



## Performance Diesel Installation

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### Step 1 – Tools & Procedures

- Proper key if required
- Anti-seize compound
- Removal & installation tool if required (Damage from improper installation will void your warranty)
- Do not use hammers or pry bars to install or remove Fluidampr, this will void your warranty.
- Sufficient torque wrench (see torque specs on page 2), fan removal tools.

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### Step 2 – Balancing

#### Internally and Externally balanced Engines

##### Part Numbers

|                                                                       |                   |                                          |                   |
|-----------------------------------------------------------------------|-------------------|------------------------------------------|-------------------|
| 720211                                                                | External Balanced | <b>Ford Powerstroke 7.3 Liter</b>        | 1999 to 2003      |
| 720221                                                                | External Balanced | <b>Ford Powerstroke 7.3 Liter</b>        | 1994 to 1997      |
| (See #4NFJ01 for Fan Spacer installation instructions)                |                   |                                          |                   |
| 870201                                                                | External Balanced | <b>Ford Powerstroke 6.0 Liter</b>        | 2003 to 2007      |
| 870211                                                                | External Balanced | <b>Ford Powerstroke 6.0 Liter</b>        | 2003 to 2007      |
| 800211                                                                | External Balanced | <b>Ford Powerstroke 6.4 Liter</b>        | 2008 to 2010      |
| 800221                                                                | External Balanced | <b>Ford Powerstroke 6.7 Liter</b>        | 2011 to Present   |
| 800141                                                                | External Balanced | <b>GM / Hummer 6.2 Liter / 6.5 Liter</b> | 1994 to 2000      |
| 800191                                                                | External Balanced | <b>GM / Hummer 6.2 Liter / 6.5 Liter</b> | 1982 to 1993      |
| 830111                                                                | External Balanced | <b>Chevy Duramax 6.6 Liter</b>           | 2006 to 2010      |
| 830121                                                                | External Balanced | <b>Chevy Duramax 6.6 Liter</b>           | 2010.5 to Present |
| 890101                                                                | External Balanced | <b>Chevy Duramax 6.6 Liter</b>           | 2001 to 2005      |
| 920301                                                                | Internal Balanced | <b>Dodge Cummins 5.9 Liter</b>           | 2003 to 2009      |
| 920321                                                                | Internal Balanced | <b>Dodge Cummins 6.7 Liter</b>           | 2007.5 to Present |
| 960301                                                                | Internal Balanced | <b>Dodge Cummins 5.9 Liter</b>           | 1998.5 to 2002    |
| 960311                                                                | Internal Balanced | <b>Dodge Cummins 5.9 Liter</b>           | 1992 to 1998      |
| (See #4NFH02 for Sensor Relocation Bracket installation instructions) |                   |                                          |                   |
| 960341                                                                | Internal Balanced | <b>Dodge Cummins 5.9 Liter</b>           | Comp Series       |

#### REPLACING THE DAMPER

Fluidampr counterweights for external balanced engines have been designed to OEM specifications. If the damper being replaced has never been altered, Fluidampr can be installed with no additional balancing.

#### BALANCING OR MATCH BALANCING

- Each Fluidampr component is precision balanced during manufacturing, so NO additional balancing is required.
- **DO NOT ATTEMPT TO BALANCE THE CRANKSHAFT WITH FLUIDAMPR INSTALLED** The inertia ring inside Fluidampr is balanced to a close tolerance at the factory and it rotates inside Fluidampr.
- **DO NOT DRILL FLUIDAMPR** – The inertia ring and silicone fluid are in a hermetically sealed housing. Drilling may cause the damper to leak and lead to damper failure, voiding the warranty.
- If balancing the crankshaft is required, install the stock damper while balancing.

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### Step 3 – Removal

- Remove fan and shroud as per manufacturer's instructions, draw sketch of belt routing if required and remove the accessory drive belt.
- **Dodge Cummins 5.9L (1992 to 1998). BEFORE REMOVING THE STOCK DAMPER**, rotate the engine so that the magnetic pick up is not on one of the notches in the outside diameter of the stock damper. If you do not have access to the gap spec, use a feeler gage to measure and record the gap between the magnetic pick up and the stock damper. (See attached sheet).
- Remove the stock damper per factory/service manual instructions.



**CAUTION** - It is recommended that the Fluidampr be pinned onto the crank shaft when using the Fluidampr on high horsepower Dodge Cummins 5.9L and 6.7L competition drag or pulling engines that exceed 3500 RPM.

Fluidampr recommends using **Drill Pin Kit p/n 300002** and drill the recommended hole(s) in the crank shaft for the spring pin(s) which are also included in this kit.

