

Owner's Manual with Installation Instructions

Banks Monster-RamTM Intake

**2003-2007 Dodge 5.9L Cummins
(24-valve) ISB Pickup Trucks**

THIS MANUAL IS FOR USE WITH SYSTEM 42765

Gale Banks Engineering
546 Duggan Avenue • Azusa, CA 91702
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565
Customer Support: (888) 839-5600
Installation Support: (888) 839-2700

bankspower.com

General Installation Practices

Dear Customer,

If you have any questions concerning the installation of your Banks Monster Ram Intake, please call our Technical Service Hotline at (888) 839-2700 between 7:00 am and 4:00 pm (PT). If you have any questions relating to shipping or billing, please contact our Customer Service Department at (888) 839-5600.

Thank you.

- 1.** For ease of installation of your Banks Monster Ram Intake, please familiarize yourself with the procedures by reading the entire manual before starting work.
- 2.** Disconnect the ground cable from the battery before beginning work. If there are two batteries, disconnect both.
- 3.** Route and tie wires a minimum of 6 inches away from exhaust heat, moving parts and sharp edges. Clearance of 8 inches or more is recommended where possible.

4. The installation should be performed at time when the vehicle has been allowed to completely cool. This installation requires the installer to work near surfaces that may remain hot after the vehicle has been run. Failure to allow the vehicle to cool may result in personal injury.

5. During installation, keep your work area and components clean to avoid possible dirt entry into the engine.

6. Banks recommends that a Pyrometer (EGT) gauge and a Boost gauge be installed to monitor performance and exhaust gas temperature of the vehicle.

Tools Required:

- Inch and metric combination or open-end wrenches
- Standard and flat head screwdrivers
- Torque wrench (lb-in)
- Gasket scraper

STOCK RAM REMOVAL

1. Loosen the clamp that holds the rubber hose at the inlet of the stock intake and slide the hose free of the intake inlet.

CAUTION: Cover the intercooler up-pipe opening with a clean rag to prevent foreign objects from entering the intake tract.

2. Remove the bolt that holds the dipstick on the intake. Save the bolt for reuse. Gently push and move the dipstick and its holder to the rear of the engine compartment to gain access to the engine.

3. Remove the electric heater wire harness from the stock intake by pulling the plastic pin out. Remove the wire harness brackets that are mounted on the intake by removing the nut and the washer.

4. Unbolt and remove the 4 bolts at the base of the stock intake and remove the intake from the engine, being careful to not knock any debris into the intake through the electric heater element block.

5. Remove the three wires connecting the electric heater element block to the engine and remove the heater element block. Save the fasteners for re-use.

CAUTION: Cover the opening in the intake manifold with a clean rag to prevent foreign objects from entering the engine.

6. Being careful not to scratch or gouge the mating surfaces of the parts, completely remove the stock gaskets from both sides of the heater element block and intake manifold, using a gasket scraper as needed. Clean and dry all sealing surfaces thoroughly.

7. Reinstall the electric heater element block onto the intake manifold, placing one of the supplied gaskets between it and the intake manifold. Reattach the three electrical connections to the heater element.

Banks Monster-Ram™ INSTALLATION

8. Plug off any unused ports with supplied pipe plugs.

CAUTION: The Banks studs have different threads on each end.

9. Make sure that the M8 ends go into the engine intake manifold. The two shorter studs go on the inboard side (closest to the valve cover). Apply the supplied thread lock compound at the M8 ends and hand-tighten the studs into the intake manifold.

10. Using the two $\frac{5}{16}$ "-24 nuts supplied, tighten the studs into the intake by threading both nuts onto the stud, then tighten the nuts against each other with two $\frac{1}{2}$ " open end

wrenches. Tighten and torque the stud to 3-5 ft-lbs (35-60 Inch Pounds) by turning the top nut. Remove the nuts from the stud by using two open end wrenches to loosen the nuts in relation to each other. Repeat the process for each stud. The process is shown in **Figure 1**.

