

# Owner's Nanua

# Banks Monster® Exhaust System

# 2003-2004 Dodge 5.9L Cummins ISB Pickup Trucks

THIS MANUAL IS FOR USE WITH MONSTER EXHAUST, SYSTEMS 48640, 48641, 48642 & 48643

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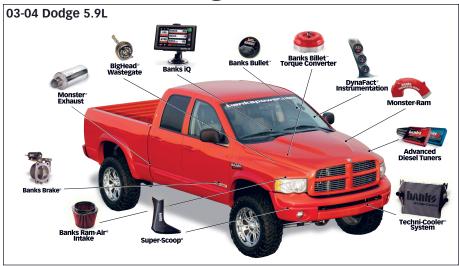
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05/28/13 PN 96422 v.7.0

# Products Available from Banks Power for the 03-04 Dodge 5.9L



#### Banks iQ System (P/N 61148-61149)

- 5" touchscreen interface that can control the Banks Diesel Tuner on the fly.
- Interchangable gauge display, read and clear codes, monitor engine diagnostics, log data, time your vehicles runs and much more.

# Banks Ram-Air Intake System (P/N 42145)

- Increases your airflow over stock.
- Adds power, improves fuel economy, lowers EGTs and reduces smoke.

#### Banks Ram-Air Intake Super-Scoop (P/N 42190-42191)

- Adds cooler denser air to the Ram-Air Intake housing, further increasing fuel economy, reducing smoke and lowers EGTs.

#### Banks Monster-Ram (P/N 42765-42766)

- Increased flow from intercooler
- Raises boost without increasing backpressure at the turbine

## Big Hoss Intake Manifold System (P/N 42747)

- Increases flow and provides more uniform air distribution to the engine for more available power at a given boost level.

# Banks Techni-Cooler® System (P/N 25980-25981)

 Provides increased air flow to the engine by increasing air density for more increased power, lower EGTs and improved fuel economy.

#### Banks Exhaust Brake (P/N 55222-55229)

 Increases the stopping power of your truck and extends the service life of your brakes

## Banks SmartLock (P/N 55270)

- Reduces wear on transmission
- Locks Torque Converter and raises trans-line pressure
- Works with Banks Exhaust Brake

## Banks Billet Torque Converter (P/N 72515)

- Higher torque capacity over stock
- Lockup clutch is slip-resistant so transmission fluids stay cooler and transmission life is prolonged.

#### Banks Bullet (P/N 66522-66523)

- Adds power safely to your vehicle
- Displays critical engine functions
- Engine safeguards
- Change power levels on-the-fly

# Boost and Pyro Gauges (P/N 64507)

- Keep your engine safe by monitoring vital engine parameters.

#### **Banks Diesel Tuner**

EconoMind w/switch (P/N 63725, 63793, 63795, 64507) EconoMind w/iQ (P/N 63807, 63808, 63817, 63818)

#### Six-Gun w/switch (P/N 61022, 63797) Six-Gun w/iQ (P/N 63809, 63819)

- Adds power safely to your vehicle
- Engine and transmission safeguards
- Change power levels on-the-fly

## Thermocouple

- Add a temperature limiting function to your Diesel Tuner .

#### Banks Speed-Loader (P/N 62981)

- Furthers the power output of the Banks Six-Gun and provides EGT limiting safety.

#### Banks BigHead® Actuator (P/N 24331)

- Achieves a higher peak boost over stock and gives you precise boost control that gives you crisp acceleration and more mid-range pulling power.

#### Banks Stinger Systems (P/N 49692-49699, 49708-49711, 49716-49721) Contains:

- Ram-Air Intake system
- Monster Exhaust (single or dual)
- EconoMind Tuner w/ Banks iQ
- Big Head Wastegate Actuator

#### Banks PowerPack Systems (P/N 49700-49707, 49712-49715, 49722-49727) Contains:

- Dom Air Intoko
- Ram-Air Intake system
- Monster Exhaust (single or dual)
- EconoMind Tuner w/ Banks iQ
- Big Head Wastegate Actuator
- Monster-Ram
- Techni-Cooler System

#### Banks Six-Gun Bundle (P/N 49728-49735, 49744-49747, 49752-49757) Containe:

### Contains:

- Ram-Air Intake system
- Monster Exhaust (single or dual)
- Six-Gun Tuner w/ Banks iQ
- Big Head Wastegate Actuator

## Banks Big Hoss Bundle (P/N 49736-49743, 49748-49751, 49758-49763)

## Contains:

- Ram-Air Intake system
- Monster Exhaust (single or dual)
- Six-Gun Tuner w/ Banks iQ
- Big Head Wastegate Actuator
- Monster-Ram
- Techni-Cooler System

For More Information please call (888) 635-4565 or Visit us online @ www.bankspower.com

# **General Installation Practices**

## Dear Customer,

If you have any questions concerning the installation of your Banks Power System, 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 system, familiarize yourself with the procedure by reading the entire manual before starting work.

