

with Installation Instructions  
**Owner's Manual**

**Banks  
TorqueTube®  
System**

**With Optional Headpipe Assembly**

**Jeep 4.0L I-6 models including:**

**'91-99 Wrangler**

**'91-99 Cherokee**

**'93-95 Grand Cherokee**

**'96-98 Grand Cherokee**

**'91-92 Comanche**

THIS MANUAL IS FOR USE WITH SYSTEM 51305, 51307, 51308 & 51309

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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 5:00 pm (PT). If you have any questions relating to shipping or billing, please contact our Customer Service Department at (888) 839-5600.

Thank you.

## General Installation Practices

1. For ease of installation of your Banks TorqueTubes, familiarize yourself with the procedure by reading the entire manual before starting work. This instruction manual contains 8 pages of text, illustrations and parts listing.
2. Throughout this manual, the left side of the vehicle refers to the driver's side, and the right side to the passenger's side.
3. Disconnect the ground cable from the battery before beginning work. If there are two batteries, disconnect both.
4. Route and tie wires and hoses a minimum of 6 inches away from exhaust heat, moving parts and sharp edges. Clearance of 8 inches or more is recommended where possible.
5. 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.**

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

**7.** For proper performance from your Banks components and to prevent engine damage, it is essential that your engine's fuel system be capable of delivering fuel at the factory's specification. We have often found vehicles with inadequate low pressure side fuel delivery that isn't apparent until performance modifications are made.

### Tools Required:

- 1/4" and 3/8" drive ratchets with inch and metric sockets and 3/8" drive extension
- Inch and metric combination or open-end wrenches
- Standard and Phillips head screwdrivers
- Standard and needle-nose pliers
- Pocket or X-Acto knife
- Clean shop towels or rags
- Inch-pound and foot-pound torque wrenches

### Highly recommended tools and supplies:

- Compressed air source and hoses
- Penetrating oil or light lubricant spray
- 9/16" swivel socket
- Floor jack and jack stands
- Fuel-line quick disconnect tool

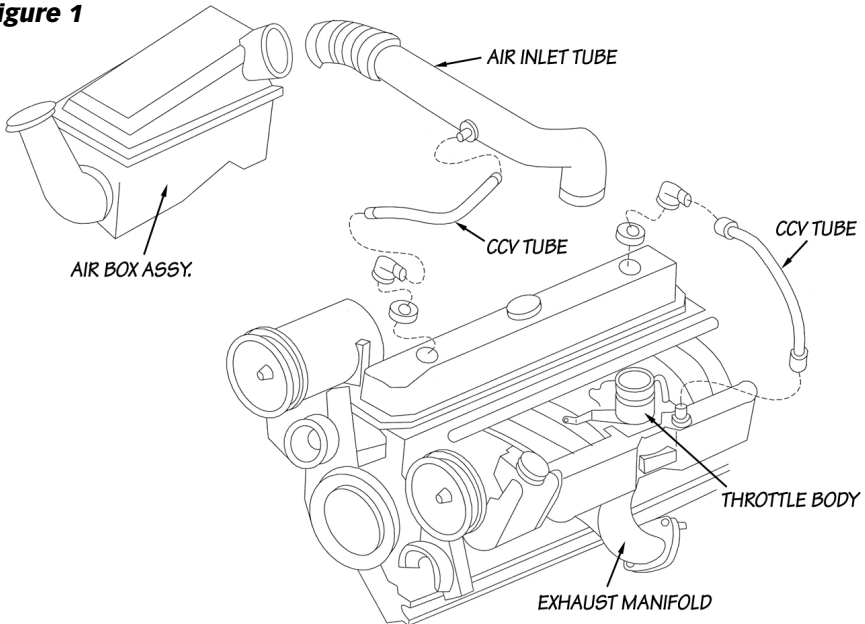
## TorqueTube Installation Procedure

**NOTE: Do not wrap TorqueTube.** Wrapping the TorqueTube with exhaust wrap or thermo tape will void the TorqueTube warranty. Exhaust wrapping can cause the TorqueTube to crack and rust. The TorqueTube has been designed to operate efficiently and protect the engine components with out the use of wrapping.

