

Product Name: **BOV Kompact Hyundai i30N**
 Product Description: BOV Kompact Hyundai i30N
 Product Number: TS-0203-1036
 Document Version: V1.00 Rev A



IMPORTANT NOTES ON YOUR BOV

- 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 Kompact series BOV is designed for use as a factory replacement
- Ensure the engine is cold prior to installation.

RECOMMENDATIONS

- **Turbosmart recommends that your Blow off valve (BOV) is fitted by an appropriately qualified technician**

KIT CONTENTS

Please check that the following items have been provided in your BOV packaging

Part	Description	Use
1	Turbosmart Kompact Series BOV	Main unit
2	Hose Clamp	Fix plumb back hose to BOV
3	M6 Flange Bolts	Mount BOV to turbocharger compressor cover
4	Blanking plug	Black off VTA trumpet to convert to pure plumb back.
5	Turbosmart Sticker	Turbosmart sticker

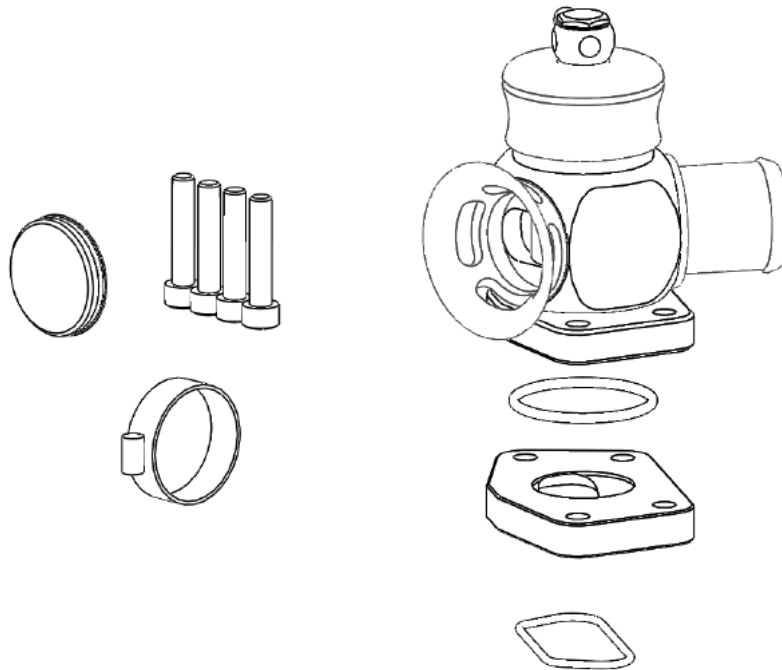


Figure 1 - Kit Contents

TOOLS REQUIRED

- 5mm hex key
- Screw drivers
- Pliers
- Socket Set

ABOUT YOUR KOMPACT SERIES BOV

A direct fit high performance replacement for the factory all plastic unit, the Turbosmart Kompact BOV suits the Hyundai i30N. The Turbosmart unit is made of billet aerospace grade aluminium with high temperature seals that allows for minimal leakage and a complete seal across the bypass aperture providing as much performance as possible.

Benefits include:

- Direct fit upgrade for the factory BOV on Hyundai i30N
- Packaged with a blanking plug to switch the unit into pure vent to atmosphere or plumb-back modes
- All billet CNC construction and attractive anodized finish
- Manufactured, assembled and validated in-house at Turbosmart HQ

