

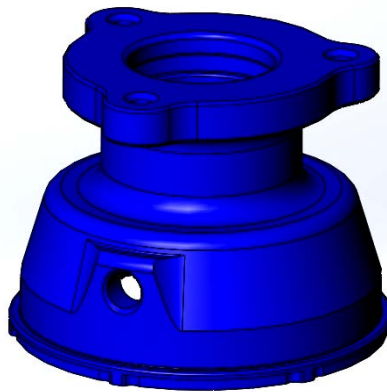
Product Name: **WG30/40/45 Valve Position Sensor**
Product Description: Valve Position Sensor WG38/40/45
Part Numbers: TS-0502-3014, TS-0502-2008, TS-0502-2009



IMPORTANT NOTES ON INSTALLATION OF YOUR WASTEGATE SENSOR CAP, SENSOR AND SENSOR PLUG

- Fitting your sensor cap may require fabrication or modification to your existing setup. Turbosmart recommends that your sensor cap is fitted by an appropriately qualified technician.
 - Turbosmart recommends that a qualified auto electrician completes the installation of the sensor plug.
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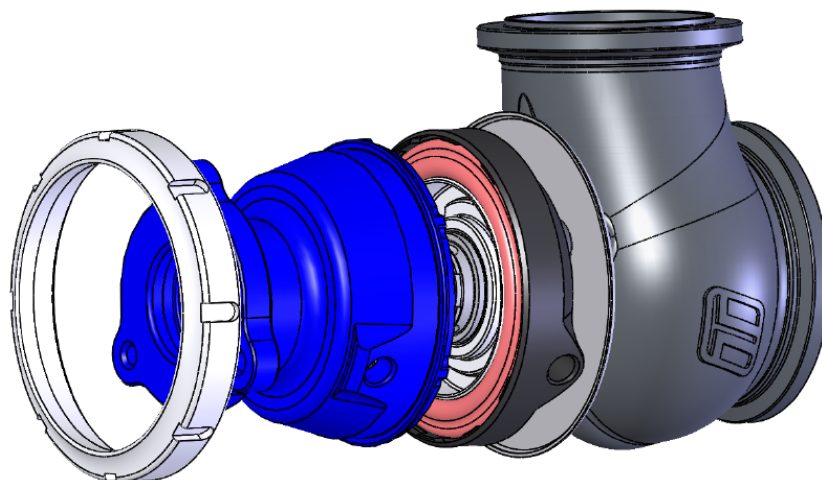
WASTEGATE 38/40/45 VALVE POSITION SENSOR CAP



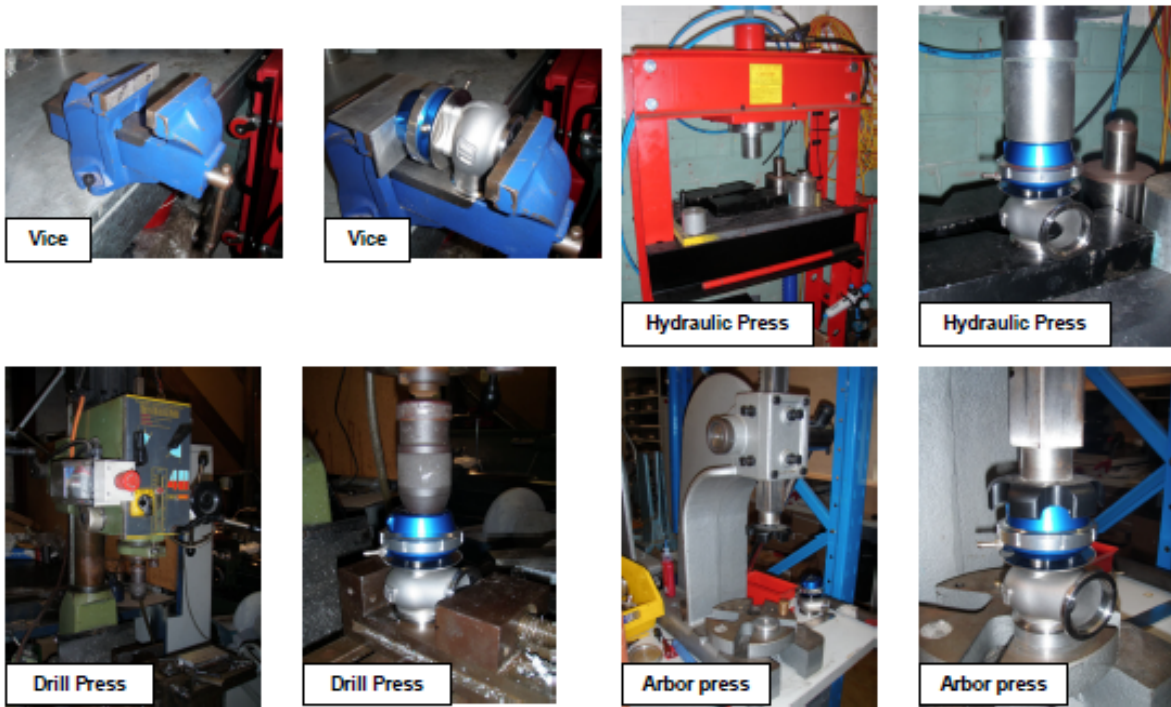
- The cap is designed to be a straight replacement to the original wastegate cap. No modifications are required for fitment.
- The "top port" is incorporated in the valve position sensor cap design. Pressure may still be supplied to the top port to help close the wastegate valve.
- The valve position sensor (TS-0502-2008) and valve position sensor plug (TS-0502-2009) are sold separately.

