

PERRIN

J-Pipe for 15+ WRX 6-Spd Manual

2020-08-04

PSP-EXT-210

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@PERRIN.com

Instant Chat off the main page of www.PERRIN.com

Or simply call our tech team at 503-693-1702

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.

EMISSIONS WARNING

This part is designed, manufactured, and sold solely for use on 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.



WARNING: This product can expose you to chemicals including Lead which is known to the State of California to cause cancer birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

SPECIAL NOTES:

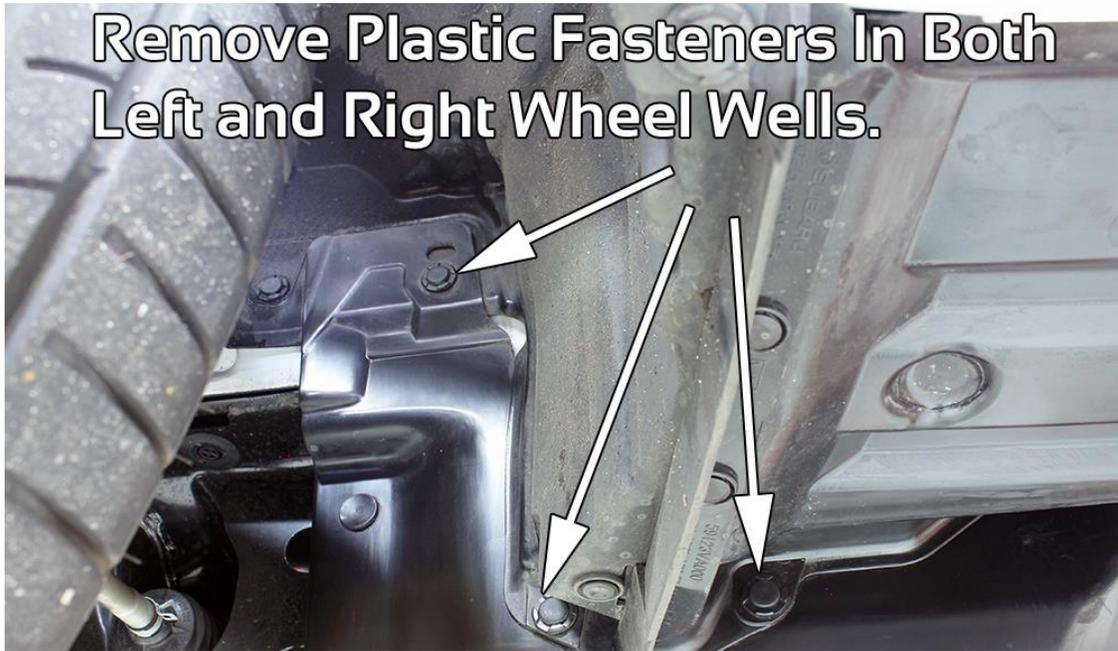
- The factory service manual says to remove entire turbo/manifold assembly to remove J-pipe from car. This is very time consuming and requires additional gaskets to purchased. Because of this, we do not recommend following the service manual for installation of the PERRIN J-pipe.
- Before installation begins, consider purchasing a PERRIN Turbo Support Bracket. This part is not required for the installation, but it is highly recommended to make the installation and future removals of the PERRIN J-Pipe much easier. This can be purchase online at PERRIN.com or any PERRIN dealer.
- We highly recommend replacing all gaskets with new Subaru brand gaskets, not aftermarket gaskets. These can be too thick and compress too much causing flanges to warp when tightened. These can be purchased online at www.PERRIN.com
- The use of a penetrating oil will greatly reduce the chances of galling threads on bolts as they are removed. Take extreme care while removing all nuts as they are a locking nut, which naturally wants to bind with studs on turbo. Liberal use of penetrating oil and slow removal of nuts will reduce the chances of studs failing, or stripping.
- We highly recommend the use of anti-seize on threads of all bolts when reassembling.
- Included is an extra O2 sensor bung used for monitoring air fuel ratios with aftermarket gauges and or dyno tuning. Install plug before installation starts if this is not going to be used. Apply Anti-seize to threads and tighten to 20ft-lbs.

