

banks

Owner's Manual with Installation Instructions

Banks Monster[®] Exhaust System

**2003-2007 Ford Power Stroke 6.0L
Turbo-Diesel F250/F350 Trucks & Excursions**

THIS MANUAL IS FOR USE WITH SYSTEMS
48749, 48760, 48781, 48783-48788

banks

Also Available from Banks Power



Banks IQ System (P/N 61151-61152)

- 5" touchscreen interface that can control the Banks Diesel Tuner and/or SpeedBrake on the fly.
- Interchangeable 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 42155)

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

High-Ram Intake (P/N 42750-42751)

- 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 25974-25975)

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

Banks Brake (P/N 55467-55468)

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

Banks Billet Torque Converter (P/N 72522)

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

Banks SpeedBrake

iQ Compatible (P/N 55455-55456)

PDA Compatible (P/N 55457-55458)

- Allows for controlled hill decent at a user defined vehicle speed.

Boost and Pyro Gauges

(P/N 64507)

- Keep your engine safe by monitoring vital engine parameters

Banks Bullet

(P/N 66524-66525)

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

Banks Diesel Tuner

Six-Gun w/ switch (P/N 61023)

Six-Gun w/ iQ (P/N 63749)

EconoMind w/ switch (P/N 63743-63745)

EconoMind w/ iQ (P/N 63747-63748)

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

Banks Speed-Loader

(P/N 62988)

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

Thermocouple

- Add a temperature limiting function to your Diesel Tuner

OttoMind Programmer

(P/N 66064)

- Contains Banks tunes that boost your vehicles HP, Torque and MPG.
- Displays a host of critical engine functions
- Provides "service technician" diagnostic capabilities
- Has upgradeable functionality, so it will never be out of date

Banks Stinger Systems

(P/N 46465-46486)

Contains:

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

Banks PowerPack Systems

(P/N 46497-46519)

Contains:

- Ram-Air Intake system
- Monster Exhaust (single or dual)
- EconoMind Tuner w/ Banks iQ
- High-Ram
- Techni-Cooler System

Banks Six-Gun Bundle

(P/N 46594-46613)

Contains:

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

Banks Big Hoss Bundle

(P/N 46623-46643)

Contains:

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

General Installation Practices

1. Before starting work, familiarize yourself with the installation procedure by reading all of the instructions.

2. The exploded view (**Figure 1**, pages 4-5) 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 negative (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. When raising the front of the vehicle, put the transmission in park (automatic) or reverse (manual), set the parking brake, and block the rear wheels. When raising the back of the vehicle, be sure the vehicle is on level ground and the front wheels are blocked securely.

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
- Inch-pound and foot-pound torque wrenches
- Penetrating oil or light lubricant spray
- Transmission jack (manual transmission)

Monster Exhaust System Installation

1. Disconnect the negative (ground) cable from the battery (if there is more than one battery, disconnect both negative cables). Secure the cable so it cannot accidentally come in contact with the post.

2. Raise the vehicle and support it securely with properly weight-rated safety stands, ramps or a commercial hoist. Take care to balance the vehicle to prevent it from slipping or falling. When using ramps, be sure the wheels are centered squarely on the topsides. Place the transmission in park (automatic) or reverse (manual), set the parking brake and securely block the wheels that are on the ground.

CAUTION: Do not work under any vehicle supported only by a jack. Severe injury may result.

WARNING! The following step may require 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 factory exhaust system from the catalytic converter back. 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. To assist in removal, the turbine outlet pipe (T.O.P.) should be cut before the transmission if it is going to be replaced. Remove the hanger pins from the rubber hangers with a pry bar. (Spray lubricant will ease hanger removal.)

4. Remove the two (2) nuts attaching the T.O.P. to the catalytic converter inlet. Loosen and remove the band clamp that attaches the rear intermediate pipe to the catalytic converter outlet. Remove the catalytic converter assembly from the vehicle. Remove the band-clamp that attaches the T.O.P. to the turbocharger and remove the factory T.O.P. from the vehicle. Retain V-band clamp for re-assembly.

Note: To assist in T.O.P. removal, remove the rear engine hoist hook by removing the two (2) Hex screws and remove the valve cover heatshield. The dipstick tube may also be removed or slightly bent to allow for T.O.P. removal/installation. Retain all hardware and parts for reassembly.

