

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

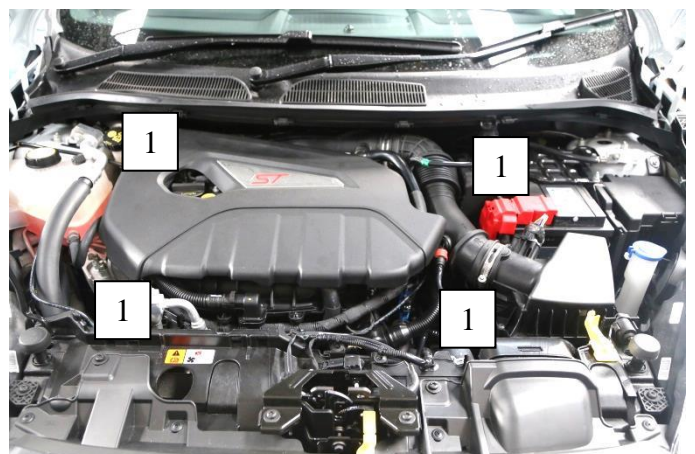
- **Turbosmart recommends that your Blow off valve (BOV) is fitted by an appropriately qualified technician**
- **Turbosmart recommends that a permanent boost gauge is fitting by an appropriately qualified technician to the vehicle.**

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

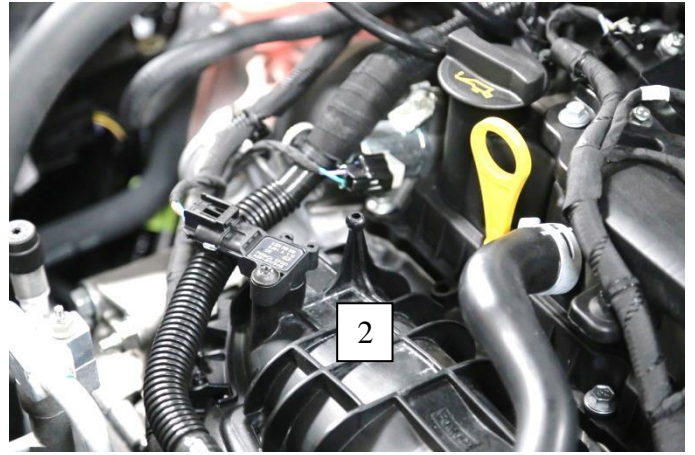
Quantity	Description	Use
1	Model specific BOV	Replaces standard electronic bypass valve
1	40.94 X 2.62 O-Ring	Sealing O-Ring BOV flange
1	18.72 X 2.62 O-Ring	Sealing O-Ring BOV flange
1	8.80 X 1.90 O-Ring	Sealing O-ring for MAP adapter
1	Electronic plug	Blanking off OEM electronic by pass valve wiring 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

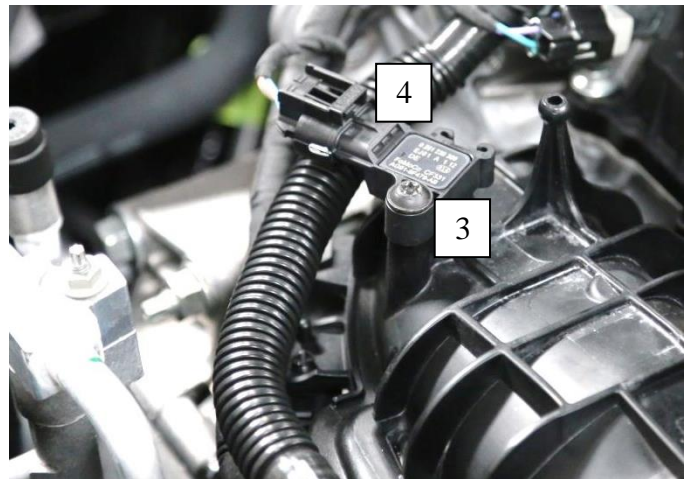
1. Remove the engine cover by pulling it upwards. Pull cover from opposing corners to aid in removal.