Parts Included with the PERRIN Downpipe:

- (1) WRX Front Section Downpipe
- (1) WRX Rear Slip Connection
- (1) 3" Accu-Seal Clamp
- (1) O2 Sensor Plug
- (1) 3" Gasket
- (1) M6 SS Nut
- (1) M6 SS Washer
- (2) 3/8-24x2 Hex Bolts
- (2) 3/8-24 Nuts
- (4) 3/8 Washers
- (2) 3/8 Lock Washers
- (1) Anti-seize Grease Packet

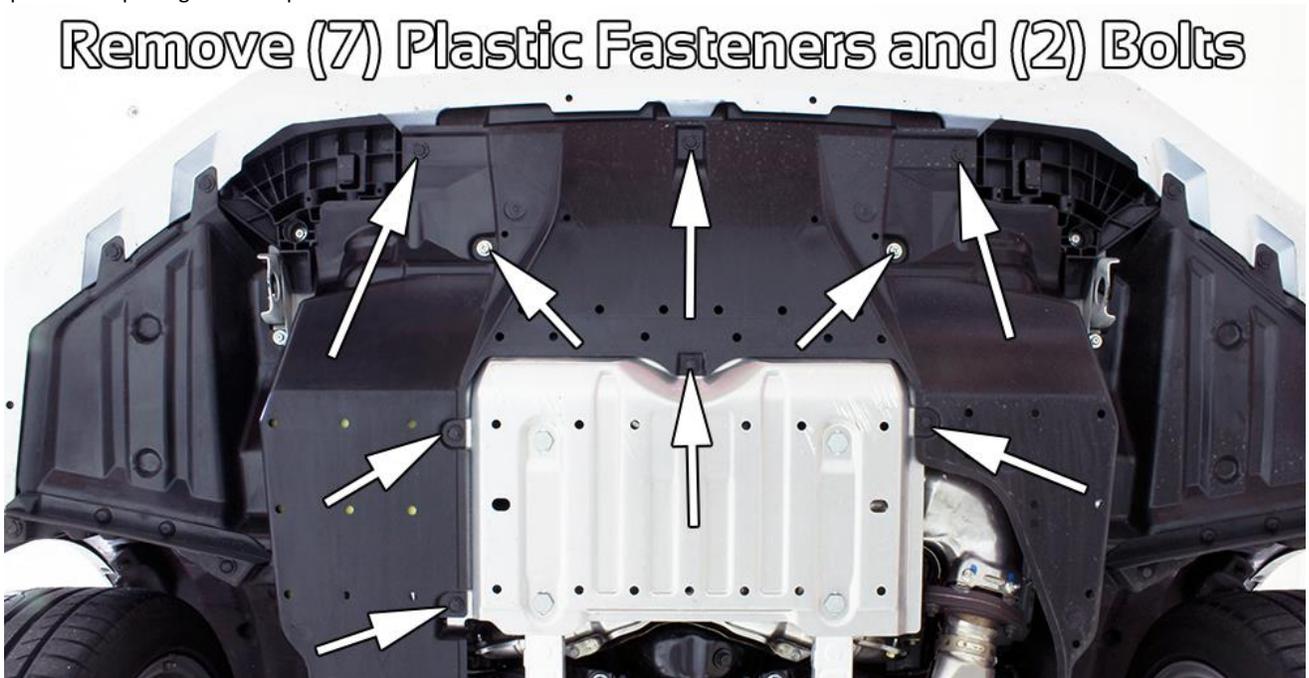
Removal Of OEM J-Pipe

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.

