

PERRIN

EQUAL LENGTH WRX HEADER

PSP-EXT-057

Vehicle Fitment Chart:

2015-2017 SUBARU WRX H4-2.0L Turbo

2019-08-26

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.

GENERAL MODIFICATION NOTE

Modifications to any vehicle can change the handling and performance. As with any vehicle extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts, and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive a vehicle safely may result in serious injury or death. Do not drive a vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications (and combinations of modifications) are not recommended and may not be permitted in your state or country. Consult the owner's manual, service manual, instructions accompanying these products, and local laws before purchasing and installing these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

SPECIAL NOTES:

- Not using the OEM turbo/header support brackets will cause the header to fail and will void the warranty on your PERRIN Header.
- Plan to replace all the coolant in the engine unless you have a set of "pinch-off" pliers or a way to plug off the turbo coolant hoses. Since the turbo sits below the engine, when step 12 is performed, it is possible to drain all coolant from the engine.
- Installation of this part requires replacement of all exhaust gaskets (heads to header, header to turbo, and turbo to downpipe). Further gaskets may need to be replaced if aftermarket downpipe or exhaust is installed.
- The use of a factory service manual is highly recommended.
- The use of penetrating oil will greatly reduce the chances of galling threads on bolts as they are removed.
- We highly recommend the use of anti-seize on threads of all bolts when reassembling.
- Only use new Subaru gaskets. Using aftermarket gaskets will warp flanges, cause leaks, and will void warranty!
- **SPECIAL NOTES ABOUT EXHAUST WRAP:** Exhaust wrap placed on headers will help contain extreme heat in header and away from important engine parts, however it will significantly reduce long-term durability. PERRIN will not warranty parts with header wrap installed. If header wrap is installed, be sure to paint headers with special paint provided by header wrap manufacturer. This will keep oil and other flammable fluids from absorbing into wrap and causing a fire.

Parts Included with the PERRIN WRX HEADER:

- (1) PERRIN FA20DIT Header
- (4) Spacers
- (4) M8 Fender Washers
- (10) 7/16" Heavy Duty Washers
- (4) M8x55mm Hex Bolts
- (1) Anti-Seize Packet

Installation of PERRIN WRX DIT Header

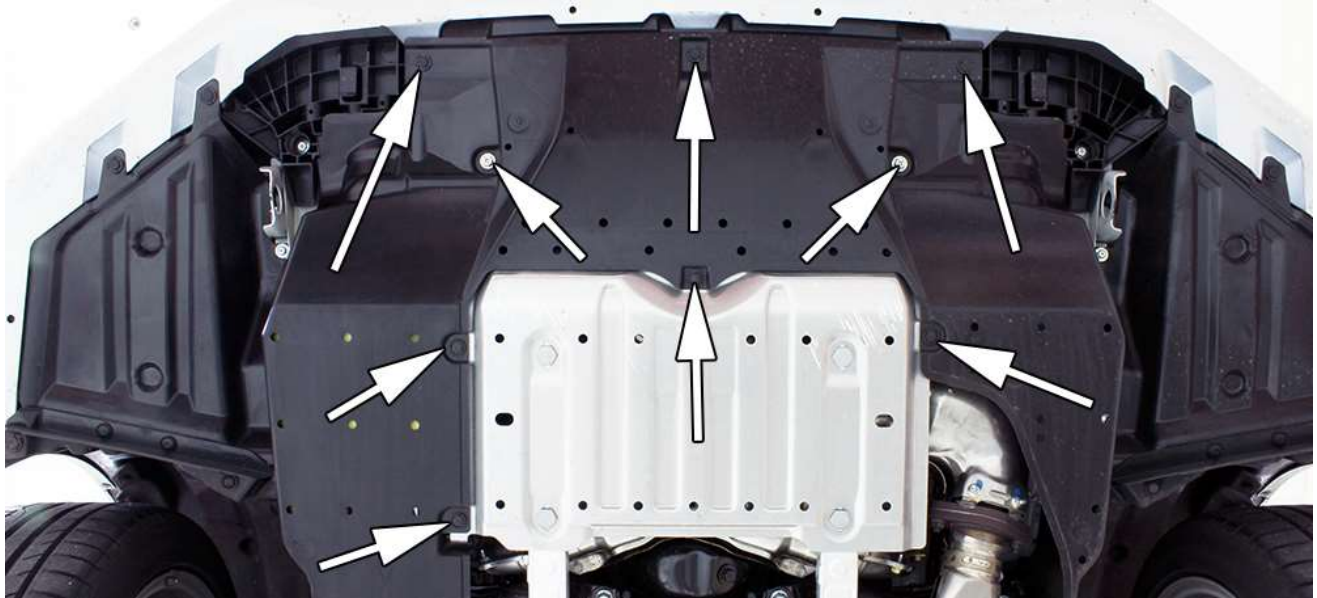
1. Raise vehicle off ground using vehicle hoist or proper jack and jack stands. Never support vehicle with jack as death or injury may occur.
2. Using proper panel removal tool or flat head screw driver, locate and remove (3) plastic fasteners in each left and right wheel well. See picture below.

