

**Procedure:**

Installation of the ATP Eliminator Series turbo hardware kit for the Transverse Mounted FWD (Front Wheel Drive) 1.8T VW/Audi/Seat Models Golf/Jetta/Beetle/TT/Leon etc. Years 1998 through 2005.



**Parts Checklist (Bill Of Materials):**

1. Turbocharger unit with integral waste gate - Eliminator Series (GT2X, GTRS/GT2871R)
2. Coolant Feed Line assembly (GTRS/GT2871R) / Coolant bypass hose (GT2X)
3. Oil Feed Line
4. Gasket, nuts, and studs (Turbo to Downpipe)
5. Coolant Return Line assembly (Only on GTRS/GT2871R)
6. Compressor outlet connection pieces (To stock intercooler hose)
7. 8mm Metric Bolt, to replace lower manifold to cylinder head stud (Only on GTRS/GT2871R)
8. Oil feed adapter (at oil filter housing)
9. Spacer kit for shifter bracket
10. Oil return gasket and bolt/nuts/studs
11. Manifold to turbo bolts/gaskets and gasket
12. Compressor inlet adapter kit (to use with stock inlet hose)

Optional upgrade equipment:

1. Large diameter turbo inlet hard pipe kit (Required for over 200WHP).
2. 3" Stainless Downpipe.
3. Larger injectors and ECU programming (fueling kit)

**Some Notes regarding this turbo application:**

The “Eliminator” series of bolt-on turbochargers has been designed to be both installation friendly and user friendly. The most basic use of this kit is to replace a defective K03 or K04 turbo without any modifications to the main components in the engine bay. The following procedure outlines the steps for installing the base turbo hardware kit which allows you to keep all stock supporting components. With the basic install, all emissions related components are retained. Refer to the supplementary documents to install the optional upgraded inlet pipe, racing test pipe, injectors, and ECU chip. Make no mistake though, this turbo is capable of 300+ HP in its stealth-like form and can blend into the engine bay a stocker.

**Begin Installation Process**

**Installation Tip #1** – Using a vehicle lift, securely place vehicle on lift so that bottom of engine components are accessible. In absence of a vehicle lift, use tall ramps, if possible. If jacks stands are to be used, make sure vehicle is securely planted before getting under the vehicle.

**1. Drain fluids (both coolant and oil):**

While it’s not completely necessary to do so, draining both fluids is highly recommended. During turbo removal, since both oil and coolant fittings have to be disconnected, there is a high chance of oil coolant mixing. In addition, the new turbo will like to see fresh fluids running through its veins.

1. Using a 19mm wrench, undo oil drain nut on oil pan and allow oil to drain completely.
2. Disconnect the coolant hose leading from turbo to back of the engine block and allow coolant to drain completely.

**2. Begin basic removal:**



1. Using flathead screwdriver, remove the engine cover from top of valve cover on engine.

2. Begin removing components connected to the stock compressor outlet pipe (stainless pipe).



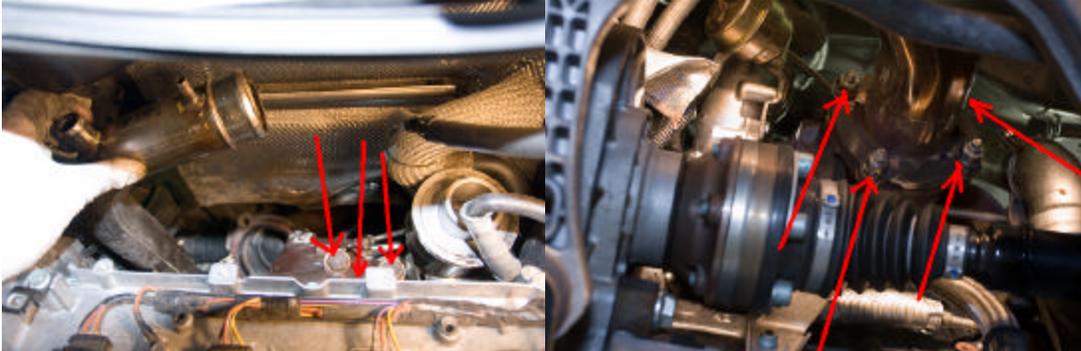
3. Unscrew hose clamp holding diverter valve/BOV to stainless pipe.
4. Disconnect N75 signal hose (small black hose) from stainless pipe.
5. Unscrew two brackets holding stainless pipe to engine (10mm bolt head)
6. Remove large rubber elbow from stainless pipe and turbo connections



7. With all components unbolted, pipe should be free to pull aside (this allows easy access to pull and replace the turbo).