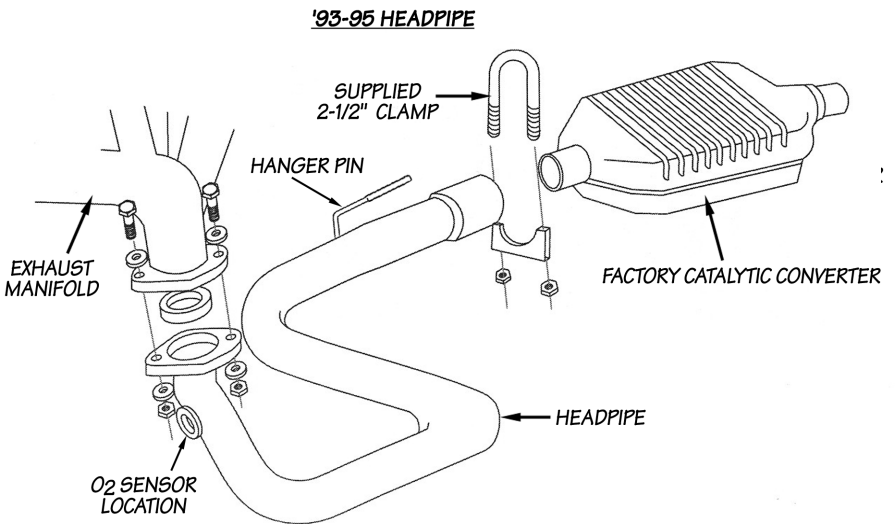
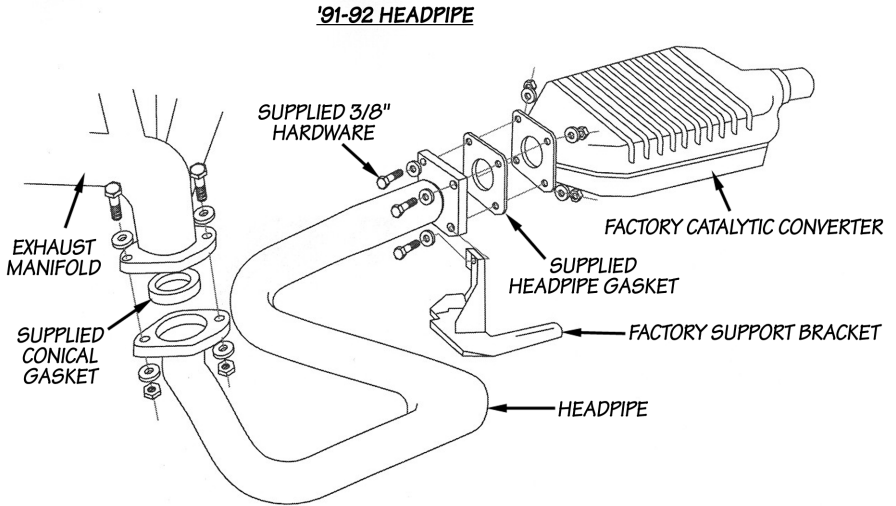
1. Remove the air inlet hose from the throttle body and move it aside. On some models, the air box assembly may need to be removed in order to relocate the air inlet hose (See **Figure 1**).
2. On the intake manifold assembly, remove the throttle cable, transmission pressure cable and cruise control cable (if equipped) located inside the engine compartment.

3. Disconnect any electrical connectors and vacuum lines on the intake manifold and throttle body. Be sure to label the lines to ensure correct replacement.
4. Remove the fuel line. Some models may require a special tool. If necessary refer to service manual for more info.
5. Disconnect and separate O<sub>2</sub> sensor and coupling from mounting bracket as needed.
6. Loosen the power steering set screws located on the pump. Loosen belt tensioner and remove the power steering belt. Next, disconnect the power-steering pump and bracket from the intake manifold.
7. Remove the hardware from headpipe and disconnect the head pipe from the exhaust manifold (see **Figure 2**).