Remove Plastic Fasteners In Both Left and Right Wheel Wells.



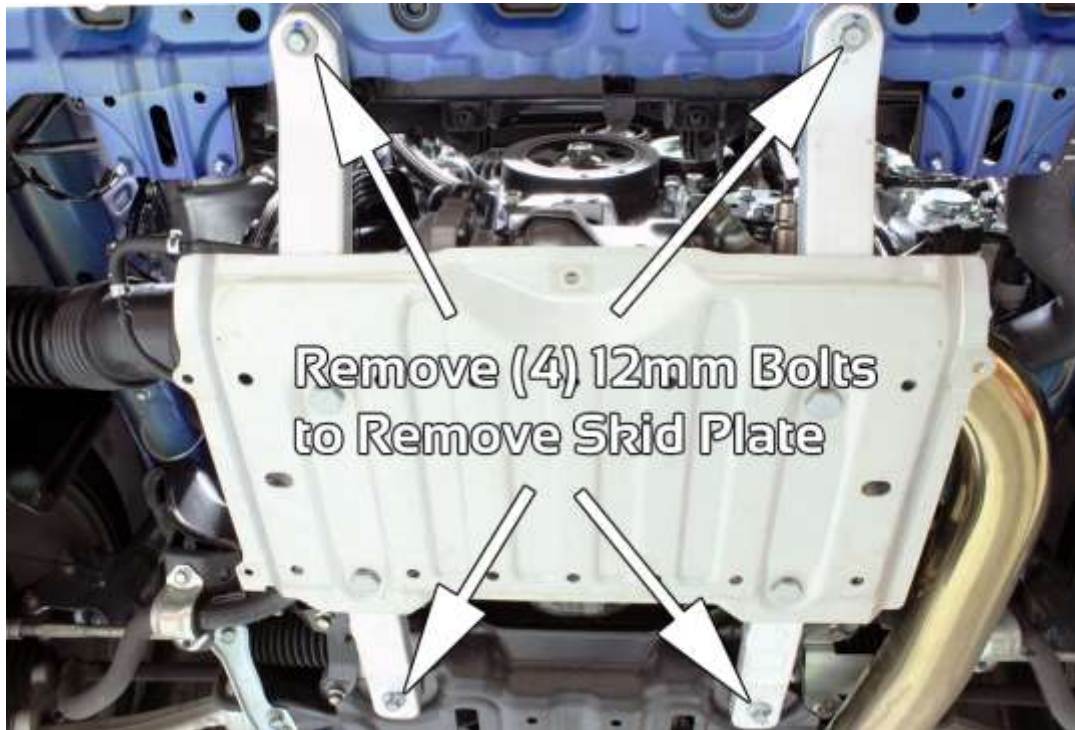
3. Using proper panel removal tool or flat head screw driver, locate and remove (7) plastic fasteners and (2) 12mm headed bolts from lower portion of splash guard. See picture below.

