

banks

Owner's Manual with Installation Instructions

Banks Torque Tubes® System

2007 Jeep 3.8L Wrangler

THIS MANUAL IS FOR USE WITH SYSTEM 51319

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General Installation Practices

- 1.** For ease of installation of you Banks system, familiarize yourself with the procedure by reading the entire manual before starting work.
- 2.** The exploded views provide 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 cables from the battery before beginning work. If the vehicle has more than one battery, be sure that the engine primary battery is disconnected. This is necessary for safety and to ease the installation of the passenger side TorqueTubes® exhaust manifold.
- 5.** 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.

- 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. If the vehicle is supported by a hoist, the front wheels may be removed for further accessibility.

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.

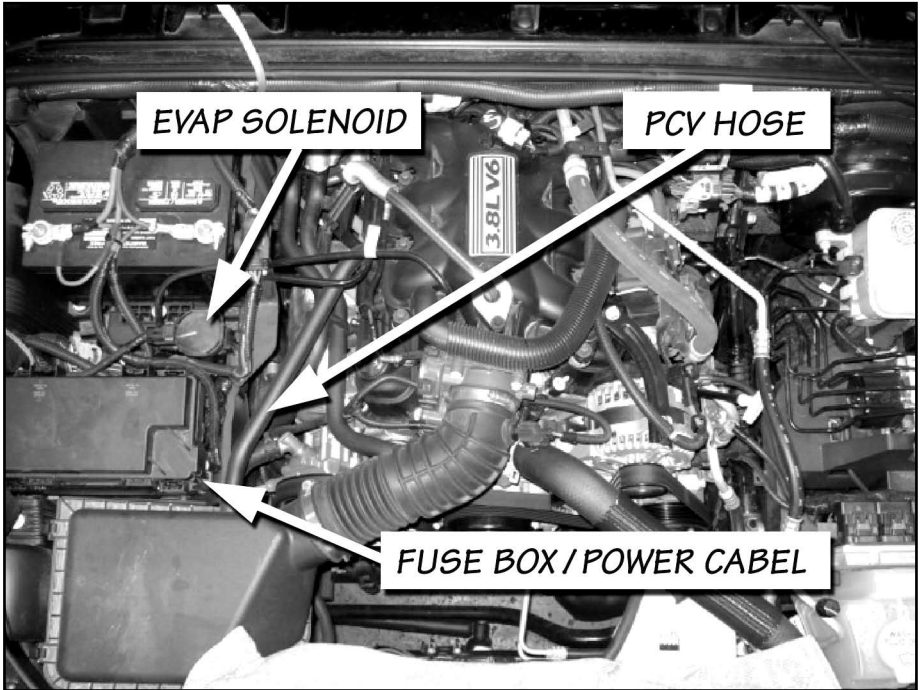
- 7.** During installation, keep the work area clean. If foreign debris is transferred to any Banks component. Clean it thoroughly before installing.

TOOLS REQUIRED

- 10mm ratchet wrench
- 10mm swivel socket
- 5mm 6 point socket
- Clean shop towels or rags
- Pry bar or channel lock pliers
- 1/4" and 3/8" drive ratchets with metric sockets and a 1/4" drive extension
- Metric combination or open-end wrenches
- Standard and Phillips head screwdrivers
- Penetrating oil or light lubricant spray

TorqueTubes Installation

Figure 1



1. Raise the vehicle and support it with properly weight rated safety stands, ramps or a commercial hoist. Follow the manufacturer's safety precautions. When using ramps, be sure the front wheels are centered squarely on the topsides; place the transmission in neutral; set the parking brake and place blocks behind the rear wheels.

REMOVE BATTERY TRAY

2. Disconnect both battery terminals. Remove the battery hold down clamp. Remove the battery from the engine compartment.

3. Loosen and remove the airbox cover intake tube hose clamp. Remove the PCV hose connected at the airbox.

Remove the airbox cover from the engine compartment and set aside.

