



TS-0223-1296 - EM Series Diverter Valve VR13

Product Name:	TS-0223-1296 - EM Series Diverter Valve VR13
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Important notes on your new Diverter Valve

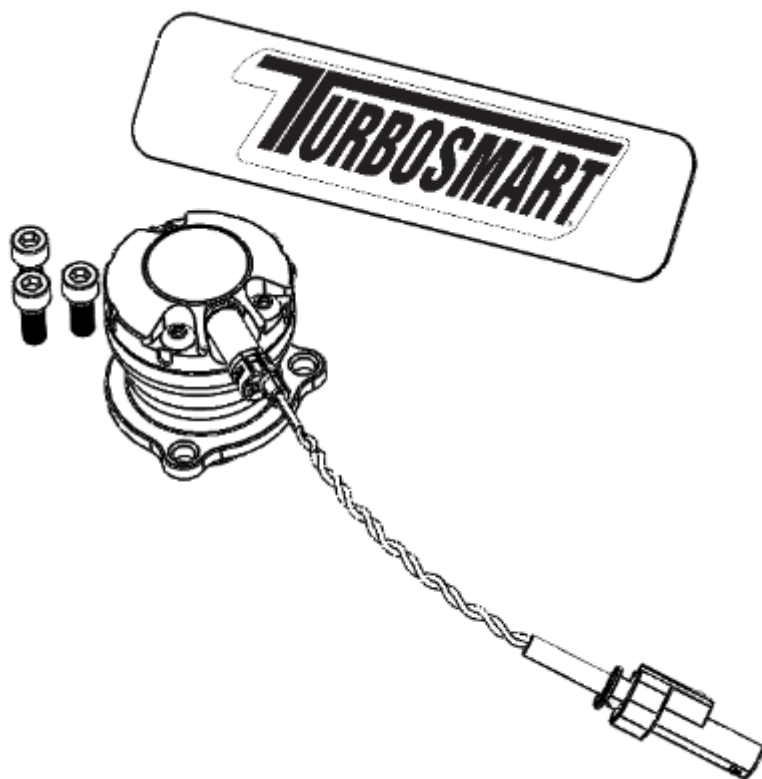
- Turbosmart accepts no responsibility whatsoever for incorrect installation of this product which is potentially hazardous and can cause serious engine damage or personal injury
- The EM series diverter valve is designed for use as a factory replacement for a turbocharged vehicle that utilises an electronic diverter valve, this valve can be used on other applications so long as there is a control signal to actuate the diverter valve.
- Ensure the engine is cold prior to installation.
- For Standalone ECU configuration, ensure valve is not energised for indefinite periods of time as this can cause significant life detriment to the actuation solenoid.

Recommendations

- Turbosmart recommends that your Diverter valve is fitted by an appropriately qualified technician.

Kit Contents

Part	Description	Use
1	Turbosmart EM Series diverter valve	Main unit
2	M6 Flange bolts	Mounts diverter valve to compressor cover