Remove (7) Plastic Fasteners and (2) Bolts

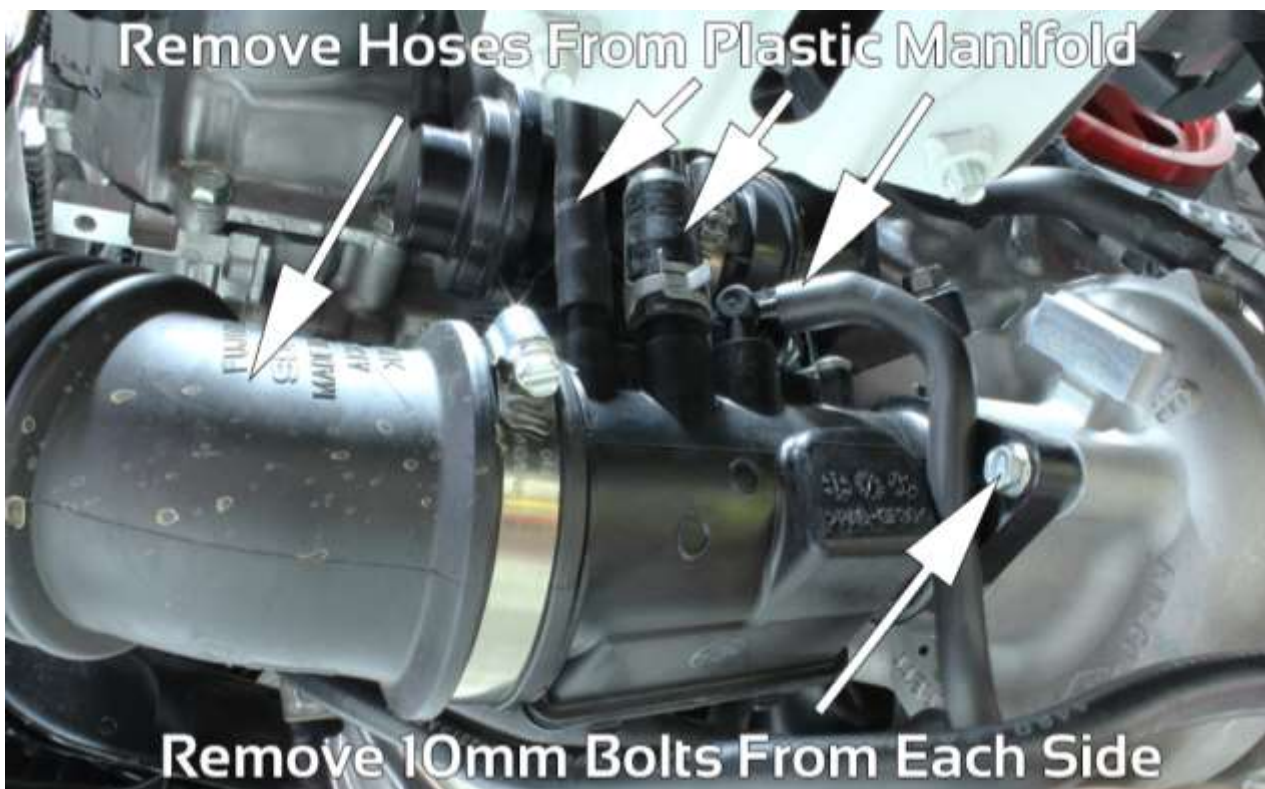


4. Remove splash guard from car and move off to the side.

- Remove (4) 12mm bolts holding skid plate to chassis and set skid plate aside.



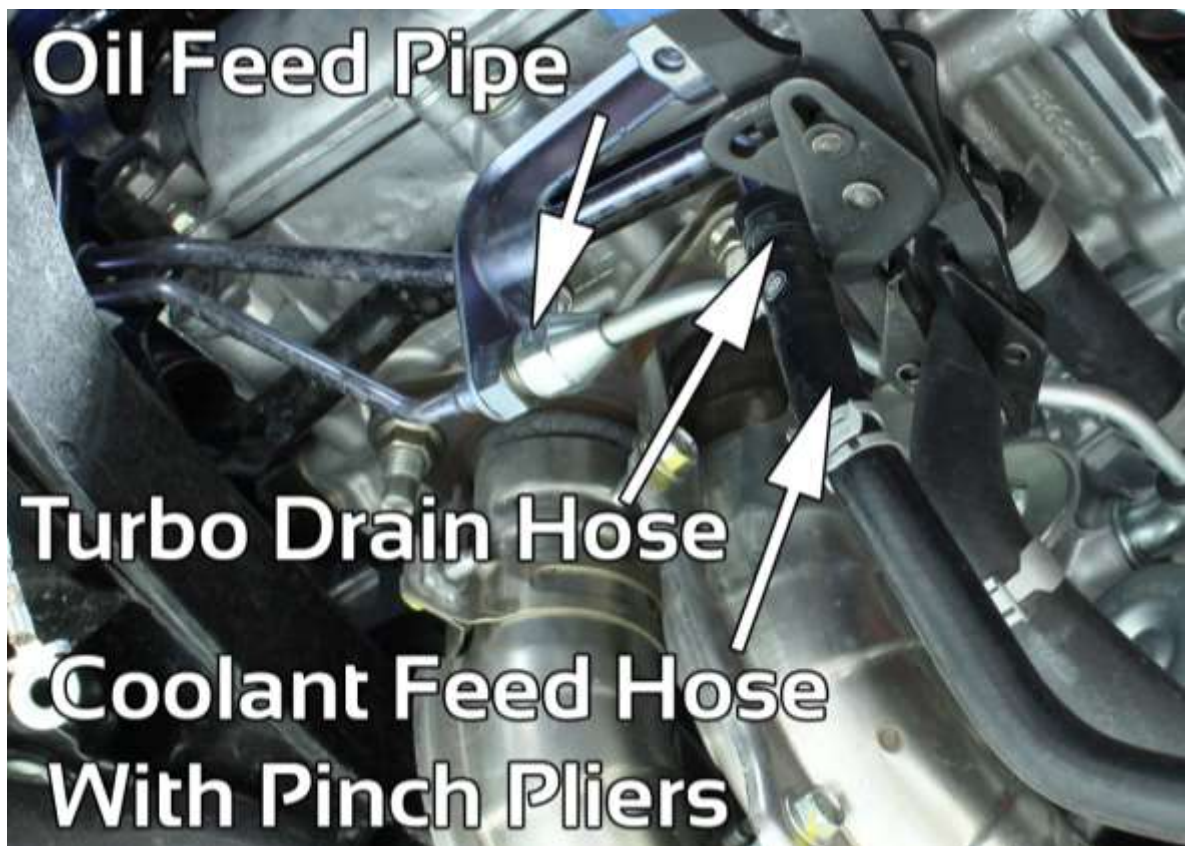
- Locate rubber intake hose and three smaller hoses shown in picture below. Remove from plastic manifold bolted to turbo.
- Remove (2) 10mm bolts securing plastic turbo manifold to inlet of turbo.



