

Product Name: Mazda/Subaru Dual Port
 Product Description: Model-Specific Dual Port BOV
 Product Number: TS-0205-1009/TS-0205-1010



Suitable for: Mazda MPS (Mazdaspeed) 3, 6, CX7, Subaru WRX'08+, Legacy/Liberty GT'03 - current.

IMPORTANT NOTES:

- This Blow-Off Valve does NOT fit the 2008 WRX STi. Please refer to www.turbosmartonline.com for product updates.
- 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.

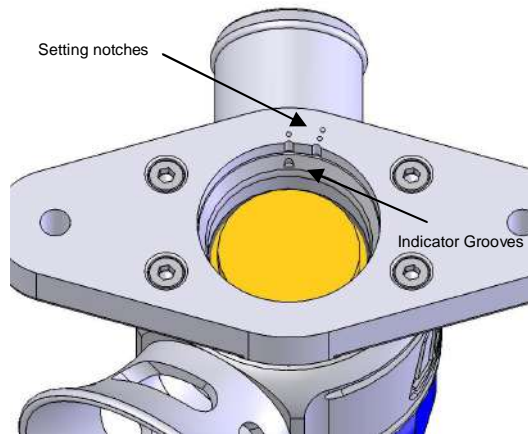
RECOMMENDATIONS

- **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**

SETTING THE FLANGE TO SUIT DIFFERENT VEHICLES

The BOV flange can be rotated to suit different vehicles. There are currently 2 setting notches; setting notch 1 for the Mazda range and setting notch 2 for the Subaru Range. The BOV comes preset to setting notch 1. The flange can be rotated by loosening the securing screws at the bottom with a 3mm allen key. Do not remove the screws, only loosen them. Rotate the flange until it lines up with the desired indicator groove. Re-tighten the screws.

Mazda = o
 Subaru = oo



HOW TO INSTALL YOUR BOV

Please check that the following items have been provided in your Mazda/Subaru Dual port kit.

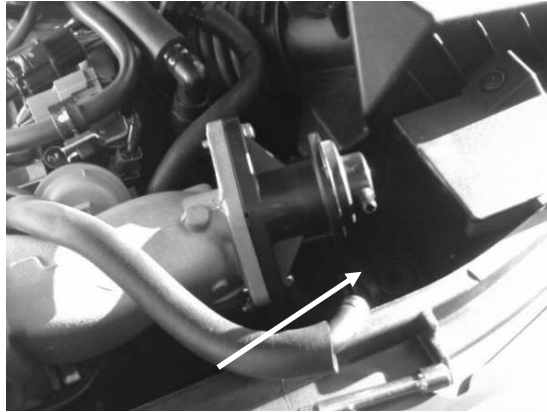
Quantity	Description	Use
1	Mazda/Subaru Dual port BOV	Model Specific blow off valve
1	Blanking plug	To blank off a port to convert the BOV to full atmospheric or plumb back
1	3mm allen key	To change configuration of flange to suit different vehicles
1	Gasket	To seal the BOV to the intercooler pipe

1) Installation on a Mazda (Diagrams are from a Mazda 3 MPS) – Setting notch 1

- 1) Remove the engine cover by removing the two securing screws/plugs.



- 2) Locate the intake standard BOV. Remove the vacuum/pressure source.



- 3) Remove the bolts securing the standard BOV and then remove the plumb back hose by removing the spring clamp.



- 4) Push the plumb back hose onto the plumb back fitting on the new BOV. Use the factory bolts to fit the new BOV onto the intercooler pipe. Remember to install the supplied gasket in between the BOV flange and the intercooler flange. Reinstall the vacuum/pressure source to the nipple.

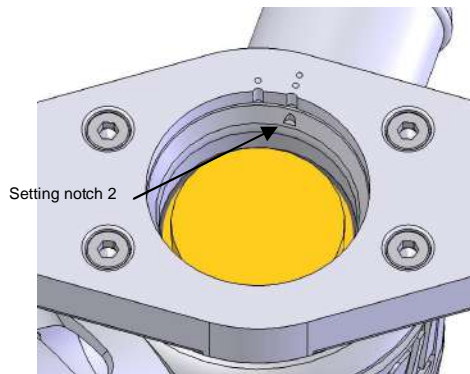


- 5) Replace the engine cover. Start the engine and check for leaks.

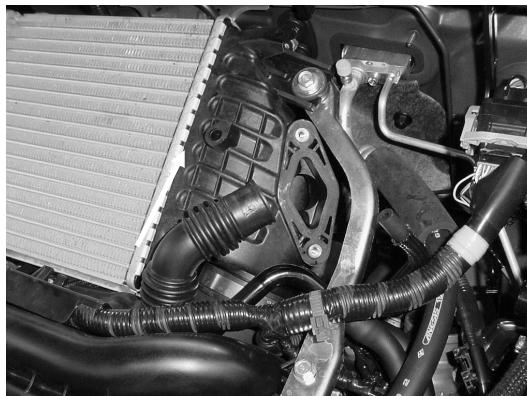


2) Installation on a WRX (MY08 Onwards) – Setting notch 2

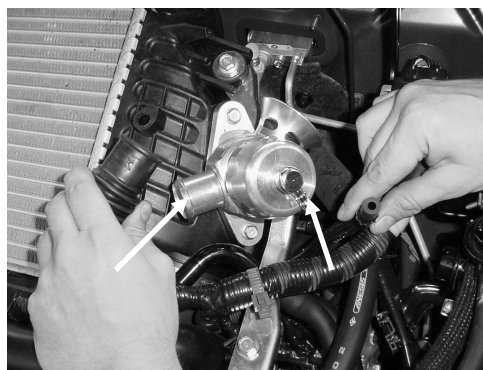
1. Set the BOV flange to setting notch 2 as per instructions. Locate the standard BOV and remove the vacuum/pressure source tube and the plumb back hose.