Tools Required

Allen key set metric

Screwdriver

Basic socket set

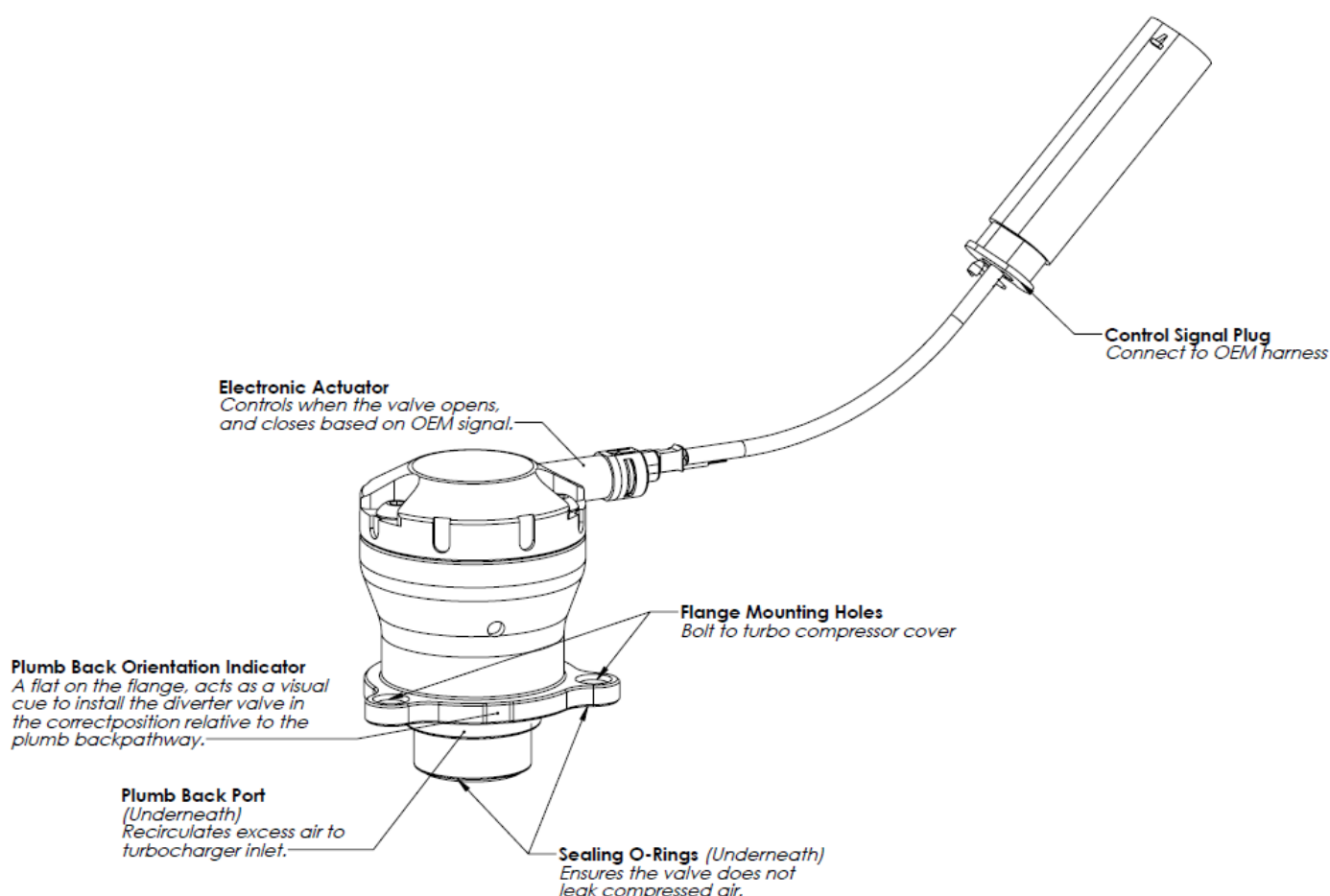
Torx bits

About Your EM Series Diverter Valve

Turbosmart has developed a unique “plug and play” diverter valve (or bypass valve) upgrade for your vehicle that is currently equipped with an electronic diverter valve. While we have developed this unit to be as simple as possible for you to install, we have not compromised on performance. This unit will not leak under elevated boost pressures and will still provide you with rapid response ensuring that all the OEM calibration strategies are not interfered with, providing you with maximum boost performance while the advanced strategies of the

OEM's are retained.

As the valve is completely controlled by the factory engine control unit, the factory diverter valve is almost silent, due to our construction, it is possible that your EM series will be much more audible. By being able to hear the unit actuate, occasionally the valve may be opening for a few seconds under the following events such as traction control, cruise control management, rapid gearchanges and varying throttle position changes, these are all coded as part of the torque management software in the OEM engine control unit, there is no adjustment available over these functions via our product. By hearing these events, it is not abnormal, it is completely normal for the EM series diverter valve to be considered "very active" as it is protecting your turbocharger from surge events or bypassing air for torque management purposes.



Fitting your EM Series Diverter Valve

Identify diverter valve location

Remove the electronic plug from the OEM diverter valve and unscrew the three screws in an anti-clockwise direction, completely remove and safely store the original mounting screws. The valve will likely want to fall off the mounting flange as you unscrew the last screw, ensure you do not drop the OEM valve as permanent damage may occur to the plastic. Identify the location of the turbocharger assembly, this is usually located close to the exhaust side of the engine for a typical in-line engine, for a v configuration engine, following the path of the exhaust immediately out of the head can assist you in locating the turbocharger assembly. If the turbocharger cannot be located, seek assistance from your local specialist.

NOTE!

Cosmetic engine covers may be required to be removed prior to the turbocharger assembly being visible.

CAUTION!