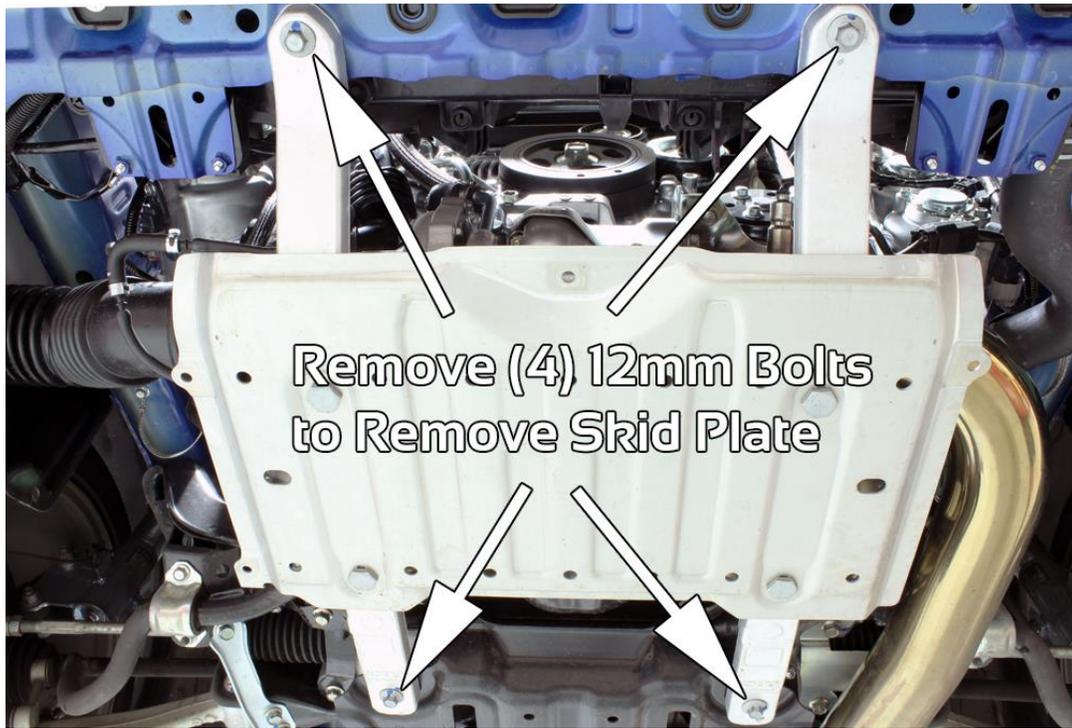


3. Using proper panel removal tool or flat head screw driver, locate and remove (7) plastic fasteners and (2) 12mm headed bolts from lower portion of splash guard. See picture below.

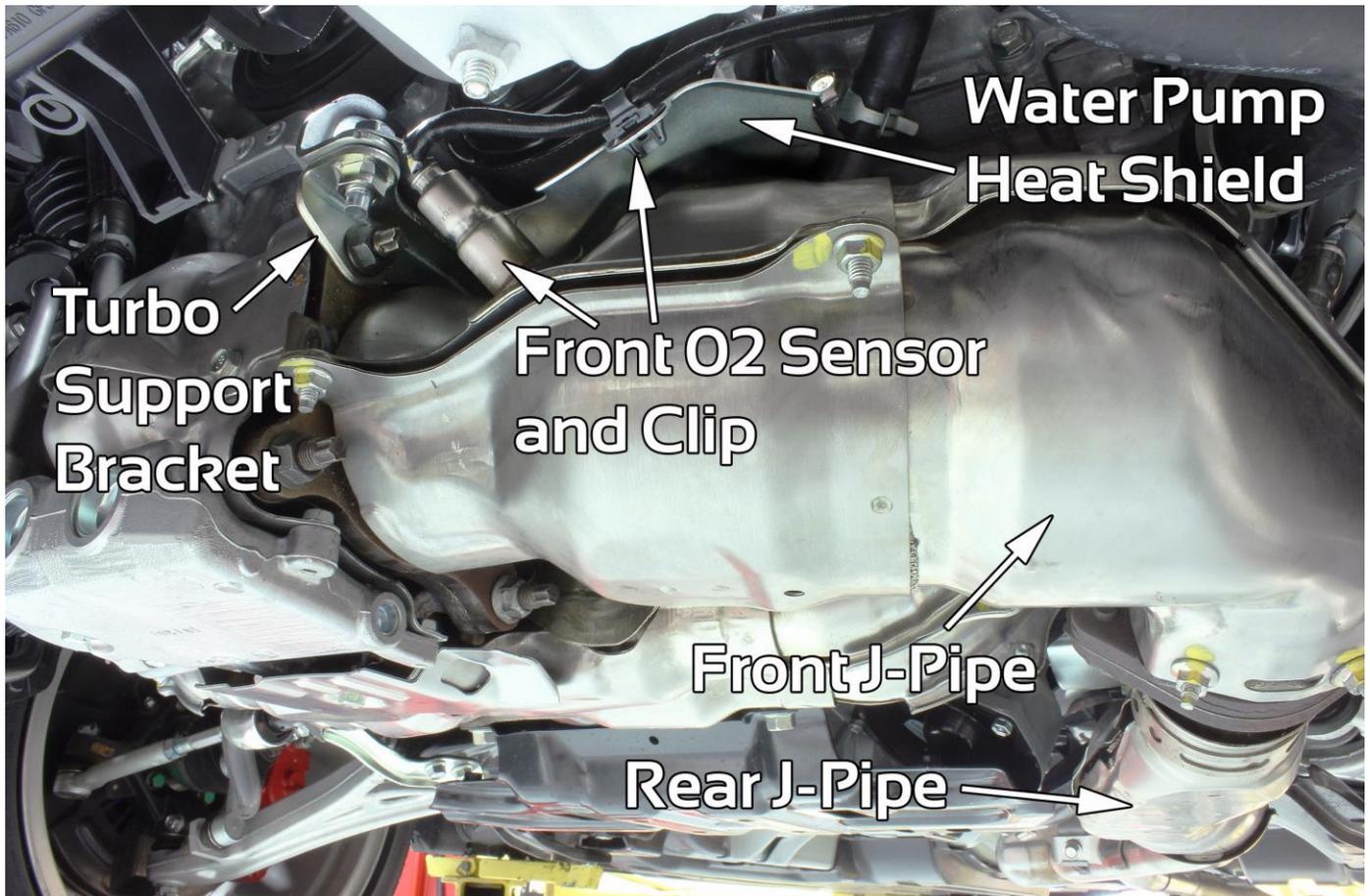
Remove (7) Plastic Fasteners and (2) Bolts