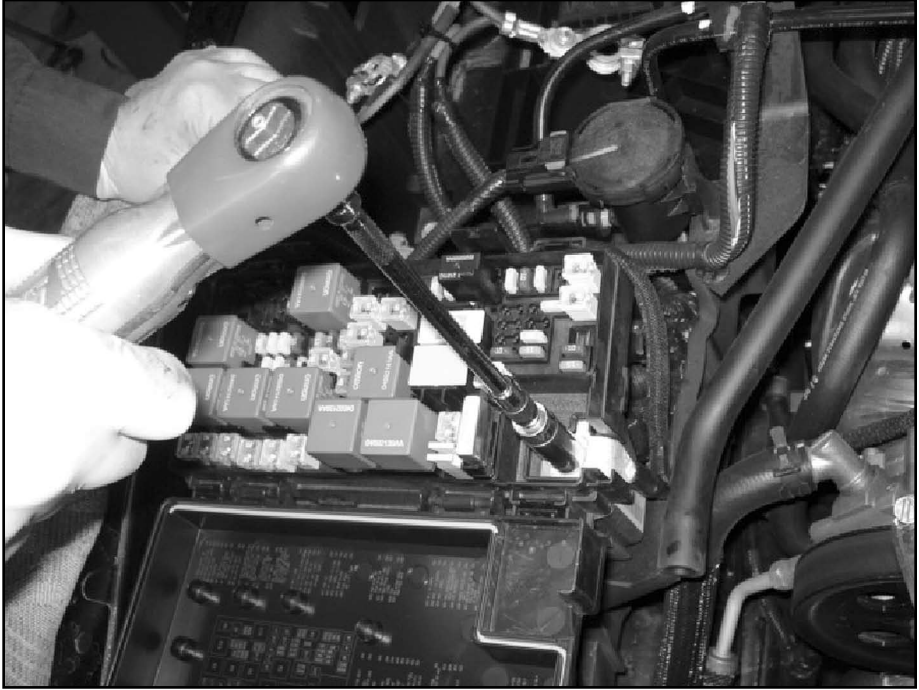
4. Remove lower half of air filter box from the engine compartment and set aside. Note: There may be slight resistance during removal. The lower air box is held in place by three rubber grommets.

5. Remove cable from the power post located in the middle/side of the fuse box See **Figure 2**.

6. Remove the Evap Solenoid by pulling out of bracket. Remove the electrical connection.

7. Remove the wiring harness fastened by a plastic tree retainer located next to the fuse box..

Figure 2



8. Remove the fuse box by pressing in the release tabs located on the outer edge of the fuse box. Remove the (4) bolts securing the fuse box bracket.

9. Remove all fasteners securing the battery tray to the engine firewall and inner fender. *NOTE: There are (4) 10mm screws and (3) 10mm nuts attached to firewall.*

10. Remove the power steering reservoir and place to the side. *NOTE: this step is done to provide additional clearance for battery tray removal.*

11. Remove the power steering reservoir bracket.

12. Remove the battery tray from the vehicle.

REMOVE PASSANGER SIDE EXHAUST MANIFOLD

13. Pull spark plug wires from the spark plugs. Warning: Take care to not damage spark plugs and wires.

14. Remove (2) 15mm nuts to free Y-pipe flange from exhaust manifold.

15. Remove exhaust manifold heat shield. *NOTE: (3) bolts.*

16. Remove exhaust manifold bolts. Remove exhaust manifold and gasket from engine compartment. *NOTE: (6) bolts.*

17. Inspect the exhaust mounting surfaces of the cylinder heads and clean away any deposits to assure proper sealing of the Banks

Figure 3



TorqueTubes. Be careful when doing this as the cylinder heads are aluminum and can be easily damaged. Use of a plastic scraper to clean the aluminum surface is recommended.

REMOVE DRIVER SIDE EXHAUST MANIFOLD

18. Pull spark plug wires from the spark plugs. Warning: Take care to not damage spark plugs and wires.

19. Locate the steering knuckle u-joint bolt. Draw a line across the steering shaft (firewall side) and knuckle u-joint. Remove the knuckle u-joint bolt. See **Figure 3**. *NOTE: Make sure not to swivel the steering shaft nor knuckle u-joint when disconnected.*

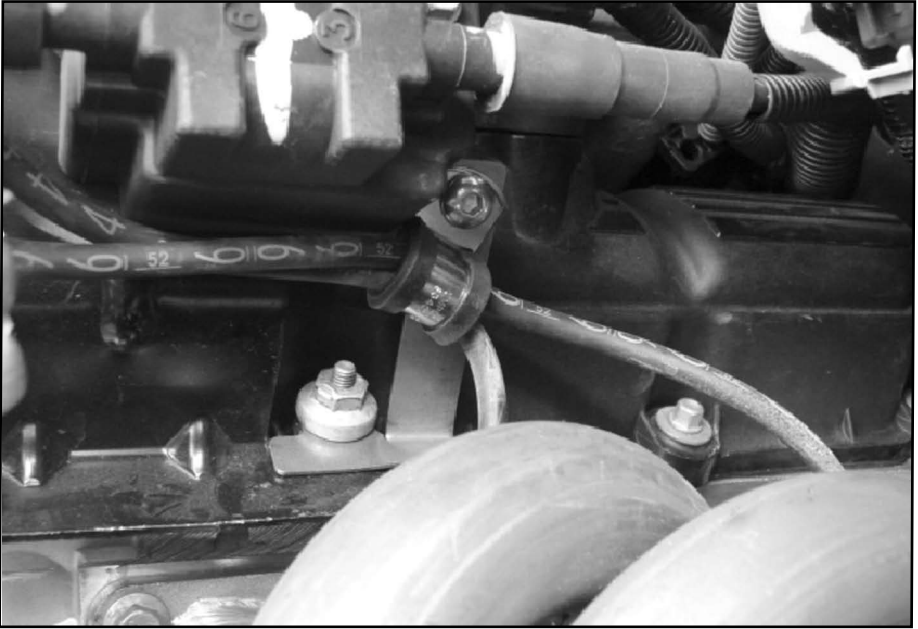
20. Remove (2) 15mm nuts to free Y-pipe flange from exhaust manifold.