**Figure 1**



**Figure 2**



If head pipe is NOT being replaced, proceed to **Step 12**.

Headpipes for 1991-92 vehicles, proceed to **Step 8 and 9**.

Headpipes for 1993-95 vehicles, proceed to **Step 10 and 11**.

**8.** For 1991-92 vehicles: Remove the four (4) bolts securing catalytic converter to the headpipe (Penetrating oil or WD-40 may assist in removal). Retain the support bracket from the flange for re-assembly. Remove the factory headpipe from the exhaust system (See **Figure 2**).

**9.** Inspect the catalytic converter flange and remove any rust or carbon that may prevent the headpipe from sealing. Install the supplied Banks headpipe and gasket onto the catalytic converter flange. Verify the notch on the headpipe, gasket and catalytic converter flange are aligned. Reinstall the factory support bracket onto the headpipe flange. Place a small amount of anti-seize onto the four (4) supplied  $\frac{3}{8}$  x 1.25" bolts. Install the  $\frac{3}{8}$ " bolts, washers and nylock nuts onto the headpipe and catalytic converter flanges, tighten them evenly. Proceed to **Step 13**.

**10.** For 1993-95 vehicles: Remove the O<sub>2</sub> sensor from the head-pipe (if not already removed). Remove the clamp holding the headpipe and catalytic converter. Remove headpipe hanger pin from the rubber hanger. Remove the factory headpipe from the exhaust system (an oxy-acetylene torch may assist in heating the headpipe for removal).

**11.** Install the supplied Banks headpipe hanger pin onto the corresponding rubber hanger. Slip the headpipe outlet over the catalytic converter inlet. Loosely install the supplied 2½" clamp over the headpipe and catalytic converter tubing. Proceed to **Step 13**.

**12.** For Cherokee models ONLY, remove lower driver-side engine mount and set it aside. Floor jack maybe used to support the weight of the engine. (Be sure the support location does not damage engine components.)

**13.** Loosen intake/exhaust bolts 3,6 and 7, but do NOT remove (see **Figure 3**). These bolts act as supports for the exhaust manifold. Remove all remaining intake / exhaust manifold bolts and set aside hardware for re-assembly (a  $\frac{9}{16}$ " swivel socket may save time).

**14.** Remove the intake manifold from the engine block. Remove the remaining bolts (bolts 3,6 and 7) and remove the exhaust manifold.

**15.** Inspect the exhaust and intake mounting surfaces of the cylinder head and remove any rust or carbon that might prevent the TorqueTube or intake manifold from sealing. Be careful debris does not enter the engine ports.

**16.** Install the supplied gasket onto the cylinder head dowels. Place a small amount of anti-seize on the threads of each of the eleven (11) factory intake and exhaust bolts.

**17.** Install TorqueTube manifold onto the cylinder head and support with loosely installed bolts in locations 3,6 and 7.

**18.** Install bolts 1, 2, 4 and 5 about three turns into engine block. Guide the intake manifold onto the cylinder head dowels. Loosely install all remaining intake/exhaust factory bolts. Be sure TorqueTubes and intake manifold seats flush as bolts are tightened.

**19.** Torque all exhaust and intake manifold bolts to 25 ft-lbs in the sequence shown (see **Figure 3**). Insert the supplied conical gasket onto the headpipe. Re-connect headpipe to the

TorqueTube manifold with the supplied  $\frac{3}{8}$ " hardware.

**20.** If headpipe was removed, tighten and torque headpipe hardware to 35-ft-lbs.

**21.** For Cherokee models, reinstall driver side engine mount using factory hardware.

**22.** Reinstall the power steering pump and mount bracket to the intake manifold. Reinstall the belt and adjust the belt tensioner to the vehicle specification.