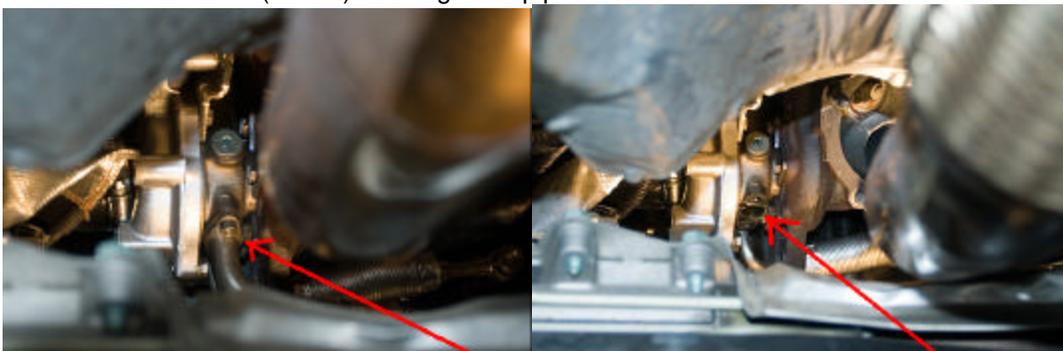
8. Prepare all turbo exhaust parts for removal.



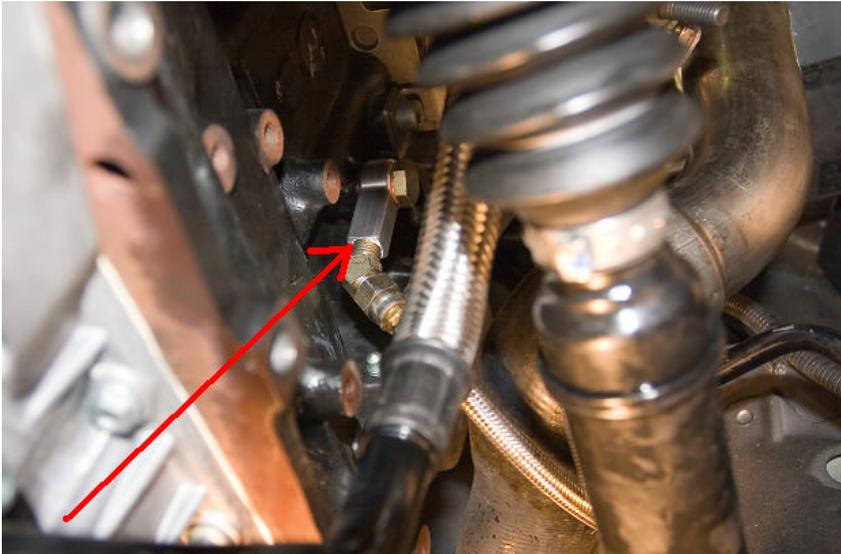
**Installation Tip #2** – Using a spray on penetrating oil (such as liquid wrench lubricant), saturate all the exhaust nuts/bolts (turbo to manifold & turbo to down pipe) and allow it to sit. This will allow any rusted hardware to come loose without breaking. 5 minutes of preparation can save a lot of hours in nut/bolt extracting!



9. Remove the Nuts (17mm) holding downpipe to the turbo.



10. Remove the 2 (5mm) allen head bolts holding the oil return line to the stock turbo.



11. Unbolt the coolant lines from the turbo and unbolt coolant line at the back of the engine block. Note: It is necessary to unbolt the turbo to manifold bolts to allow the turbo to sit low enough to access the allen bolt holding the oil/coolant lines to the stock turbo
12. Install the coolant return hose assembly as shown (longer 24" hoses assembly) to back of engine block (replacing stock hose).

**Installation Tip #3** – Notice the connection between aluminum machine banjo and 45 degree fitting is  $\frac{1}{4}$ " NPT (pipe thread) which requires the use of Teflon tape or thread sealant.

- a. Install other end to hose on side of engine if GT2X to terminate the coolant bypass hose assembly.



- b. If GTRS or GT2871R, Install the shorter 12" coolant hose to back of engine block and install the other end of this hose to coolant port on the eliminator turbo (facing engine block) using same banjo assembly once the turbo is on.
- c. If GTRS or GT2871R, Install the longer 24" coolant hose to the back port on the eliminator turbo (facing firewall) and run that hose into the side of the engine as shown above.
- d. Either GTRS/GT2871R or GT2X, when running into the coolant feed hose on the side of the engine as shown above, cut away the original hose and slip on barb terminator provided.