21. Remove exhaust manifold heat shield. *NOTE: (3) bolts.*

22. Remove exhaust manifold bolts. Remove exhaust manifold and gasket from engine compartment. *NOTE: (6) bolts.*

23. Inspect the exhaust mounting surfaces of the cylinder heads and clean away any deposits to assure proper sealing of the Banks TorqueTubes. Be careful when doing this as the cylinder heads are aluminum and can be easily damaged. Use of a plastic scraper to clean the aluminum surface is recommended.

Figure 4



**INSTALL BANKS TORQUE TUBE
DRIVER SIDE**

24. On the driver side, install the sparkplug wire retainer bracket on the 2nd valve cover stud. Remove the factory 8-mm nut from the 2nd valve cover stud, install the bracket such that the long arm is facing upwards.

25. Reinstall the nut and tighten. See **Figure 4**.

26. Route the 2nd & 3rd cylinder sparkplug wires inside the cable clamp. Install the cable clamp to the bracket using the $\frac{5}{16}$ " screw, washers and lock nut assembly. See **Figure 4**.

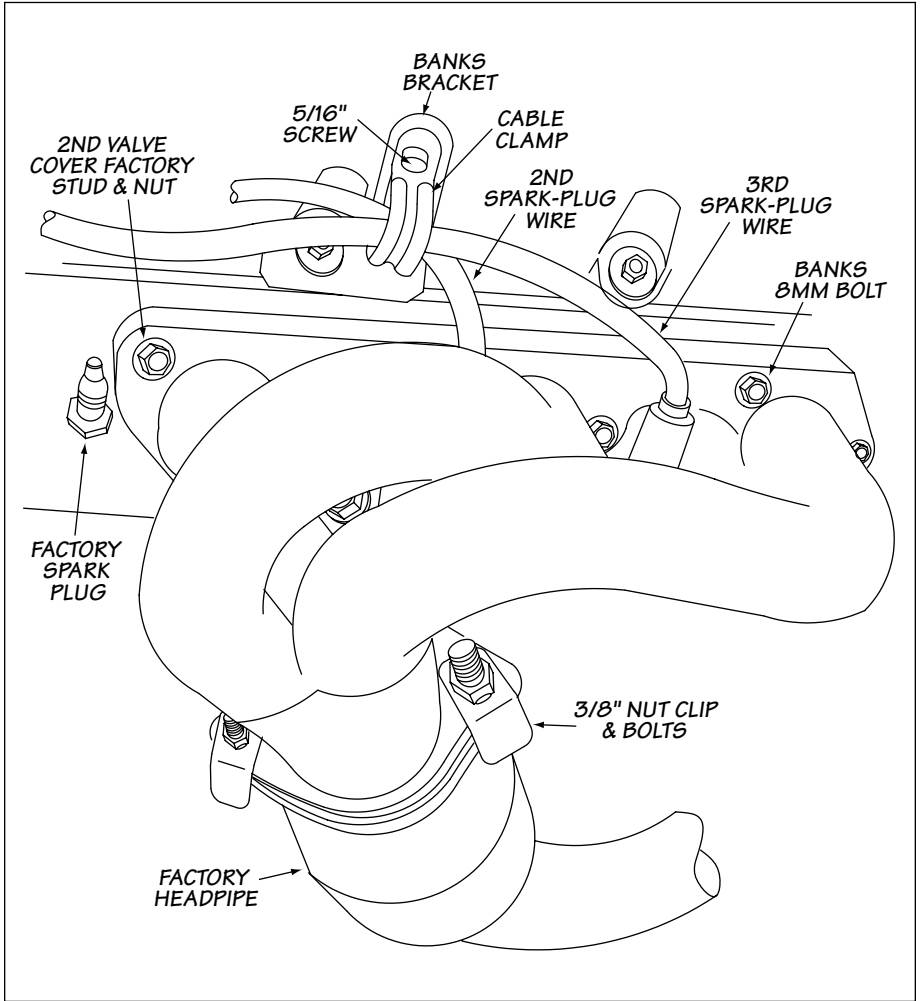
27. Place a small amount of anti-seize compound on the threads of

each of the supplied 12-TorqueTubes 8mm bolts. Note: When installing the bolts be careful not to cross thread in the aluminum threads of the cylinder head.