Figure 1

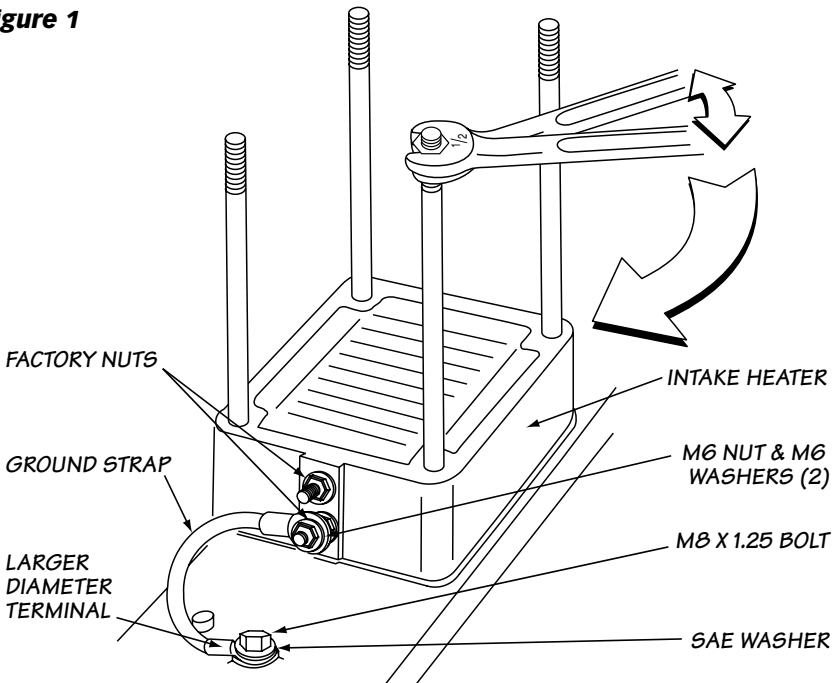


Figure 2

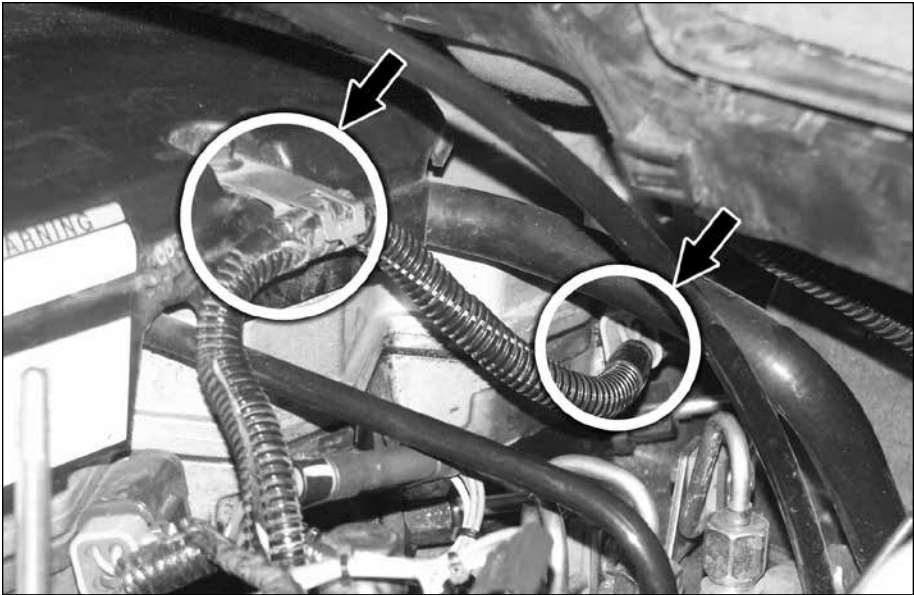
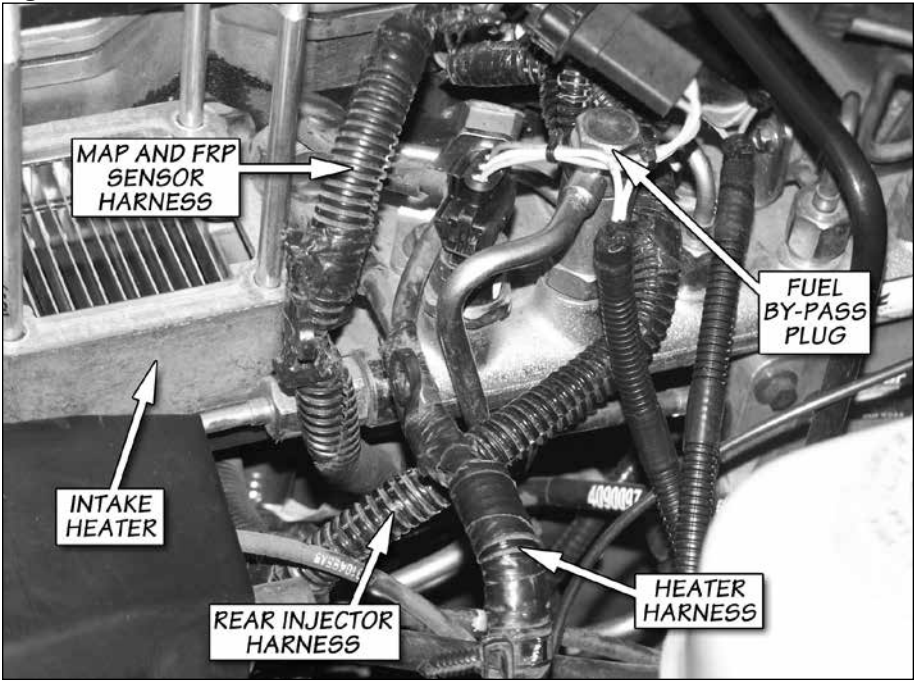