- Using long needle nose pliers, pinch large hose clamp securing OEM recirc valve to plastic turbo manifold then slide down and away.
- Disconnect electrical connection from boost control solenoid located on turbo intake duct.
- Pull plastic turbo intake duct down and off of OEM recirc valve. Some twisting and wiggling may be necessary to remove. **NOTE: Pictures below show the rubber intake hose removed to make pictures clearer. This step is not necessary.**

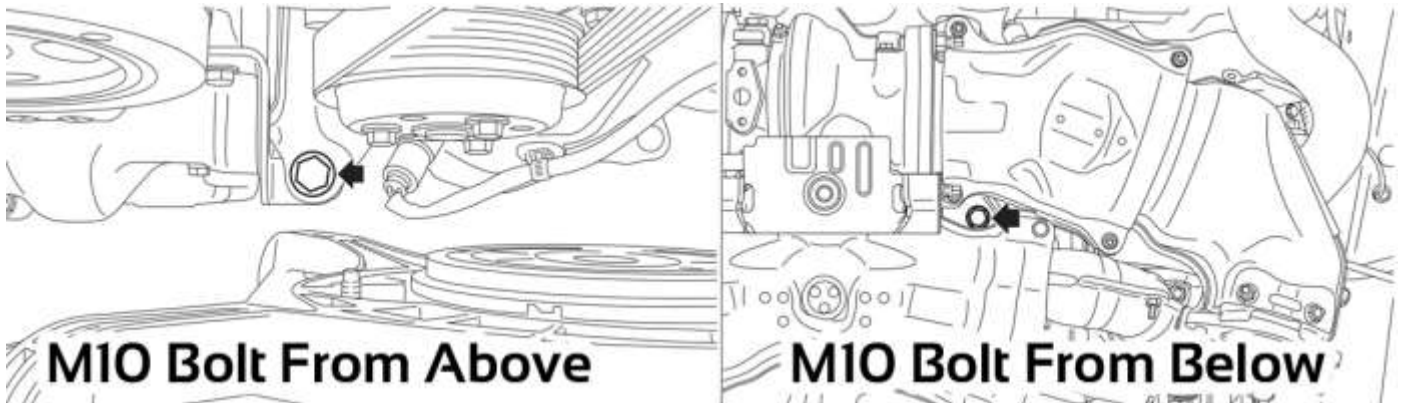


11. Removed (2) M8 bolts securing plastic boost tube to turbocharger (shown above). **Note: Rear most bolt is difficult to reach and best to use a gear wrench to remove.**

