

2018-04-25

Thank you for purchasing this PERRIN product for your car! Installation of this product should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands and/or a professional vehicle hoist for safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur! Please read through all instructions before performing any portion of installation. If you have any questions, please contact our tech department prior to starting installation. We can be reached in any of the following methods:

Email Tech@PERRINperformance.com

Instant Chat off the main page of <u>www.PERRINperformance.com</u> Or simply call our tech team at 503-693-1702

### **SPECIAL NOTES:**

- The use of a factory service manual is highly recommended. This can be downloaded at http://techinfo.subaru.com.
- See special notes at the end of the instructions regarding aftermarket intake and aftermarket boost control solenoid installations.

# Parts Included with the PERRIN Turbo Inlet Hose:

- (1) PERRIN Turbo Inlet Hose for 2015 WRX
- (1) Turbo Adapter Nozzle
- (2) M6x20 Socket Cap Screws
- (1) M5 Hex Key
- (1) 3/8" Plastic Union
- (1) 3/8" 90 Degree Connector
- (1) 5/8" Plastic Union
- (1) Clamp Size 52 or 70-90mm
- (1) Clamp Size 48 or 60-80mm
- (1) Clamp Size 20 or 23-35mm
- (5) Clamp Size 6 or 12-22mm
- (2) Zip Ties
- 1. Raise vehicle off ground using vehicle hoist or proper jack and jack stands. Never support vehicle with jack as death or injury may occur.
- 2. Using proper panel removal tool or flat head screw driver, locate and remove (3) plastic fasteners in each left and right wheel well. See picture below.



3. Using proper panel removal tool or flat head screw driver, locate and remove (7) plastic fasteners and (2) 12mm headed bolts from lower portion of splash guard. See picture below.

Remove (7) Plastic Fasteners and (2) Bolts



- 4. Remove splash guard from car and move off to the side.
- 5. Remove (4) 12mm bolts holding skid plate to chassis and set skid plate aside.



Using a flat head screwdriver or 8mm nut driver, locate and remove rubber flexible intake hose from plastic manifold and from intake system.
Locate and remove three hoses (EVAP, Crank Case Vent, and Boost Control Solenoid Hose shown in picture below) from plastic manifold bolted to turbo. NOTE: 2017+ models will have an electrical connector on the larger crank case vent hose as shown in second picture below.



2015-2016 Model Shown Above

# Remove Hoses / / From Plastic Manifold



2017+ Model With PCV Diagnosis Connector Shown Above

- 8. Remove (2) 10mm bolts securing plastic turbo manifold to inlet of turbocharger.
- 9. Using long needle nose pliers, pinch large hose clamp securing OEM recirc valve to plastic turbo manifold and slide down and away.
- 10. Pull plastic turbo manifold down and off OEM recirc valve. Some twisting and wiggling may be necessary to remove.
- 11. Unplug electrical connection from boost control solenoid located behind plastic turbo manifold.



- 12. Remove rubber gasket/o-ring from plastic turbo manifold and install into supplied PERRIN turbo adapter flange.
- 13. Install supplied turbo inlet adapter flange and size 52 hose clamp to end of PERRIN Inlet hose but leave hose clamp loose.
- 14. Install supplied size 48 hose clamp to smaller side of PERRIN inlet hose but leave loose.
- 15. Install 5/8" union into crank case vent spigot and secure with supplied size 6 hose clamp. Note: Trimming roughly 1/2" off crank case hose is recommended and will make the installation easier.
- 16. Install 3/8" union into EVAP spigot and secure with supplied size 6 hose clamp. Install supplied size 20 hose clamp over recirc valve spigot. Note: Trimming roughly 1/2" off EVAP hose is recommended and will make the installation easier



- 17. Connect PERRIN inlet hose to intake system and recirc valve. NOTE: Loosening clamp securing recirc valve to charge pipe may be necessary to ensure proper alignment of PERRIN inlet hose to the recirc valve.
- 18. Rotate turbo adapter flange until both holes line up with holes in turbocharger inlet. Make sure that these are very close to eliminate stripping threads in next step.

