

Product Name: BOV Kompact Shortie Dual
 Port Ford Fiesta Ecoboost
 Product Description: 1.6L Ford Ecoboost OEM
 replacement BOV
 Product Number: TS-0203-1066



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 cold before installing this product.

RECOMMENDATIONS

- **Turbosmart recommends that your Blow off valve (BOV) is fitted by an appropriately qualified technician**
- **Turbosmart recommends that a permanent boost gauge is fitting by an appropriately qualified technician to the vehicle.**

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

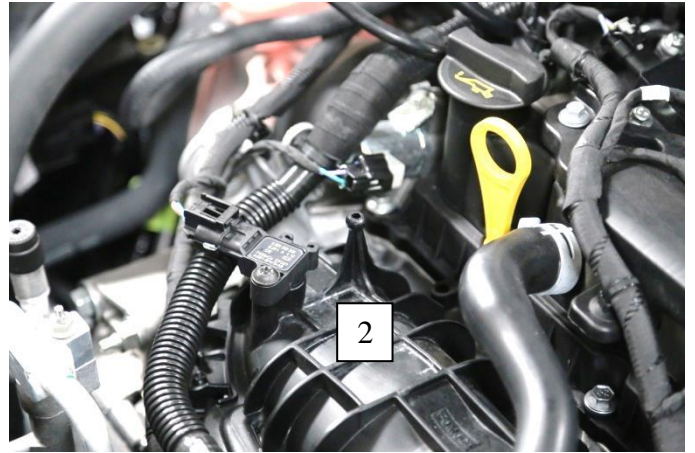
Quantity	Description	Use
1	Model specific BOV	Replaces standard electronic bypass valve
1	40.94 X 2.62 O-Ring	Sealing O-Ring BOV flange
1	18.72 X 2.62 O-Ring	Sealing O-Ring BOV flange
1	8.80 X 1.90 O-Ring	Sealing O-ring for MAP adapter
1	Electronic plug	Blanking off OEM electronic by pass valve wiring loom
1	5mm Black vacuum hose	Connects BOV to pressure/vacuum source
1	1/16 th FPR nipple	Smaller diameter nipple ideal for boost gauges/boost controllers
1	1/16th NPT Blank	Port blank for boost reference adapter
1	1/16th NPT nipple	Provides BOV and other devices such as boost gauges with vacuum/pressure source
1	Boost reference adapter	Adapter between MAP sensor and manifold for boost/vacuum source.
1	M6x20 button head screw	Sources boost reference adapter to intake manifold
2	6mm spring clamps	Secures pressure lines
2	250mm cable ties	Fixing pressure lines in position
2	100mm cable ties	Fixing pressure lines in position

HOW TO INSTALL YOUR BOV

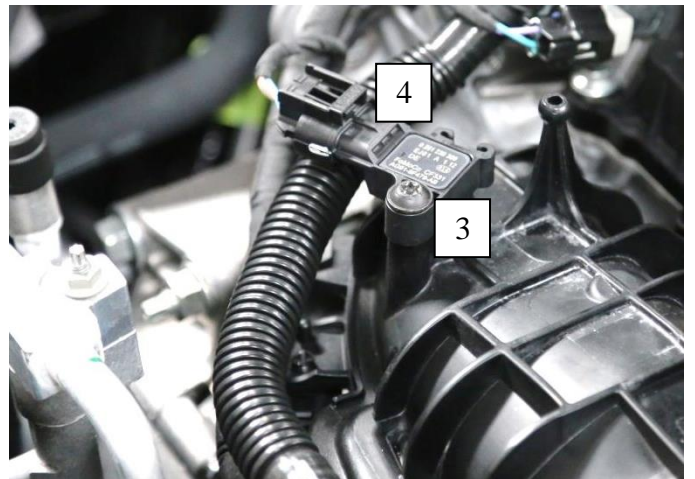
1. Remove the engine cover by pulling it upwards. Pull cover from opposing corners to aid in removal.



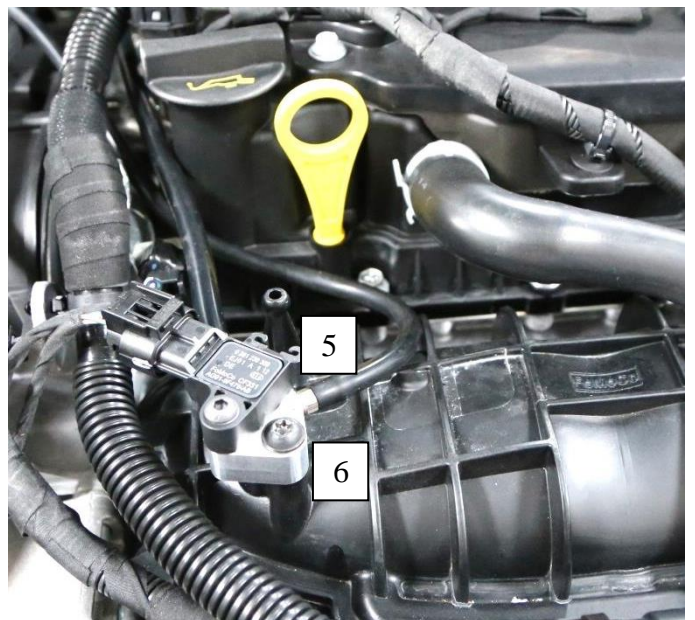
2. Locate the MAP sensor. When facing the vehicle, the MAP sensor is located on the left hand side of the engine on the intake plenum.



