



Dodge Cummins (2003-07) R700 **Primary Turbocharger Upgrade Kit**

P/N# 1045440

- Installation Manual -

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 Engine Brake Inc.

Plant Address: Unit A10, 33733 King Rd, Abbotsford, BC, Canada V2S 7M9

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

Introduction

The purpose of this kit is to allow the user to gain an additional airflow to support 700HP, over the standard BD twin kit.

This kit is meant for high performance only. You will sacrifice some bottom end response with this kit in favor of tremendous top end power.

Kit Contents

| Part Number | Description | Qty. |
|--------------------|--------------------------|-------------|
| 1405227 | 4" -5.5" Boot | 1 |
| 1405237 | 5.5" Gear Clamp | 1 |
| 1453112 | Silicone Oil Drain Hose | 6" |
| 2485012 | Secondary Turbine Gasket | 1 |
| 1405914 | M8 x 1.25 x 30 | 2 |
| 1405135 | R700 turbo upgrade | 1 |

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Removal

1. Due to the size of the R700 turbo, you will need to remove the secondary turbocharger in order to install the R700.
2. With the secondary turbo removed, you can then start to remove the existing BD primary turbo along with the cast hot pipe. Remove the primary turbo oil drain and set it to the side, and then remove the oil supply line. Discard the used silicone inlet tubing.
3. Disconnect the primary turbo oil supply fitting. You may need to transfer the brass fittings over from this turbo to the new turbo.
4. Completely loosen the exhaust V-Band clamp.
5. Remove the two gear clamps from the primary turbo inlet. You will need to reuse one of the 4" gear clamps. You can discard the 4" blue silicone intake hose.
6. Remove the air filter from the primary turbo inlet tube. Disconnect the Mass Air Flow sensor connection and remove the inlet tube.
7. You can loosen the 4 support bolts or nuts securing the primary turbo to the exhaust intermediate pipe. You will need to reuse the bolts or nuts for the reinstallation.

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Installation

1. Unpack the R700 turbo from the shipping box and ensure all necessary gaskets are inside the box. There should be an oil drain gasket and turbine flange gasket.

BE SURE TO ORIENT THE OIL SUPPLY FITTING INLET TOWARDS THE ENGINE.

2. Before installing the turbo, pre-lube the turbo with some fresh oil.
3. Bolt the R700 turbo to the exhaust intermediate pipe using the earlier hardware.
4. Connect the oil supply to the turbo.
5. Connect the exhaust down pipe to the turbo and tighten the V-Band clamp.
6. Secure the new 4"-5.5" silicone adapter boot to the turbo charger inlet using the 5.5" gear clamp supplied with the kit.

Trimming the Oil Drain Tube

Because every vehicle is slightly different, these two modifications will be primarily based on judgment and preference of the installer.

You will need to trim about 2" off of the bottom of the drain tube. It should be trimmed just before the last slight bend. Once you have cut and de-burred the piece, you can install it along with the gasket onto the bottom of the turbo with the two of the M8 x 1.25 x 30mm (**1405914**) bolts and the new piece of silicone tubing (**1453112**).



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Trim about 1.5" from the turbo end of the primary turbo inlet pipe. The new R700 turbo is longer, which is why this modification needs to be done. Be sure to de-burr the piece before re-installation into the 4"-5.5" silicone boot. Use the previous 4" gear clamp to secure the boot onto the inlet tune. Reconnect the filter and Air Mass sensor.



Re-tighten all connections and let the vehicle idle while checking for leaks. Allow the turbo to break in for 50 miles before any hard pulls.

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