For Manual Transmissions only: The transmission will need to be lowered to allow for removal and installation of the T.O.P. Using a transmission jack, support the rear of the transmission to allow working room for the T.O.P. and remove the rear transmission mount and crossmember. Remove the Front drive shaft support bracket from the cab. Lower the transmission 4-6" and remove the factory T.O.P.

The transmission may need to be raised before the Banks T.O.P. is installed. Install the Banks T.O.P. Raise the transmission and reinstall drive shaft bracket, transmission crossmember and rear transmission mount. Refer to vehicles owners manual for factory Torque Specifications.

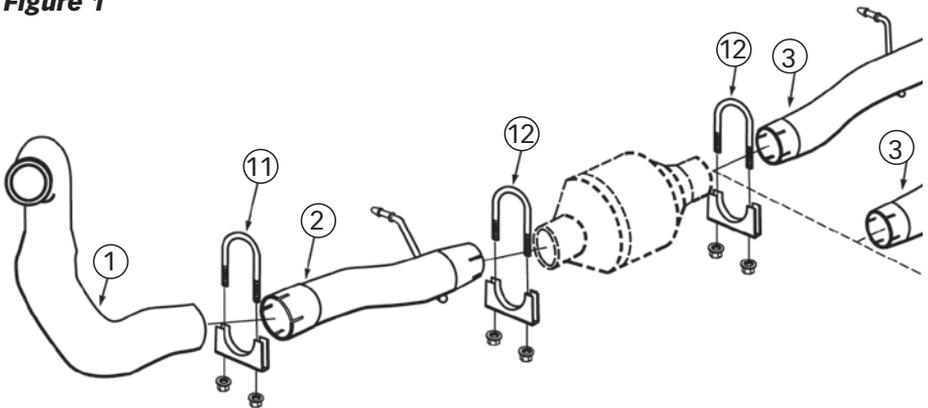
5. Loosely place the factory V-band clamp on the Banks T.O.P. Install the Banks T.O.P. to the turbine housing. Loosely snug the V-band clamp assuring the T.O.P. is aligned properly.

Note: Reinstall the engine hoist hook and valve cover heat shield if previously removed.

General Assembly Diagram

Item #	Part #	Description	QTY
1	53525 or 53537	Turbine Outlet Pipe (T.O.P.) (Build date 9/03 & Earlier or Build date 10/03 & Later)	1
2	53526	Front Intermediate Pipe	1
3	53529	Rear Intermediate Pipe (Crew-Cab Long-bed / Crew-Cab Short-Bed)	1
4	53531	Extension Pipe (Crew-Cab Long-Bed)	1
5	53530	Rear Intermediate Pipe (Extended-Cab Long-Bed)	1
6	53528	Rear Intermediate Pipe (Extended-Cab Short-Bed and Excursion)	1
7	53527	Rear Intermediate Pipe (Regular-Cab Long-Bed)	1
8	53800	Banks Monster Muffler	1
9	53512	Monster Tailpipe	1
10	52383	Polished 5" Exhaust Tip	1
11	52470	Exhaust Clamp, 4"	1*
12	52468	Exhaust Clamp, 3 1/2"	2
13	53453 / 53498	Hanger Clamp, Front, Muffler (various cab configurations / Excursion)	1
14	53454 / 53499	Hanger Clamp, Rear, Muffler (various cab configurations / Excursion)	1