The turbocharger assembly may require the vehicle to be raised on a hoist or jacked up and secured using vehicle jack stands, ensure your safety is not compromised. Identify OEM diverter valve location

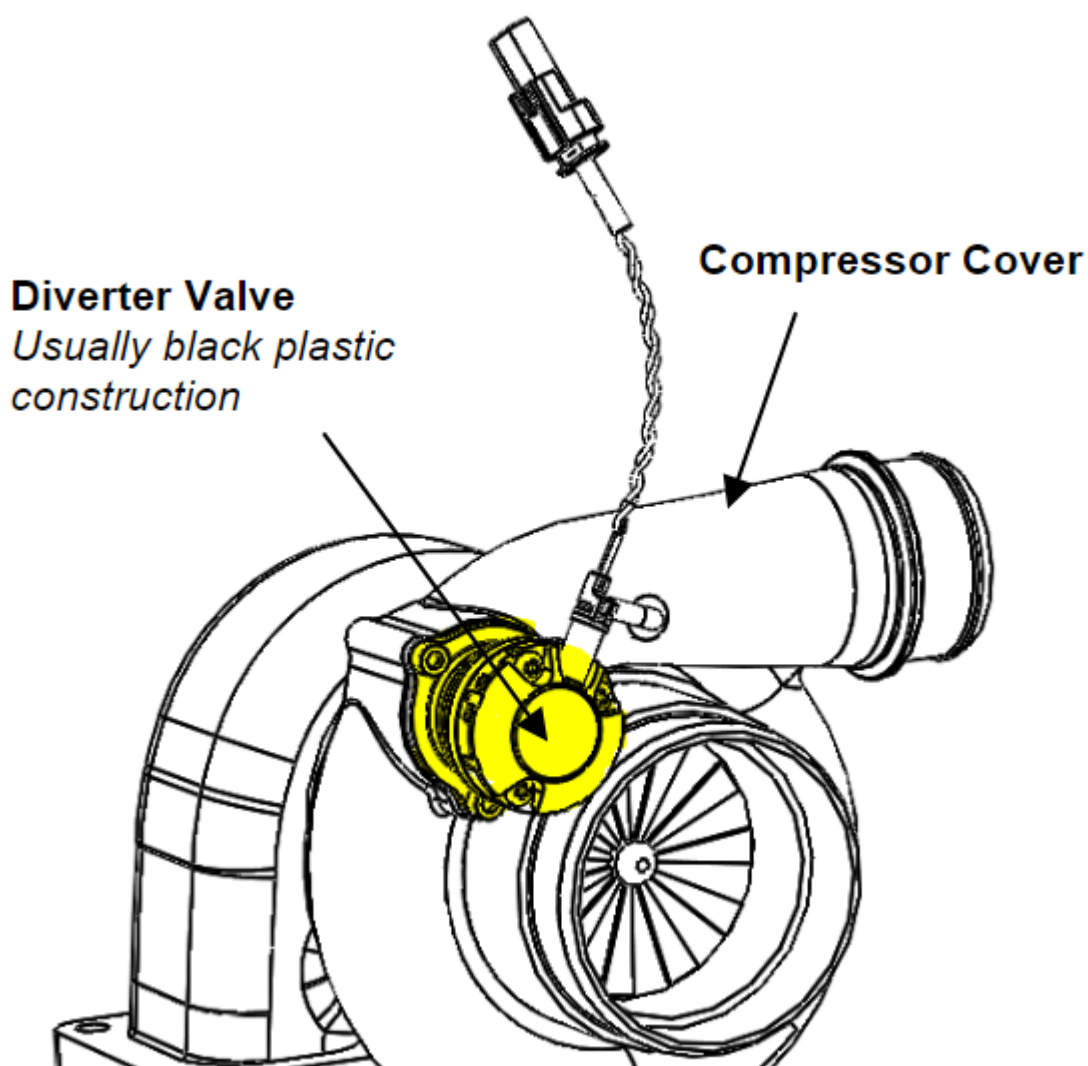
NOTE!

Allow for the engine to cool down.

Identifying OEM diverter valve location

The OEM electronic diverter valve is usually located on the compressor cover of the turbocharger, the diverter valve generally is mounted with 3 or 2 bolts. On some vehicle applications, this diverter valve is mounted on

the intercooler, or the charge pipe between the turbocharger compressor outlet and the engine throttle body. If the diverter valve cannot be located, seek assistance from your local specialist.



