

## PowerMax Diesel Upgrade For PowerStroke Engines

### Installation Instructions

1999.5 - 2003 7.3L Excursion &  
F-Series Diesel Trucks

Part Number: 739619-5004S

Parts List			Tools Needed	
Item	Description	Qty		
1	GTP38R Turbocharger	1	• 7/16" deep-well socket	• 13mm open end wrench
2	4-inch Inlet Hose	1	• 7mm socket	• 14mm open end wrench
3	V-Band Clamp	1	• 8mm 12-point socket	• 13/16" open end wrench
4	Oil inlet o-ring	1	• 10mm socket	• Torque wrench
5	Oil outlet o-ring	1	• 13mm socket	• 6" extension
			• 14mm socket	
			• 10mm hex socket	
			<p>• NOTE: Bolt and fastener sizes may be different from one model year to the next depending on OE specifications. Different tools than those listed above may be required.</p>	
			<h4>Recommended Other Items</h4> <ul style="list-style-type: none"> <li>• Factory Service Manual</li> <li>• Safety glasses</li> <li>• Catch basin for engine coolant</li> <li>• Engine coolant (quantity per service manual)</li> <li>• Anti-seize compound</li> <li>• RTV or Grease</li> <li>• Oil filter</li> <li>• Oil (quantity per service manual)</li> </ul>	

### IMPORTANT INFORMATION - PLEASE READ CAREFULLY



We recommend that this turbo upgrade kit be installed by a qualified automotive technician. If you have any doubts as to your ability to install this turbo upgrade kit, consult with a local automotive repair company. Please be sure to carefully read all of the attached instructions prior to starting the installation process. If you have any questions about the enclosed parts or the instructions, call the distributor that you purchased the kit from for clarification.

Prior to the PowerMax Kit installation, be sure that the vehicle is parked on a level surface and the engine is cool. Engine fluids and components can be extremely hot following normal vehicle operation. Avoid direct contact of engine fluids or components with your skin; may cause personal injury.

**NOTE: It is recommended that the oil and oil filter are changed prior to installing the Garrett turbocharger. This will provide clean oil to the new turbocharger. To ensure optimal performance, always follow oil and filter change intervals per the Factory Service Manual.**

## IMPORTANT INFORMATION - PLEASE READ CAREFULLY

### **Return Policy**

Only unused and complete merchandise will be accepted for return subject to inspection and acceptance by Honeywell Turbo Technologies. No goods will be accepted without prior return authorization from Honeywell Turbo Technologies. No returns are accepted after thirty (30) days from original ship date from Honeywell. All accepted returns are subject to a 20% restocking charge - NO EXCEPTIONS.

### **Damaged Shipments**

The customer must file a claim with the shipping company if goods arrive in a damaged condition. The customer must also notify the distributor from which the goods were purchased with pertinent information.

### **Refused Shipments**

Sending a shipment back to The Garrett Garage (or Honeywell) does not automatically give rise to a complete refund or credit. Honeywell Turbo Technologies may, at its sole discretion require different payment means for any shipment refused and then reshipped. It is the customer's responsibility to make all arrangements with Honeywell Turbo Technologies for disposition of refused shipments.

### **Shortage or Discrepancy Claim**

Shortage or Discrepancy claims must be reported within forty-eight (48) hours of receipt of goods to the distributor from which the goods were purchased. The Honeywell distributor will determine the best solution on how to address shortages or discrepancies.

### **Limited Warranty**

Honeywell Turbo Technologies warrants to the original purchaser of its Turbocharger Products that such Turbocharger Products will, for a period of 1 year from date of shipment and subject to the Limitations on Warranty, be free from defects in materials and workmanship. For approved warranty claims Honeywell Turbo Technologies will, at its sole discretion, either credit the original purchaser in an amount equal to the original purchase price, or replace the applicable Turbocharger Product free of charge, within 60 days of Honeywell Turbo Technologies' approval. This is purchaser's sole and exclusive remedy and provides the complete financial responsibility of Honeywell Turbo Technologies for a warranty claim. To be eligible for reimbursement, Customer must (a) submit all warranty claims to Honeywell Turbo Technologies within 30 days of the discovery of the alleged Turbocharger Product defect; and (b) complete and return a Returned Material Authorization Form. Consumers are required to work through Honeywell's distributors in order to process any warranty claims.