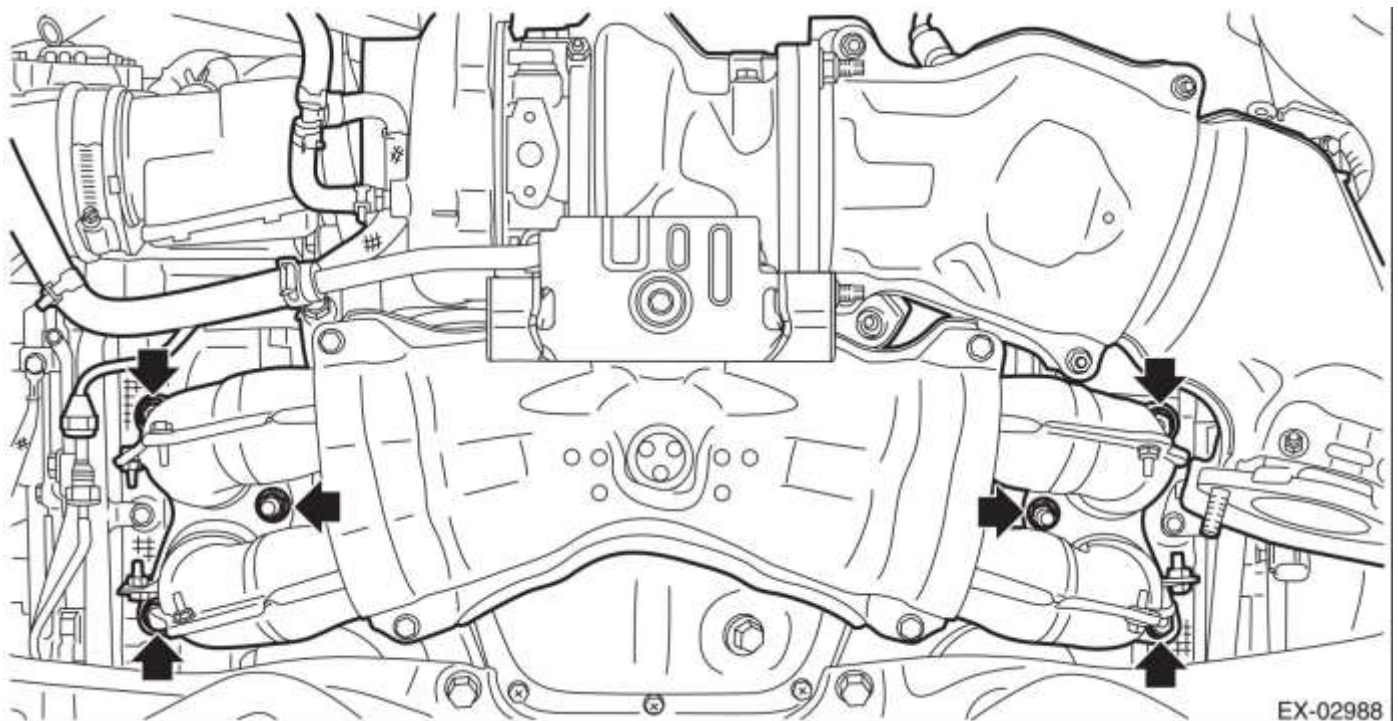


12. Disconnect turbo oil feed pipe using two open ended wrenches. **NOTE: Never use one wrench to tighten!**
13. Be prepared to capture fluid in the next two steps.
- Using picture above, remove turbo oil drain hose from steel pipe on head (leave connected at turbo drain reservoir).
 - Carefully aim hose down into a bucket and let oil drain out of turbo drain reservoir.
 - Remove (2) coolant feed hoses from turbo (one shown in above picture, and second one passes in front of engine) and be prepared to catch coolant into a bucket. **NOTE: Using pinch off pliers or plugs will significantly reduce the amount of coolant lost and keep you from needing to drain all the coolant from the car.**