Figure 3



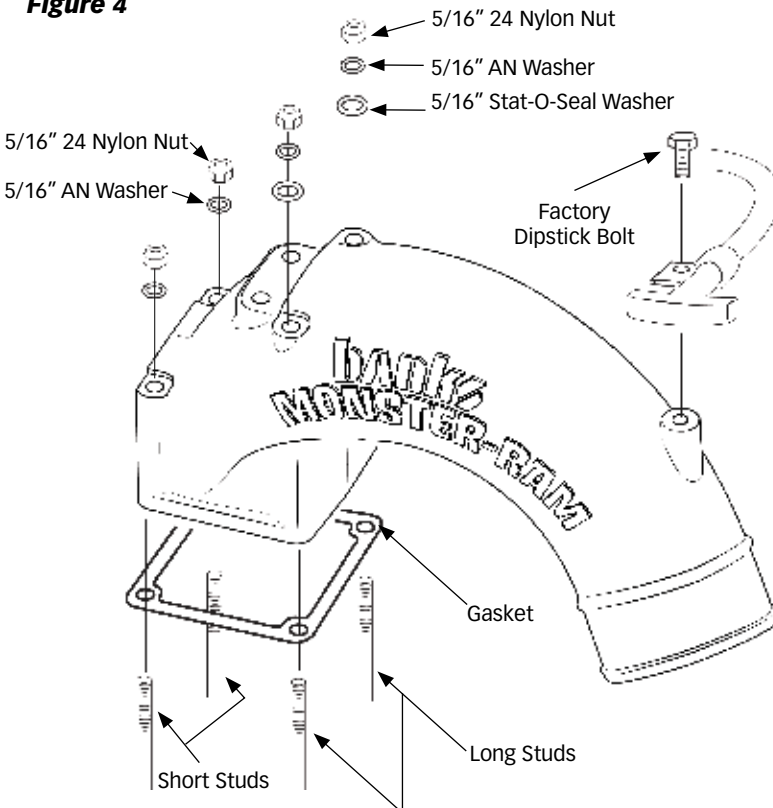
11. If your vehicle is NOT equipped with a factory ground strap on the intake heater, install the supplied ground strap from the intake heater to the engine. Put a 6-mm washer onto the bottom intake heater stud, leaving the factory heater nut installed. Next, install the smaller diameter ground strap terminal over the stud and retain with a 6-mm washer and nut. Route the other end of the ground strap to the threaded section on the engine and retain with a SAE washer and M8-1.25x16 bolt. See **Figure 1**.

12. Using a flat screwdriver, loosen the clamp that holds the rear injector wire harness on the engine valve cover.

Disconnect the injector wire harness from its connection. See **Figure 2**. Remove the bracket used to hold this wire harness to the stock ram. Route this harness underneath the heater harness and around the fuel by-pass valve as shown in **Figure 3**. Place the wire harness back in the clamp that is on the valve cover and re-connect the wire harness. Make sure there is no sharp bending in the wire harness, and secure it by re-fastening the clamp. Secure the wire harness with the supplied cable ties.

13. Disconnect the MAP and the FRP sensors and relocate the wire harness in front of the heater harness as shown in **Figure 3**. Reconnect the sensors.