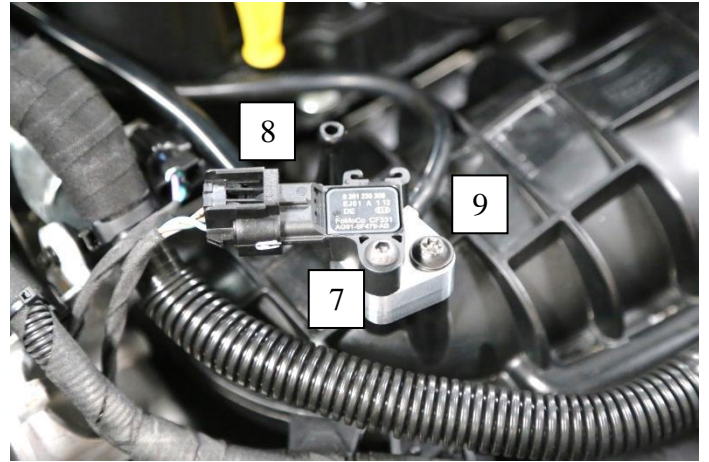
3. Use a T27 torx bit to remove the OEM MAP sensor bolt.
4. Unplug the MAP sensor plug and remove the MAP sensor off the intake plenum.



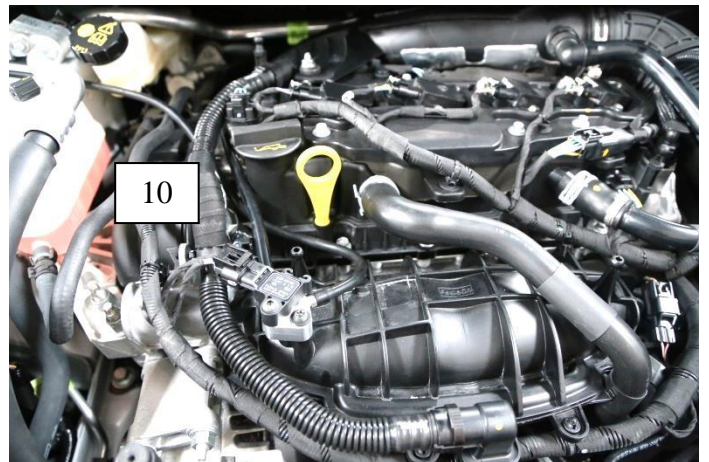
5. Apply thread sealant to the threads of the nipple. Fasten the nipple to the MAP adapter. Hand tighten the nipple, and then use a spanner to tighten it two more turns. **Install the blanking plug on the second port if it is not in use (use thread sealant).**
6. Use the OEM torx bolt to secure the MAP adapter onto the intake plenum. **Do not over tighten.**



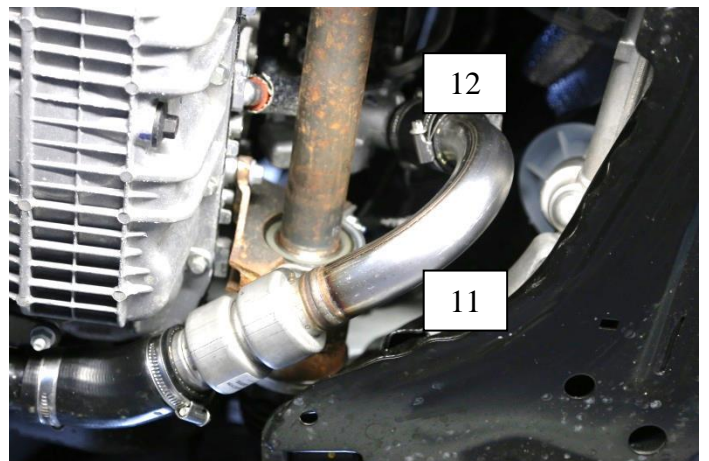
7. Install the MAP sensor onto the MAP adapter. Use the supplied M6 bolt.
8. Install the MAP sensor plug onto the MAP sensor.
9. Connect the supplied vacuum hose onto the nipple. Secure the vacuum hose with one of the supplied hose clamps.



10. Route the vacuum hose towards the bottom rear left hand side of the engine towards the factory BPV location. (Bottom left hand side of engine when facing the vehicle.)



