

banks[®]

Owner's Manual with Installation Instructions

Banks Ram-Air[®] Intake System

**2004-2008 Ford 5.4L
F150 Trucks**

THIS MANUAL IS FOR USE WITH KIT 41806

Gale Banks Engineering
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bankspower.com

banks

General Installation Practices

Dear Customer,

If you have any questions concerning the installation of your Banks Ram-Air 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.

1. For ease of installation of your Banks Ram-air intake system, familiarize yourself with the procedure by reading the entire manual before starting work. This manual contains 16 pages of copy, illustrations and parts listing. If any pages are missing from this manual please call Gale Banks Engineering immediately for a replacement.
2. The exploded view of the Ram-Air assembly (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 ground cable from the battery before beginning work. If there are two batteries, disconnect both.

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

7. 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 parking 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.

Notification

The Banks Ram-Air Filter comes pre-oiled and no oiling is necessary for the initial installation. Service the filter as specified in the Filter Maintenance Section of this manual.

Tools Required:

- 3/8" drive ratchets with metric and standard sockets
- Standard and Phillips head screwdrivers
- Standard and needle-nose pliers
- Clean shop towels or rags
- 5/16 nut driver

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General Assembly

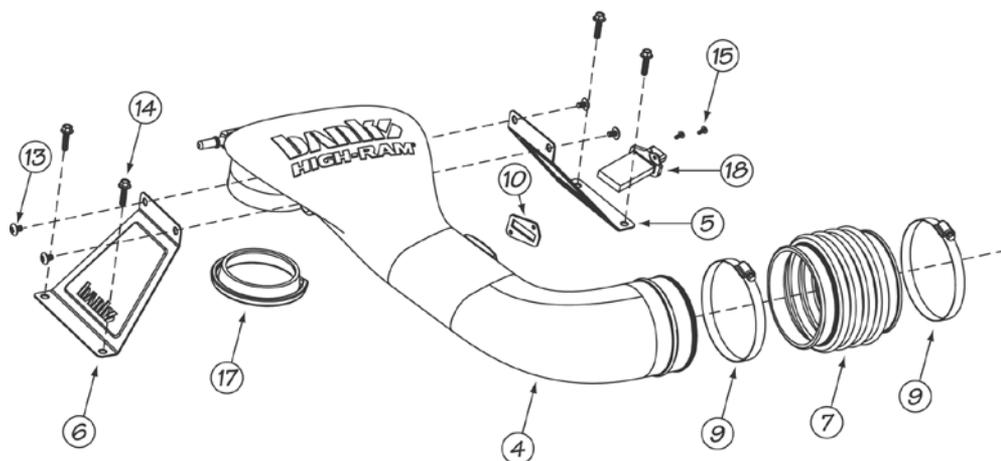
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Section 1

