

banks[®]

with Installation Instructions
Owner's Manual

**Banks
Techni-Cooler[®]
Charge Air Cooler
Assembly**

**2009 Dodge 6.7L Cummins (24-valve)
ISB Pickup Trucks**

USE WITH SYSTEM P/N 25985

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 Techni-Cooler, 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.

- 1.** Before starting work, familiarize yourself with the installation procedure by reading all of the instructions.
- 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 negative (ground) cable from the battery (or batteries, if there are two) before beginning work.
- 4.** 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.
- 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. 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.

6. 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:

- Drive ratchet
- Ratchet extensions
- Inch and metric deep sockets
- Torx & Allen bits
- Flat blade screwdriver

Highly recommended tools:

- Torque wrench
- Silicon lubricating spray

Also Available from Banks Power

07-10 Dodge 6.7L



Banks Ram-Air Intake System (P/N 42175, 42178)

- 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 Exhaust System

Single (P/N 49764)

Duals (P/N 49765)

Single Dual Tip (P/N 49766)

Duals Quad Tip (P/N 48767)

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

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

Intercooler Assembly Installation

- 1.** Disconnect the negative battery cables from both batteries
- 2.** Disconnect the Inlet Air Temperature/ Pressure Sensor connector located on the air box cover. The connector is shown in **Figure 1**.
- 3.** Remove the nut that fastens the air filter housing to the radiator cross brace.
- 4.** Loosen the hose clamp that secures the air inlet duct to the turbocharger inlet. Disconnect the inlet duct from the turbocharger.
- 5.** Remove the air box and inlet duct to turbocharger as an assembly. The air box is held in place with re-usable push-in fasteners and can be pulled out vertically.

- 6.** Remove the passenger side boost tube. The boost tubes are the charge air ducting that route air from the turbocharger to the Charge Air Cooler (CAC) and from the CAC to the intake manifold.

- 7.** Remove the driver side boost tube.

NOTE: Cover the intake manifold and turbocharger inlet and outlet with a rag to prevent foreign debris from entering during installation.

- 8.** Remove the two upper radiator attachment bolts.

- 9.** Remove the two upper CAC attachment bolts.

- 10.** Remove the 4 bolts (2 per side) that retain the upper radiator cross brace, then remove the upper radiator cross brace. The brace is shown in **Figure 2**.

Figure 1 Location of the Inlet Air Temp/Pressure Sensor



11. Remove the hex head bolts that attach the lower two A/C condenser mounting brackets to the CAC. Remove the torx head bolts that fasten the lower two mounting brackets to the A/C condenser. Discard the stock lower mounting brackets, but retain the torx head bolts for re-use.

12. Remove the hex head bolts that attach the upper A/C condenser mounting brackets to the CAC.

13. Swing the A/C condenser upward as shown in **Figure 3**, then out away from the vehicle as shown in **Figure 4**.

CAUTION: Minimize the amount of stress to the A/C condenser fluid lines to prevent damage.

An assistant could be helpful to hold the A/C condenser while the stock CAC is being removed and the Banks Techni-Cooler is being installed.

14. Remove the stock CAC from the vehicle.

15. Remove the lower saddle mount rubber bushings from the stock CAC and install them on the Banks Techni-Cooler.

16. Remove the upper rubber isolators from the stock CAC and install them on the Banks Techni-Cooler.

17. Install the Banks Techni-Cooler in the vehicle.

18. Remove all of the factory brackets from the condenser, retain the torx head bolts for reassembly. The Banks condenser brackets are stamped such that "R.U." means Right (Passenger Side) Upper and that the "R.U." is visible when the condenser is installed. Install Banks condenser brackets in the same locations as the old factory brackets. See **Figure 5**.