**2.** The exploded view (**Figure 1**) provides only general guidance. Refer to each step and section diagram in this manual for proper instruction.

**3.** Throughout this manual, the left side of the vehicle refers to the driver's side, and the right side to the passenger's side.

**4.** Disconnect the ground cable from the battery (or batteries, if there are two) before beginning work.

**5.** Route and tie wires and hoses a minimum of 6" away from exhaust heat, moving parts and sharp edges. Clearance of 8" or more is recommended where possible.

**6.** When raising the vehicle, support it on properly weight-rated safety stands, ramps or a commercial hoist. Follow the manufacturer's safety precautions. Take care to balance the vehicle to prevent it from slipping or falling. When using ramps, be sure the

front wheels are centered squarely on the topsides; put the transmission in park; set the hand brake; and place blocks behind the rear wheels. **Caution! Do not use floor jacks to support the vehicle while working under it. Do not raise the vehicle onto concrete blocks, masonry or any other item not intended specifically for this use.** 

**7.** During installation, keep the work area clean. Do not allow anything to be dropped into intake, exhaust, or lubrication system components while performing the installation, as foreign objects will cause immediate engine damage upon start-up.

# **Tools Required**:

- 1/2" and 3/8" drive ratchets with inch and metric sockets and 1/2" and 3/8" drive extension
- Inch and metric combination or open-end wrenches
- Standard screwdriver
- Clean shop towels or rags
- Pry-bar
- Reciprocating saw

# Highly recommended tools and supplies:

- Inch-pound and foot-pound torque wrenches
- Compressed air source and hose
- Air pressure regulator
- Penetrating oil or light lubricant spray

# **Monster Exhaust System Installation**

**1.** As a precaution, disconnect the ground of the battery (if there is more than one battery, disconnect both).

**2.** Raise the vehicle and support it with properly weight rated safety stands, ramps or a commercial hoist. Follow the manufacturer's safety precautions. Take care to balance the vehicle to prevent it from slipping or falling. When using ramps, be sure the front wheels are centered squarely on the topsides; place the transmission in park; set the parking brake and place blocks behind the rear wheels. **CAUTION: DO NOT WORK UNDER ANY VEHICLE SUPPORTED ONLY BY A JACK. SEVERE INJURY MAY RESULT.** 

WARNING! The following step requires the use of a torch and/ or saw. Proper safety equipment should be used. Failure to use proper safety equipment may result in severe injury.

**3.** From under the vehicle, remove the entire factory exhaust system. Starting at the rear of the vehicle, remove each component by either cutting through the pipe near the clamps or by removing the clamps and heating the joints with an oxy-acetylene torch to allow crimped pipes to separate. DO NOT CUT OR DAMAGE CATALYTIC CONVERTER TUBING DURING THE REMOVAL PROCESS. Remove the hanger pins from the rubber hangers with a pry bar. (Spray lubricant will ease hanger removal.)

**4.** Remove the clamp attaching the turbine outlet pipe (T.O.P) to the catalytic converter headpipe (or intermediate pipe if applicable) and remove the catalytic converter assembly or intermediate pipe. Remove the band-clamp that attaches the T.O.P. to the turbine outlet elbow and remove the factory T.O.P from the vehicle.

**5.** Remove the V-band clamp that attaches the turbine outlet elbow to the turbine housing and remove the turbine outlet elbow from the vehicle.

**6.** Attach the supplied T.O.P. gasket to the Banks T.O.P. Loosely place the supplied V-band clamp on the Banks T.O.P. Install the Banks T.O.P. to the turbine housing (note: the factory turbine outlet elbow will not be used). Loosely snug the V-band clamp assuring gasket and T.O.P are aligned properly.

**7.** For vehicles that are NOT equipped with a catalytic converter, install the supplied Banks front intermediate pipe and supplied gasket onto the previously installed Banks T.O.P. Place a small amount of anti-seize onto the four (4) 7/16" bolts. Loosely install the supplied 7/16" hardware onto the T.O.P. and intermediate pipe flange (see **Figure 1**). Proceed to **Step 9**.

