and then follow points (5) to (12) of the MK6 Golf GTI to install the BOV.

BLOCK OFF COLLAR (DUAL PORT ONLY)

The Dual port is equipped with a block off collar that can convert the BOV to either dual port mode or plumb back (recirculation) mode. Rotating the collar fully anti-clockwise till it hits the stop will put the BOV to full plumb back mode. Rotating it fully clockwise will put the BOV to dual port mode.



Dual Port mode

Plumb back mode

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. In most cases, the cap is in the correct position from factory but with certain engine modifications, additional springs or springs changes are required to tune the performance of the valve to the turbo system.

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 compressor cover flange and the BOV. Make sure the supplied O-Rings are installed properly and the BOV Flange is secured on the compressor cover flange with the 3 supplied screws.
- Ensure the spring clamps are secured on silicon hoses and fittings.
- If the valve does not open properly or is slow to react, it could be due to the mapping of the drive by wire system from such things as aftermarket chips and engine tunes. Check with the tuner that the mapping of the throttle is the same as OEM.
- A softer spring is available (TS-0203-3003) for engines which have lower vacuum levels than stock or experience response issues from the drive by wire system.

ONE YEAR LIMITED WARRANTY

Turbosmart is a company built on Customer Satisfaction and Service. That is why all of our products go through regimented test procedures before they are packaged and shipped. Turbosmart stands behind its products for one full year after purchase. Terms of Warranty, Service and Returns are as follows:

Limited Warranty: Turbosmart warrants its products to be free from defects in material and workmanship under normal use and if properly installed for a period of one year from date of purchase. If found to be defective, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of Turbosmart to the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Turbosmart be liable for special or consequential damages. This warranty is only valid on products purchased from Turbosmart Authorized Dealers.

Service: After the warranty period has expired, repair service is charged based on a minimum and maximum charge rate. (Contact Customer Service for current rate).

Returns: When returning a Turbosmart product for repair, it must be accompanied by a completed Customer Warranty Form and RMA number. To access this form please go to our website www.turbosmartonline.com and you will find it on the Downloads page.

THE TURBOSMART PLEDGE

DO NOT USE ANY TURBOSMART PRODUCT UNTIL YOU HAVE CAREFULLY READ AND UNDERSTOOD THE FOLLOWING AGREEMENT. Please call if you have any questions or do not understand this agreement. Refer to our brochure, website or catalogue for terms and conditions and further information regarding your product. Turbosmart appreciates your business and pride ourselves on our customer service. We are always happy to offer you advice and will provide you with help in any way we can. The purpose of this agreement is to avoid any problems or hard feelings.

We sometimes make mistakes, as do our dealers, distributors and suppliers. Even customers can sometimes order the wrong parts. Do not use, modify, install, trial assemble, nick, drop, scratch or adjust any part until you first check for any damage. Damage must be reported immediately. NO EXCEPTIONS. If there are any components missing please contact your authorized reseller immediately upon receipt of your shipment. Missing components must be reported within five (5) business days of receipt. Parts returned for any reason MUST BE IN RESALABLE CONDITION. It is YOUR responsibility, "THE CUSTOMER" to carefully package any returns to avoid shipping damage. Insurance is highly recommended. Credit cannot be issued for damaged goods.

Warranty as to Defects – Australian Consumer Law

- 1.1 We warrant for a period of twelve (12) months from the date of supply of the Goods and/or Services that if due to the fault of Turbosmart the Goods and/or Services (as the case may be) provided by Us are defective then We will, as determined by Us do one or more of the following:
 1. In the case of Goods; the replacement of the Goods, the supply of equivalent Goods, the repair of the Goods, the payment of the cost of replacing the Goods or of acquiring equivalent Goods, or the payment of having the Goods repaired; or
 2. In the case of Services; the supplying of the Services again, or the payment of the cost of having the Services supplied again.
- 1.2 You will only be entitled to the benefit of the warranty set out in this pledge, if You have not wholly or partially caused or contributed to the defect to the Goods by the misuse of the Goods or the failure to use the Goods in accordance with any specifications or instructions applicable to the Goods.
- 1.3 The warranty contained in this pledge is provided by Turbosmart Pty Limited of 32 Milton Street North, Ashfield NSW 2131, Australia, Telephone: +(61) 1300 735 506, Email: sales@turbosmart.com.au.
- 1.4 In order for a You to make a claim on the warranty You must within twelve (12) months of delivery of the Goods or Services give written notice to Us at the address specified in clause 1.3 above of the details of any defects in respect thereof. Any Goods referred to in a notice given pursuant to this clause should be left in the state and condition in which they were delivered until such time as We or Our duly authorised agent have inspected the Goods with such inspection to be carried out within a reasonable time after service of such notice. If the Goods are not so left in the state and condition in which they were delivered then the You shall be deemed to have accepted the Goods and the warranty contained in this pledge shall not apply.
- 1.5 You shall be responsible for all expenses associated with making a warranty claim under this pledge however if the Goods and/or Services are found to be defective due to Our fault then We shall reimburse You for any expenses incurred by You in making a warranty claim upon receiving evidence satisfactory to Turbosmart to support such expenditure.
- 1.6 The benefits to You given by the warranty contained in this pledge are in addition to other rights and remedies of You have under a law in relation to the Goods or Services to which the warranty relates. In accordance with the Australian Consumer Law We makes the following statement: "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure."

EXCEPT AS PROVIDED BY LAW, THIS LIMITED WARRANTY IS THE ONLY EXPRESS WARRANTY, WHICH APPLIES TO TURBOSMART PRODUCT AS EXPRESSLY GIVEN IN LIEU OF ANY OTHER WARRANTY EXPRESSED OR IMPLIED, INCLUDING THAT OF MERCHANTABILITY. ANY IMPLIED WARRANTY INCLUDING THAT OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE IS HEREBY LIMITED BY THE SAME TERMS AND TIME LIMITATIONS SET FORTH IN THIS LIMITED EXPRESS WARRANTY AND OTHERWISE EXCLUDED.

EXCEPT FOR THOSE OBLIGATIONS ASSUMED HEREIN, TURBOSMART ASSUMES NO OTHER OBLIGATIONS IN CONNECTION WITH THE SALE OF ITS PRODUCTS.

IN THE EVENT THAT THE INDIVIDUAL PURCHASER DOES NOT AGREE WITH THIS AGREEMENT THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UN-USED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN SEVEN (7) DAYS FROM THE DATE OF PURCHASE FOR A FULL REFUND.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE INDIVIDUAL PURCHASER HAS READ AND UNDERSTOOD THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.

Happy motoring!
The Turbosmart Team

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