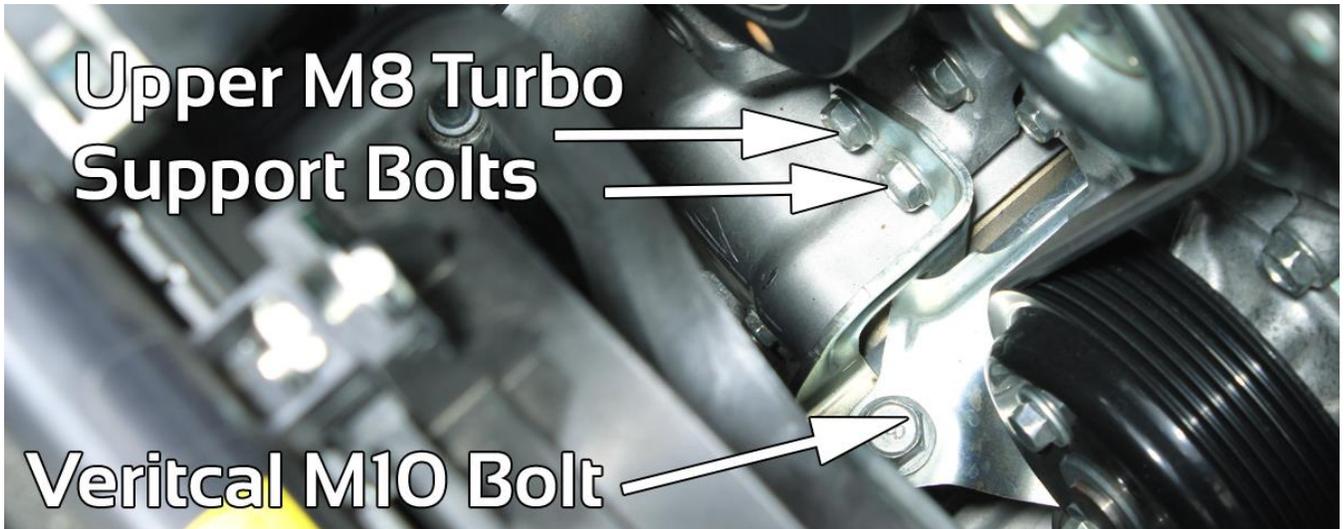
4. Remove splash guard from car and move off to the side.
5. Remove (4) 12mm bolts holding skid plate to chassis and set skid plate aside.



6. Remove hardware securing rear section of J-pipe to catback exhaust system.
7. Remove (1) 14mm bolt securing rear section of J-Pipe to transmission support bracket.
8. Remove (2) bolts securing rear section of J-pipe to front section, then remove rear section from car.
9. Disconnect rear O2 sensor from the engine harness, then remove using proper O2 sensor wrench.
10. Remove ground bolt from J-pipe.