Figure 4



14. Slide the second provided intake gasket over the four studs and set the Monster-Ram in place on the studs. Twist a Stat-o-seal washer over the two driverside studs, then over each stud install a flat $\frac{5}{16}$ " AN washer. Install a $\frac{5}{16}$ " - 24 nylock nut on each stud and tighten all four evenly between 11-12.5 ft-lb (140 to 150 Inch Pounds) See **Figure 4**.

CAUTION: Use only handtools when tightening the Monster-Ram. Tighten snugly but do not overtighten. Damage to the Monster-Ram casting can result from the use of pneumatic tools or excessive tightening.

15. The plastic pin on the heater wire harness will not be used to secure to the Monster-Ram. Use a supplied cable tie to secure the harness away from any heat source.

Figure 5



*NOTE: Before slipping any boost tubes and the corresponding hoses, into position, ensure that all connection ends are clean and free of any oil residue and contaminants. Clean compressor outlet and all connection points with a **non-oil based solvent** such as Acetone, Mineral Spirits, Denatured Alcohol or Lacquer Thinner. Read and follow the manufactures operation instruction for non-oil based solvent cleaner.*

16. Remove all rags from the intercooler up-pipe opening and install the supplied coupler and clamps. Tighten the clamps to 100 Inch Pounds.

17. Rotate dipstick bracket and align the dipstick bracket hole to the hole on the Monster-Ram. Mount it to the Monster-Ram casting using the original factory bolt. See **Figures 4** and **5**.

NOTE: For 2004-2007 model vehicles, locate the supplied corrugated

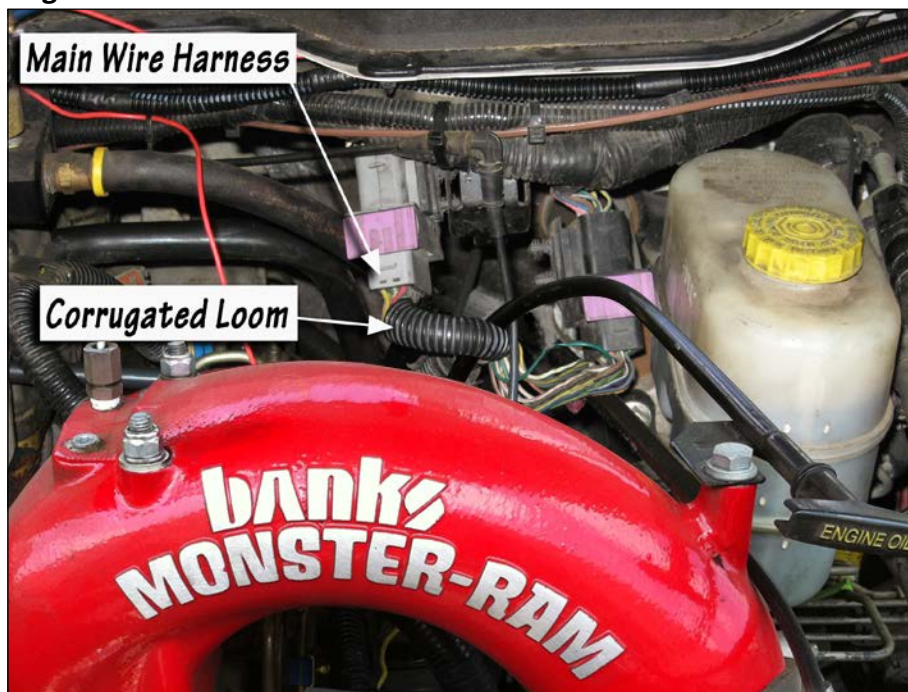
loom in your kit and install over the main connector wires to protect it from rubbing against the dipstick. See **Figure 6**.

18. Reconnect the batteries. The Banks Monster-Ram installation is now complete.

NOTE:

The 1/8" NPT ports shall only be used for installing sensors for measuring air temperature, pressure, or flow. Sensors installed to these ports shall have a fitting of 1/8" NPT and shall not be connected to the vehicle's electronic control units. In addition, factory sensors that come equipped on the vehicle shall not be disconnected and shall not be relocated to the ports. The ports, when not used, shall be closed off with the supplied plugs.

Figure 6



Gale Banks Engineering
546 Duggan Avenue • Azusa, CA 91702
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565
Customer Support: (888) 839-5600
Installation Support: (888) 839-2700

bankspower.com