Figure 1

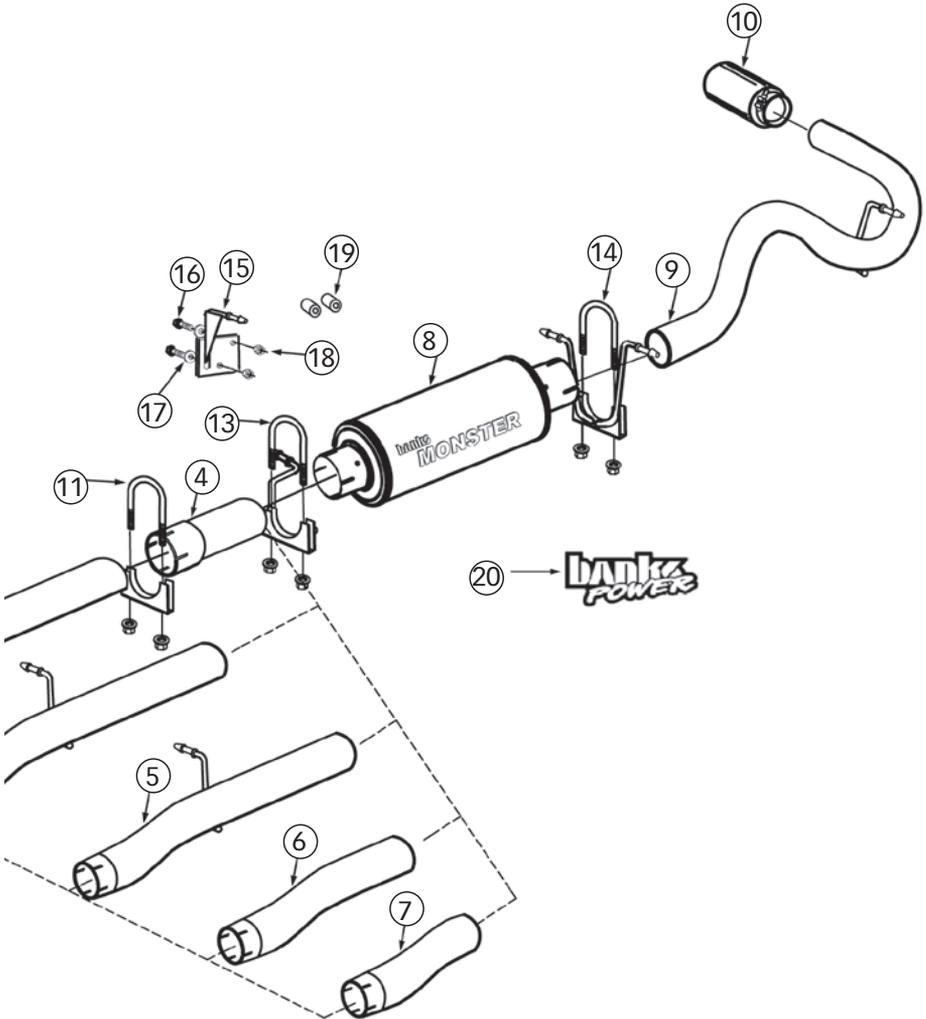


15	53532	Hanger Pin Assembly	1**
16	91788	Bolt, 8-1.25x30mm	2**
17	91202	Washer, Flat, 5/16"	2**
18	91803	Nut, Lock, 8-1.25mm	2**
19	91019	Spacers, 8mm	2***
20	96010	Banks Power decals	2

* Crew-Cab Long-Bed models contain two (2) 4" exhaust clamps

** Crew-Cab Short-Bed only

*** Long-Bed only



6. The catalytic converter inlet will need to be trimmed to accommodate the Banks exhaust system. Be careful not to trim an excessive amount of tubing. **Be sure to wear proper safety equipment.**

IMPORTANT: Diesel catalysts may become plugged with soot which can restrict exhaust flow, impeding performance. Inspect the converter by shining a powerful flashlight into the inlet. 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 lowering 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. 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 approximately 4" from the weld and mark the location (this location should be before any bend, about 7" rear of the inlet flange). Using a reciprocating saw or equivalent, vertically cut and remove 7" from the converter outlet tubing (see **Figure 2**).

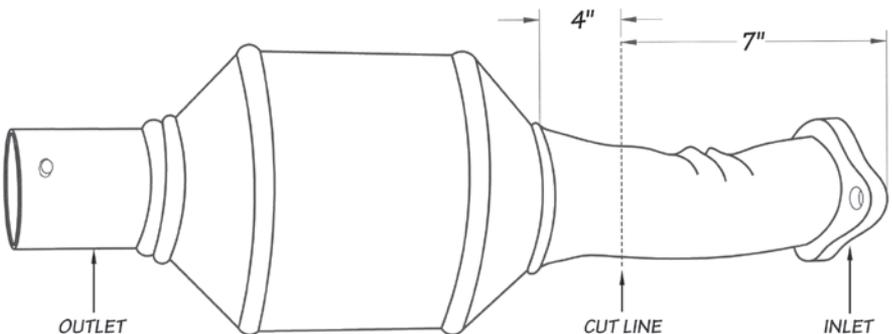
B) Install the supplied Banks front intermediate pipe onto the previously installed Banks T.O.P. Loosely install a supplied 4" exhaust clamp onto the forward end of the front intermediate pipe.