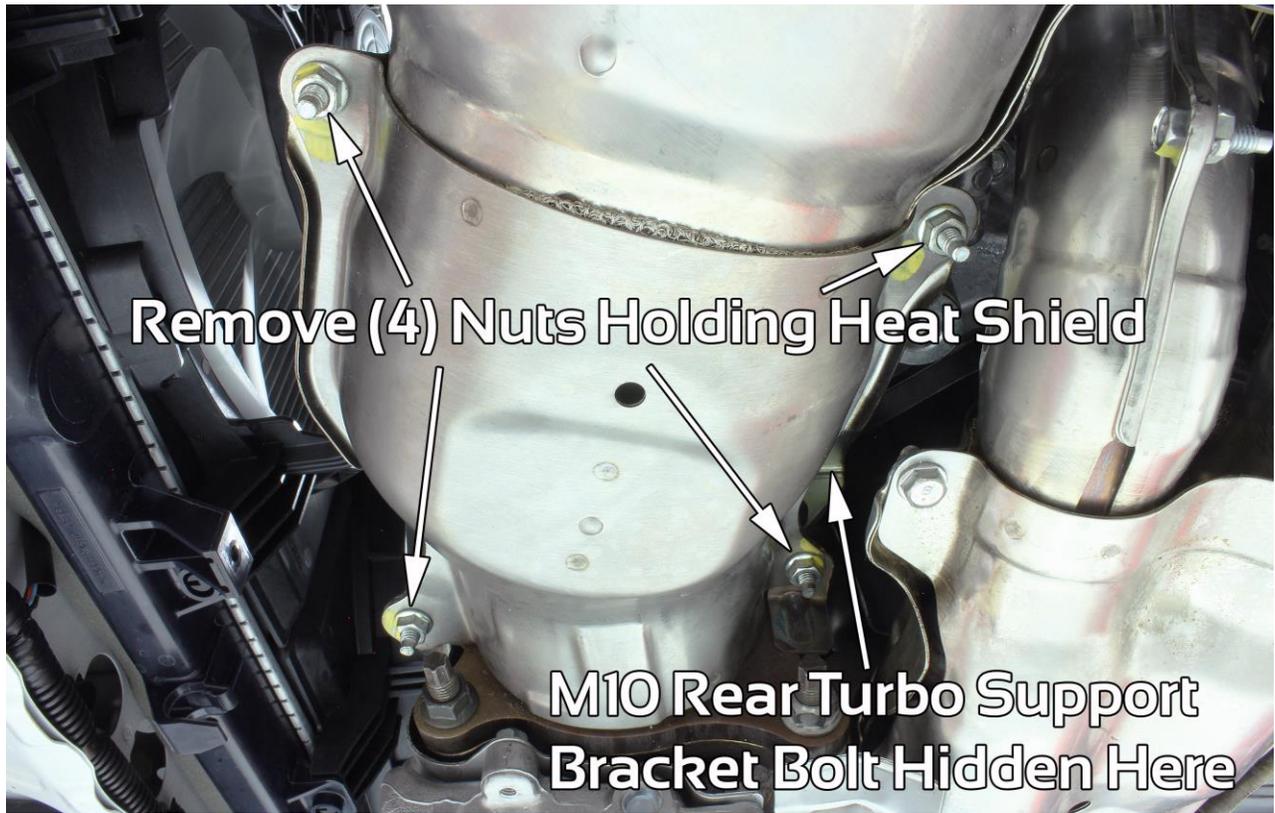
11. Using pliers, remove clip securing front O2 Sensor harness to water pump heat shield, then remove sensor using O2 sensor wrench.
12. Using picture below taken from the engine bay looking down, remove M10 Bolt, and loosen (2) M8 bolts.



13. Using picture after step 10, locate and remove (1) M8 bolt securing water pump heat shield to engine and remove shield from car.
14. Using picture below, locate and remove M10 bolt securing rear portion of turbo support bracket to engine (located behind J-Pipe below car).



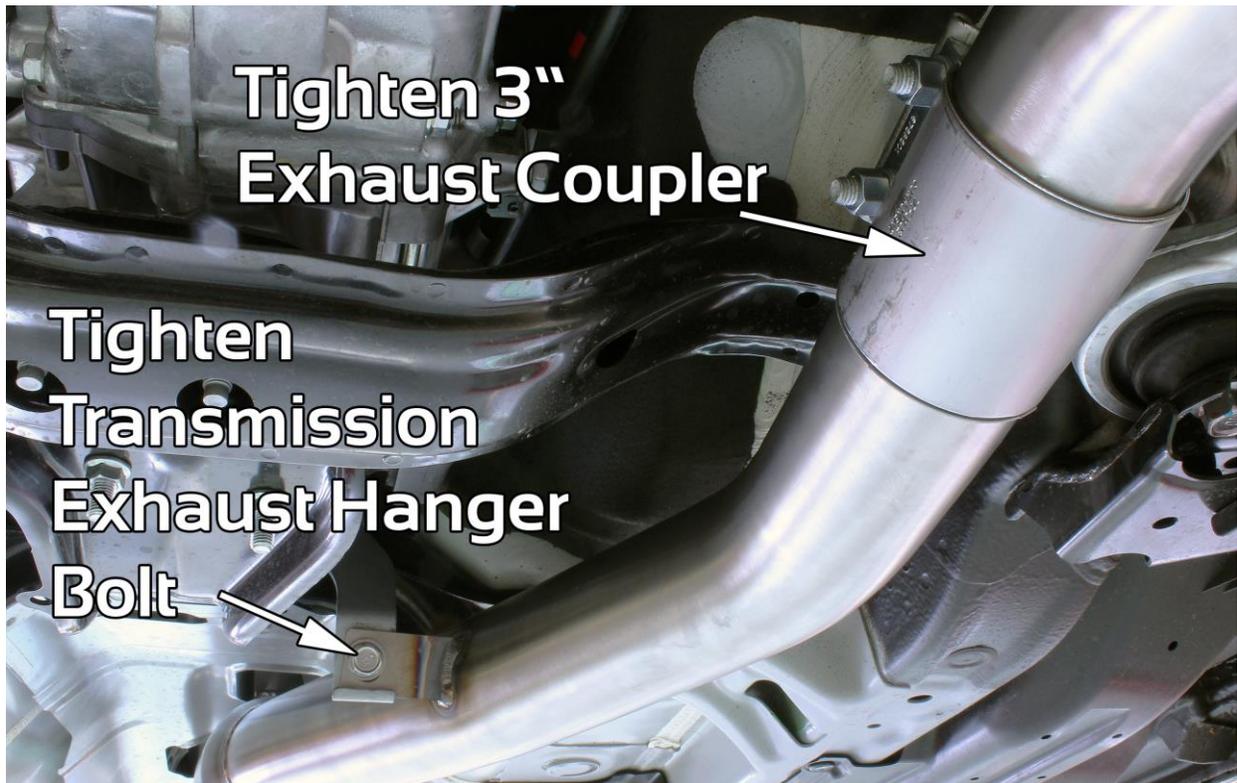
15. Remove (4) M10 nuts securing J-Pipe to turbo.
 - a. A high-quality penetrating oil should be sprayed on all nuts and left to sit for a minimum of 30 minutes. This will reduce the potential for breaking and stripping studs.
 - b. Have a selection of extensions and a universal joint to remove the upper, rear nut. This can be best accessed with a long extension reaching from the fender area.
 - c. Break nuts free then re-spray nuts and studs with penetrating oil. Tighten then loosen nuts a small amount to work oil into threads and let sit for a few minutes.
 - d. Remove all (4) nuts from J-pipe.
16. Remove turbo support bracket from J-pipe. This step can be done a couple of different ways both involving a pry-bar. This step is very difficult to find the perfect spot to remove the bracket as clearances are very tight (around the water pump). Take time with small movements of bracket and pulling J-Pipe from turbo to remove. Patience will pay off here!
 - a. Option#1, remove J-Pipe heat shield to access bracket. Remove (4) nuts securing upper and lower shields. Using a combination of a pry-bar, bending upper shield, and pulling J-pipe from turbo slightly, remove upper shield from J-pipe.
 - b. Option#2, slide bracket off turbo studs, then slide J-Pipe off turbo slightly. Use a pry bar to bend bracket slightly into heat shields, then pry bracket away from turbo. You should be able to slide J-Pipe further off turbo and slide turbo support bracket around water pump. If bracket does not slide around water pump, carefully pry on bracket/J-Pipe then J-pipe to turbo to free bracket from engine.