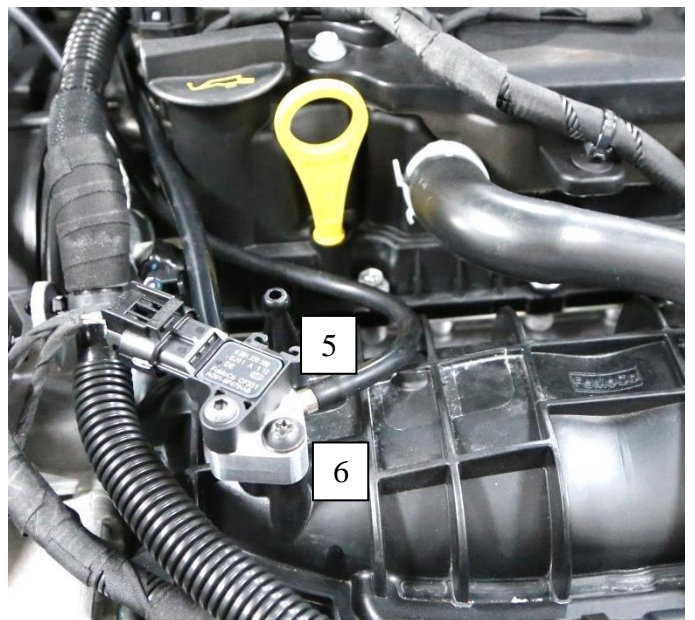
2. Locate the MAP sensor. When facing the vehicle, the MAP sensor is located on the left hand side of the engine on the intake plenum.



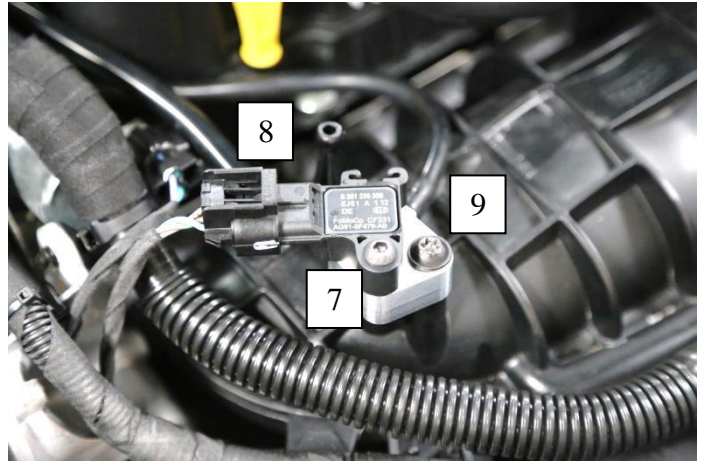
3. Use a T27 torx bit to remove the OEM MAP sensor bolt.
4. Unplug the MAP sensor plug and remove the MAP sensor off the intake plenum.



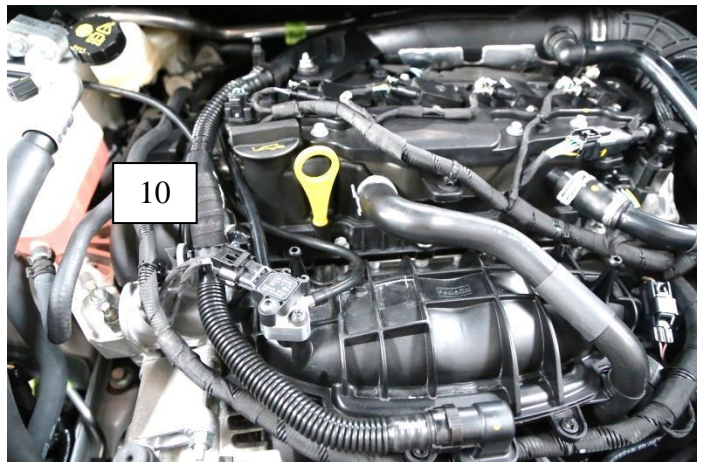
5. Apply thread sealant to the threads of the nipple. Fasten the nipple to the MAP adapter. Hand tighten the nipple, and then use a spanner to tighten it two more turns. **Install the blanking plug on the second port if it is not in use (use thread sealant).**
6. Use the OEM torx bolt to secure the MAP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



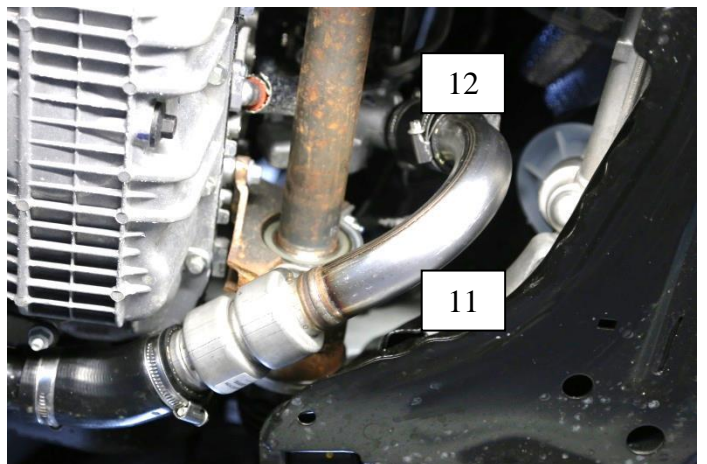
7. Install the MAP sensor onto the MAP adapter. Use the supplied M6 bolt.
8. Install the MAP sensor plug onto the MAP sensor.
9. Connect the supplied vacuum hose onto the nipple. Secure the vacuum hose with one of the supplied hose clamps.



