



## Rotated Garrett GT Turbo Kit

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Thank you for purchasing the PERRIN performance rotated turbo kit. Installation of this turbo should only be performed by persons experienced in the installation and proper operation of turbochargers and related systems. This kit is designed around using Garrett GT2860R, GT3071R, GT3076R, and GT3582R. All of which utilize Garrett T3 turbine housing with 3", 4 bolt discharge.

**WARNING:** AN ACCURATE BOOST GAUGE AND PROGRAMABLE ENGINE MANAGEMENT, IS REQUIRED FOR PROPER INSTALLATION AND ADJUSTMENT OF THIS PRODUCT. IMPROPER INSTALLATION AND USE OF THIS PRODUCT WILL DAMAGE THE 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!

**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:**

- The use of a factory service manual is highly recommended. <http://techinfo.subaru.com>, and <http://subaru.spx.com> is a place to buy OEM tools.
- It is critical that all bolts and nuts are tightened; improper tightening can cause serious injury or death.
- 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 treads of all bolts, when reassembling.
- This kit comes with STI oil feed line only. WRX oil line with 12mm banjo is purchased separately.

### **Parts Included with the PERRIN GT ROTATED TURBO KIT:**

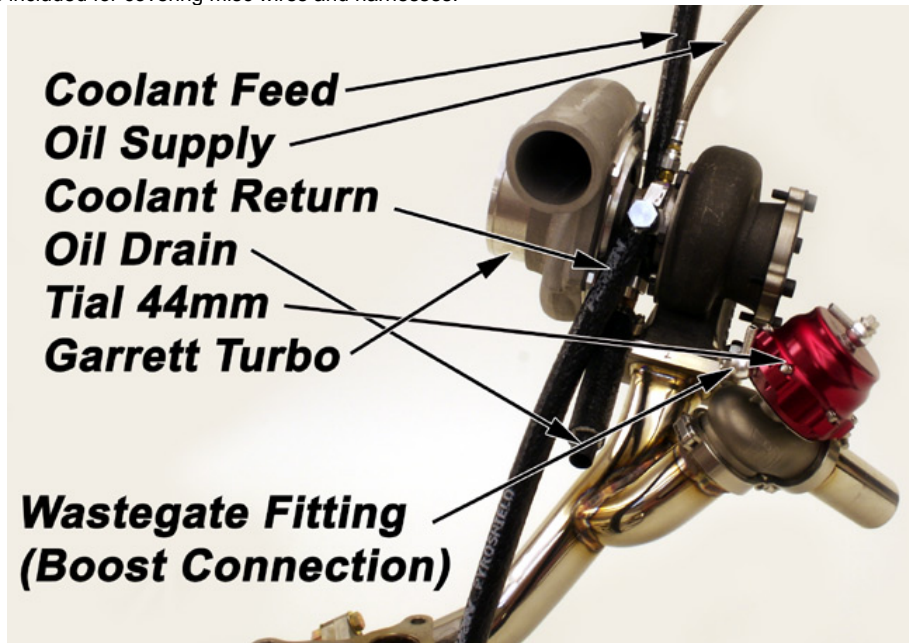
- (1) Rotated Turbo Uppipe Assembly
- (1) Rotated Turbo Downpipe Assembly
- (1) STI oil line with female fitting (WRX oil line with banjo fitting is ordered separately)
- (1) Gasket set (T3 Turbo outlet, 3" gasket)
- (1) 175 PERRIN T-bolt Clamp
- (4) M8x25 socket cap screws
- (1) 3/8"- 3/8" connector
- (2) #3 hose clamps
- (2') 3/4" PERRIN PYROshield
- (3') 5/32" vacuum hose
- (10) Zip ties