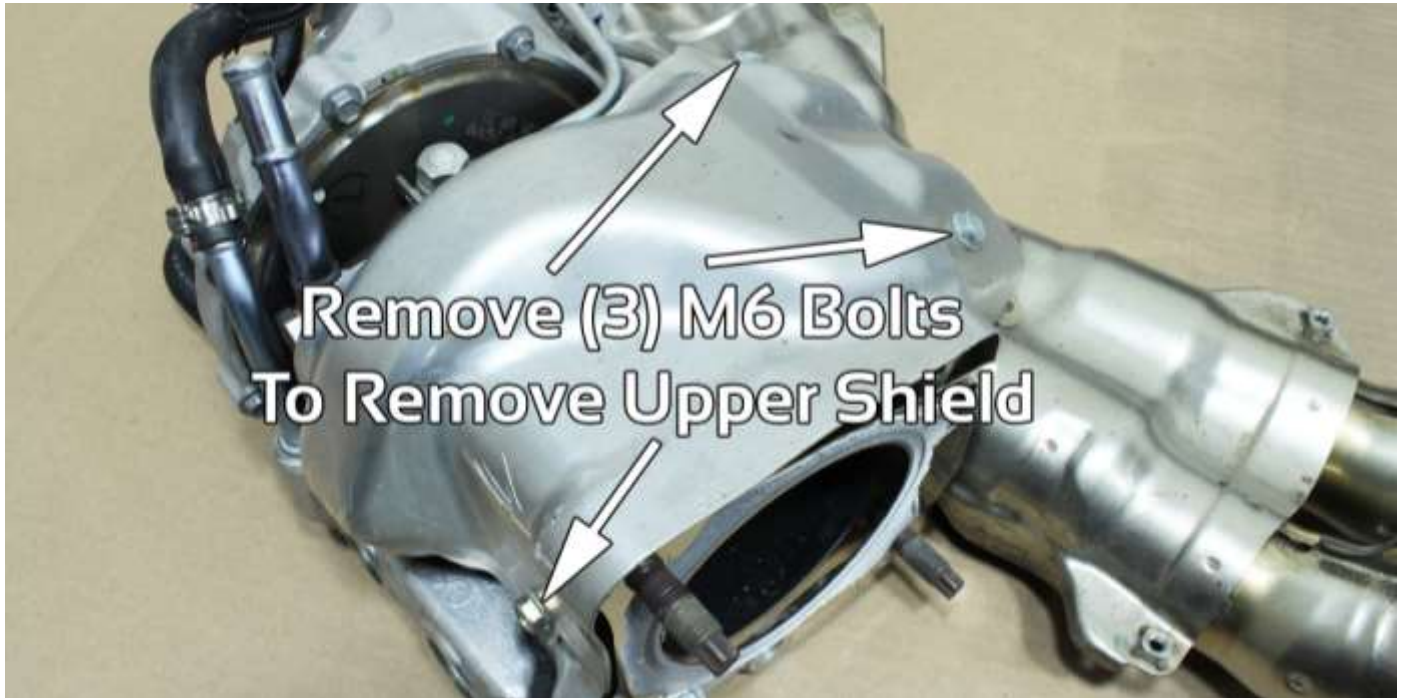
14. Remove rubber vent hose from top of turbo drain reservoir (passes by front of engine).
15. Remove J-pipe from car. This step will vary depending on J-pipe installed. Be prepared to buy new gaskets as necessary.
 - a. Remove ground wire, and unplug (2) O2 sensors from their wire harnesses and clips.
 - b. Remove bolts securing J-pipe to catback exhaust. **NOTE: This step can vary depending on exhaust installed.**
 - c. Remove (1) M8 bolt securing water pump shield to left side of engine.
 - d. Remove (2) M10 bolts from turbo support bracket. One bolt faces up toward engine and one down toward the ground.