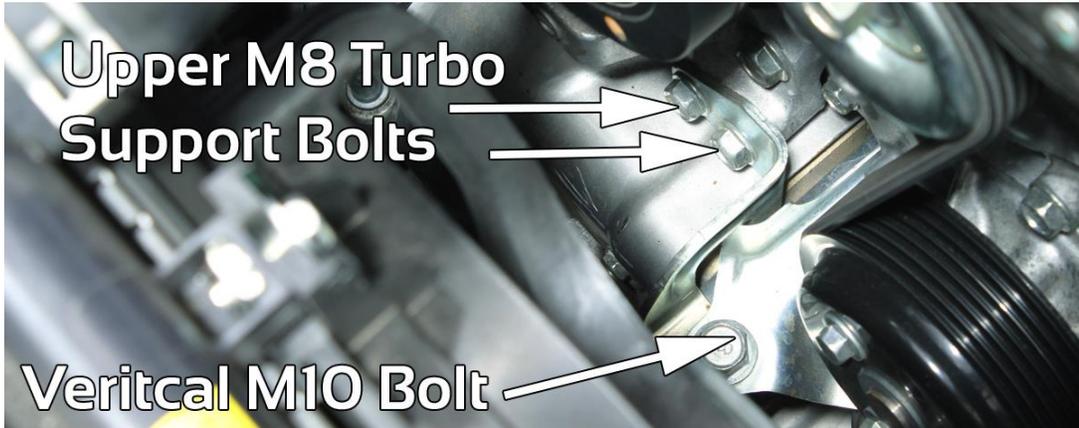
17. With turbo support bracket removed, remove J-pipe from car.