When Honeywell Turbo Technologies requires the examination of a failed part, Honeywell Turbo Technologies will promptly notify Customer and will await receipt of the failed part before further processing the warranty claim. If Honeywell Turbo Technologies ultimately determines that the failed part is covered under the Limited Warranty, Honeywell Turbo Technologies will reimburse Customer for the actual cost of ground shipment for any part found to be defective.

## IMPORTANT INFORMATION - PLEASE READ CAREFULLY

### Limitations on Warranty

The Limited Warranty does not apply to any parts: (a) not used in accordance with Honeywell Turbo Technologies' written instructions (b) for which no fault is found; (c) that have been modified in any manner not specifically approved by Honeywell Turbo Technologies; (d) for which an inspection indicates that reasonable and proper installation and/or preventative care and maintenance has not occurred; (e) that have been subject to damage attributable to or caused by misuse, abuse or vandalism; mishandling, improper shipping or other transit related damage; acts of god or insurrection; foreign object entry; any part not supplied by Honeywell Turbo Technologies; any repair, maintenance or service by anyone other than Honeywell Turbo Technologies; or any other acts that are beyond Honeywell Turbo Technologies' reasonable control; or (f) attributable to parts not supplied by Honeywell Turbo Technologies. Honeywell Turbo Technologies expressly disclaims any and all warranties relative to the foregoing circumstances.

**Honeywell Turbo Technologies shall not be liable to Customer under any circumstances for any special, incidental or consequential damages, including without limitation, damage to or loss of property other than for Turbocharger Products; damages incurred in installation, repair or replacement; lost profits, revenue or opportunity; loss of use; losses resulting from or related to downtime of Turbocharger Products; the cost of replacement transportation, power, or compression; the cost of substitute products; or claims of third parties for such damages, howsoever caused, and whether based on warranty, contract, and/or tort (including negligence, strict liability or otherwise).**

**The Limited Warranty is the only warranty made by Honeywell Turbo Technologies for any of its turbochargers and related parts and/or services, and is in lieu of and excludes all other warranties, expressed or implied, including warranties of merchantability or fitness for a particular purpose. Honeywell Turbo Technologies hereby disclaims all other warranties not expressly set forth. Some jurisdictions do not allow for the exclusion of implied warranties, so the above exclusions may not apply to you, however if implied warranties do apply they are limited to the original purchaser and for a period of one (1) year from the date of shipment.**

### Diagnosing Your Vehicle

Do not rely on diagnostic software without seeking the advice of an ASE certified mechanic. Diagnostic software should only be used as a general guideline to help you facilitate the repair of your car. If you experience or suspect any malfunction of vital safety equipment, such as your brakes, exhaust, motor, transmission, fuel delivery system, your car's structural integrity or any other potentially life threatening malfunction, cease driving your vehicle immediately and seek professional help. Always consult your owner's manual.

### Vehicle Modification Notice

Any modifications to your car are AT YOUR OWN RISK. You should consult the owner's manual and service manual. You should also contact your car's manufacturer to determine what effects modifications may have on your safety, warranty, performance, etc. Please also contact your local authorities to determine whether your intended modifications will make your car illegal to drive on public roads. A vehicle modified by the use of competition parts may not meet the legal requirement for use on public roads. It is your responsibility to comply with federal, state, and local laws prior to driving your vehicle on public roads.

## IMPORTANT INFORMATION - PLEASE READ CAREFULLY

### OTHER PRECAUTIONS

Observe all safety precautions and warnings contained in the installation instructions. Wear eye and ear protection and appropriate protective clothing. When working under or around the vehicle support it securely with jack stands. Use only the proper tools. Exercise extreme caution when working with flammable, corrosive, and hazardous liquids and materials.