C) Install the supplied 3½" clamp onto the outlet of the front intermediate pipe. Place the trimmed catalytic converter onto the previously installed front intermediate pipe. Loosely snug the clamp onto the catalytic converter inlet.

7. Place a supplied 3½" clamp onto the front of the supplied rear intermediate pipe.

Note: Review the Parts List Table on page 11 to verify the rear intermediate pipe P/N.

Figure 2



8. Install the supplied rear intermediate pipe onto the catalytic converter outlet. Be sure the notch and catalytic converter pin are properly aligned. Lightly snug the 3½" clamp onto the front of the intermediate pipe / catalytic converter outlet.

For *crew-cab long-bed* models, install the supplied extension pipe onto the intermediate pipe and snug a supplied 4" clamp onto the connection. *Note: Exhaust clamps should be placed at the beginning of the slot and evenly tightened.*

9. For *crew-cab long-bed*, *extended-cab short bed*, and *extended-cab long-bed models*, it is necessary to relocate the factory-installed frame-mounted hanger pin that is located behind the rear transmission crossmember.

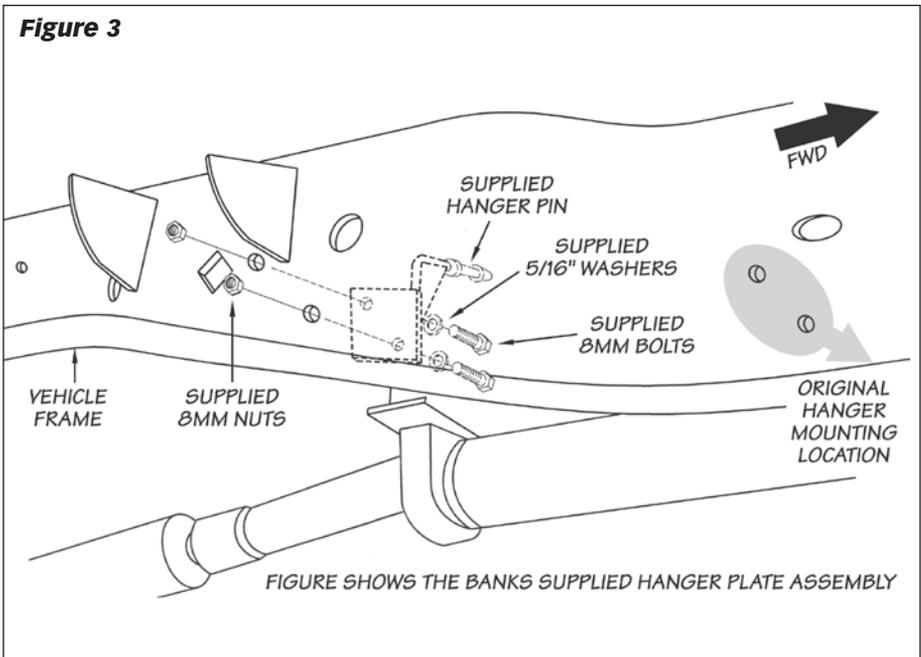
A) Remove the two (2) factory nuts that mount the front muffler hanger pin to the frame rail and remove the hanger pin from the vehicle.

*Note: **Extended cab short bed models will NOT use the two (2) 3/8" spacers.***

B) Re-install the frame mounted hanger pin using the two (2) 3/8" long steel spacers onto the factory exhaust hanger studs. Install the hanger/spacer assembly into the vehicle frame holes about 10-16" to the rear of the original muffler hanger location (see **Figure 3**

3). *Note: spacers are to be installed between the hanger pin and the inside of the frame rail. Torque factory nuts to 20 ft-lbs.*

10. For *crew-cab short-bed models*, it is necessary to replace the factory-installed frame-mounted hanger pin that is located behind the rear transmission crossmember.



A) Using a pry bar, completely remove the rubber hanger from the front muffler hanger pin. Remove the two (2) factory nuts on the front muffler hanger pin from the frame rail and remove the hanger pin from the vehicle. Retain the rubber hanger for re-assembly.

