DOWNLOAD COLOR INSTALL MANUALS AT www.bddiesel.com

BD LB7 Duramax Turbo Stock Replacement & Screamer Turbo

Drop-in Turbo

Part #	Compressor Size	Turbine Size	Description
1045836	60 mm	62 mm	Stock Replacement
1045837	63 mm	64 mm	BD Screamer

Modification to your turbo inlet piping is required if observing over 23psi boost. See installation procedure for details.

PRE-INSTALLATION

A new turbocharger will not solve the following failures:

- Oil contamination
- Restrictive oil drain
- Over speed due to a boost leak or clogged air filter
- Exhaust leaks due to faulty bellows, clamps, or seals

Turbo over speed will lead to premature turbo failure. Boost pressure can be used to estimate turbo speed. The table below shows maximum allowable turbo speed for a stock motor at 3500rpm. A turbo intake restriction, clogged filter, high altitude or boost leak will cause increased wheel speed.

Turbo	Estimated Airflow (lb/min)	Max boost (psi)	Max Boost with clogged filter (psi)
1045836	62.5	28	23
1045837	75	37	30

Kit Contents

1045836	1045837
	
Turbo; 2001-04 LB7	Turbo; Screamer 2001-04 LB7

Introduction

The BD turbo series is now available for the 2001-2004 Duramax. We offer two different turbos for the LB7 Duramax. 1045836 is a stock replacement turbocharger that offers up to 23psi boost. The Screamer turbo is designed to be a drop-in stock-appearing performance turbocharger that increases the total airflow without affecting low-end drivability and offers up to 75lb/min (37psi boost).

The LB7 Screamer Turbo (1045837) is sized for those looking for a mild performance upgrade from the OEM turbo, but would like to still utilize their truck for what it is, a reliable work horse.

The 63mm compressor wheel is sized to pair nicely with a stock CP3 pump and can be pushed up to 625whp utilizing 90hp injectors and a R900 CP3. BD's Duramax screamer line-up utilizes a custom mixed flow turbine (MFT) wheel with a larger 64mm extruder. A MFT wheel geometry offers increased efficiency in both initial spool up and high flow operation.

Optional Accessories

Part	Description	
BD Diesel Hose and Clamp Kit • 1046275	Stock boots and clamps may be worn out due to old age, leading to boost leaks when increased boost is applied. This kit is capable of 100psi and uses rugged, spring–loaded, stainless steel clamps.	
Venom Fuel Lift Pump • 1050322	Due to the lack of a lift pump, increases in power will also increase strain on your Duramax's CP3 pump. The venom lift pump provides a constant flow of fuel to the CP3 pump.	

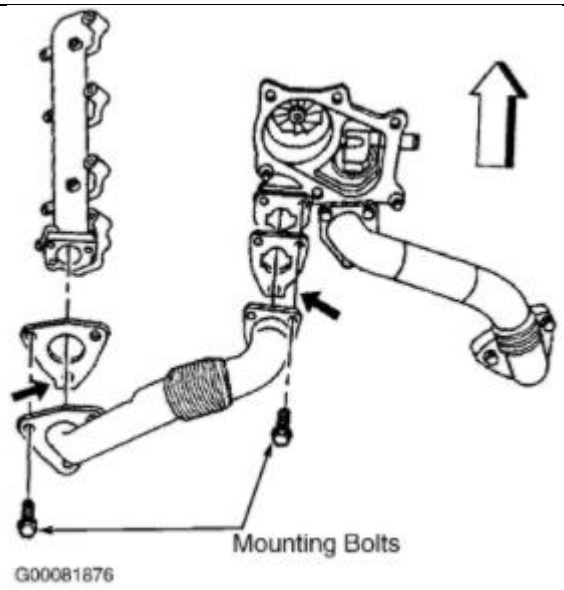
1. Disconnect both negative battery terminals.