Changing the wastegate caps

WARNING! Use caution when changing the wastegate caps.



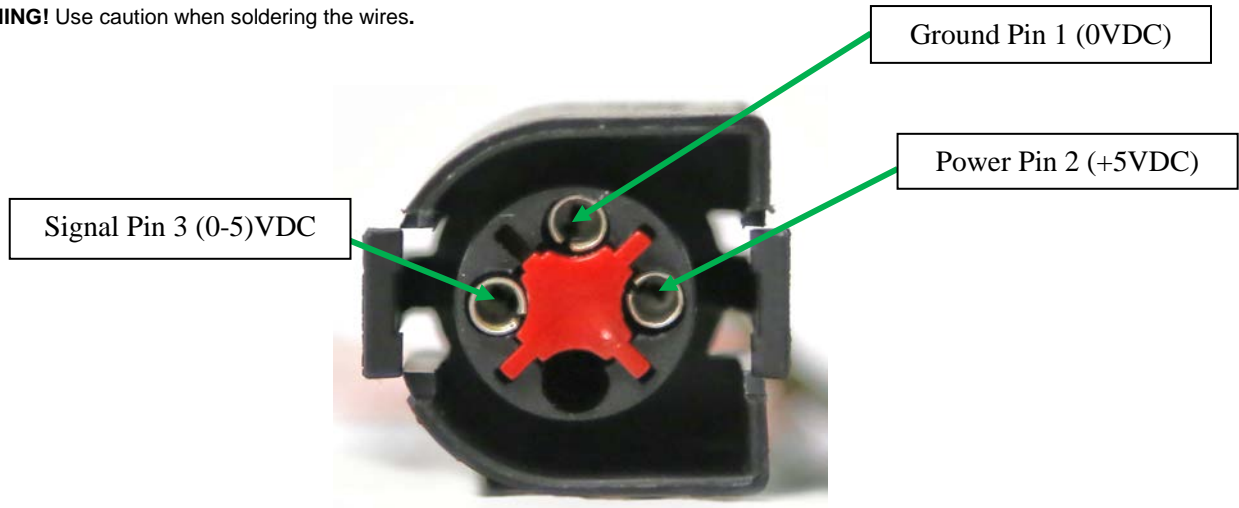
IMPORTANT: A press or clamping device must be used when removing or installing the collar as clamping the cap down removes the load off the collar and allows it to be removed. The following are examples of different clamping devices that can be used to remove or install the collar:



- 1) Remove the wastegate from the exhaust manifold. Use **CAUTION!** The wastegate may still be **HOT!**
- 2) Remove any pressure nipples in the top cap. Hold the cap down in a press or vice. Using the locking collar tool, unscrew the locking collar. Slowly, back off the vice or press and remove the cap.
- 3) Ensure that the diaphragm is inside the diaphragm groove.
- 4) Slowly push the sensor cap down on the lower diaphragm housing in a vice or press. As the cap reaches the diaphragm, line up the notches in the cap with the cut outs in the lower diaphragm housing. Carefully push the cap down till the cap is home on the lower diaphragm housing. Reinstall the locking collar and tighten with the locking tool. Make sure that the cap is clamped down while tightening the collar.