NOTE!

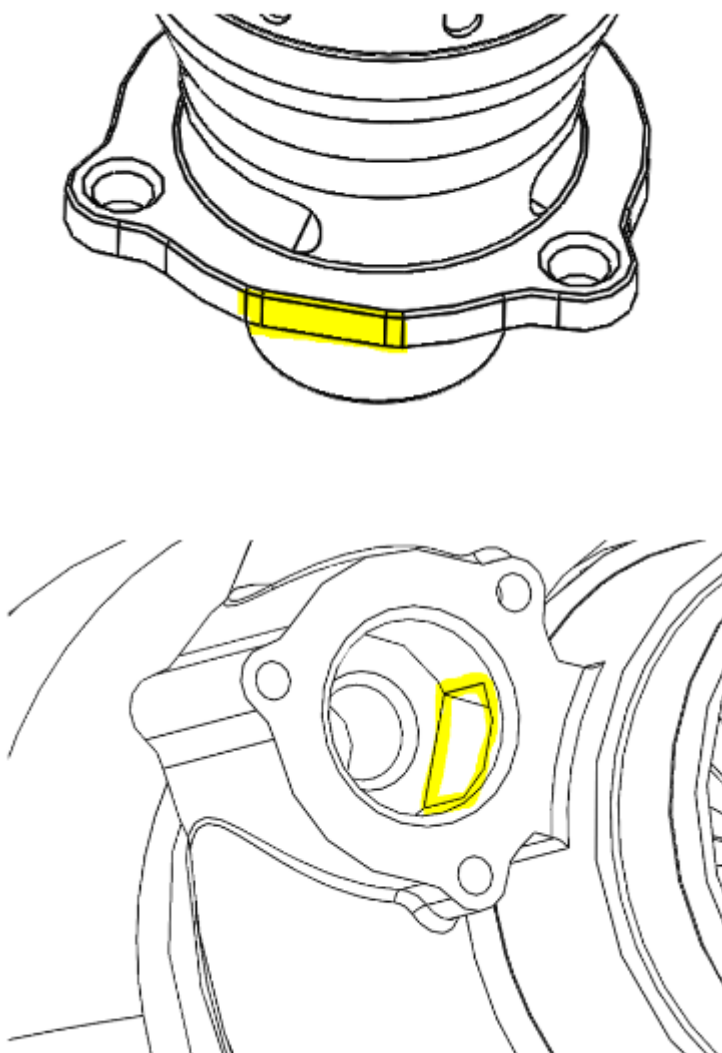
It may be required to remove auxiliary components to access the diverter valve, ensure you consult your local specialist or a service manual for correct disassembly procedures.

Remove the OEM diverter valve

Remove the electronic plug from the EM series BOV and unscrew the flange screws in an anti-clockwise direction, completely remove and safely store the mounting screws. The valve will likely want to fall off the mounting flange as you unscrew the last screw, ensure you do not drop the valve as permanent damage may occur. Ensure O-Rings are kept with the valve for reinstallation.

Observe the Factory Diverter Valve Recirculation Path

If your diverter valve has a flat featured on the flange (indicated in yellow below), this flat is to indicate the orientation of the plumb back ports relative to the factory diverter valve recirculation path. This is to ensure maximum recirculation performance.



TROUBLE SHOOTING

- Diverter valve not actuating - Confirm electrical signal plug is connected appropriately, as the plugs are new, some force may be required to click the plug into place.
- Valve is staying open - Confirm the valve has O-rings as they may have been dropped or lost during installation.
- Boost Pressure loss or lower than before - Confirm the valve has O-Rings as they may have been dropped or lost during installation.
- Failing the above, submit a technical request to tech@turbosmart.com.au with information of your engine configuration and photos of installation.
- As the factory engine control unit controls the valve, the diverter valve is almost silent.

Notes on EM Diverter Valve operation

- Due to its construction, your EM series may be much more audible than the OEM valve
- During normal operation you may now be able to hear the valve open for a few seconds under the following events: traction control, cruise control management, rapid gear changes and varying throttle position changes. This is standard operation of your diverter valve and is coded as part of the torque management software in the OEM engine control unit; there is no adjustment available over these functions on the Turbosmart EM valve directly. It is normal for a diverter valve to be “very active” as it protects your turbocharger from surge events as well as bypassing air for torque management purposes.