

***The Garrett PowerMax Turbo Upgrade Kit***  
***For the 1999.5-2003***  
***7.3L Excursion***  
***and F-Series Diesel Trucks***



**Kit Contains:**

- 1 Garrett GTP38R turbocharger**
- 1 Inlet hose with clamp**
- 1 Oil inlet o-ring**
- 1 Oil outlet o-ring**

**DESCRIPTION:** The Garrett PowerMax turbo kit is a drop-in upgrade for the 1999.5 - 2003 7.3L Ford Power Stroke diesel trucks. The kit contains a Garrett GTP38R turbocharger, an oil inlet o-ring, an oil outlet o-ring, and “Turbo by Garrett” inlet hose with clamp. These instructions are also posted on the web at [www.TurboByGarrett.com](http://www.TurboByGarrett.com) - please refer to the website instructions as any installation updates and tips will be posted on the PowerMax page.

**WARNING:** This drop-in turbocharger upgrade kit can be installed using common tools and automotive procedures. However, one should have basic knowledge of automotive repair and modification and should be familiar with and comfortable working on a vehicle. If you do not feel comfortable working on a large project such as this, it is recommended to have the installation completed by a professional mechanic.

# ***The Garrett PowerStroke Turbo Upgrade Kit***

## ***For the 1999.5-2003 7.3L Excursion and F-Series Diesel Trucks***

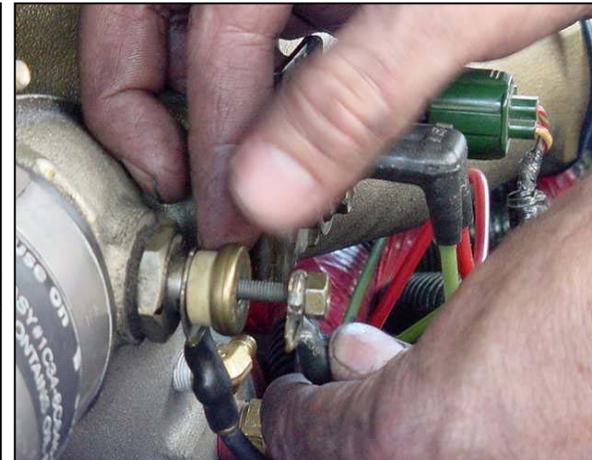


Before beginning, be sure to disconnect the negative terminal of the battery.

1. Unplug the green hose from the compressor intake duct. Remove the intake duct and crankcase breather



2. Remove the boost control module from the front of the x-section pipe



3. Remove the temperature sensor wires from the front of the x-section pipe



4. Unplug any remaining hoses and electrical connections from the x-section pipe



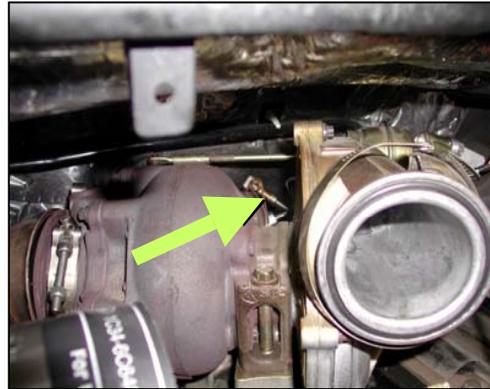
5. Loosen hose clamps and remove the x-section pipe from the engine. Cover intake manifold openings to prevent foreign objects from entering the pipework during this installation

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6. Using a 7/16" deep socket, loosen turbine outlet v-band clamp and move clamp off of the flange. Separate down-pipe from turbo



7. Using a 7/16" deep socket, loosen turbine inlet v-band clamp & move the clamp off the flange. This is the most difficult step of the installation. Use penetrating oil to help loosen the clamp.



8. Reach under turbo and slide the clip on the EBPD control rod towards the pedestal to free the EBPD crank



9. Remove the 2 bolts holding the turbo to the pedestal and unplug the red pressure line from the actuator



10. Make note of the turbo's position and how it fits on the engine for future reference. Lift the turbo off the pedestal and remove from the vehicle.



11. Remove the backpressure valve assy from the old turbo and install on the new turbo. Use anti-seize compound on the threads & torque the bolts to 185 - 215 lb-in.

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12. Ensure the 2 supplied o-ring oil seals are properly seated on the pedestal.. The turbo oil drain hole will pilot on the raised sleeve.