### LEGAL INFORMATION

The Garrett turbo kits are for use off the public roadways. Federal law restricts the removal or modification of any part of a federally required emission control system on motor vehicles. Also, many states have enacted laws which prohibit tampering with or modifying emission or noise control systems. Vehicles which are not operated on public roadways may be exempt from certain regulations, however the buyer is strongly urged to check all applicable local and state laws and is ultimately responsible for compliance with the applicable laws and regulations.

### Contact Information for Questions

Please contact the Honeywell distributor from which the equipment was purchased for any questions regarding this Shipping/Returns/Cancellation Policy, for notifications to Honeywell Turbo Technologies, and for instructions on processing damaged shipments and authorized returns.

**Honeywell Turbo Technologies**  
Garrett Independent Aftermarket  
Honeywell International Inc.  
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**Garrett**<sup>®</sup>  
by Honeywell

## Installation Instructions

**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.



Fig. 1

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



Fig. 2

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



Fig. 3

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

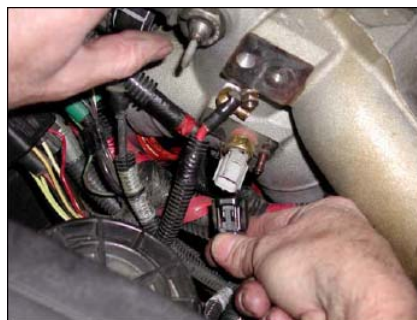


Fig. 4a

## Installation Instructions (cont'd)

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



Fig. 4b

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.

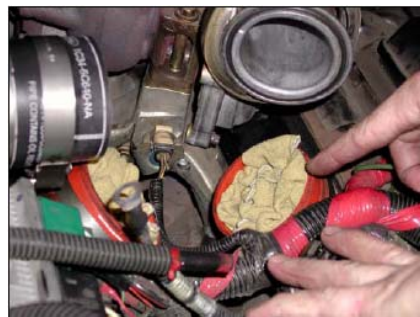


Fig. 5

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



Fig. 6

7. Using a **7/16" deep-well 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.



Fig. 7

## Installation Instructions (cont'd)

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



Fig. 8

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



Fig. 9

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.



Fig. 10

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.



Fig. 11

## Installation Instructions (cont'd)

12. Ensure the supplied oil inlet and outlet o-rings 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.**



Fig. 12

13. Install new turbo.

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



Fig. 13

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



Fig. 14

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



Fig. 15



## Installation Instructions (cont'd)

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



Fig. 16

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.



Fig. 17

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.

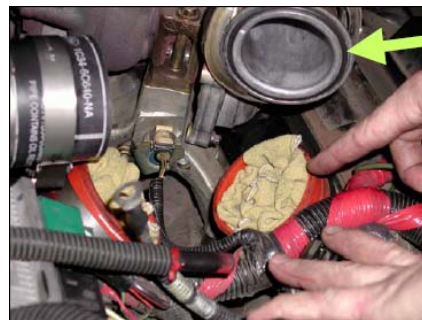


Fig. 18

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.

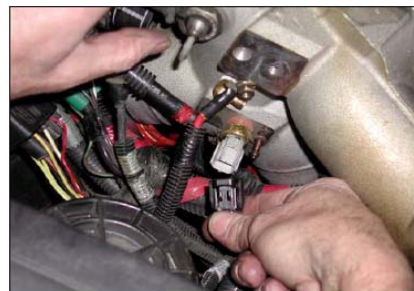


Fig. 19

## Installation Instructions (cont'd)

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.

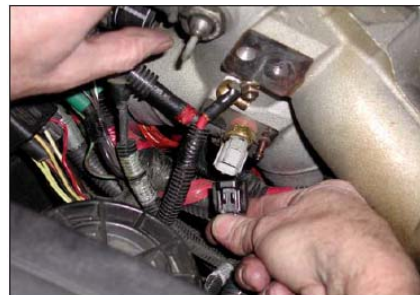


Fig. 19b

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



Fig. 20

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 4-inch inlet hose in place and insert the green hose into the boss. Tighten clamps snugly.



Fig. 21

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



Fig. 22

## Installation Instructions (cont'd)

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



Fig. 23

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.