2. Spray all bolts with penetrating fluid well in advance.

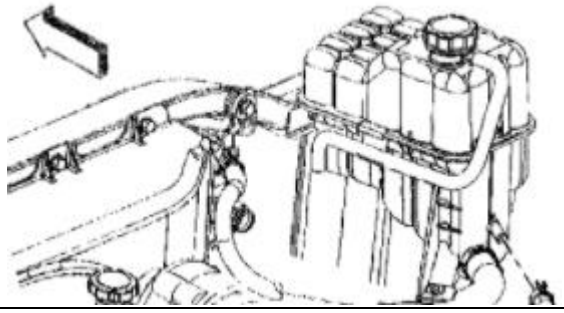
3. Spray the up-pipe bolts a second time and wait for penetrating fluid to do its job. Come back a few hours later.

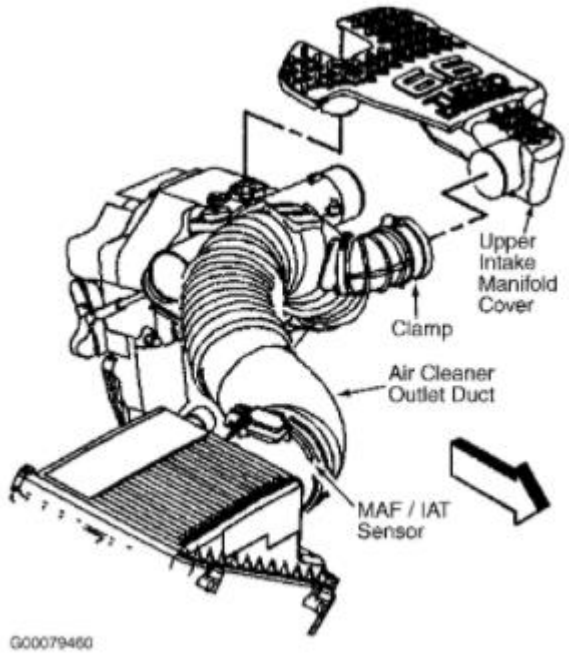
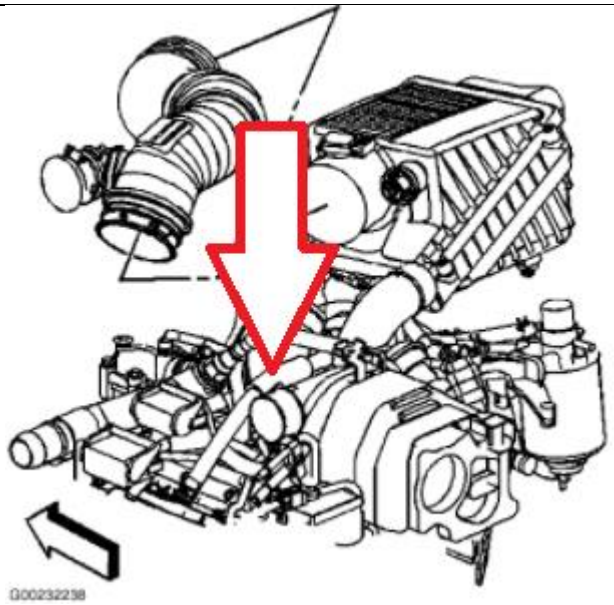
4. Remove the 3 nuts and the left exhaust heat shield at the front lower of the lower dash panel. Remove the left exhaust pipe heat shield bolts. Reposition the left exhaust pipe heat shield in order to access the left exhaust manifold bolts. Do not remove the heat shield from the vehicle at this time.