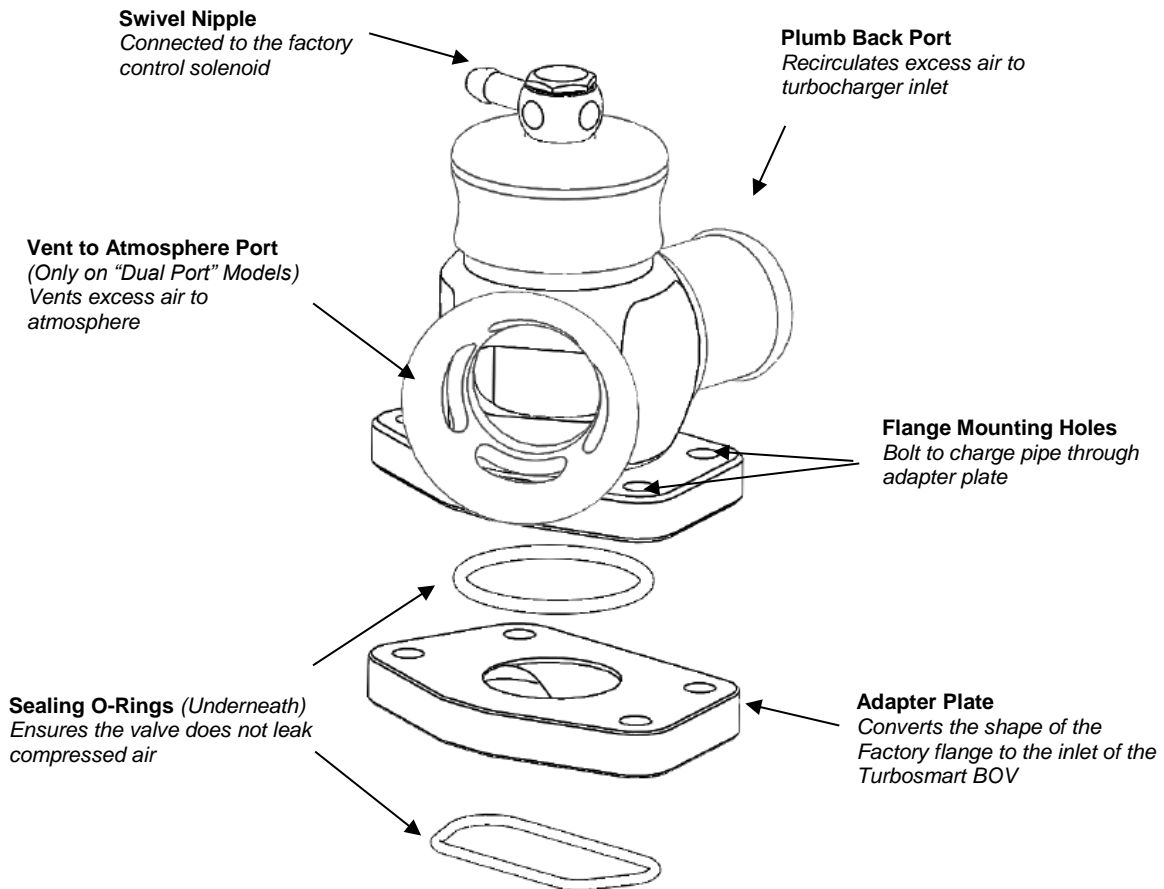


Figure 2 – i30N Kompact BOV Overview

FITTING YOUR EM SERIES BOV

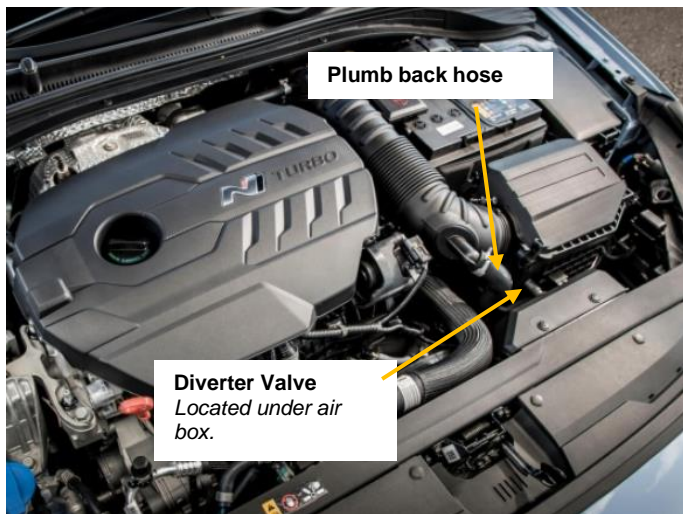
1 Identify Diverter valve location

Identify the location of the factory BOV assembly, The Hyundai i30N factory bypass valve is located under the airbox of the vehicle, Remove the factory air box to allow access for the fitment.

