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7.3L Comp Wheel Upgrade

99.5-03 Ford Powerstroke 7.3L

Installation Instructions

Part# 1047000

Part# 1047001

1047001 Compressor Wheel will NOT fit 1994-1998 vehicles

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION.

UNLESS AN EO# IS LISTED, THIS PRODUCT IS LEGAL IN CALIFORNIA FOR RACING VEHICLES ONLY, WHICH MAY NEVER BE USED UPON A HIGHWAY.

BD is not responsible for and will not warranty installation errors.

**BD always recommends you have your BD product installed
by a trained BD service center.**

BD Engine Brake Inc.

Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2

U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295

Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

Tools Required

- Flat blade screwdriver
- Ratchet/breaker bar
- Torque wrench
- Shop air & blow gun
- Sockets: 5/16" 12-point, 7/16", 5/8", 3/4", 8mm, 17mm, 19mm.
- Vice Grips
- T handle socket wrench

Battery Disconnect

Disconnect the negative terminals on both of the vehicle's batteries, and then disconnect the positive terminals.

Removal & Installation

Installation Notice :

The Billet Compressor Wheel (1047001) is not compatible with a BorgWarner Turbine shaft due to an interference issue. This issue can be corrected by having the shaft polished at an authorized BD service center otherwise the warranty will be void.

1. Remove air inlet hose (8mm) & charge air tube (7/16") from turbo. It may help to loosen the MAP sensor so that you can take the charge air tube out of the truck. Also remove the charge air tube from the intercooler to the intake 'Y' going into the engine (7/16").



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2. Unplug the wastegate controller on the front of the intake Y & disconnect the air intake heater wiring (10mm).



3. Undo the clamps on the hoses from the intake Y to the engine & remove the Y (7/16"), being careful not to damage the o-ring between the turbo outlet & the Y. Put a rag over the air inlets to keep debris out of the engine.



4. Remove the two nuts on the wastegate actuator (10mm). Use shop air to gently extend the actuator so that it extends enough to remove the studs from their mounts on the compressor housing & move the actuator to the side so it is out of the way. It is not necessary to disconnect the rod from the wastegate lever.



5. Remove downpipe clamp (7/16") & shift downpipe away from turbo as much as possible.



6. Remove the warm-up valve & it's housing from the back of the turbo by undoing the bolts (5/16" 12-point) & valve actuator rod. These bolts are often seized in place & can be difficult to remove.



7. Remove the compressor cover (5/16" 12-point).

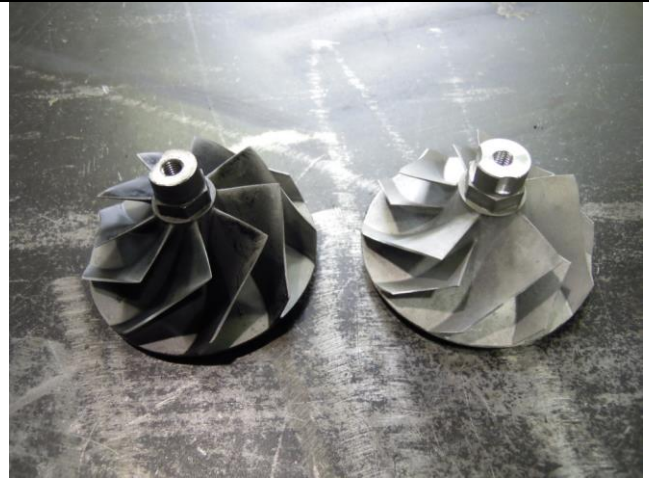


8. Remove the stock compressor wheel (5/8"). Be careful not to bend the turbo shaft. The nut on the turbine end of the shaft is usually irregularly shaped as it is ground down for balancing. A 19 mm or 3/4" T handle socket wrench can be used, if this does not work vice-grips will have to be used.





9. Clean the turbo shaft & lubricate it liberally with clean engine oil. Spin on the BD Compressor wheel (17mm), you should be able to spin it on by hand. If it does not go on freely chase the threads in the compressor wheel with a 1/4"NF tap. Torque the wheel to 85-115 INCH POUNDS. Make sure the wheel & shaft assembly spins freely after the wheel is installed.



10. Reinstall the compressor cover and torque to 110 TO 130 in/lbs. Reinstall the wastegate actuator using shop air to extend the rod again THEN reinstall the warm-up valve housing and torque to 140 to 170 in/lbs.

NOTE: *If the warm up valve is installed before the wastegate actuator it is possible to jam the wastegate door open with the warm up valve housing.*



11. Reinstall intake Y, charge air tubes & MAP sensor. Reattach the wires for the wastegate controller and air intake heater. Reinstall air intake tube.



12. Reconnect the negative terminals on both of the vehicle's batteries, then reconnect the positive terminals.