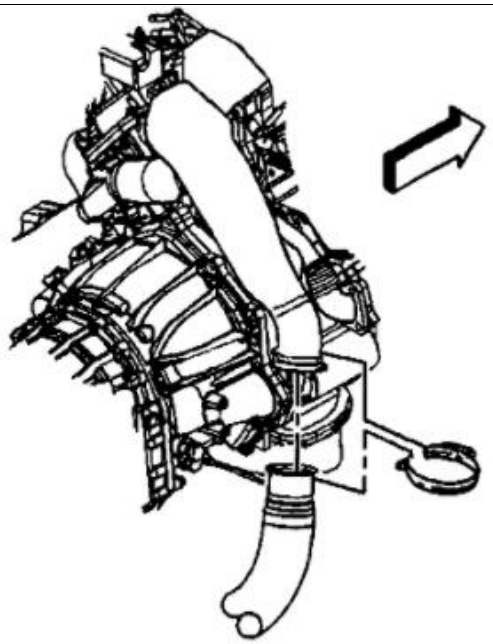
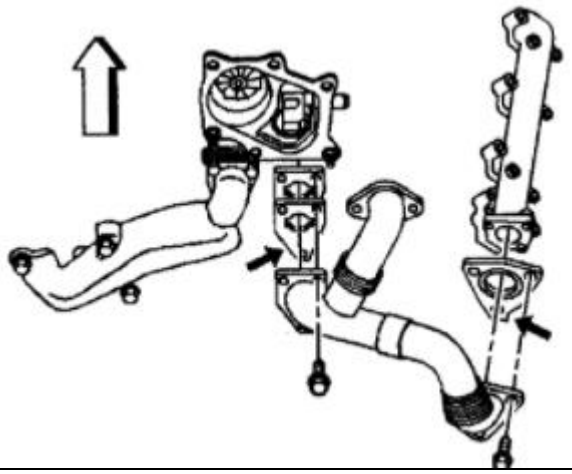
5. Remove both the left and right exhaust pipe to exhaust manifold bolts. Remove the lower bolt for the exhaust outlet shield.

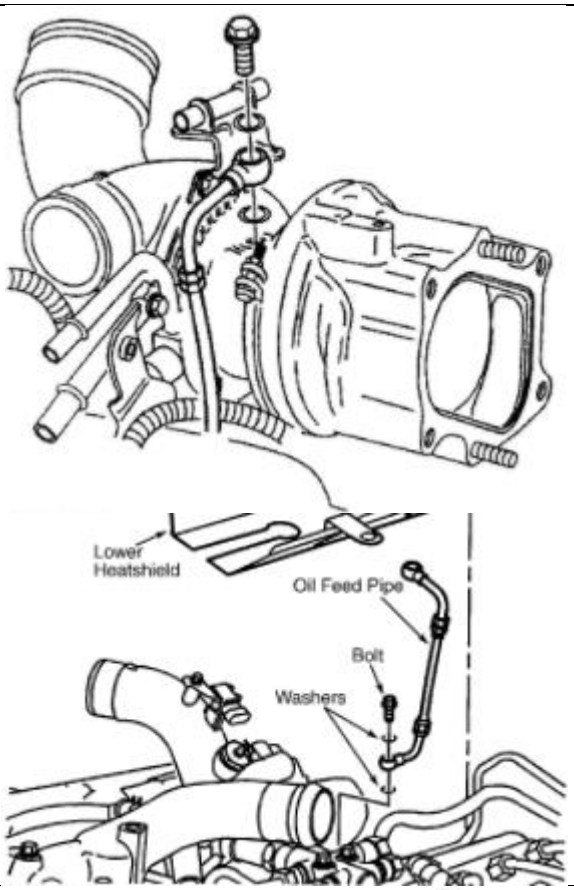
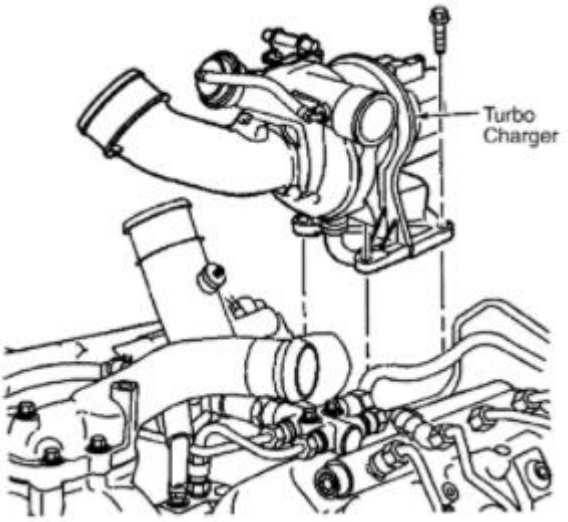


6. Drain the engine coolant.



7. Remove the upper intake. Be careful to not damage the tubing.	
8. Disconnect the turbocharger air outlet CAC tube.	
9. Disconnect both turbocharger coolant lines. Disconnect the PCV hose from the left rocker valve cover.	