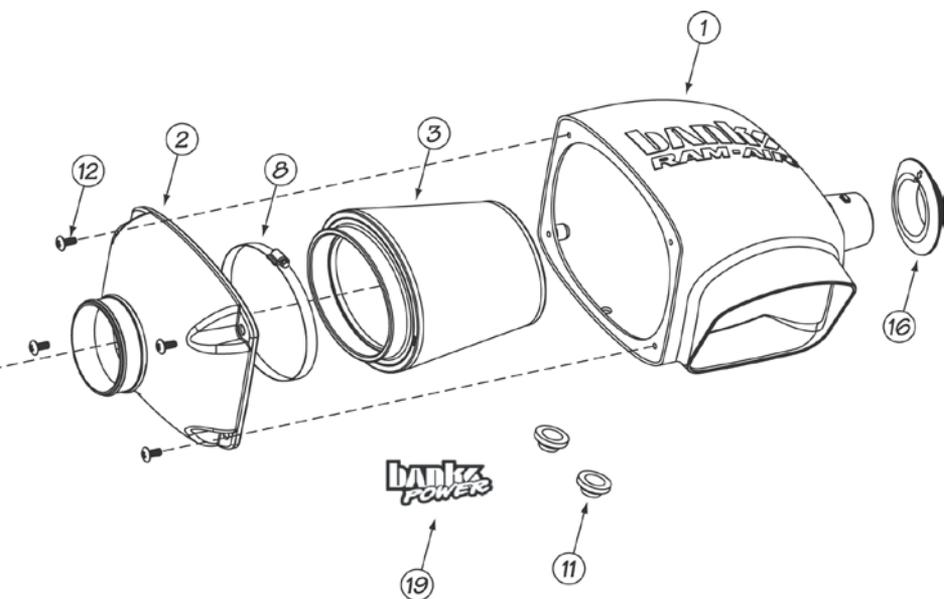
GENERAL ASSEMBLY

Figure 1



Item #	Part #	Description	QTY
1	41807	HOUSING, RAM-AIR FILTER	1
2	41808	COVER, RAM-AIR HOUSING	1
3	42158	AIR FILTER ELEMENT, RAM-AIR	1
4	41810	HIGH-RAM, RAM-AIR	1
5	41811	BRACKET, LEFT	1
6	41812	BRACKET, RIGHT	1
7	94300	BELLOWS, 4.5"	1
8	92904	HOSE CLAMP, #104	1
9	92872	HOSE CLAMP, #72	2
10	93067	GASKET, MAF SENSOR	1
11	93047	GROMMET, HOUSING FOOT	2
12	91226	SCREW, TRUSS HEAD, PHILLIPS, 5/16-18 X 3/4	4
13	91128	SCREW, TRUSS HEAD, PHILLIPS, 1/4-20 X 3/8	4
14	91736	SCREW, HEX FLANGE HEAD, M6 X 1.0 x 10mm	4
15	91718	SCREW, TRUSS HEAD, PHILLIPS, 6-32 X 3/8	2
16	*	GROMMET, INLET (STOCK)	*
17	*	GROMMET, THROTTLE BODY (STOCK)	*
18	*	MAF SENSOR (STOCK)	*
19	96009	BANKS UROCAL	2

* These are stock components that will be reused with the Banks Ram-Air System.



Section 2

RAM-AIR INSTALLATION

Use the Bill of Materials Chart and the General Assembly Drawing to reference component nomenclature and location. Use caution when working in the engine compartment. Make sure the engine has been OFF for several hours and cool.

You are about to install the Banks Ram-Air Intake System. Read and follow all steps before working on the vehicle. Some components from the stock air intake system will remain in service. Take care when removing stock air intake components to not damage them.

1. Disconnect the Mass Airflow sensor (MAF) located on the air filter housing and set the connector aside.
2. Remove the PCV vent hose connection located on the air housing assembly and set the connector aside.
3. Remove the bolt located near the power steering reservoir that fastens the intake tube to the power steering bracket. See **Figure 3**.

4. Pull out the intake snorkel and grommet from the inner fender.
5. Remove and set aside the four M6 bolts that secure the air filter housing to the engine bay. *Note: The M6 bolts will not be reused.* See **Figure 4**.
6. Remove the air filter housing along with the attached intake tube from the engine compartment and set aside. See **Figure 5**.
7. Using the supplied torx tool bit, remove the MAF sensor and the stock MAF sensor gasket from the air filter housing and set aside. *Note: Take care when handling the MAF sensor.* See **Figure 6**.
8. Locate the supplied MAF sensor gasket from your Banks kit and install the gasket on the MAF sensor. *Note: Make sure to remove the stock gasket from the MAF sensor before installing the Banks gasket. Make sure the supplied MAF sensor gasket is aligned as shown in **Figure 7**.*