B) Install the supplied hanger pin to the vehicle frame about 10-16" to the rear of the original muffler hanger location (see **Figure 3**). Install the supplied bolts and washers into the hanger plate and through the frame. Install the supplied nuts and torque to 20 ft-lbs (27 N*m).

C) Reinstall the rubber hanger onto the mounted hanger pin assembly.

11. Install the single pin front hanger clamp onto the rear of the intermediate pipe with the hanger pin on the inside facing the muffler. Insert the hanger

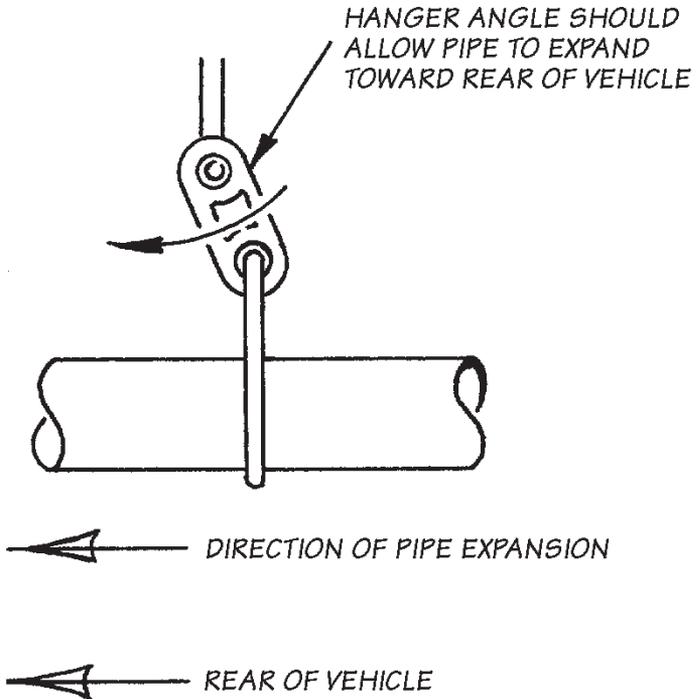
pin into the vehicle's rubber grommet. Install the inlet of the Banks Monster muffler to the intermediate pipe.

12. For *F-series Trucks*, install the dual pin rear hanger clamp onto the outlet of the Monster muffler with the hanger pins on the inside, facing the muffler.

For *Excursions*, install the rear hanger clamp with the pins facing to the rear of the vehicle. Insert the two hanger pins into the vehicle's rubber grommets.

13. Route the tailpipe over the rear axle housing and into the muffler outlet. Install the tailpipe hanger pin into the corresponding rubber hanger. Loosely snug the 4" hanger clamp onto the muffler outlet.

Figure 4



14. Install the 5" Monster tailpipe tip on the exhaust. Keep the wrapping on until installation is complete. The tip should be rotated so the clamp nut and drain hole are pointing down. Align the end of the tip with the body line of the truck.

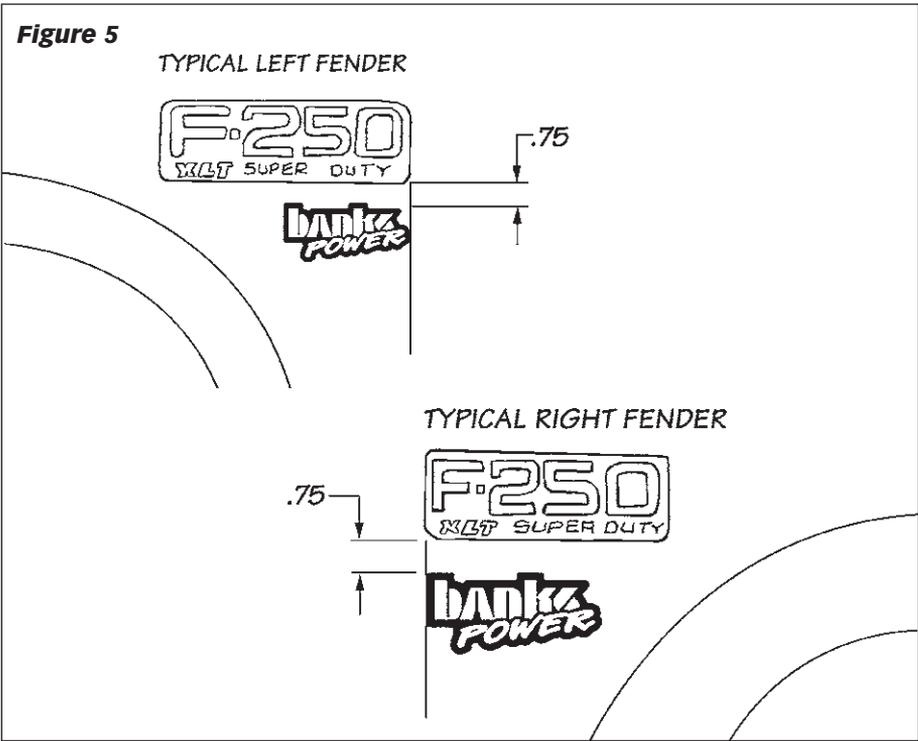
15. With everything positioned properly, begin to tighten the clamps starting with the ones closest to the front and working your way back. Torque the exhaust clamps evenly to 35 ft-lbs (47 N*m). Make sure that each slip is fully inserted (+/- 1/4 inch) and that all mount hangers are in the forward position (see **Figure 4**).