**NOTE: Before installing turbocharger, inspect and remove all foreign material from turbo air inlet, exhaust inlet, & exhaust manifold.**

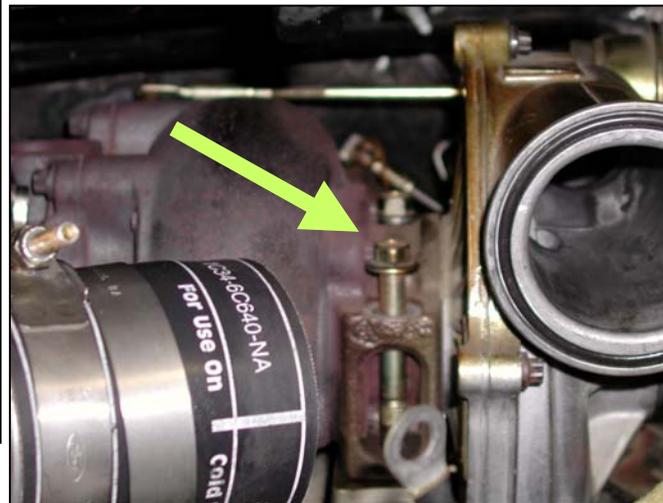


13. Install new turbo.

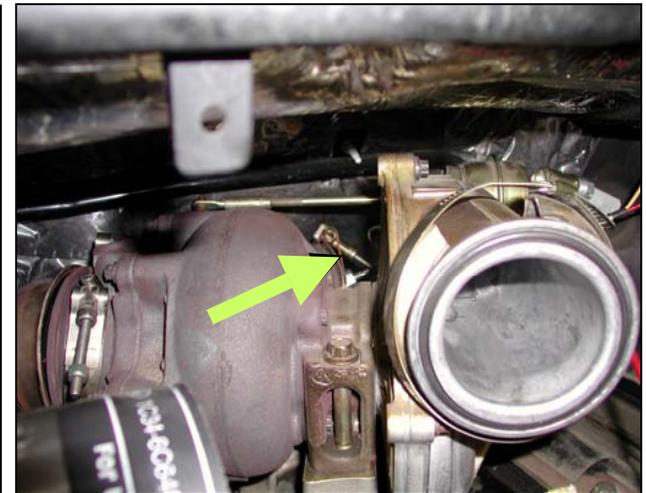
**NOTE: Turbine inlet flange should line up with the mating exhaust flange. The pin in the Y-flange should mate with the hole in the turbine housing flange.**



14. Ensure the crank pin for the EBPD drops into the hole in the control arm rod-end. Slide retaining clip back into place ensuring the clip fits into the crank pin groove.



15. Install and tighten 2 turbo "hold down" bolts and torque to 35-37 lb-ft..



16. Position and install turbine inlet v-band clamp and torque to 110-130 lb-in.

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17. Install downpipe. Guide the v-band flange to mate with the turbine discharge flange. Install v-band clamp & torque to 110-130 lb-in.



18. Remove covers (rags in this picture) from the intake manifold openings. Re-use the original compressor discharge O-ring and mount it into the new compressor discharge groove. A light coating of RTV or grease can be used to hold it in place.



19. Position the x-section pipe in place and re-install hoses. Tighten compressor discharge v-band clamp to 110-130 lb-in. Tighten hose clamps to 50-60 lb-in, and re-install all electrical and temperature connections.



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20. Re-install the red wastegate hose onto the wastegate hose actuator



21. Double check that the compressor inlet area is free from any foreign objects and that the inlet hose is clean. Install the new compressor inlet hose in place and insert the green hose into the boss. Tighten clamps snugly.



22. Re-install the crankcase breather assy, again verifying that everything is clean.



23. Re-install the hose from the breather duct to the air filter housing, snug the clamps. Reconnect battery, and you're DONE!!

**24. Now retrace your steps to verify that everything has been re-installed, re-tightened or re-connected and that there are no loose wires, hoses, or fasteners. Make sure that you have retrieved all rags, tools, etc. from the work area. DO NOT OPERATE the engine without the inlet ducting in place.**

**25. Start engine and watch for signs of oil leakage at the turbo/pedestal joint. If none exists, drive the vehicle a short distance to fully warm the engine and then re-inspect. Investigate any unusual noise or condition.**

**26. If all checks out, then there is no further break-in necessary and the vehicle can be driven as usual.**