- e. Remove (4) nuts on J-pipe to turbo connection. **NOTE: These bolts are none to gall or strip out. It is important to spray these with penetrating oil before removal.**
 - f. Remove J-pipe from turbo. **NOTE: This can be a little tricky to do as turbo support bracket gets in the way. Take time in moving both bracket and J-pipe out of the car at the same time. Aftermarket J-pipes will not have as much of a problem with this step.**
16. Remove (6) nuts holding header and turbo assembly to head. **NOTE: During this step be prepared to remove turbo from car and set on a bench to transfer over turbo to PERRIN header. This assembly is heavy and having a second person will make this easier.**



17. Remove (3) M6 bolts securing turbo heat shield onto turbo. Remove shield from turbo (will be reinstalled).

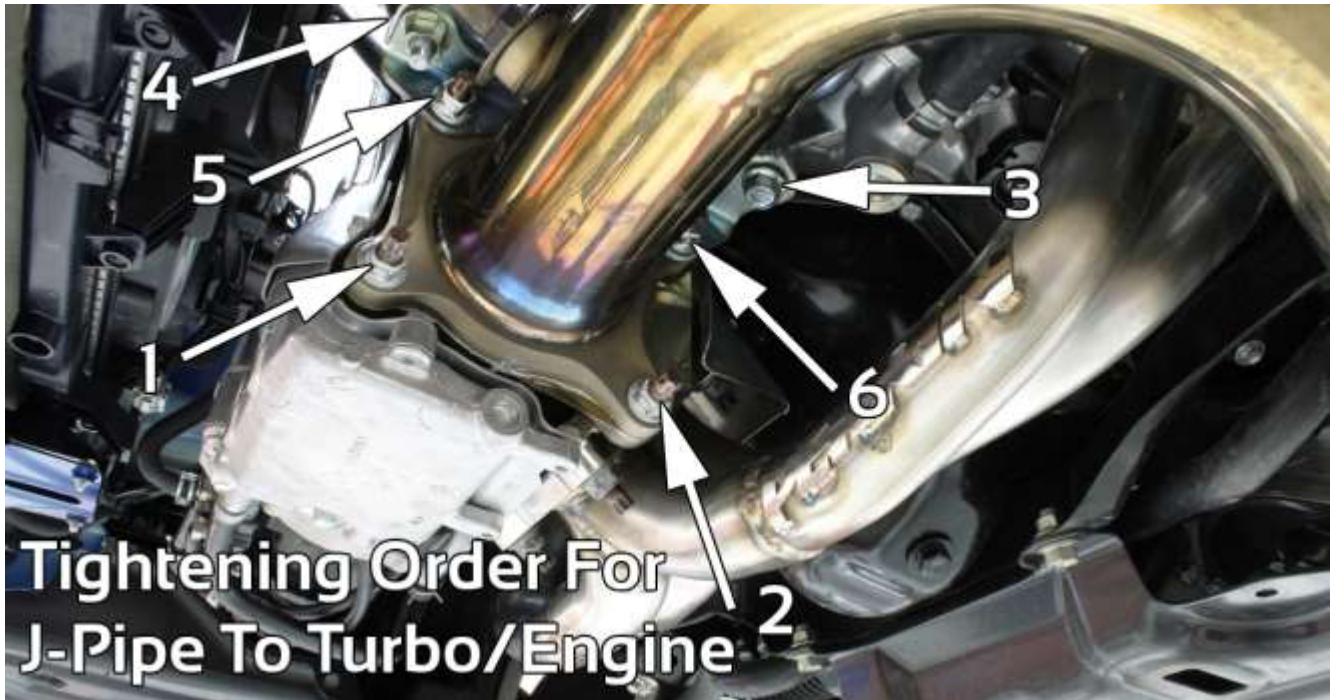


18. Flip header and turbo over, then remove (4) M6 bolts securing header heat shield to header. Remove both upper and lower shields from header. These will NOT be reused.
19. Remove (4) nuts securing header to turbo and split turbo from header. Take note of heat shield bracket and its orientation, as this will be reused in a later step. **NOTE: These nuts are known to seize or fail. Spray down with penetrating oil to help reduce this problem. Also be prepared to buy new studs or nuts if these fail.**

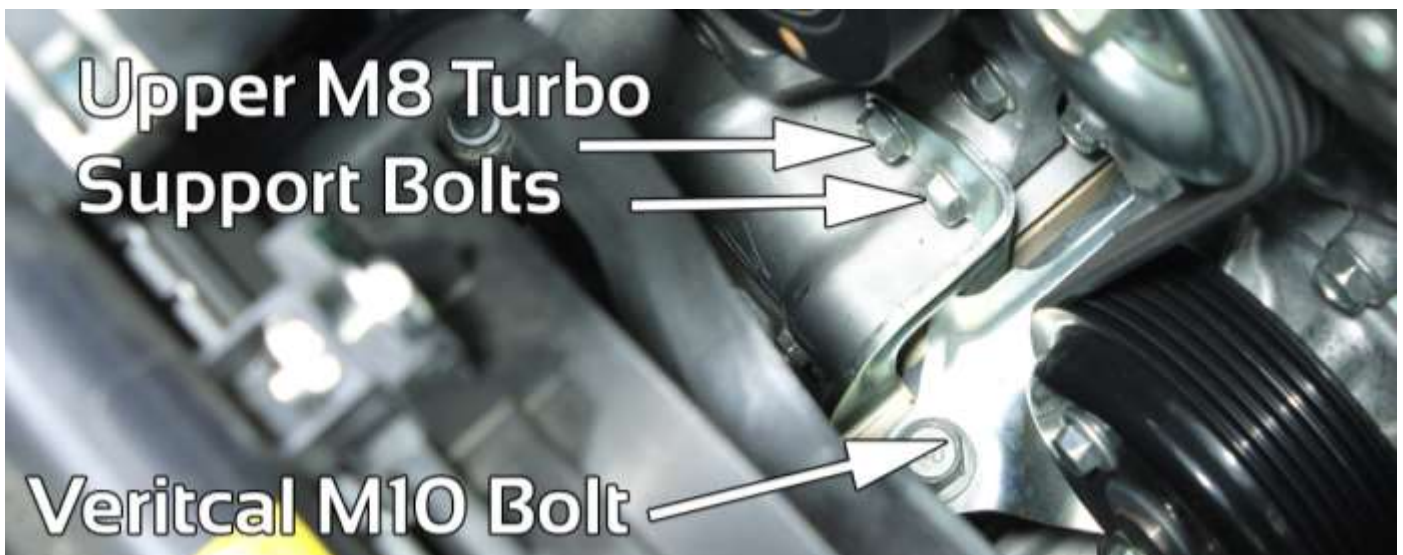


20. Install new OEM gasket onto turbo and place PERRIN header over studs. Place heat shield bracket on upper studs as shown, apply supplied Anit-seize compound to thread, then secure with OEM nuts removed. Tighten nuts to 40ft-lbs.