10. Remove the 3 bolts and the turbocharger heat shield. Remove the 2 bolts and the exhaust outlet heat shield. Remove the 4 bolts and 2 nuts for the exhaust outlet (Downpipe). Note: The transmission dipstick tube may need to be removed. 11. Once these heat shields have been removed you can now access and remove the right exhaust pipe turbocharger bolts, remove these.	 G02133540
12. Remove the left exhaust up-pipe. Some heating/ cooling may be required before cracking the up-pipe bolts loose.	

13. Remove the turbo oil feed banjo bolt. Remove the two nuts that hold the oil drain line. NOTE: Clean off the area around the oil drain seal to prevent debris from entering your motor.	
14. Remove the four turbocharger bolts and remove the turbocharger.	

Installation

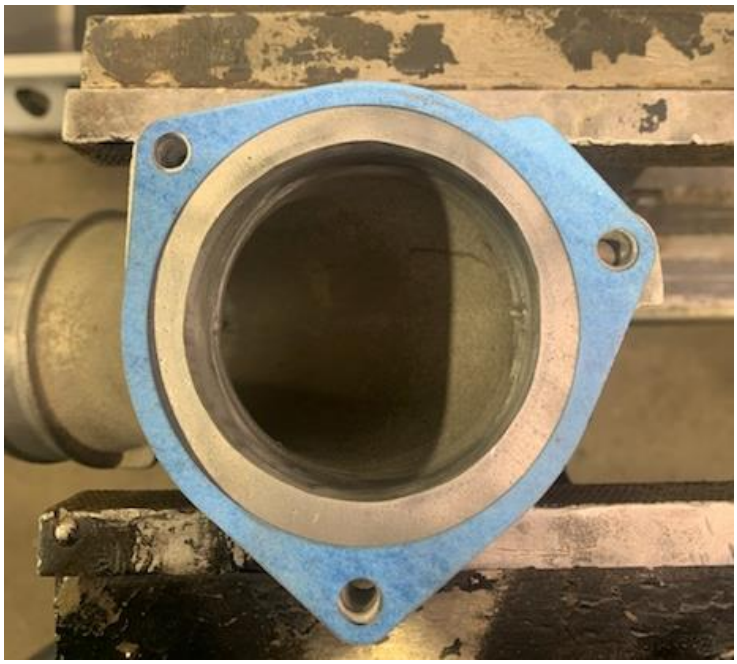
Please follow GM's factory replacement instructions for detailed year specific turbocharger replacement procedure.

1. Install new oil drain gaskets and connect the oil drain to the turbocharger.	Oil Drain Bolts: 16 ftlbs Oil Drain Nuts: 15 ftlbs
2. Ensure the oil feed line is clear and free of debris. Replace both gaskets and reinstall onto the motor.	Banjo Bolt to motor: 25 ftlbs
3. Install the turbocharger onto the motor. Ensure the oil drain gasket is installed. Pre-lubricate the turbocharger with 135cc of oil while rotating the turbo wheel.	Turbo Pedestal Bolts: 80 ftlbs
4. Install the oil feed line onto the turbocharger.	Banjo Bolt to turbo: 25 ftlbs
5. Install the left exhaust pipe to the turbocharger. Use a new gasket with the tab facing inwards. Position the heat shield in place but do not install, yet.	Up-pipe to turbo bolt: 39 ftlbs Up-pipe to Manifold: 39 ftlbs
6. Install the right exhaust pipe to the turbocharger. Use a new gasket with the tab facing inwards. Use a locating bolt in the manifold to hold the up-pipe in place.	Up-pipe to turbo bolt: 39 ftlbs Up-pipe to Manifold: 39 ftlbs
7. Install the exhaust heat shields.	Turbocharger heat shield:5.9 ftlbs
8. Install the exhaust downpipe.	Exhaust outlet to turbocharger: 39 ftlbs Exhaust pipe clamp: 30 ftlbs
9. Install the transmission fill tube.	Transmission Tube Retaining Nuts: 13 ftlbs
10. Install the PCV hose. Install the turbocharger coolant hoses. Install the inlet air heater relay	

11. Install the turbocharger outlet tube.

12. Install the intake tubing and cover.

Note: If reusing the OEM inlet tube, the inlet will need to be opened up to at least 67mm



13. Refill and bleed your coolant.
Change your oil to ensure no debris has fallen in your motor during the process.