Installation of PERRIN J-Pipe

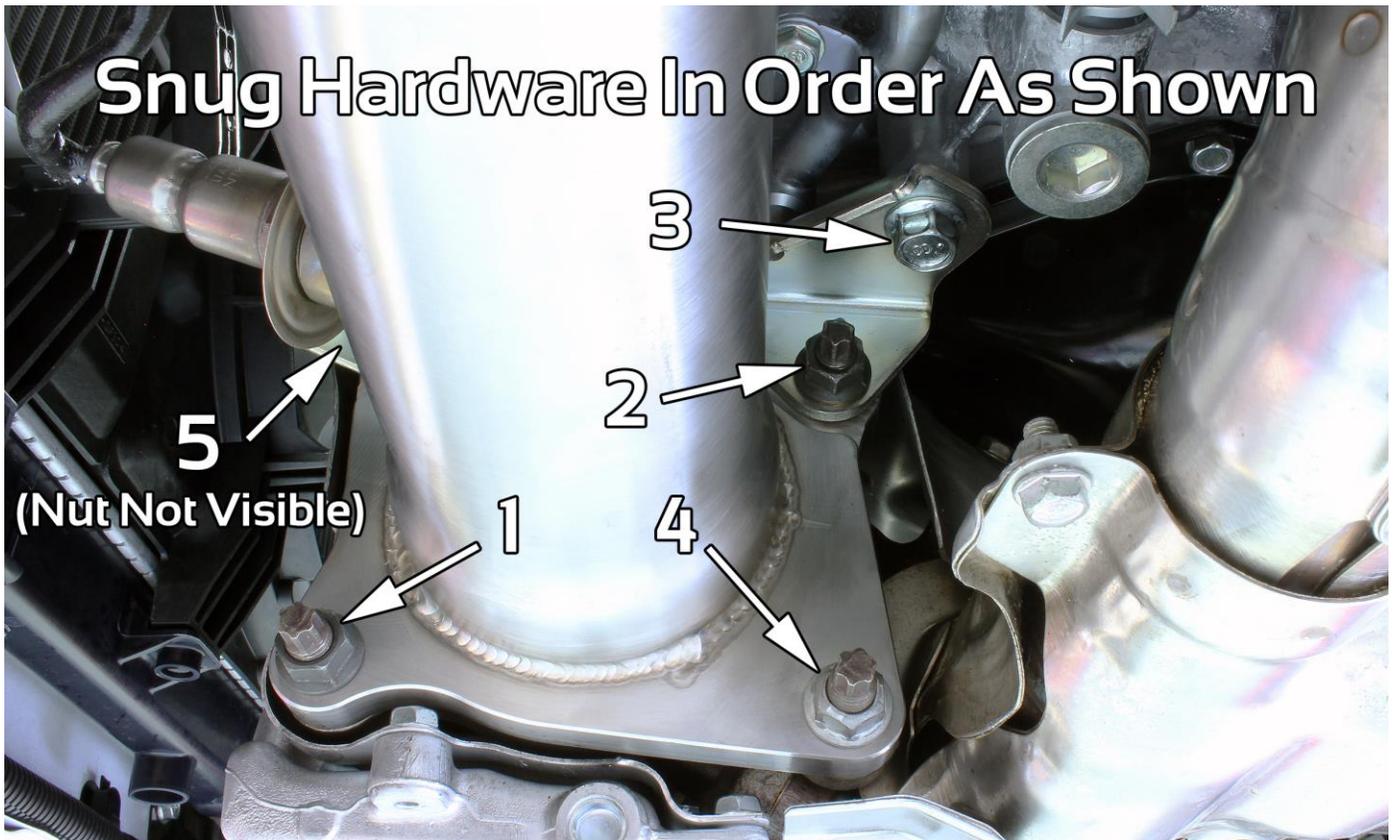
1. Replace any turbo studs and nuts that were damaged during removal.
2. Install new gasket to turbo and slide front section of PERRIN J-pipe onto studs on turbo.
3. Slide turbo support bracket over upper two studs and loosely install (4) nuts securing PERRIN J-pipe and bracket to turbo.



4. Slide exhaust coupler over front section of PERRIN J-pipe.
5. Install rear section of PERRIN J-pipe to transmission exhaust hanger and hold in place with bolt removed previously.
6. Slide exhaust coupler from front section to rear section making sure it is equally covering both tubes. Do not exceed 1" of a gap between both tubes. Lightly snug down hardware to hold tubes in place.
7. Using supplied hardware and 3" gasket, loosely connect PERRIN Rear J-pipe to exhaust making sure to align flanges as best as possible.
8. Install water pump heatshield to engine using (1) M8 bolt removed in previous step. Leave bolt loose for now.