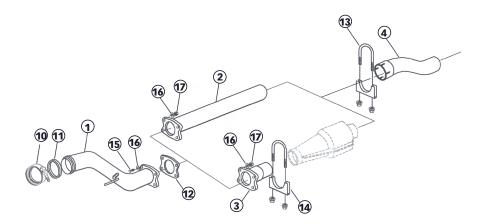
**8.** For vehicles equipped with catalytic converters:

**IMPORTANT: If the vehicle** is equipped with a catalytic converter, it should be inspected. **Diesel catalysts may become** plugged with soot and can cause a restriction to exhaust flow, impeding performance. Shine a powerful flashlight into the inlet end of the converter. Observe the light through the other end of the converter. The full circle of the flashlight should be visible without any blockage in the gridwork of the catalyst. If excessive soot is observed, the catalyst may need to be cleaned. TAKE PRECAUTIONS to avoid blowing soot toward the work area or where it could be inhaled. ALWAYS use breathing protection. Also inspect the catalyst for damage (i.e. chips, bent corners, etc.) to the gridwork.

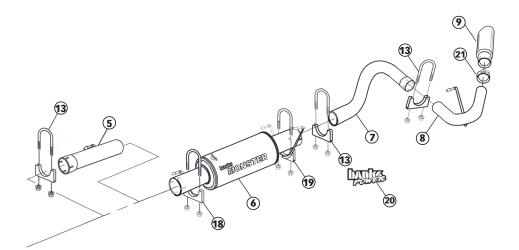
# **General Assembly Diagram**

# Figure 1

Item	Description	P/N	QTY.
1	Monster Turbine Outlet Pipe (T.O.P.)	53270	1
2	Front Intermediate PIpe, (Non-Cat. Conv. System Only)	53272	1
3	Front Intermediate Pipe (Cat. Conv. Systems Only)	53271	1
4	Rear Intermediate Pipe	53273	1
5	Extension Pipe	53276	1
6	Muffler	53801	1
7	Front, Tailpipe	53277	1
8	Rear, Tailpipe	53280	1
9	Tailpipe Tip Assembly	52730	1
10	V-Band clamp, 4"	92887	1
11	Gasket, Turbine Outlet	93005	1
12	Gasket, Exhaust Flange	93210	1
*13	Exhaust Clamp, 4"	52476	3
14	Exhaust Clamp, 3.5" (Cat. Conv. Systems Only)	52468	1
15	Hex Bolt, 7/16"x 20-1.50	91629	4



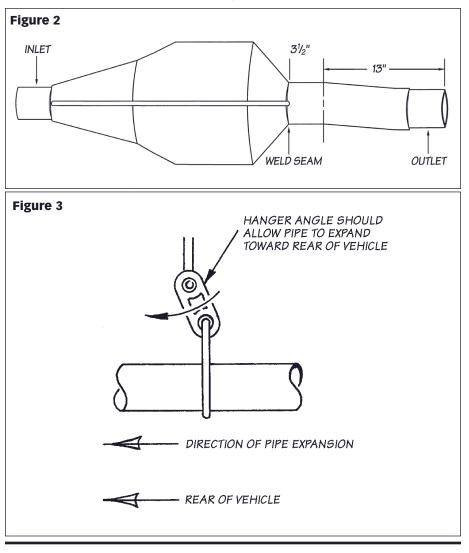
Item	Description	P/N	QTY.	
16	Washer, Flat 7/16-AN, S/S	91601	8	
17	Nut, Crimplock 7/16"-20	91619	4	
18	Hanger Clamp, Front Muffler	53279	1	
19	Hanger Clamp, Rear Muffler	53280	1	
20	Urocal, Banks Power	96009	2	
21	Band Clamp, 4"	52471	1	
* Quad-Cab, Long Bed Models contain four (4) 4" exhaust clamps.				



#### If your catalytic converter is damaged, it may be covered under your vehicle's emissions warranty.

**A)** With the catalytic converter removed from the vehicle and the headpipe removed from the converter, measure 13'' inward from the outlet tubing rim (3-1/2'') of tubing from the outlet weld should remain). Using a reciprocating saw or equivalent, vertically cut and remove 13" from the converter outlet tubing (see **Figure 2**).

**B)** Install the supplied Banks front intermediate pipe and supplied gasket onto the previously installed Banks T.O.P. Place a small amount of anti-seize onto the four (4) 7/16" bolts. Loosely install the supplied



7/16" hardware onto the T.O.P. and intermediate pipe flange.

**C)** Install the supplied  $3-\frac{1}{2}$ " clamp onto the catalytic converter inlet. Place the catalytic converter onto the previously installed intermediate pipe. Loosely snug the clamp on the catalytic converter inlet.