2. Remove the securing bolts and remove the standard BOV



3. Use the factory bolts to fit the new BOV onto the intercooler pipe. Remember to install the supplied gasket in between the BOV flange and the intercooler flange. Reinstall the vacuum/pressure source to the nipple.

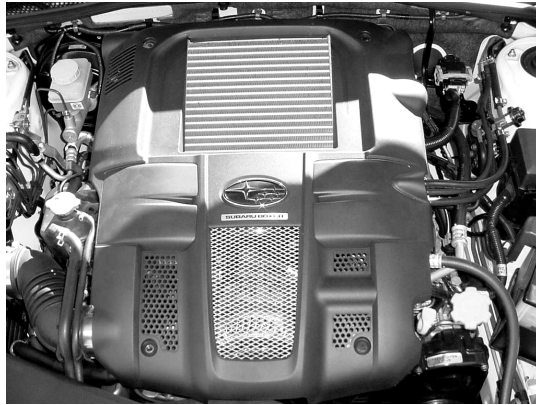


4. Replace the standard plumb back hose and vacuum/pressure source tube, start engine and check for leaks.

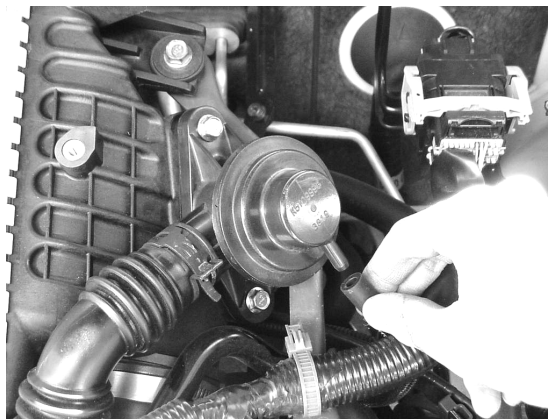


3) Installation on a Liberty GT – Setting notch 2

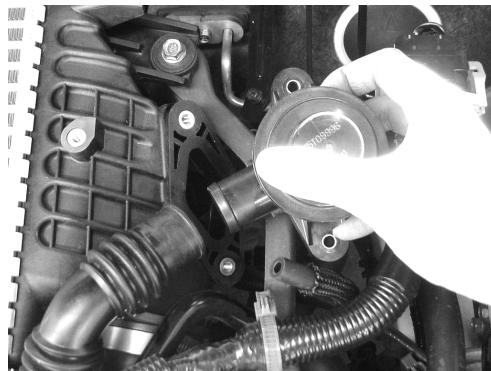
- 1) Remove engine cover by removing the 4 securing screws.



- 2) Locate standard BOV and remove the plumb back hose and the vacuum/pressure source line.



- 3) Remove standard BOV.



- 4) Cut the raised circle area on the engine cover using appropriate cutting tools



5. Use the factory bolts to fit the new BOV onto the intercooler pipe. Remember to install the supplied gasket in between the BOV flange and the intercooler flange. Reinstall the vacuum/pressure source to the nipple and the plumb back hose. Reinstall the engine cover. Start the engine and check for leaks.

ADJUSTING YOUR BOV

Each BOV needs to be adjusted to suit the vehicle it is being mounted on. The aim of the adjustment on Vee Port's, Supersonic's and Dual ports 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. Plumb back BOV's are equipped with a spring which are designed to keep the piston open at engine idle and hence the cap can be left in the middle position.

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 first O-Ring indicator groove.

- 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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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

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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.

Turbosmart warrants the quality of the products it designs and manufactures to be free of defects in material and workmanship. This limited warranty is extended only to the original purchaser and may not be transferred or assigned. This limited warranty applies to any product, which after careful inspection by Turbosmart, after receipt of the product from our authorized reseller, is found to have a defect in either material or workmanship. Any modifications to the product will void any and all warranties and will not be exchanged. Before installation, check new car warranty. Turbosmart is not responsible for voiding any original manufactures warranty.

All warranty claims must be returned to the nearest Turbosmart Office, you must return the product and sales receipt, at your own expense, accompanied by the Customer Warranty Form stating the reason for the claim. Proof of purchase must be provided with any warranty claim and will be verified with the authorized reseller from which the product was purchased.

If all the above procedures are followed, and the product is found to be defective in either workmanship or material, Turbosmart shall either repair or replace the product, at its sole discretion, and sole cost. This limited warranty does not cover or apply to any personal injury, labor charges or any other incidental costs or damages caused by the defective product. The individual purchaser acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the individual purchaser agrees to indemnify Turbosmart and to hold Turbosmart harmless for any claim related to the item of the equipment purchased. Under no circumstances will Turbosmart be liable for any damages or expenses by reason of use or sale of any such equipment.

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Happy motoring!
The Turbosmart Team.

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