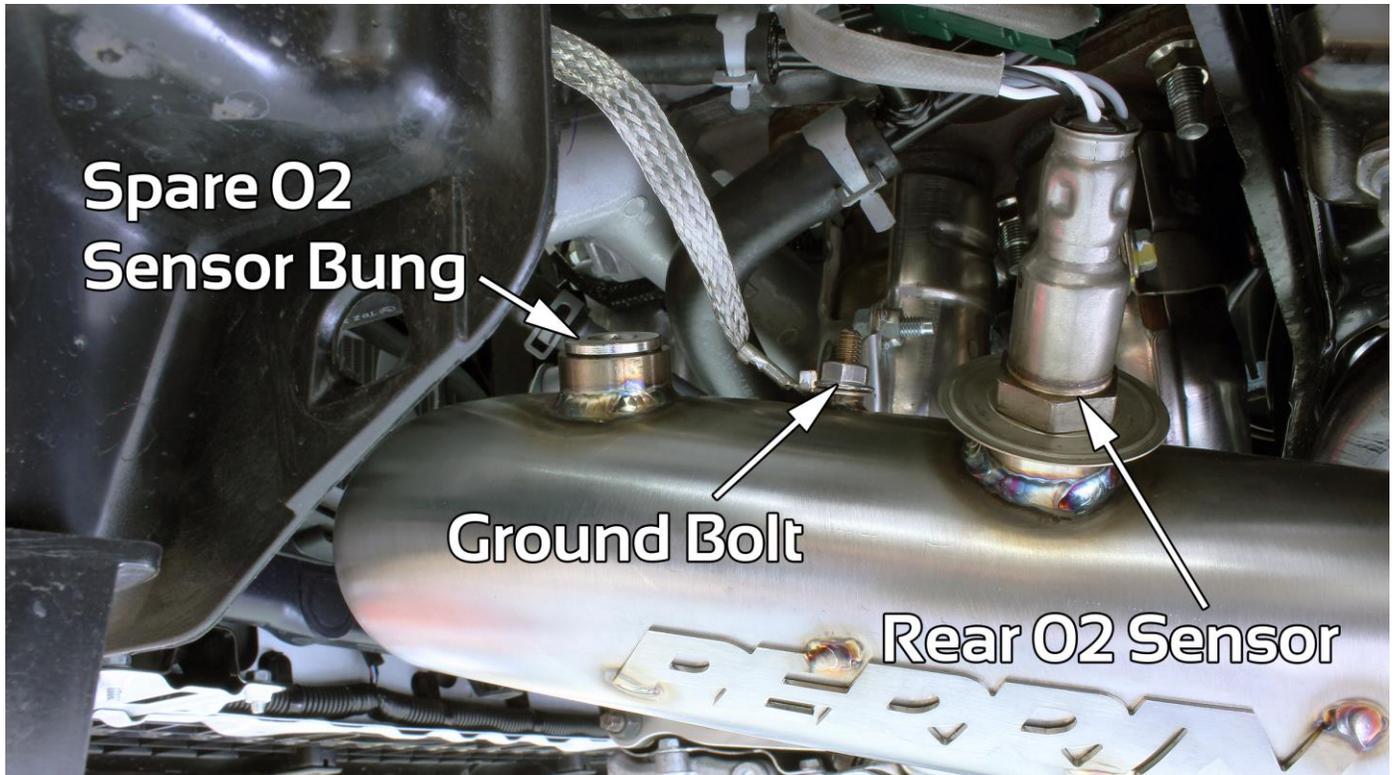


9. Using picture above and below, loosely install (2) M10 bolts: One facing vertically (also secures water pump shield), and one facing towards ground securing turbo support bracket to engine. **IMPORTANT NOTE: M10 bolt securing turbo support bracket to engine (one facing down) may not line with hole in block. This is a very common problem and extreme care must be taken to ensure bolt does not get cross threaded into block. This may involve using a pry-bar to push header in a direction that allows it to better align, and or grinding a slot in the bracket.** Purchasing a PERRIN Turbo Support Bracket Kit will eliminate this issue and make future removals of J-pipe much easier. This kit can be purchased online at PERRIN.com or at any PERRIN dealer.
10. Using picture below, lightly snug nuts and bolts as show. Then, in the same order, fully tighten bolts and nuts to 31ft-lbs.



11. Referencing picture above step 9, tighten (1) M10 Bolt to 30ft-lbs and (2) M8 bolts securing front upper turbo support bracket at engine to 15ft-lbs.
12. Tighten (1) M8 bolt securing water pump heat shield to engine to 15-ft-lbs.

13. Tighten 3" exhaust coupler to 40ft-lbs. Then tighten rear transmission hanger bolt to 25ft-lbs.
14. Tighten (2) bolts connecting J-Pipe to exhaust to 25ft-lbs.
15. Using supplied M6 nut and washer, attach ground wire to J-pipe.



16. Install rear O2 sensor to PERRIN J-Pipe then plug into engine harness.
17. Install front O2 sensor, making sure to snap plastic fastener on harness into water pump shield, then plug into engine harnesses.
18. Before proceeding, start car and listen for exhaust leaks and watch for any evidence of leaking fluid (evidence of an exhaust leak). Fix any issues before proceeding.
19. Reinstall OEM skid plate and tighten bolts to 15ft-lbs.
20. Reinstall plastic splash guard.
21. After 5 hours of drivetime, re-check all hardware for tightness.

Questions, Comments and Suggestions Contact: Tech@PERRIN.com
Visit Our Website for Instant Chat Options at www.PERRIN.com