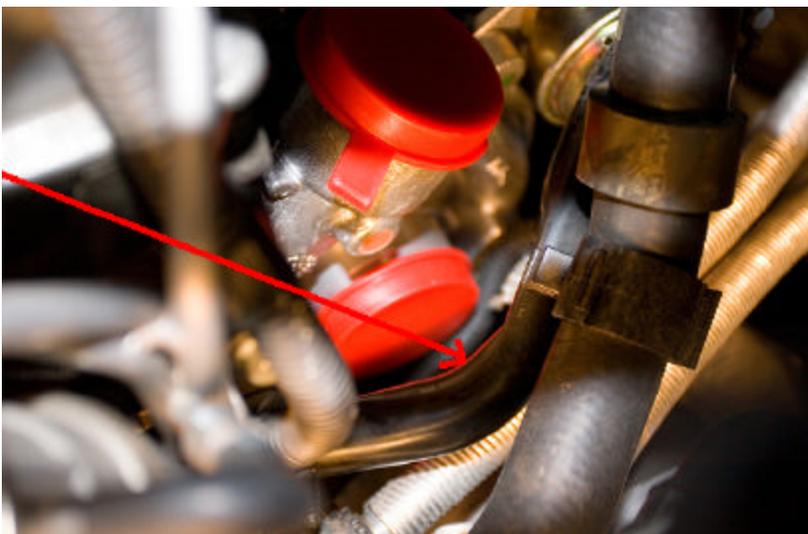


13. Bolt on the new eliminator turbo as shown using new bolts, gaskets, and washers provided.

**Note: GTRS/GT2871R Requires the removal of the bottom left manifold to head exhaust stud and replacing it with the (1) single allen bolt provided.**

**To remove the stud, remove the nut and then grab the stud with a larger pair of pliers and unscrew until removed.**

[ If installing a high flow manifold, please swap out the new manifold prior to bolting on the new eliminator turbo]



14. Grab black coolant pipe firmly and pull up and bend upwards 1" and towards the compressor outlet nozzle leaving enough clearance only for the outlet hose.

15. Notice new position of black coolant pipe (sits 1" higher and further left closer to top of compressor housing on new turbo)



16. Oil feed line install.

- a. Screw oil 1.8T oil feed fitting into original feed source on oil filter housing.



- b. Attach 90 degree end of the oil feed line into end of the fitting.  
c. Attach straight end of oil feed line straight into the turbo 90 degree (already attached to turbo)



17. Use compressor outlet pieces provided to construct the outlet adapter (to stock compressor outlet hose).



18. Slide pieces together: 2" stainless coupler to stock 90 degree rubber and connect other end of 2" stainless coupler to newly cut short elbow (other end into GT2X turbo). Clamp down all hoses with clamps provided.