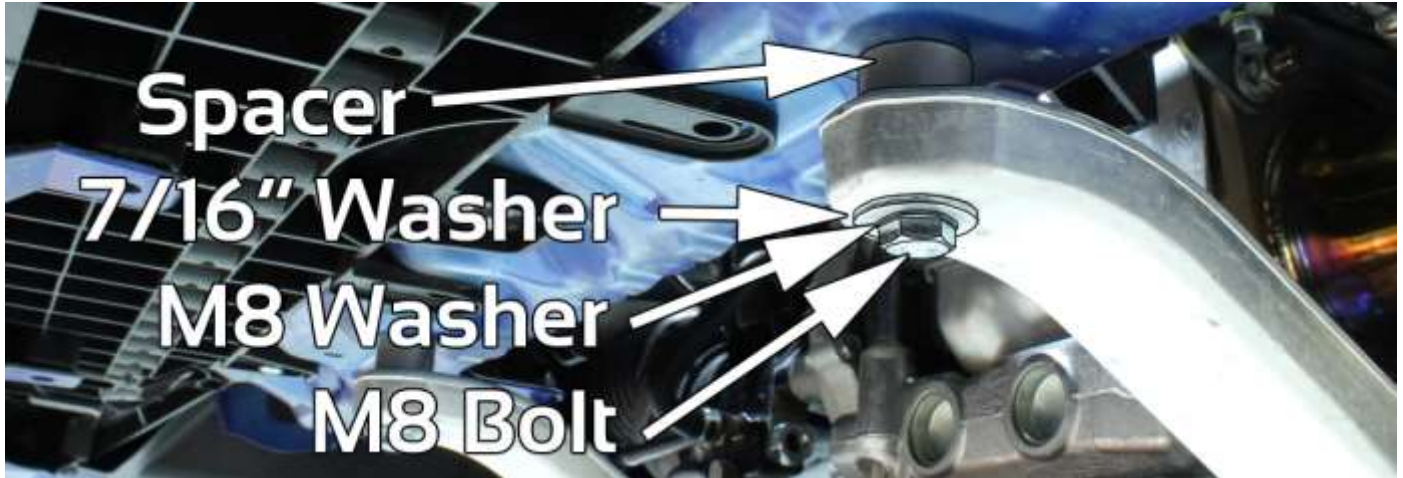
21. Reinstall turbo heat shield using (3) M6 bolts removed in earlier step.
22. Install new OEM gaskets (DO NOT USE EXTRA THICK AFTERMARKET GASKETS) to heads and place PERRIN header with turbo mounted onto the engine. Secure with OEM nuts using (6) supplied 7/16" washers between nut and flange and tighten to 45-50ft-lbs. **NOTE: During this step it is normal to have header fit snugly between both heads. This step may require light tapping on each runner, to get over studs. Make sure not to put header fully onto one head then the other, place partially over studs on one head before placing it completely over other head.**
23. Reinstall J-pipe onto turbo making sure to use a new gasket. Place turbo support bracket on upper (2) studs.
24. Reinstall water pump shield by hand threading M8 bolt into left side of shield (do not tighten at this time).
25. Loosely install (2) M10 bolts: One facing up toward engine also secures water pump shield, and one facing down towards ground securing turbo support bracket to engine. Install (4) nuts onto turbo to J-pipe studs. **NOTE: Not using the OEM turbo/header support brackets will cause the header to fail and will void the warranty on your PERRIN Header.**
26. Lightly snug down in this order: (2) lower nuts on turbo to J-Pipe, (1) M10 bolt to block, (1) M10 bolt to upper bracket, (2) upper nuts on turbo to J-Pipe. **NOTE: Not using the OEM turbo/header support brackets will cause the header to fail and will void the warranty on your PERRIN Header.**



27. Loosen (2) M8 bolts securing upper turbo support bracket at engine, then re-tighten to 15ft-lbs. **NOTE: This step is important to relieve any unwanted pressure on the PERRIN header.** In the same order as in the above step, fully tighten bolts and nuts to 31ft-lbs. **NOTE: Not using the OEM turbo/header support brackets will cause the header to fail and will void the warranty on your PERRIN Header.**



28. Tighten M8 bolt on water pump shield to 15ft-lbs.
29. Attach ground wire to J-pipe and plug O2 sensors back in.
30. Tighten oil feed connection using two wrenches to secure. **NOTE: Never use one wrench to tighten!**
31. Reinstall (2) coolant feed hoses from turbo and secure with pinch clamps removed in earlier step.
32. Reinstall plastic boost tube to turbo and tighten bolts to 12ft-lbs.
33. Reinstall plastic turbo intake duct to blow off valve and to turbocharger inlet. Tighten bolts to 5ft-lbs, then slide pinch clamp over nipple.
34. Plug in electrical connection on boost control solenoid.
35. Reinstall (2) crank case vent hoses and secure with pinch clamps removed earlier.
36. Reinstall rubber intake hose to plastic turbo duct and secure with OEM clamp.
37. Reinstall rubber turbo vent hose to top of turbo drain reservoir.
38. Replace any coolant lost during installation.
39. Before proceeding, start car and listen for exhaust leaks and watch for any leaking fluid. Fix any issues before proceeding.



40. Reinstall OEM skid plate making sure to place supplied spacers between it and the chassis. Use supplied M8x55 bolts, M8 fender washers, and 7/16" flat washers to secure skid plate to chassis. Tighten bolts to 15ft-lbs.
41. Reinstall plastic splash guard.
42. After 1 week of driving, re-tighten (6) nuts holding header to engine.