Figure 2 Upper Radiator Cross Brace

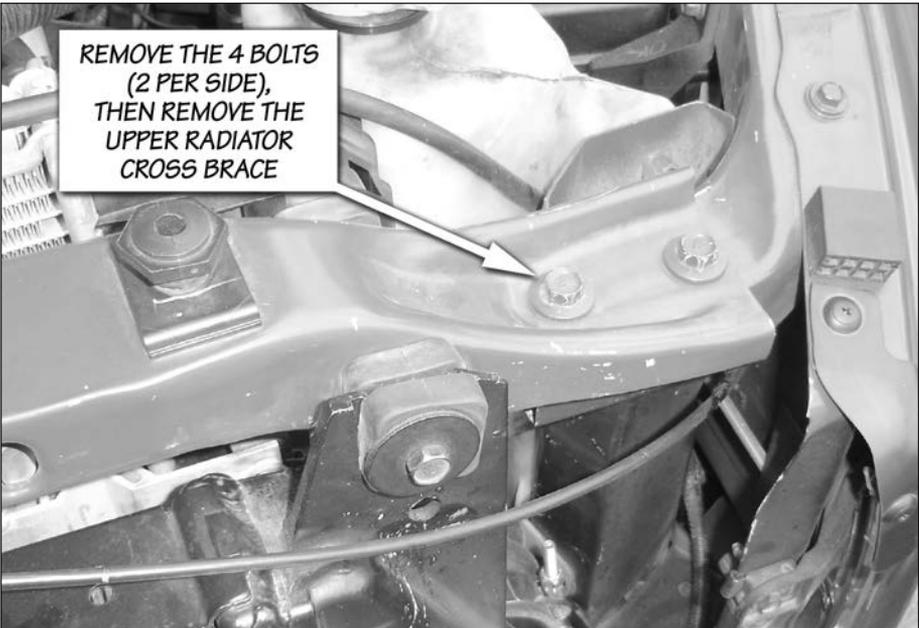


Figure 3 A/C Condenser Removal Procedure

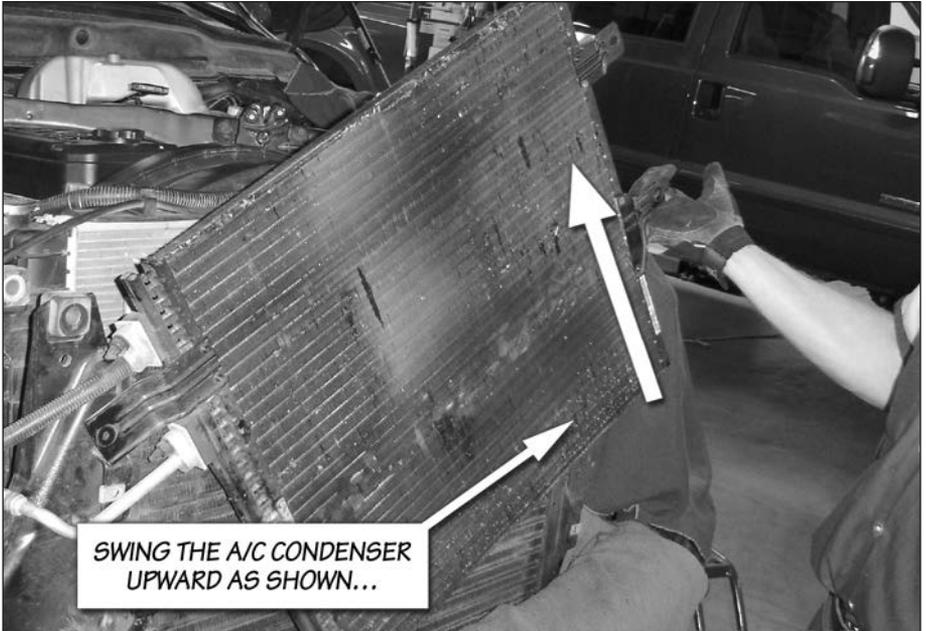


Figure 4 A/C Condenser Removal Procedure

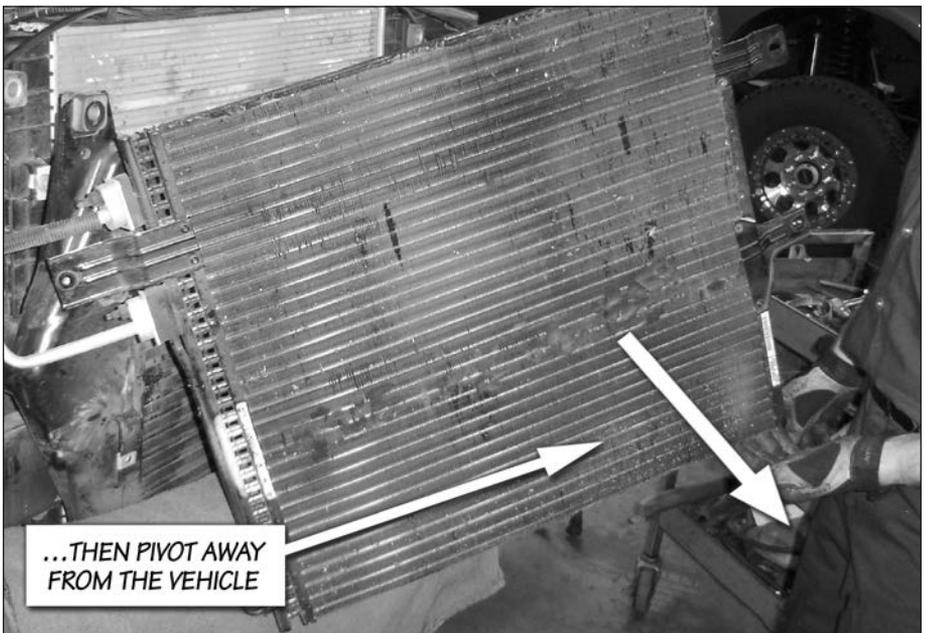
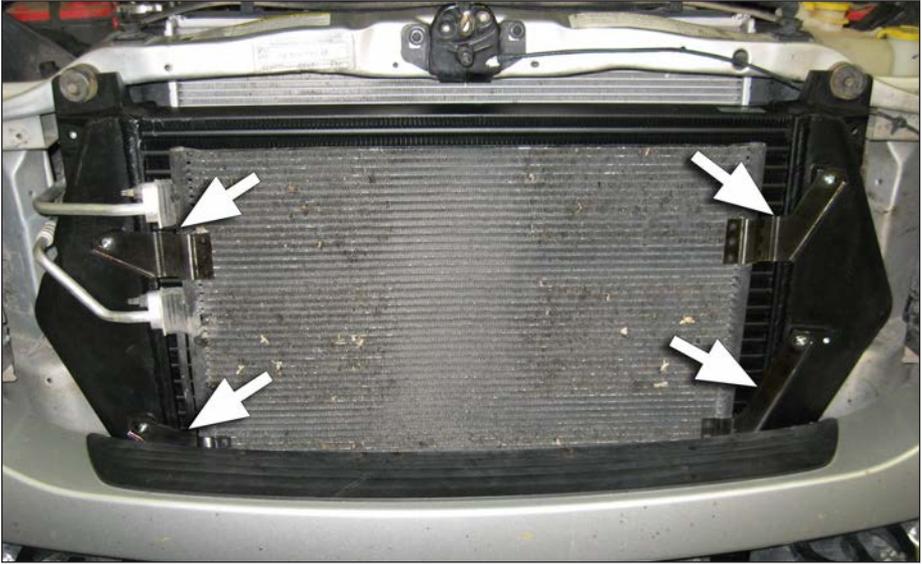


Figure 5



*NOTE: Before installing the Right Lower (RL) bracket gently bend the condenser line so that it runs behind the bracket as shown in **Figure 6**.*

19. Place the A/C condenser back in front of the Techni-Cooler and assemble the condenser to the banks intercooler using the 5/16" bolts and washers supplied with the Banks Techni-Cooler system. Keep the bolts loose to adjust the A/C condenser.

20. Install the upper radiator cross brace. Leave the bolts loose to aid in the alignment of the cross brace with the radiator and Techni-Cooler.