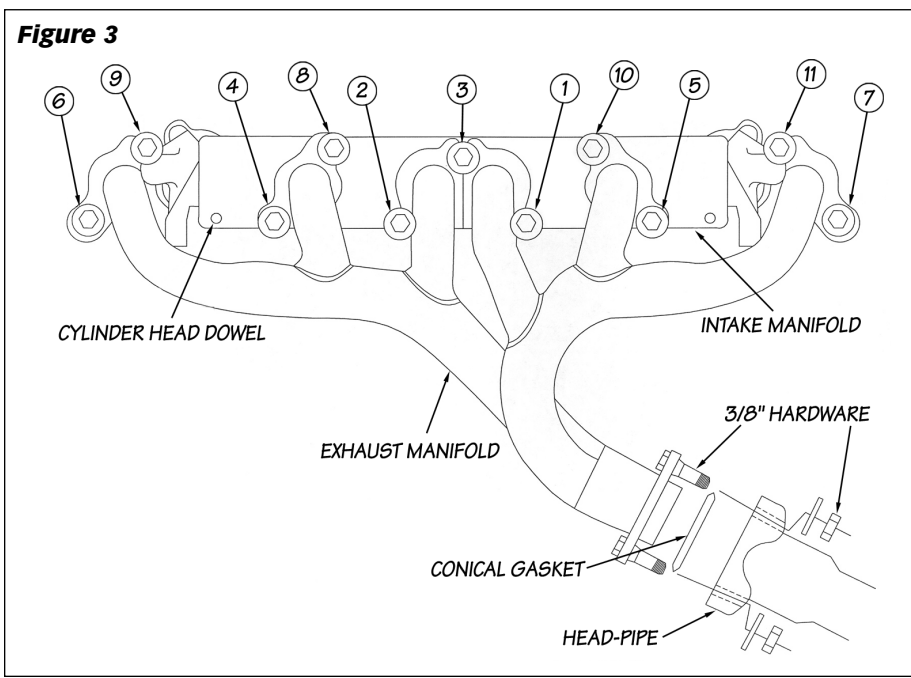
**23.** Reconnect all vacuum and electrical connections on the intake manifold. Reinstall the throttle cable, transmission pressure line cable and cruise control (if applicable).

**24.** Reinstallation the fuel line. Reconnect the exhaust O<sub>2</sub> sensor.

**25.** Reinstall the air inlet hose onto throttle body. Reinstall the air cleaner assembly if removed.

*Note: Your System contains two (2) Banks Power decals. These decals can be placed on top of the Wrangler 4.0L factory emblem or wherever aesthetically pleasing. Your system also contains a CARB EO label for emissions purposes. This label should be placed on the grill/radiator cross member inside the engine compartment, so that it is easily seen by an emissions technician.*

**26.** Reconnect the battery. Start the engine and listen for exhaust leaks. Check the fuel line for any leaks. Once normal operating temperatures have been reached, drive the vehicle and listen for any leaks or rattles. Correct as necessary.



**Parts List, Jeep 4.0L TorqueTube System**

<b>QTY</b>	<b>DESCRIPTION</b>	<b>P/N</b>
1	Assembly, TorqueTube	51300/51302
1	Gasket, Exhaust/Intake	93093
1	Gasket, Conical, Exhaust Outlet	93092
2	Hex Bolt, 3/8-16x2"	91466
4	Washer, 3/8 SAE Flat	91402
2	Nut, lock 3/8-16	91416
1	Lubricant, Anti-Seize 1-oz	90045
2	Decals, Banks Power	96004
1	Decal, CARB E.O.	96205
1	Warranty Statement	96503
1	Card, Product Registration	96392
1	Owners Manual	96965

**Parts List, Jeep 4.0L Headpipe System**

<b>QTY</b>	<b>DESCRIPTION</b>	<b>P/N</b>
1	Assembly, Headpipe (1991-92)	51307
1	Assembly, Headpipe (1993-95)	51308
1	Gasket, Headpipe Outlet (1991-92)	93094
1	Clamp, Exhaust 2 1/2" (1993-95)	52461
4	Hex Bolt, 3/8-16 x 1.25 (1991-92)	91428
4	Nut, Lock 3/8-16 (1991-92)	91417
8	Washer, 3/8" SAE Flat (1991-92)	91402
1	Owners Manual	96965

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