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.)



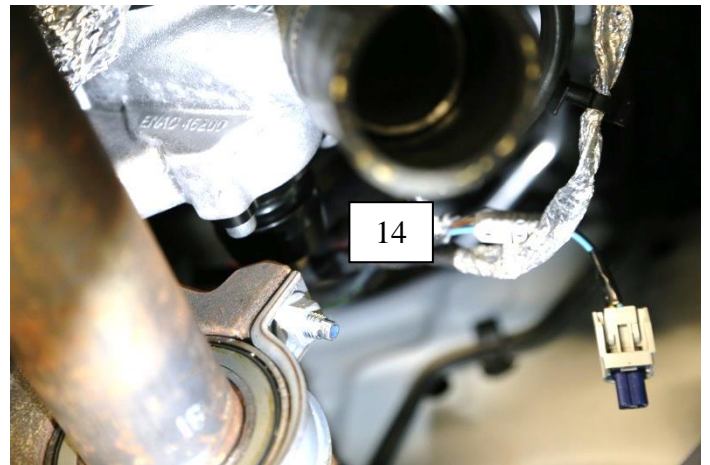
11. The factory BPV can be located after the removal of the hot pipe (pipe shown from outlet of turbocharger to inlet of intercooler).
12. Unplug the OEM BPV plug. Remove the three M6 bolts that are securing the BOV flange on. Once you remove the three M6 bolts, remove the factory BPV.



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

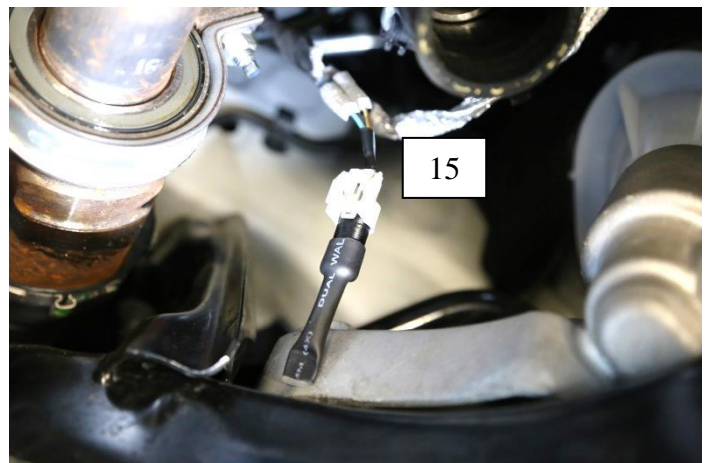


14. Install your new Turbosmart BOV. Align the mounting holes with the flange. Use the OEM M6 bolts to secure the BOV. **Do not over tighten.** Connect the vacuum hose (routed from the MAP adapter in step 9). Use the supplied spring clamps to secure the vacuum hose onto the BOV nipple.



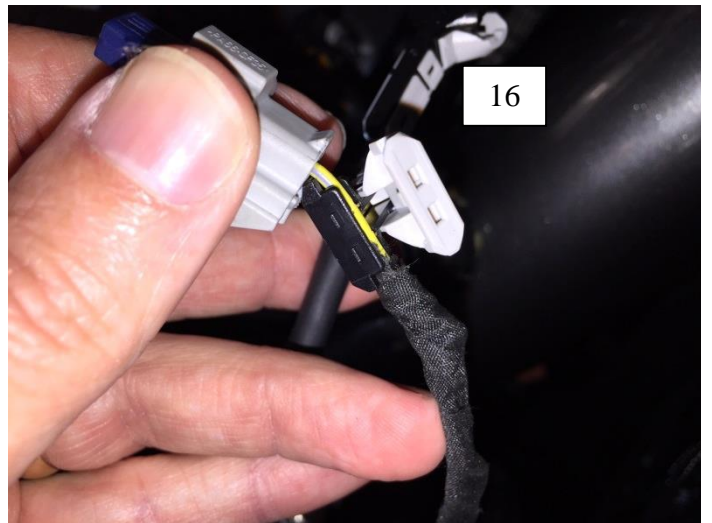
The OEM BPV solenoid plug needs to be blanked off. Depending on the kit purchased you may either be supplied with a direct plug-in blanking plug or a plug utilising clip-on connectors.

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.

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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