21. Loosely install the upper CAC mounting bolts.

22. Loosely install the upper radiator mounting bolts.

23. Push the cross brace back and tighten the radiator cross brace bolts. Torque the bolts to 21 ft-lbs.

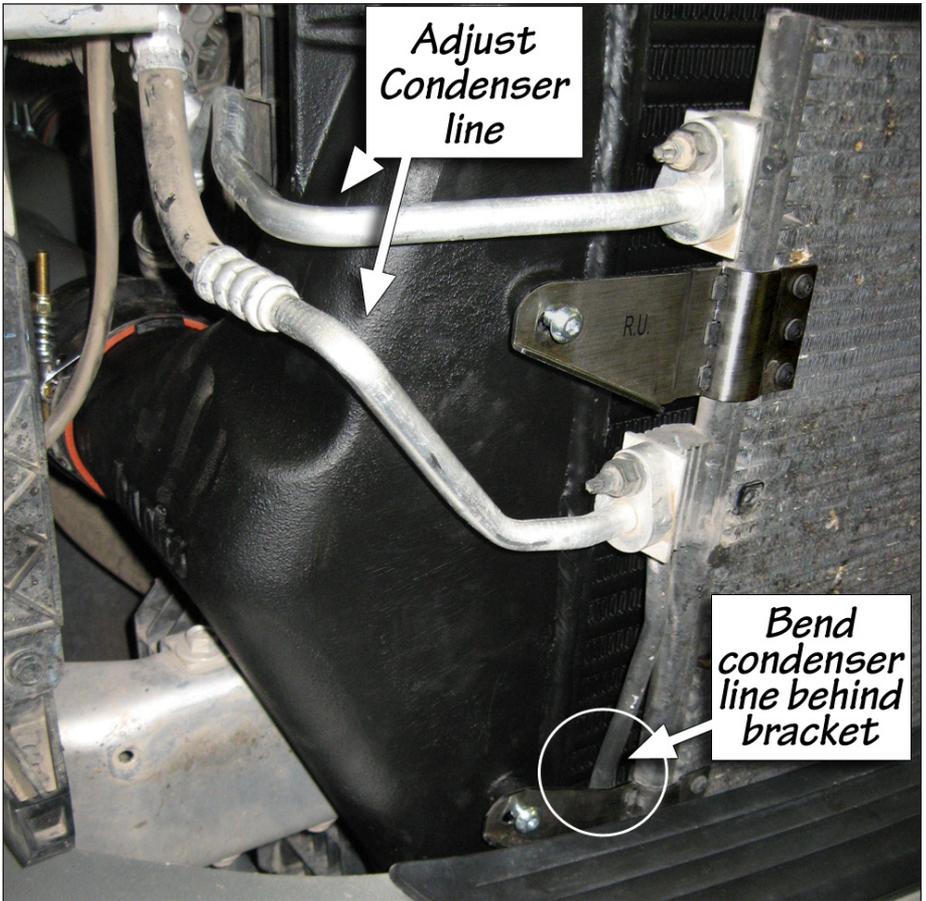
24. Tighten the upper CAC mounting bolts and torque to 8 ft-lbs (96 in-lbs).

25. Tighten the upper radiator mounting bolts and torque to 8 ft-lbs (96 in-lbs).

26. Tighten the torx head bolts on both of the lower and the upper A/C mounting brackets.

27. Adjust the condenser and condenser lines and close the hood. There may be some rubbing of the condenser lines and grill due to vehicle variance. Open the hood and make adjustments as necessary to the condenser lines and the back of the grill. After making all the necessary adjustment, tighten the 5/16" bolts at each of the A/C mounting brackets and torque to 19 ft-lbs.

Figure 6



28. Install the passenger side boost tube. The passenger side uses a 2.75 inch diameter straight hose at the turbocharger connection, and a 3.5 inch diameter hump hose at the CAC connection. The passenger side tube is most easily installed by placing the 2.75 inch straight hose as it will normally reside on the boost tube when installed on the vehicle. Then slide the 3.5 inch diameter hose all the way onto the boost tube. Install the boost tube in the vehicle, make the attachment to the

turbocharger, then slide the 3.5 inch diameter hose towards the Techni-Cooler to complete the installation. Install the hose clamps on the passenger side boost tube as shown in **Figure 7** to avoid clearance issues. The clamps should be tightened to 5 ft-lbs (60 in-lbs).

NOTE: Before installing any boost tubes into position, remove rag(s) covering the intake manifold and turbocharger outlets.

Figure 7 Orientation of the Passenger Side Hose Clamps to avoid clearance issues.