19. Reinstall all hose connections and brackets from stainless pressure pipe to engine:

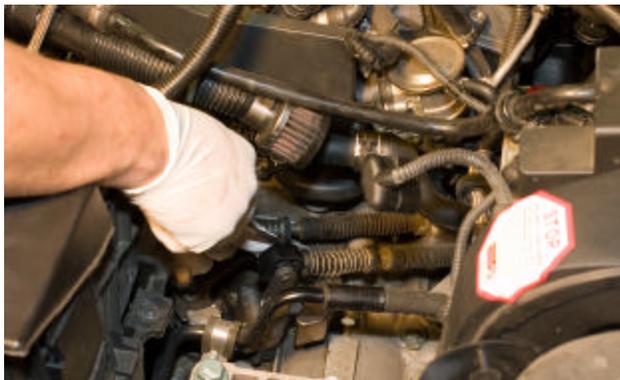




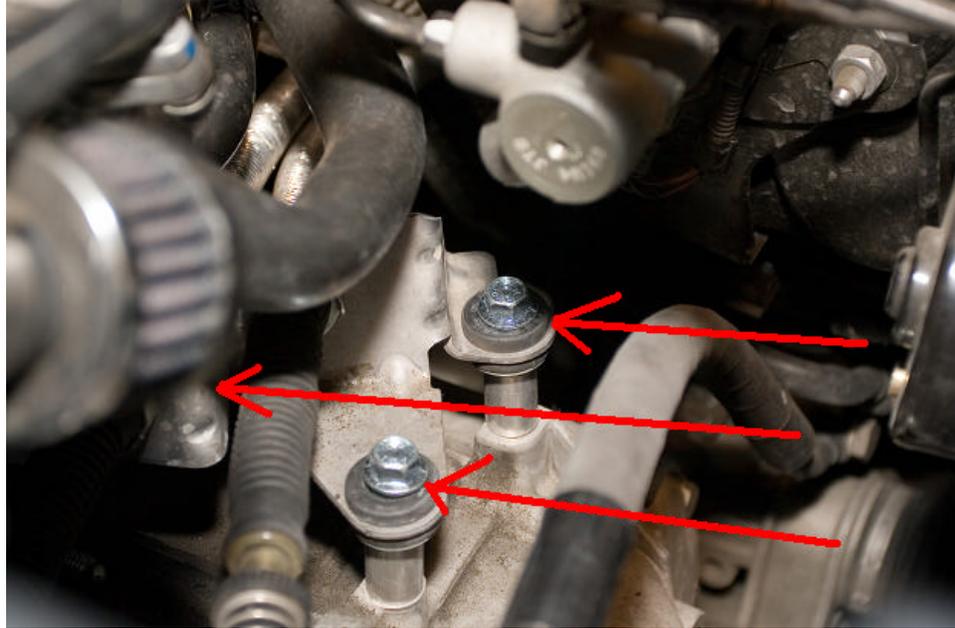
20. Use the Shifter Bracket Spacer Kit to Space bracket 1" higher as shown above.

21. Proper steps for shifter cable unbolting and length adjustment:

a. Carefully unclip the retainer clips to release the (2) cable ends.



- b. Remount the shifter bracket onto the top of the tranny using the (3) 1" spacers and longer bolts as shown:



- c. Once the shifter bracket is remounted with the spacers, re-install the shifter cable ends into the shifter mechanism and re-install the retaining clips.



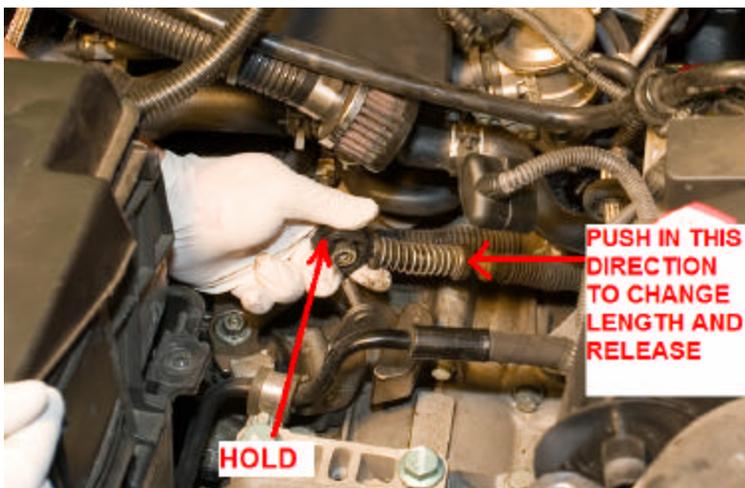
Important Notes for adjusting cable length if necessary to compensate for the spacer installation:

1. Make sure shifter is in Neutral by making sure white tab is on the center as shown:



2. When slipping the cable end back on to the shift level, make sure that the lever doesn't get pulled in either direction due to altered cable length.
  - i. If too short and lever appears pulled slightly , then lengthen the cable end slightly to retain 100% neutral once cable end slips on.
  - ii. If too long and lever appears to be pushed forward slightly, shorten the cable end slightly to retain 100% neutral once cable end slips on.

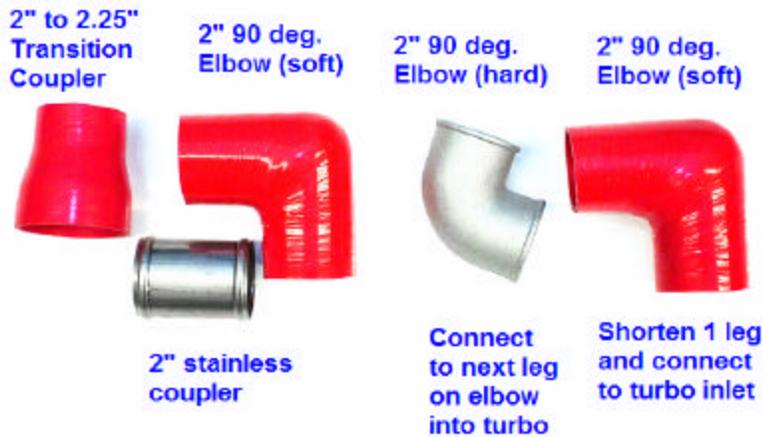
3. To adjust the cable end length, refer to diagram below.