Checked By \_\_\_\_\_

### **Installation**

- 1) Remove the factory turbocharger per factory service manual. Take care in removing OEM oil line from turbo. Remove this line from engine to insure it doesn't become stressed from over bending. Take note of OEM oil drain tube and its orientation.
- 2) Remove factory uppipe and Uppipe brackets from car.
- 3) Remove OEM inlet hose from engine. This can be done by removing the manifold, or by destroying OEM part.
- 4) Temporarily drop turbo assembly into car to make sure OEM turbo oil line clears turbo assembly. If line needs to be bent, take great care in not bending to far or too sharply. If OEM oil line breaks, this can be very time consuming and costly to replace.
- 5) Turbo, uppipe, and Tial 44mm Wastegate have been factory assembled/aligned to ensure associated pieces fit properly. Do not take apart to install into car. Uppipe assembly will drop straight into car with out any adjustments.
- 6) Drop Uppipe assembly into car, and loosely install to header. Make sure to use a new factory gasket between header and uppipe. Replace any galled or damaged bolts from removal of OEM parts.
- 7) Bolt downpipe to turbo using supplied gasket and M8 bolts. Leave bolts slightly loose until downpipe is snapped into transmission hanger, and hanger bolt is tightened. Once downpipe is installed into hanger, tighten M8 bolts securing downpipe to turbo.
- 8) Bolt downpipe to catback exhaust using supplied flat gasket and bolts. Some catbacks utilize OEM donut gaskets, may require modifications.
- 9) Align uppipe flange to header flange, and tighten bolts to 40ft-lbs. Again, make sure to use new gasket.
- 10) Install supplied oil line onto OEM oil line fitting. Make sure to tighten down or oil leak can occur. Some bending of OEM oil line will be necessary to clear turbo. Extra care must be taken to ensure the hard line doesn't break.
- 11) Locate OEM turbo coolant hoses. One is located on passenger side of head, and the other is located on top of coolant fill reservoir. Connect coolant hoses from turbo charger to these OEM hoses. Make sure to use supplied hose clamps where they attach to OEM hoses. In and out orientation do not matter, but we recommend attaching the hose on the drivers side to the coolant fill tank.
- 12) Locate OEM turbo oil drain tube on passenger side head below OEM turbo location. Locate PERRIN installed turbo oil drain hose and fitting. Install turbo drain hose into OEM turbo drain hose located on head. Some bending of hose is necessary to get it to fit into OEM drain hose. The OEM drain hose is able to move up and down slightly to change overall length. Make sure there are no kinks in hose, as this will cause a restriction in oil draining from turbo.
- 13) Remove Power steering line from power steering pump. Using supplied -8 Pyroshield hose protector, slide over power steering line all the way down to steering rack. This is used to protect the power steering line from the extreme temperatures seen by the uppipe. Not using this can cause a fire. Reinstall power steering line back to power steering pump making sure to clean up any oil that spilled out.

- 14) Remove aluminum power steering return line (S bent line) from rubber hose at power steering reservoir. Install supplied 3/8" connector into hose and secure with OEM clamp. (Power Steering oil will come out of the hoses, have rag ready to catch oil). New imprezas will need to cut aluminum line to shorten it. Take care not to get metal shavings into hose and lines.
- 15) Install PERRIN rotated turbo intake kit and boost tube connection. (see rotated intake instructions)
- 16) Install boost control system to Tial 44mm wastegate according to instructions provided with boost controller. If no instructions were provided, located lower port on wastegate, and connect to boost or vacuum source. This will provide 14-16psi of boost.
- 17) Start car and check for oil leaks at turbo, at the oil drain tube connection, and coolant line connections. If any leaks are found stop engine and fix. Start engine, and warm to normal operating temperature. Again make sure there are no leaks once normal operating temps are reached.
- 18) Once no leaks are found, using supplied zipties, tie coolant hoses out of way of turbo, and Pyroshield material to oil line, and power steering line. Extra Pyroshield is included for covering misc wires and harnesses.



***PERRIN Recommends These Complimentary Parts:***

- PERRIN Rotated intake system.
- PERRIN Dual Tube Catback Exhaust.
- PERRIN Front Mounted Intercooler
- PERRIN High Flow Fuel Rails
- PERRIN Modified 816cc Fuel Injectors
- Walbro 255LPH fuel pump

***WARNING!!***

***These turbos are capable of more power than the stock engine is designed for. Catastrophic failure can occur when stock horsepower levels are exceeded. We highly recommend a properly built engine that is capable of handling the extra power and a proper tune. PERRIN performance is not responsible for any and all damage caused by this turbo.***

***For questions & comments please contact  
503-693-1702  
TECH@PERRINPERFORMANCE.COM  
AIM contact ALTAPERRINSALES***