28. Locate the supplied Banks exhaust manifold gasket. Align the gasket to the driver side TorqueTubes. Install the TorqueTubes and gasket assembly to the cylinder head. Secure the TorqueTubes with six (6) of the supplied 8mm bolts. Torque the 8mm bolts to 20 ft-lbs.

25. Reinstall the previously removed steering knuckle u-joint bolt. Make sure that the knuckle u-joint and the steering shaft are aligned utilizing previously drawn line. See **Figure 3**.

Figure 5



**INSTALL BANKS TORQUE TUBE
PASSANGER SIDE**

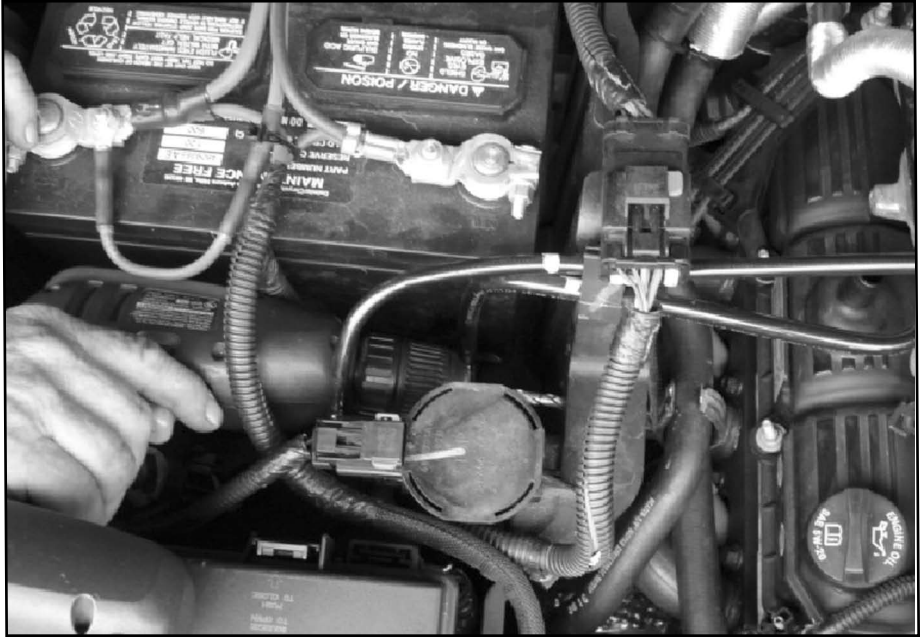
30. Locate the supplied Banks exhaust manifold gasket. Align the gasket to the passenger side TorqueTubes. Install the TorqueTubes and gasket assembly to the cylinder head. Retain the TorqueTubes with six

(6) of the supplied 8mm bolts. Torque the 8mm bolts to 20 ft-lbs.

INSTALL FACTORY Y-PIPE

31. Reinstall the factory driver side and passenger side Y-pipe to the TorqueTubes using the supplied $\frac{3}{8}$ " bolts, $\frac{3}{8}$ " washers and nut clips.

Figure 6



The nut clips should be on top of the TorqueTubes flange. The bolts and washers should be under the headpipe flange. Evenly torque the $\frac{3}{8}$ " hardware 32 ft-lbs. See **Figure 5**.

INSTALL BATTERY TRAY

32. Reinstall the plastic battery tray compartment. Secure with the 10mm bolts on the outside of the battery compartment. Reinstall the fuse compartment to the sheet metal brackets. Reconnect the power cables to the fuse box. Reconnect ground ring terminals removed from inner fender. Reconnect the two lever lock harnesses exiting the fuse compartment.

33. Reinstall the power steering reservoir bracket.

34. Reinstall the power steering reservoir.

35. Reinstall the battery to the tray and secure with the factory hold down. Reconnect the positive and negative terminals.

36. Reinstall the air intake system to the vehicle. Reinstall the removed PCV hose

RELOCATE HEATER HOSE BRACKET

37. Locate the stock heater hose bracket fastened to the passenger side valve cover stud. Carefully remove the bracket and unfasten it from both water hoses. Drill a $\frac{1}{4}$ " hole through the battery tray as shown in **Figure 6**. Using supplied $\frac{1}{4}$ " screw and lock nut relocate and fasten heater hose bracket and position as shown in **Figure 7**.

Figure 7



38. 38. Your system includes two (2) Banks Power logos designed to complement the vehicle's front fenders. See **Figure 8** for recommended logo placement.

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Figure 8



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