



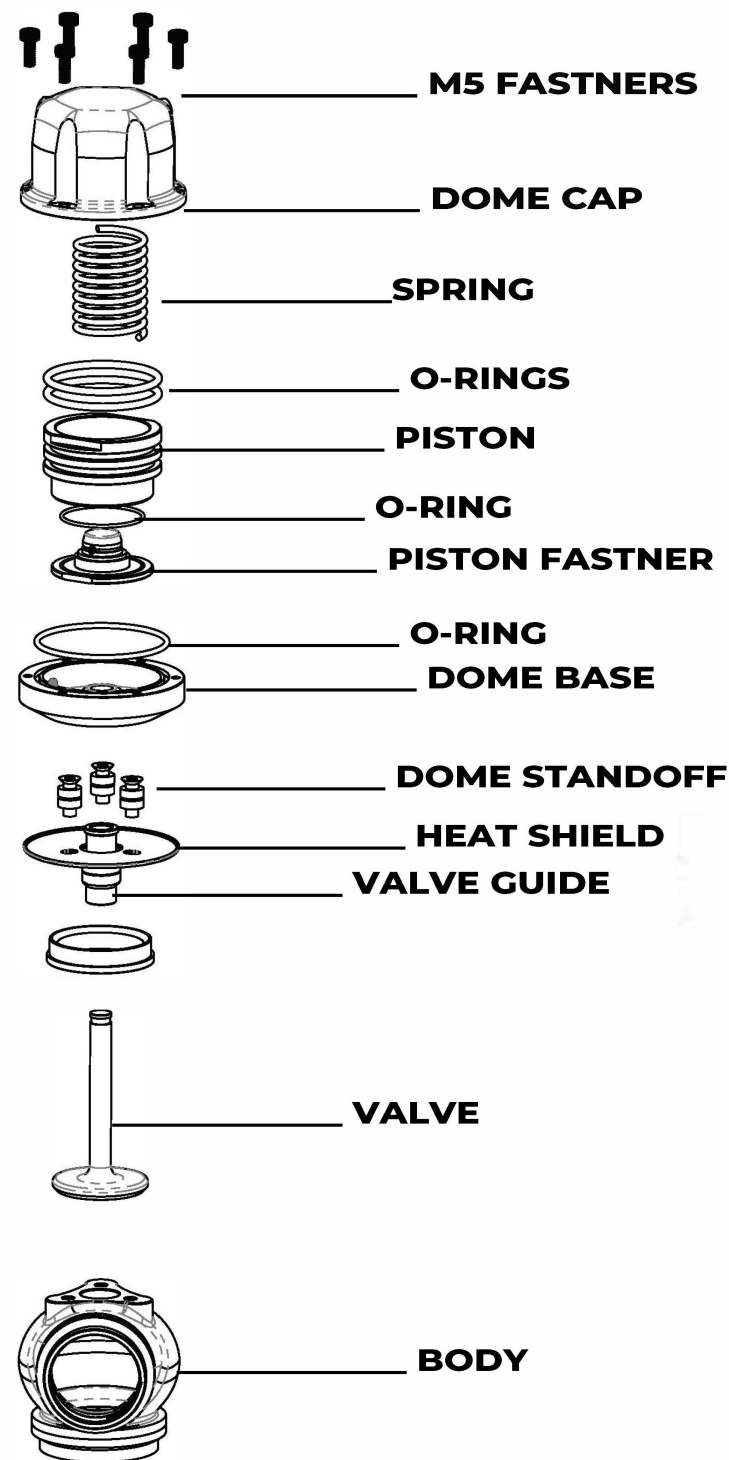
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# WASTEGATE DIAGRAM OPERATIONAL REVIEW

Your Blacksheep Industries wastegate, controls turbocharger boost by bypassing turbine inlet exhaust gas via a spring-loaded valve diaphragm assembly. Spring rate, in conjunction with boost pressure signal, and back pressure, control the opening point of the wastegate valve. Once the spring rate has been overcome, the valve will open.

This causes exhaust flow to be diverted away from the turbine side of the turbocharger, effectively slowing and/or stabilizing the turbine wheels' speed. This stabilization results in a smooth and steady boost pressure level, created by the compressor wheel of the turbocharger.

Open pressure of the valve can be controlled via spring rate and or a boost controller, such as a manual boost controller or an electronic boost controller.



## WARNING

WARNING: Installing higher spring rate springs into your wastegate, may cause higher than expected boost levels. It is recommended to reduce your boost controller back to its minimum setting, and monitor your new minimum boost level with the new spring or springs, before increasing your boost pressure.