- 19. Secure turbo adapter to turbo inlet using supplied M6 bolts and M5 hex key. NOTE: Double check that OEM turbo manifold gasket/o-ring is installed. NOTE: Rear M6 bolt can be difficult to tighten, using an M5 socket hex can make this step much easier.
- 20. Double check that PERRIN inlet hose lines up to intake system, recirc valve and turbo adapter, then secure all three connections with hose clamps. NOTE: If recirc valve to charge pipe clamp was loosened, please tighten at this time.

#### 21. For 2015-16 models:

- a. Install supplied size 6 clamps over OEM hoses.
- b. Install EVAP hose and crank case hose to fittings on PERRIN inlet hose and secure with supplied size 6 clamps.
- c. Then skip to step 22.
- 22. For 2017+ models:
  - a. Locate and remove white plastic PCV Diagnosis connector from crank case hose. **NOTE: Clamp securing hose is very difficult to** remove. Using a small poker tool or needle nose pliers are the best tools to remove clamp.
  - b. Locate metal jumper pin inside of white plastic connector and remove with pliers.
  - c. Place male type pin into female plugs on wire harness side. Use electrical tape to secure pin and protect from the weather.
  - d. Use supplied zip tie to secure plug up and out of the way (securing to the side of the EVAP hose works very well).
  - e. Install supplied size 6 clamps over OEM hoses.
  - f. Install EVAP hose and crank case hose to fittings on PERRIN inlet hose and secure with supplied size 6 clamps.



23. Remove (2) screws securing OEM boost control solenoid to plastic turbo manifold. Slide solenoid out of housing by twisting and pulling. If part will not come out, spray around base with a small amount oil.



- 24. Place nipple of boost control solenoid into side fitting on PERRIN turbo inlet hose. Secure with supplied size 6 clamp. If aftermarket boost control solenoid is installed, see special notes below.
- 25. Plug electrical connection into solenoid.



- 26. After installation is complete, start engine and if engine starts and runs normal, reinstall lower skid plate and plastic splash guard.
- 27. If car doesn't start make sure all sensors are plugged, then look for vacuum leaks. Restart engine and test for other leaks if engine runs poorly. If nothing obvious is found, please contact our tech department.

### **Aftermarket Intake Special Notes:**

- Wire reinforcement is purposely stopped just in front of the PERRIN Logo. This allows the hose to be cut and trimmed to fit some aftermarket intakes that connect directly to the OEM plastic turbo manifold.
- The hose ID is 3.00" at this location. Make sure and check that your aftermarket intake will fit a 3" ID and the length that will be cut. Double check before making any cuts as there is no going back!
- Cut hose with brand new razor blade or X-Acto knife using the clamp as a guide.



## Aftermarket Boost Control Solenoid Special Notes:

- Included is a 3/8" 90 degree fitting to be used with aftermarket boost control solenoids. This allows the vent from the EBCS, to connect to the PERRIN inlet hose without the use of adapters. NOTE: This may require a new larger fitting threaded into port used as a vent. Contact our sales department to order the correct fitting (X-CON-044)
- Additional mounting bracket may be required depending on aftermarket parts installed. Test fit aftermarket EBCS before getting too far into the installation to ensure bracket and location work. NOTE: Location of EBCS (where it is mounted) is not critical to the installation as long hoses will reach.
- Install 90 degree fitting and route vent hose from boost control solenoid to fitting.
- Addition hose and fittings may be required for this to reach, make sure to check this before getting too far into the installation.



# Boost Control Solenoid/ EBCS Vent Connection

Questions, Comments and Suggestions Contact: <u>Tech@PERRINperformance.com</u> Visit Our Website for Instant Chat Options at <u>www.PERRINperformance.com</u> Call Our Tech Team at 503-693-1702