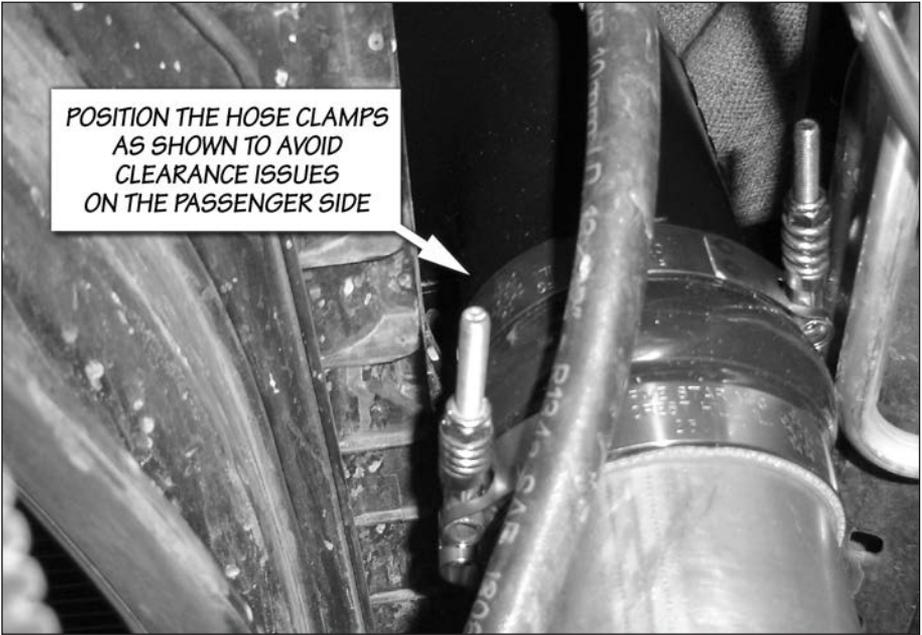
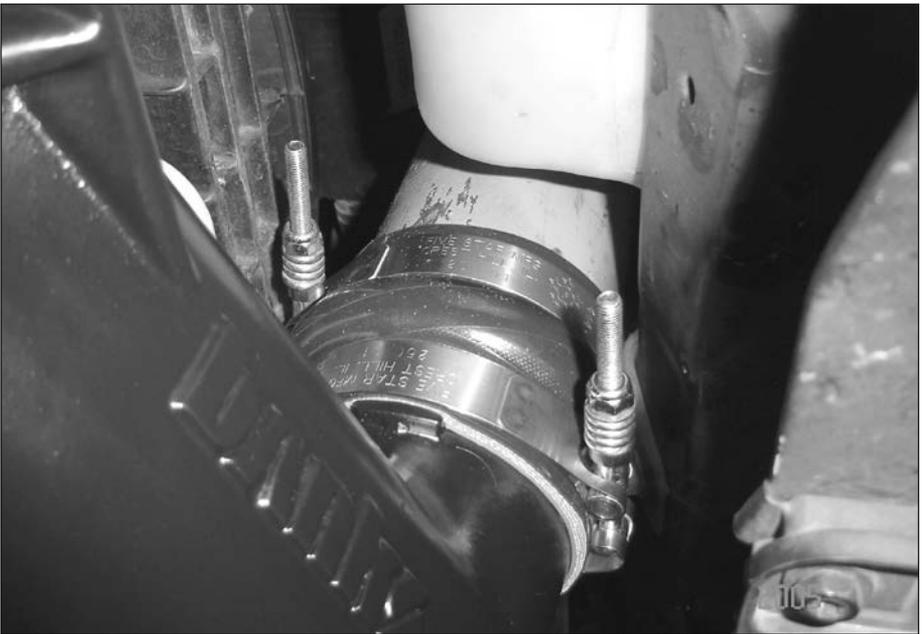


Figure 8 Orientation of the Hose Clamps on the driver side.



29. Install the driver side boost tube. The driver side tubes uses a 3.5 inch diameter straight hose at the intake manifold and a 3.5 inch diameter hump hose at the CAC. The orientation of the hose clamps should be as shown in **Figure 8** to avoid clearance issues.

NOTE: To provide additional clearance for installation of boost tube on driver side, remove fuse box.

30. Make the connection between the driver side boost tube and the intake manifold. Tighten all the driver side hose clamps to 5 ft-lbs (60 in-lbs).

31. Re-install the air box and inlet tube assembly. Secure the air box at the radiator cross brace with the factory nut that was previously removed. Re-connect the Air Inlet Temperature/ Pressure sensor at the air box cover. Re-connect the air inlet duct to the turbocharger inlet. Tighten the hose clamp at the turbocharger inlet to 8 ft-lbs (96 in-lbs).

32. Re-connect the negative battery cables.

NOTES

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