22. Reinstall the top of oil return line into the bottom of the new turbo.



23. If you have an optional "Large Bore Inlet Pipe for the Eliminator series" ready, follow the separate instructions and install it now, or install the Factory Stock Inlet Hose using the following adapter piece provided:



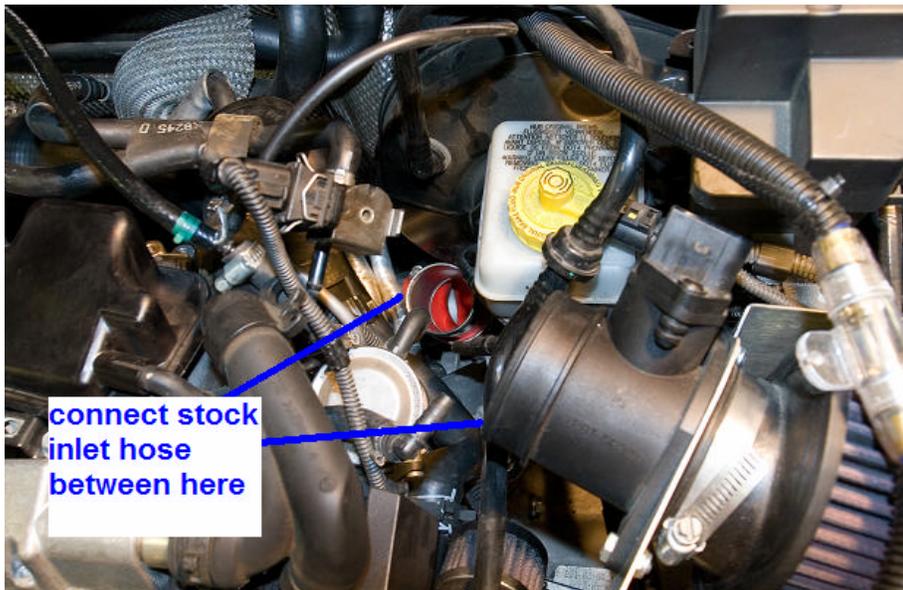
a. Connect first (3) 90 degree elbows as shown (shorten leg at turbo):



- b. Back to the top of the engine bay, install the 2" stainless coupler to end of 90 degree soft elbow from below.
- c. Install 2.25" to 2" transition hose to stainless coupler.



24. With airbox and MAF pipe in original location, run the stock inlet hose into new connection as show:



25. Re-install downpipe onto turbo with new studs and gaskets provided.

Note: Installation of eliminator hardware is complete. Proceed to filling fluids and follow startup procedure carefully.

## **Pre - Startup Process**

### **1. Fill fluids (both coolant and oil):**

1. Make sure oil drain plug has been re-installed on oil pan.
2. Fill engine with new oil to proper level. Oil type and capacity can be found in the car owner's manual.
3. Fill coolant system with factory specified coolant type.

### **2. Circulate the oil through the turbo WITHOUT starting the engine!**

Option #1: Remove the ECU from the car.

Option #2: Disconnect all the injector connectors from the injectors and disconnect all the connectors from the coil packs.

1. Once one of the above options has been met, proceed to crank the engine (as though trying to start it) for 10 seconds at a time for 3 minutes.
2. If ECU was previously removed, reinstall now. Re-install injector connectors and coil pack connectors and engine will start.
3. Allow engine to idle and observe for leaks. If any leaks are detected, shut down the car and fix. Repeat steps 1 through 3 as necessary.
4. Once there are no leaks found, allow engine to idle for 15 to 20 minutes for proper warm-up.

Note: During warm up idle, all the oil residue from installation will burn off. During this time, there will be light smoking due to the burn off. If there is heavy, cloudy white smoke or any foreign mechanical sounds observed, shut the car down and contact your nearest dealer.

### **3. Test Driving:**

1. An upgraded turbo vehicle should never be driven without both a boost gauge and an air fuel monitoring device. If you do not have both installed, do not drive the car!
2. Install any supporting programming and/or injectors as necessary and follow the software manufacturer's specifications during the drive.
3. During the driving, monitor that boost levels never exceed the software provider's limits and air/fuel ratio does not go lean. Anything over 12:1 A/F under wide open throttle is considered lean.

Happy Motoring!