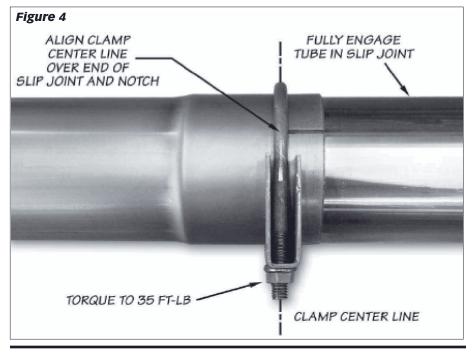
**9.** Place a supplied 4" clamp onto the front of the supplied intermediate pipe. Install the intermediate pipe onto the catalytic converter outlet or the front intermediate pipe. Lightly snug the exhaust clamp near the rim of the intermediate pipe.

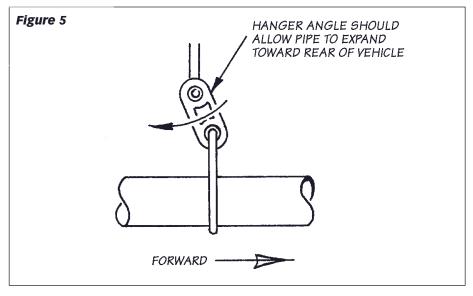
**10.** For quad cab long bed (160.5" wheelbase) models only: Place a supplied 4" clamp onto the front of the supplied extension pipe. Install the extension pipe hanger pin into the corresponding rubber hanger. Connect the extension pipe onto the

intermediate pipe and loosely snug the 4" clamp.

**11.** Install the front hanger clamp onto the Monster Muffler inlet. Install the muffler inlet onto the intermediate pipe. With the hanger facing the front of the vehicle, insert the front hanger into the vehicle's rubber grommet.

**12.** Route the front tailpipe over the rear axle housing and install onto the Monster muffler outlet. Be sure that the two pipes are completely engaged. Loosely snug the 4" hanger clamp. 8. Install a 4" exhaust clamp onto the inlet of the rear tailpipe. Install the rear tailpipe onto the outlet of the front tailpipe. Insert the rear tailpipe hanger pin into the factory rubber hanger. Rotate the tailpipe until the hanger pins are parallel with the frame mounted pin. Slide the 4" clamp and position as shown in **Figure 4**. Loosely snug the 4" clamp.





Notes: Maintain an adequate air gap clearance of one (1) inch between the exhaust and the shock absorber and between the exhaust and the spare tire.

Minimum distance between exhaust tip and body is one (1) inch. 9. Adjust each of the pipes to ensure that all of the hanger pins are parallel with the frame mounted pins and that the rubber hangers are all positioned slightly forward (**Figure 5**). The amount of forward angle on the rubber hangers should increase the farther downstream the hanger is positioned. This allows the hangers to be properly positioned once the exhaust system reaches operating temperature.

**13. Figure 3** illustrates the proper location of an exhaust clamp on a tubing joint. Torque the nuts on each of the exhaust clamps to 35 ft-lb. Note: The clamps only need to be tight enough to form a seal and hold the pipes together. Over tightening the clamps may cause the system to leak due to the pipe being crimped.

Note: If installing optional tailpipe tip, cut off 4" from the tailpipe outlet before installing the tailpipe into Banks Monster Muffler. See **Figure 6**.

#### <u>If not installing the optional Banks</u> <u>Tailpipe Tip, skip to step 13.</u>

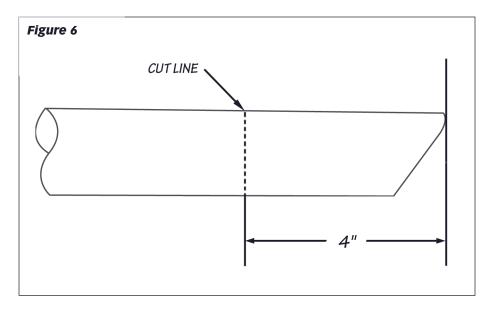
**14.** Insert the optional tailpipe tip over the tailpipe outlet. Adjust the tip past the edge of the body or where aesthetically pleasing. Torque the band clamp to 35 ft-lb.

**15.** Remove the protective covering from the tailpipe tip.

CAUTION: The protective covering may ignite and burn if not removed

## prior to running the engine.

**16.** With everything positioned properly, begin to tighten the clamps starting with the ones closest to the turbo and working your way back. Evenly torque the exhaust clamps to 35 ft-lbs. Make sure that each slip is fully inserted (+/- 1/4 inch).



**17.** Your system includes two (2) Banks power logos. The logos can be mounted 1/2" to 1" above the "Cummins Turbo Diesel" emblem on the driver-side and passenger-side front fenders.

**18.** Re-connect the negative battery cable. Start the engine and listen for exhaust leaks. Tighten the exhaust clamps as necessary. Whenever possible, tack weld slip connections to prevent disengagement is recommended. The Banks Monster Exhaust installation is now complete.

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