



Solid boost Actuator Installation Guide

PN# S1104MT8A001J

Applied Models:

2005-2009 Legacy GT, Spec B
2005-2009 Outback XT



You are now the proud owner of a highly tested and proven AVOTurboworld upgrade kit. While you have made a wise choice in selecting this upgrade kit, below we have some suggestions and procedures for you to follow in ensuring its successful installation.

Tools Required

Metric socket and ratchet set
Flathead screwdriver & Philips head screwdriver
Compressed air gun and boost gauge

A) Orientation

Before grabbing a bunch of wrenches and attacking your car take a moment to

STOP AND THINK

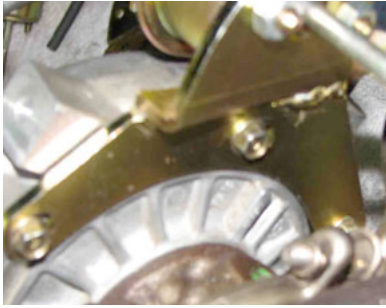
Read these supplied installation instructions thoroughly from start to finish – do you understand all of the mechanical operations required? Are you sure that you can adequately complete all of the mechanical operations required?

Prior to installation, make sure that your car is in excellent mechanical condition and that there are no outstanding faults or problems. This part has been designed to work only with a car that is in good state of repair. Pre-existing problems or faults can result in improper operation and/or failure of your engine. This is your responsibility to ensure. No matter how carefully we design our Parts, this is one area we have no control over and cannot be held responsible.

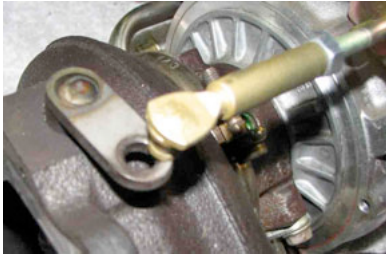
Installation

1. Allow the engine to **cool down completely** before starting the installation.
2. **Remove** the 6mm bolts from the heat shield cover and remove heat shield.
3. **Removal of the standard actuator** - Remove the two 5mm bolts and the vacuum line with the T joint that goes to the factory boost control valve.

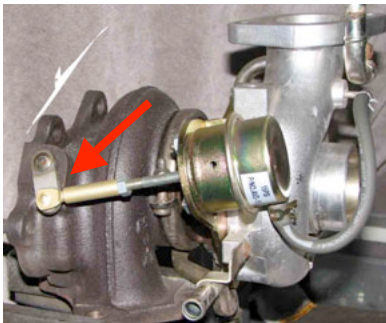
Note: take care with the removal of the spring clip as it may fly off in any direction at the swing valve end.



Fitting the AVO actuator bracket- with the actuator in place fit the three 5mm bolts tight, make sure the flapper valve is shut and the pin is over the actuator rod hole.

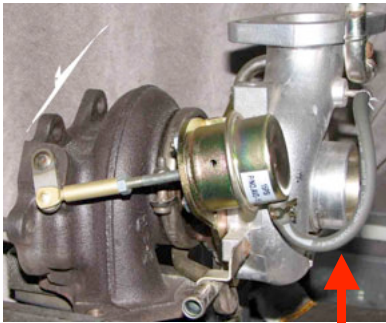


Setting the rod length - Fit the AVO Actuator to the recommended pre-load on the actuator spring. When it is in the correct position, it should look like this, slightly short of the hole. This ensures that the proper pre-load is on the wastegate.



Use an air compressor gun to put air pressure into the actuator - until it reaches about 15 PSI. This will extend the rod and allow easy fitment to the turbo swing arm. Fit the original E-clip back in original spot and check the clip is secure.

Test procedure - use a boost gauge and air pressure to see when the rod starts moving. It should start to move at about 15 psi. Check that the rod and arm is moving freely, don't over pressure it.



Vacuum line - Fit the black vacuum line that is hanging off the actuator to the turbocharger compressor cover directly - **DO NOT USE THE T JOINT** - make sure to clamp on firmly.

Refit - heat shield and intercooler to the vehicle making sure all bolts are tight.

FIT A BOOST GAUGE TO THE VEHICLE TO SET THE BOOST LEVEL.

12. Vehicle Set-up – Drive the vehicle until working temperature. Use 3rd gear from 1500 RPM and apply full throttle. This will indicate the maximum boost that you are running as shown on the boost gauge.

Note: AVO Turboworld recommends setting up your actuator on a dyno, as road tuning may be dangerous. The boost pressure should be 15PSI and if it goes higher than this then it should be lowered back down to 15PSI. With boost pressures over 15PSI it is likely the car will hit the factory fuel cut.

13. Readjusting Boost -To adjust the boost level, you can either shorten or lengthen the rod by turning the actuator rod clockwise or anti clockwise. By shortening the total length of the actuator rod, it will make the boost pressure higher. By lengthening the total length of the actuator rod, it will make the boost pressure lower.

Note: After completing the boost settings remove your tools, double check for leaks and any loose fittings. Correct if necessary. In order to maintain the reliability of your AVOTurboworld upgrade part, you should inspect all components during the recommended engine servicing schedules; and rectify or replace any damaged components as necessary.

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