

PERRIN

WRX/STI RECIRC BLOW OFF VALVE

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Thank you for purchasing the PERRIN WRX/STI Recirc BOV. Only persons experienced in the installation and proper operation of drive train systems should perform installation of these parts. *Please read through all the instructions before performing the installation.*

SPECIAL NOTES:

- The use of a factory service manual is highly recommended. These can be purchased at the dealer, or downloaded online at <http://techinfo.subaru.com>
- Do not "tighten" BOV to increase holding pressure. The BOV will hold boost with no spring installed.
- Before adjusting BOV, please read through tuning tips below.

Parts Included with the PERRIN WRX/STI Recirc BOV:

- (1) PERRIN Recirc BOV
- (1) WRX/STI Flange
- (2) M8x25mm SS Socket Cap Screws
- (28") 1/2" Fuel Hose
- (1') 1/4" Hose
- (1) 1/4"-1/4" Connector
- (1) 1/2" Tee
- (1) 1/2" Straight Connector
- (2) 6-32x7/16" SS Socket set screws
- (2) 6-32 SS nuts
- (1) 1/16" Allen Wrench

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Installation INSTRUCTIONS:

- 1) Locate OEM Blow off valve, and remove from car. Use 12mm socket and pliers to remove. Do not discard gasket, this will be reused.
- 2) Remove cast aluminum elbow from front of BOV. Use Phillips screw driver to remove screws. Install elbow to front of PERRIN BOV, and tighten using OEM screws.
- 3) Locate and remove OEM steel vent piping from front of intercooler. Using supplied tee and connector and connect left over hoses.
- 4) Slide OEM rubber recirc hose over cast aluminum elbow, and clamp using OEM pinch clamp.
- 5) Install BOV to Intercooler making sure to use supplied SS M8 bolts. Make sure to install OEM gasket between BOV and intercooler. Tighten screws to 14ft-lbs.
- 6) If adjustment of BOV angle is needed, loosen (2) small set screws on flange, and adjust. Retighten screws when adjusted.
- 7) Connect OEM manifold vacuum hose to BOV. Included with kit is extra hose and hose adapter if needed.
- 8) BOV is factory set, and no adjustment is necessary.
- 9) Start car and check for leaks. If car runs erratically, check for leaks around BOV flange.

Tuning INSTRUCTIONS:

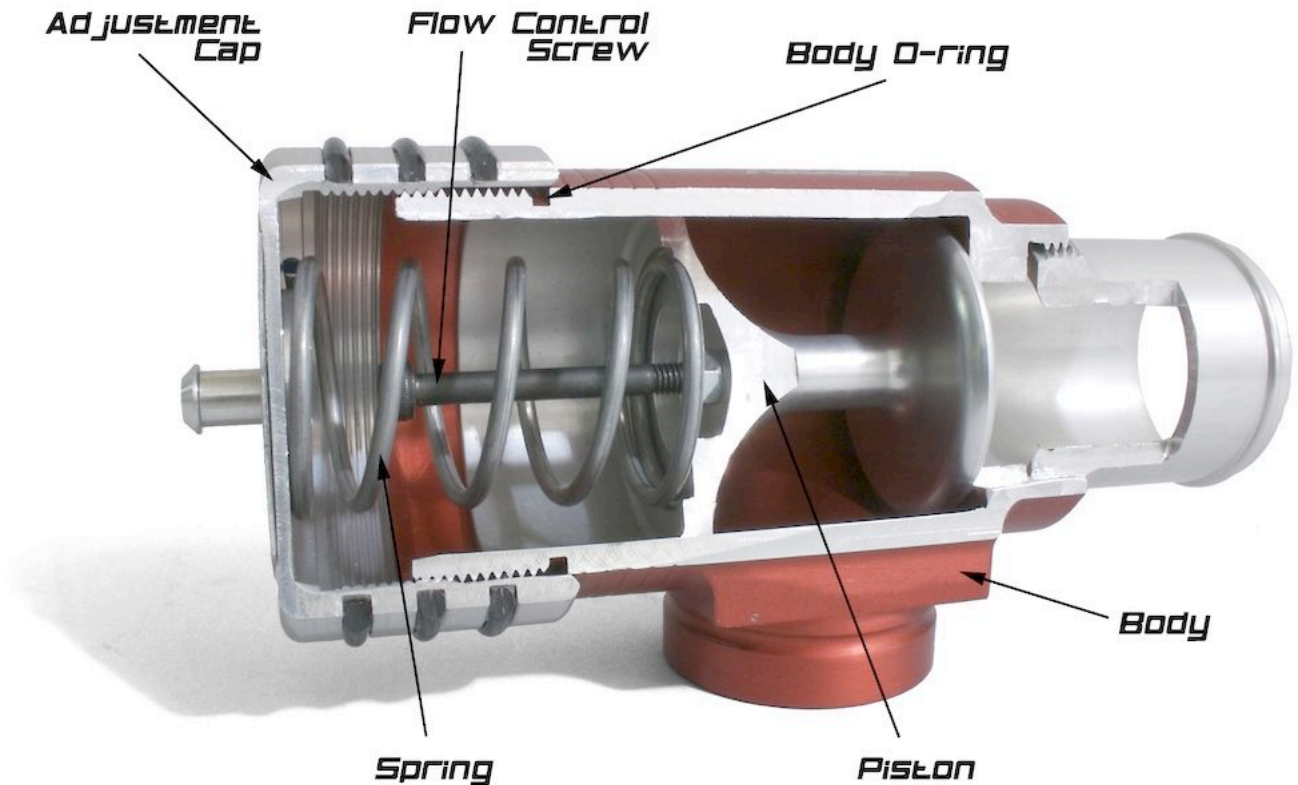
Adjusting Spring Tension

- Adjusting the spring tension is the PERRIN BOV doesn't adjust the amount of boost it holds. Because of our unique design, no spring is needed to hold boost. The spring is used to adjust how quickly the BOV vents boost, and when the BOV vents boost while backing off of the throttle.
- Adjusting the spring tension tighter will make the BOV vent slower, and in turn, vent closer to zero percent throttle.
- Adjusting the spring tension looser will make the BOV vent quicker, and in turn vent closer to when throttle is initially lifted.
- Adjusting of spring tension effects the amount BOV flows when BOV vents. When adjusting spring tension, either remove flow control screw, or thread screw all the way down.
- Please note there are grooves on body to indicate spring tension. Cap must be screwed down far enough to cover o-ring on body, or a boost leak will occur.
- After spring tension is set, follow directions below to adjust flow.

Adjusting Flow

- Using diagram below locate flow control screw. The distance between cap and top of screw determines amount of valve lift. This amount of lift determines amount the BOV flows when it opens between shifts.
- Flow control should be adjusted only after spring tension is set.

- Adjusting flow control screw shorter will make BOV vent the maximum amount of boost when BOV vents. Venting too much boost, can cause turbo lag, as the turbo has to refill the boost tubes.
- Adjusting flow control screw longer will make BOV flow less when BOV vents. The benefit to this is to keep some of the pressurize air in the boost system, making the turbo do less work to re-fill boost tubes. Not venting enough boost can cause compressor surge. Compressor surge can cause the turbo to stop, and in turn will have to re-spool to build boost, causing turbo lag. Compressor surge sounds like a fluttering sound between shifts.
- Once adjustment is set, make sure to lock nut down to piston.



PERRIN Performance Highly Recommends These Complimentary Products:

- PERRIN WRX/STI TMIC, or FMIC
- PERRIN Short Ram Intake System
- PERRIN Manual Boost Controller, or EBCS
- ECUTEK EASY-ECU Flash

For questions & comments please contact

Tech@PERRINperformance.com

503-693-1702

AIM contact ALTAPERRINSALES