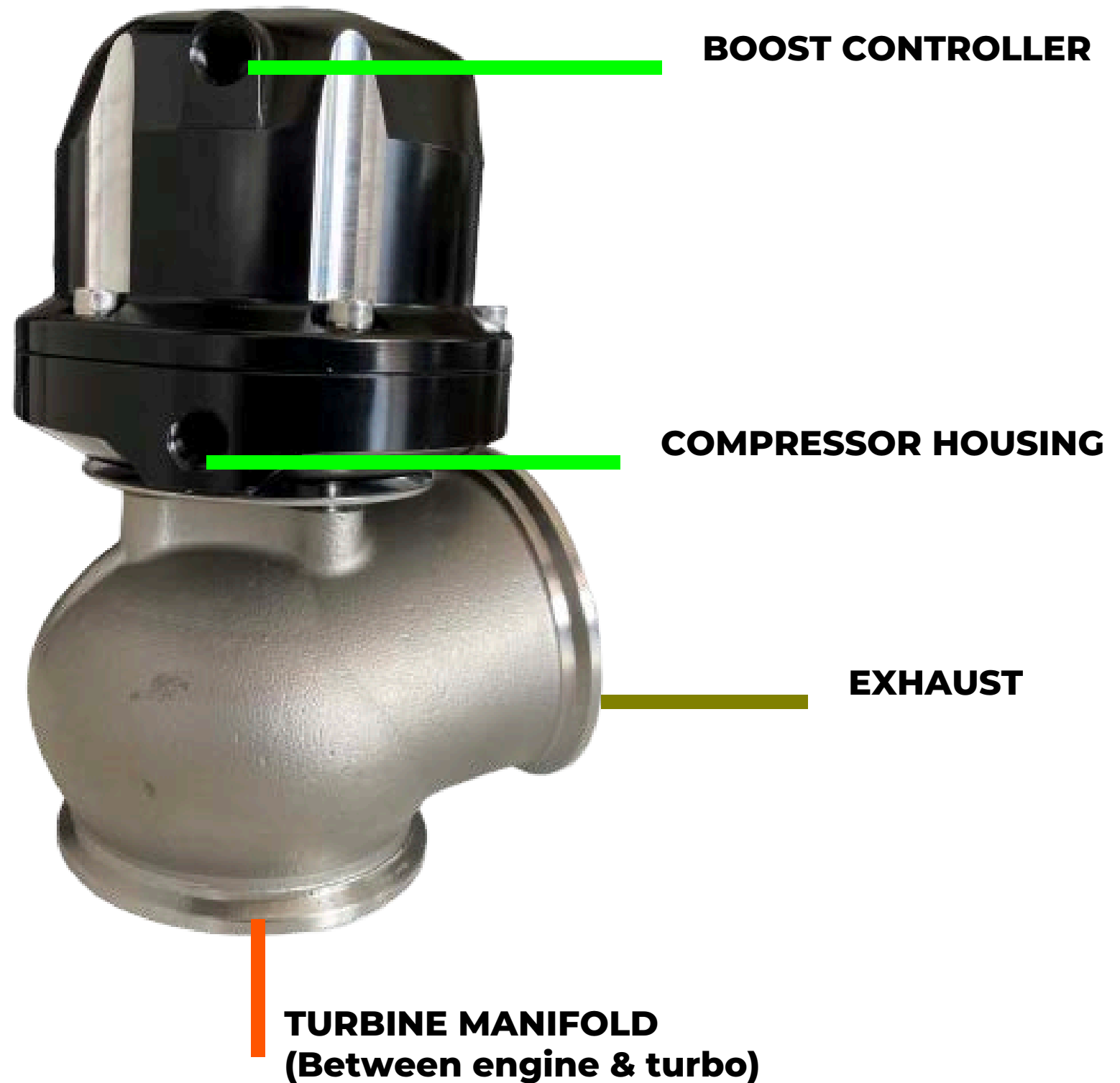
Failure to do so can lead to severe detonation and engine damage. Any damage incurred, as a result of detonation from excessive high boost levels or improper installation is the customer's responsibility.

Blacksheep Industries recommends that the air/fuel ratio be checked while setting the boost levels, as raising your boost levels will change your air/fuel ratio of your tune up and could cause engine detonation or damage.



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**WITH STD.  
BOOST  
CONTROLLER**



**BOOST CONTROLLER**

**COMPRESSOR HOUSING**

**EXHAUST**

**TURBINE MANIFOLD  
(Between engine & turbo)**



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# WITHOUT BOOST CONTROLLER



LEAVE VENTED  
(Or small filter)

COMPRESSOR HOUSING

EXHAUST

TURBINE MANIFOLD  
(Between engine & turbo)



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**WITH  
PRESSURE  
SOURCE**



**REGULATED PRESSURE SOURCE  
150PSI MAX**

**COMPRESSOR HOUSING**

**EXHAUST**

**TURBINE MANIFOLD  
(Between engine & turbo)**



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## **WARRANTY**

Each Blacksheep Industries wastegate comes with a 1 year or 10,000 kms warranty, whichever occurs first from the date of the original invoice. Manufacturer's warranty otherwise applies. Seller expressly disclaims all implied warranties of merchantability and or fitness for a particular purpose.

Blacksheep Industries will repair or replace, at its discretion, any Blacksheep Industries branded product that proves defective in material or workmanship under normal installation, use and service. In the case of any warranty claim with regards to defects in material or workmanship, the product in question should be returned, shipping prepaid to our address.

This warranty does not cover damage or failure of components due to normal wear and tear. There is no warranty on any parts used in race applications, or on products that have been physically altered, improperly installed or not maintained. Seller's warranty is in place of all other warranties, expressed or implied.

## **DISCLAIMER**

Blacksheep Industries does not guarantee the accuracy of the information contained in the manual. Any information and specifics contained in the manual are provided "as is" without any representation or warranty, expressed or implied, of any kind, including, but not limited to, warranties of merchantability, non-infringement, or fitness for any particular purpose. Some jurisdictions do not allow for the exclusion of implied warranties, so the above exclusions may not apply to you.

Federal, State or provincial laws, rules and regulations in the US, Canada or elsewhere may prohibit the removal or modification of components that were installed on motor vehicles or engines by the original equipment manufacturer, to meet emissions requirements or to comply with safety regulations applicable to engines or vehicles manufactured for use on public roads or highways. Removal of such components and installation of Blacksheep Industries products may be illegal and considered to be emissions-related tampering under applicable laws, rules and regulations.

Motor vehicles or engines equipped with Blacksheep Industries products may not be used on public roads or highways, as installation of such products could cause the vehicles engine to be non-compliant with applicable emissions and or safety standards.

Installation of Blacksheep Industries products (or similar products from other manufacturers) on a motor vehicle or engine, may void, reduce or otherwise adversely affect any warranties given by the manufacturer or seller of the vehicle, engine or other parts.