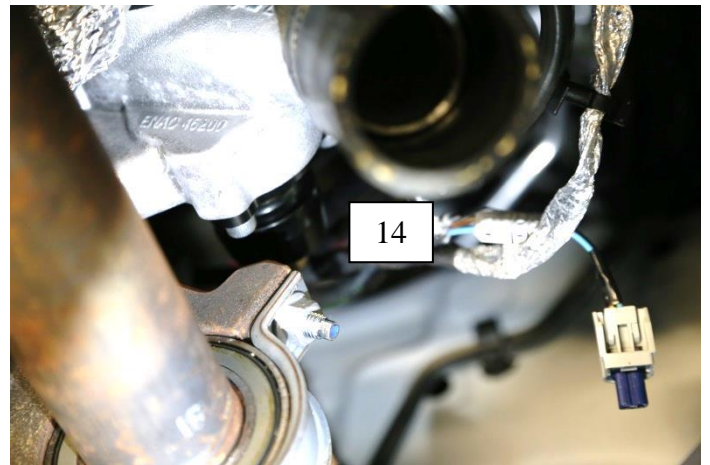
11. The factory BPV can be located after the removal of the hot pipe (pipe shown from outlet of turbocharger to inlet of intercooler).
12. Unplug the OEM BPV plug. Remove the three M6 bolts that are securing the BOV flange on. Once you remove the three M6 bolts, remove the factory BPV.



13. The OEM BPV looks like as shown in the in picture on the right.

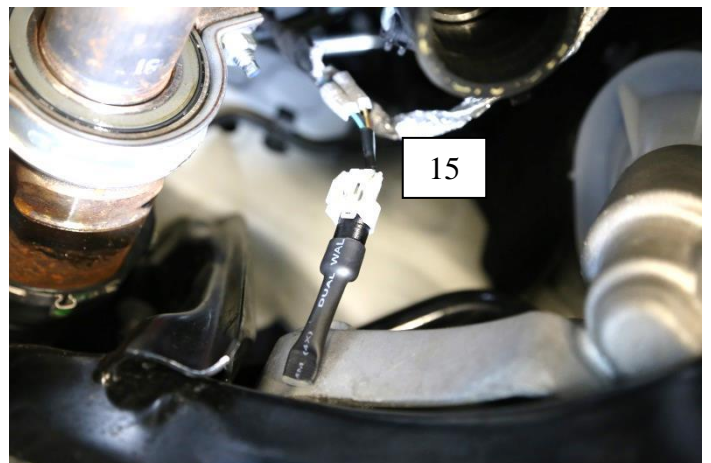


14. Install your new Turbosmart BOV. Align the mounting holes with the flange. Use the OEM M6 bolts to secure the BOV. **Do not over tighten.** Connect the vacuum hose (routed from the MAP adapter in step 9). Use the supplied spring clamps to secure the vacuum hose onto the BOV nipple.



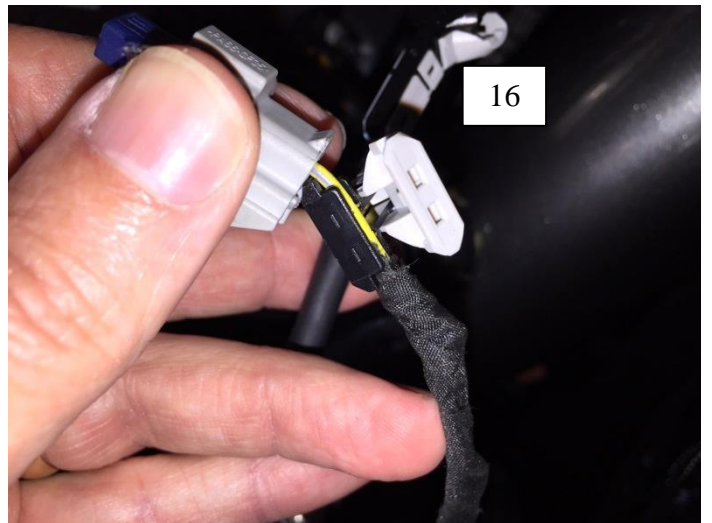
The OEM BPV solenoid plug needs to be blanked off. Depending on the kit purchased you may either be supplied with a direct plug-in blanking plug or a plug utilising clip-on connectors.

15. If you are supplied with a direct plug-in blanking plug, connect it to the OEM solenoid plug and use the supplied cable ties to secure it.



If you are supplied with a blanking plug utilising clip-on connectors please follow these steps:

16. Strip back 15mm of mesh covering the wires of the OEM solenoid plug. Install a clip-on connector onto each wire, polarity not important. Secure the clip-on connectors with a pair of pliers. Ensure that both halves are pressed together.



17. The clip-on connectors should look like this when installed correctly. Clip-on connectors are removable if the factory BOV is to be re-installed. Secure the blanking plug with the supplied cable ties.



18. Reinstall the hot pipe by following the reverse of step 11.

19. Secure the vacuum hose with the supplied cable ties. Be careful not to pinch the vacuum hose. Reinstall the engine cover. Vehicle is ready to start. Check for leaks. Consult *adjusting your BOV section* for tuning.



ADJUSTING YOUR BOV

INSTALL THE BOV WITH THE FACTORY SETTING FIRST BEFORE PERFORMING ANY ADJUSTMENT.

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.

- 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.
- The valve may not open if the engine is just free revved. This is due to the drive by wire system. Check that the valve operates by driving the vehicle.

We at Turbosmart are proud to offer a high quality product at the industries most competitive pricing!