It may be possible to access the valve from underneath the vehicle.

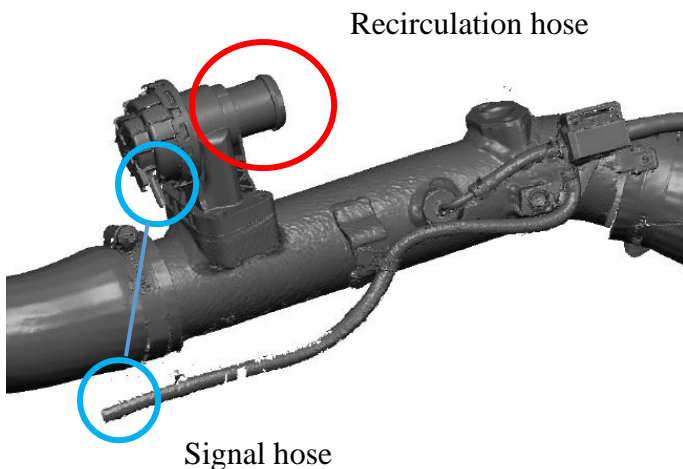
NOTE!

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.



2 Remove the OEM diverter valve

Remove the recirculation hose from the valve by loosening the hose clamp, similarly, remove the signal hose from the top of the valve by first releasing the spring action hose clamp.



Remove the four bolts holding the diverter valve to the charge pipe and remove from the engine bay.

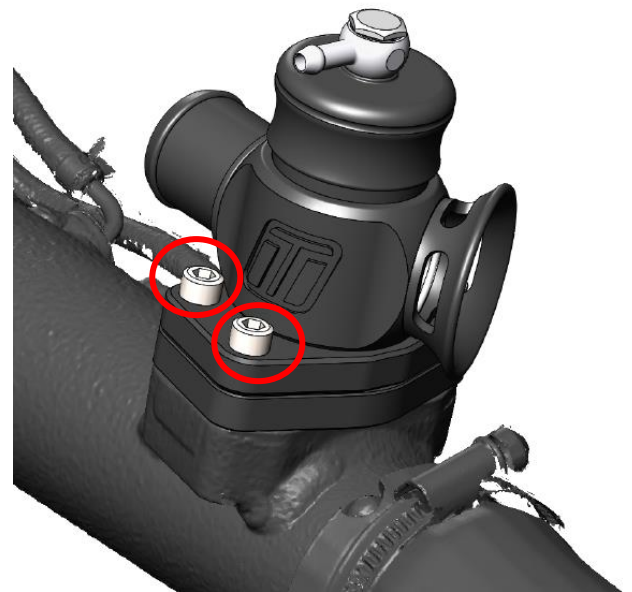
3 Align adapter plate with

Take note of the orientation of the adapter plate with the trapezoid passage to be placed against the matching port on the charge pipe and the circle port to be against the BOV. Ensure O-rings are in place and fit together with the four supplied bolts.



4 Mount your new Turbosmart Kompact BOV

Align your new Turbosmart Kompact BOV with the flange on the charge pipe, the bolt pattern will only allow the BOV to be fitted in one direction, ensure Both O-rings are correctly seated in their grooves and tighten down the bolts.



Re attached the recirculation hose onto the BOV and tighten the hose clamp. Align the swivel nipple on the cap of the BOV and attach the signal hose.

Congratulations, your Turbosmart Kompact Series BOV is installed and ready for use. Double check all connections and mounting screws. Start your engine and check for leaks.

ADJUSTING YOUR BOV (DUAL PORT ONLY)

The aim of the adjustment on the Dual port 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. In most cases, the cap is in the correct position from factory.

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

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 charge pipe 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. Check that the valve operates by driving the vehicle.
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