

# PERRIN MANUAL BOOST CONTROLLER

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Thank you for purchasing the PERRIN Manual Boost Controller. Installation of this controller should <u>only</u> be performed by persons experienced in the installation and proper operation of turbocharged engines.

WARNING: This part is designed, manufactured, and sold solely for use on off-road and racing vehicles not controlled by federal and or local emissions laws. It is not intended for use on vehicles that operate on public streets and highways. Use of this part on emissions controlled vehicles may be in violation of federal or local law! ASMC, LTD. is not responsible for any damages as a result of misuse of this part. Check your local laws prior to use or installation.

#### SPECIAL NOTES:

- WARNING: AN ACURATE BOOST GAUGE IS <u>REQUIRED</u> FOR PROPER INSTALLATION AND ADJUSTMENT OF THIS PRODUCT. IMPROPER INSTALLATION AND USE OF THIS PRODUCT WILL DAMAGE THE TURBOCHARGER, ENGINE AND MAY RESULT IN INJURY OR DEATH! PERRIN PERFORMANCE IS IN NO WAY RESPONSIBLE FOR ANY DAMAGES AS A RESULT OF THE INSTALLATION OF THIS PRODUCT! CONTACT YOUR PERRIN DEALER FOR MORE INFORMATION!
- See above special note, you can't adjust this without a gauge!

#### Parts Included with the PERRIN Manual Boost Controller:

- (1) PERRIN Manual Boost Controller
- (6') 5/32 vacuum hose
- (5) Zip ties

#### Checked By

#### **INSTALLATION:**

- 1) Open hood and locate turbocharger.
- 2) Locate and <u>remove any and all</u> factory boost management, hoses, tees etc. (leave electronics plugged in) NOTE: MANY FACTORY TURBOCHARGED VEHICLES HAVE RESTRICTORS INSIDE OF THE HOSES & LINES LEADING FROM THE COMPRESSOR SIDE OF THE TURBO. THESE RESTRICTORS WILL AFFECT BOOST RESPONSE WHEN USING THIS CONTROLLER.
- 3) Using supplied hose and zip ties attach one end of hose to the compressor (boost) side of the turbo housing. Trim to length and attach hose to the logo side (input side) of PERRIN Manual Boost Controller.
- 4) Again, using supplied hose and zip ties attach small end (output side) to input on waste gate. This connection is the same for both internal and external waste gates. (Fig 1)
- 5) When using an external wastegate attach the hose to the lower vacuum port. (Fig 2)
- 6) Secure lines and controller to suitable location away from direct heat source, using supplied wire ties.

### ADJUSTMENT AND TUNING:

- Loosen adjustment on controller until 5 grooves are visible(making it longer). The 5<sup>th</sup> groove on shaft should be aligned with body. This is the minimum boost setting and is the farthest amount the boost controller should ever be unscrewed. NOTE: MINIMUM SETTING ON PERRIN MANUAL BOOST CONTROLLER WILL EQUAL THE BOOST LEVEL SET BY SPRING IN ACTUATOR. BOOST CAN BE ADDED BUT IT CANNOT BE REDUCED TO A VALUE LOWER THAN THAT! NOTE: Do not disassemble controller as damage to internal seals may result!
- 2) Each complete revolution (making it shorter) of adjustment will equal approx. 1.5 lbs increase in boost. Be sure to disconnect the vacuum hose every time you adjust the boost controller. A twist in the vacuum line can affect boost stability.
- 3) The controller can allow 30 PSI or more boost on most vehicles. Your vehicle may be higher or lower than that level depending on the wastegate spring and size of turbo charger. Consult a professional tuner to decide which boost level is correct.
- 4) Road test after each adjustment until desired boost level is achieved. Make sure when testing boost level, that 3<sup>rd</sup> gear or higher is used. If 1<sup>st</sup> or 2<sup>nd</sup> is used, boost in higher gears will be too high and cause engine damage.



# **Connection Diagrams**



(FIGURE 1. INTERNAL WASTEGATE)



# (FIGURE 2. EXTERNAL WASTEGATE)

# **COMMON QUESTIONS:**

- My car's boost is spiking- Boost controller is set too tight, Boost controller is hooked up backwards, or possibly a factory restrictor is placed in boost hose.
- My car's boost is too low- Boost controller is set too loose, or boost controller may be hooked up to the factory tee, not like the diagram shows.
- I can't get more than my desired amount- This can be caused by the turbo being too small to be able to hold the desired boost, or boost leak in the boost system.

For questions & comments please contact <u>INFO@PERRINPEFORMANCE.COM</u> 503-693-1702 Instant Chat Available on Website