16. Remove the protective covering from the tailpipe tip.

CAUTION: The protective covering may ignite and burn if not removed prior to running the engine.

17. Your system includes two "Banks Power" logos designed to complement the Ford badging on your truck. Use the provided measurements (see **Figure 5**) to position the logos for a clean factory look.

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



Parts List—Ford Power Stroke Monster Exhaust

T.O.P. System <i>(Build Date 9/03 & Earlier)</i>		Std. Cab LB 137" WB 48761	Ext. Cab SB 141" WB 48761	Crew Cab SB 156" WB 48761	Ext. Cab LB 158" WB 48761	Crew Cab LB 172" WB 48761	Excursion 48761
P/N	Description						
53525	2003 T.O.P. w/Resonator	1	1	1	1	1	1
53526	Front Intermediate Pipe	1	1	1	1	1	1
52470	Exhaust Clamp, 4"	1	1	1	1	1	1
52468	Exhaust Clamp, 3.5"	1	1	1	1	1	1
96440	Owners Manual	1	1	1	1	1	1
T.O.P. System <i>(Build Date 10/03 & Later)</i>		48781	48781	48781	48781	48781	48781
53537	2004 T.O.P. w/ Out Resonator	1	1	1	1	1	1
53526	Front Intermediate Pipe	1	1	1	1	1	1
52470	Exhaust Clamp, 4"	1	1	1	1	1	1
52468	Exhaust Clamp, 3.5"	1	1	1	1	1	1
96440	Owners Manual	1	1	1	1	1	1

Monster Exhaust System		Std. Cab LB 137" WB 48755	Ext. Cab SB 141" WB 48756	Crew Cab SB 156" WB 48757	Ext. Cab LB 158" WB 48758	Crew Cab LB 172" WB 48759	Excursion 48760
P/N	Description						
53800	Monster Muffler	1	1	1	1	1	1
53512	Tailpipe	1	1	1	1	1	
53536	Tailpipe (Excursion)						1
52383	Tailpipe Tip	1	1	1	1	1	1
53453	Hanger, Clamp, Front Muffler	1	1	1	1	1	
53454	Hanger, Clamp, Rear Muffler	1	1	1	1	1	
53498	Hanger Clamp, Front, Muffler (Excursion)						1
53499	Hanger Clamp, Rear, Muffler (Excursion)						1
52470	Exhaust Clamp, 4"					1	
52468	Exhaust Clamp, 3.5"	1	1	1	1	1	1
53527	Rear Interm. Pipe (Kit 48750)	1					
53528	Rear Interm. Pipe (Kit 48751)		1				
53529	Rear Interm. Pipe (Kit 48752)			1		1	
53530	Rear Interm. Pipe (Kit 48753)				1		
53531	Rear Interm. Pipe (Kit 48754)					1	
53534	Rear Interm. Pipe (Excursion)						1
53532	Frame Hanger, Muffler			1			
91803	Nuts, Lock M8-1.25			2			
91202	Washer, Flat 5/16			2			
91019	Spacer				2		
96440	Owners Manual	1	1	1	1	1	1
96503	Warranty Card	1	1	1	1	1	1