Wiring the sensor plug

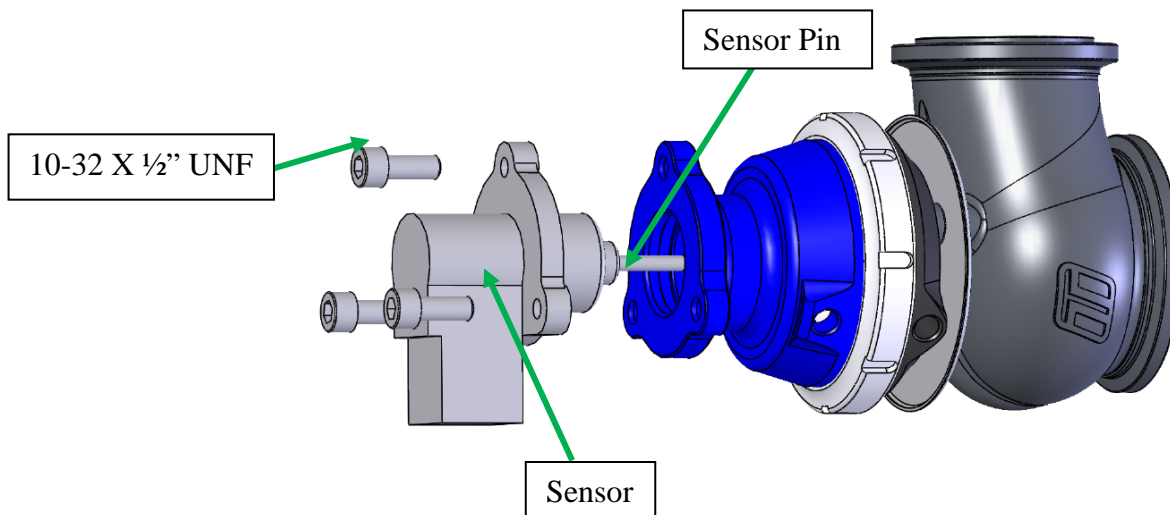
WARNING! Use caution when soldering the wires.



- The valve position sensor plug has three wire ends. The first terminal is for positive voltage supply (+5VDC, black and green wire), the second terminal is for ground supply (0VDC, black and white wire) and the third terminal is the positive variable voltage return (0-5 VDC).
- Connect the wires to your data logger accordingly. Use a solder iron and heat shrink insulation when joining the wire ends.
- Gently inset the plug into the sensor. The plug can only be inserted in one way. Check for plug and sensor orientation. Do not force the plug into the sensor.
- Test the wiring. Gently push the sensor pin up and down and ensure that the voltage input on the data logger is changing between 0-5 VDC. The data logger should approximately read 0 VDC when the sensor pin is in free form and approximately +5VDC when the sensor pin is pushed all the way in.
- Ensure that the wiring is properly shielded from external heat sources.

Installing the valve position sensor

WARNING! Use caution when installing the valve position sensor.



- Insert sensor into cap. Rotate left and right as you are pushing the sensor in. Ensure that the screw holes in the sensor body are aligned with the tapped screw holes on the sensor cap in your desired position.
- Use supplied screws to screw the sensor to the cap. Torque screws to 2 N-m (1.5 lb-ft). Be careful not to over tighten the screws as it will damage the sensor.

The Turbosmart Pledge

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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

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All warranty claims must be returned to the nearest Turbosmart Office, you must return the product and sales receipt, at your own expense, accompanied by the Customer Warranty Form stating the reason for the claim. Proof of purchase must be provided with any warranty claim and will be verified with the authorized reseller from which the product was purchased.

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Happy motoring!
The Turbosmart Team.