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#### Step 4 – Fluidampr Installation

- On engines that the damper **slides or presses** onto the crankshaft, carefully remove burrs, scratches, or nicks on the crank snout by filing or polishing the snout so that it is smooth and free of surface irregularities. Remove any sharp keyway corners. The key should fit snugly in the keyway on the crank. A heavy press fit creates high stress on the slot and should be avoided. If you use a hammer for anything other than a light tap, the key is too wide. Replace or modify the key if it is too tight or too loose.
- Coat the crankshaft snout and damper inside diameter with anti-seize compound or moly grease to prevent galling during installation.
- **Dodge Cummins 5.9L (2003 – 2009), 6.7L (2007.5 to 2011), and Ford Powerstroke 6.0L: The belt must be routed between the Fluidampr and the water pump pulley before the Fluidampr is installed.**
- Install the Fluidampr and torque the bolt or bolts properly as per the original manufacturers' torque or torque to yield requirements. Consult a dealer to determine if your application is torque to yield.
- Fluidampr recommends that crank bolt(s) always be replaced when installing the damper.
- Install the accessory drive belt, fan and shroud as per manufacturer's instructions.

| Part No. | Engine                                 | Bolt Torque                              |
|----------|----------------------------------------|------------------------------------------|
| 720211   | Ford Powerstroke 7.3L 1999 to 2003     | 212 ft-lbs                               |
| 720221   | Ford Powerstroke 7.3L 1994 to 1997     | 212 ft-lbs                               |
| 870201   | Ford Power Stroke 6.0L 2003 to 2007    | 50 ft-lbs plus an additional 90 degrees* |
| 870211   | Ford Power Stroke 6.0L 2003 to 2007    | 50 ft-lbs plus an additional 90 degrees* |
| 800211   | Ford Power Stroke 6.4L 2008 to 2010    | 50 ft-lbs plus an additional 90 degrees* |
| 800221   | Ford Power Stroke 6.7L 2011 to Present | 22 ft-lbs plus an additional 90 degrees* |
| 800141   | GM / Hummer 6.2L / 6.5L 1994 to 2000   | See Owners Manual*                       |
| 800191   | GM / Hummer 6.2L / 6.5L 1982 to 1993   | See Owners Manual*                       |
| 830111   | Chevy Duramax 6.6L 2006 to 2010        | 74 ft-lbs plus an additional 90 degrees* |
| 830121   | Chevy Duramax 6.6L 2010.5 to Present   | 74 ft-lbs plus an additional 90 degrees* |
| 890101   | Chevy Duramax 6.6L 2001 to 2005        | 74 ft-lbs plus an additional 90 degrees* |
| 920301   | Dodge Cummins 5.9L 2003 to 2009        | 92 ft-lbs                                |
| 920321   | Dodge Cummins 6.7L 2007.5 to Present   | 92 ft-lbs                                |
| 960301   | Dodge Cummins 5.9L 1998.5 to 2002      | 92 ft-lbs                                |
| 960311   | Dodge Cummins 5.9L 1992 to 1998        | 92 ft-lbs                                |
| 960341   | Dodge Cummins 5.9L Comp Series         | 92 ft-lbs                                |

**WARNING: FAILURE TO USE PROPERLY TORQUED BOLTS WILL VOID WARRANTY AND COULD RESULT IN DAMPER, KEY, OR CRANK DAMAGE.**

**\*BOLTS ARE TORQUE TO YIELD, NEW BOLTS MUST BE USED EVERYTIME.**

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#### LIMITED WARRANTY

LIMITED WARRANTY: All Fluidamprs are warranted to be free from defects in workmanship and materials for a period of one (1) year from the DATE OF PURCHASE. A copy of the sale receipt showing DATE OF PURCHASE must be presented at the time of warranty claim. In the unlikely event you need to make a claim for warranty consideration, you must contact Horschel Motorsports for a returned goods authorization number. During the warranty period, Horschel Motorsports will repair or replace, at our discretion, any part or parts that are determined by Horschel Motorsports to be defective due to workmanship or materials. Transportation charges for return of defective parts must be prepaid by the purchaser. THIS WARRANTY DOES NOT INCLUDE AND IS NOT LIMITED TO THE FOLLOWING: Failure due to improper installation or maintenance. Loss or injury incurred from use or operation of Horschel Motorsports products. Misuse, abuse, or unauthorized repairs. Removal or replacement cost. Cost incurred due to downtime of vehicle. Damage to other engine or vehicle components. Normal wear and tear.

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