Figure 2

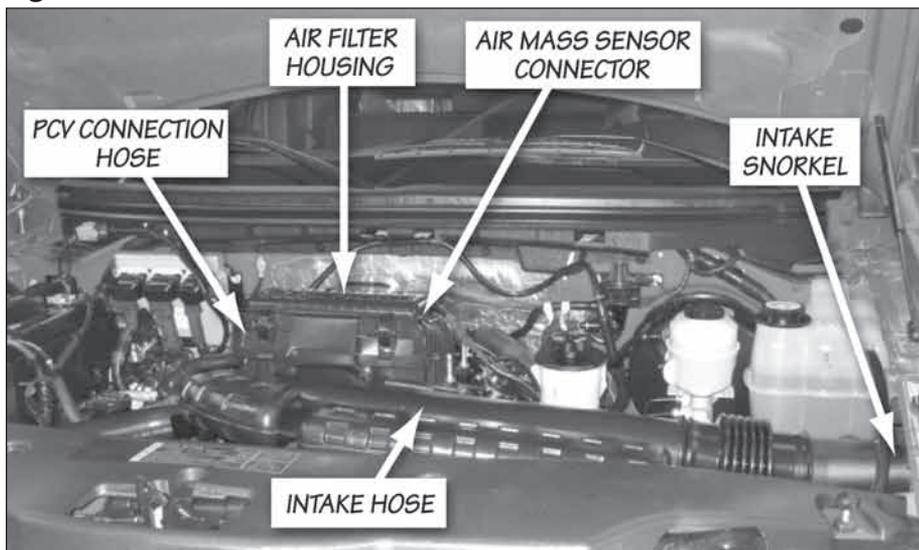


Figure 3

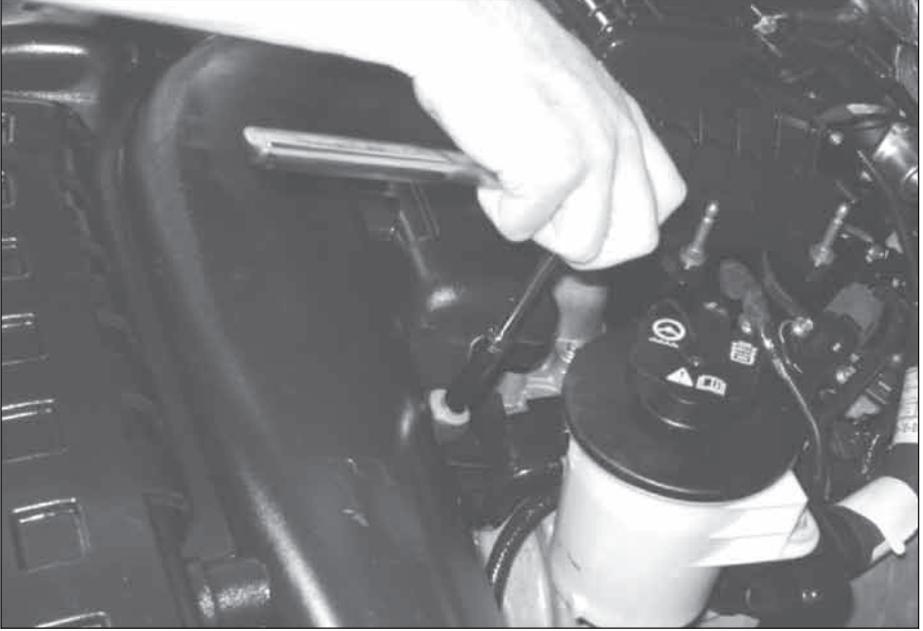


Figure 4

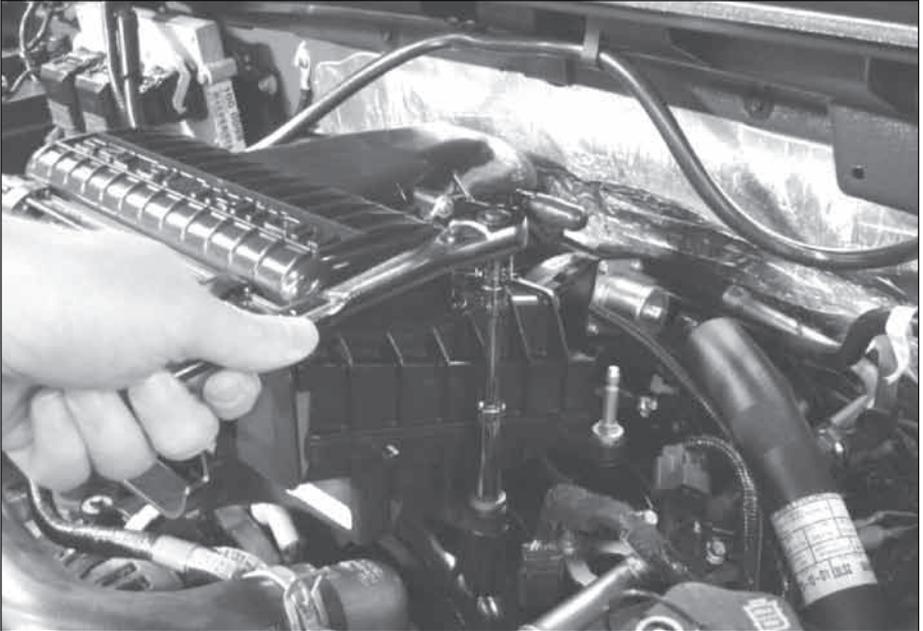


Figure 5

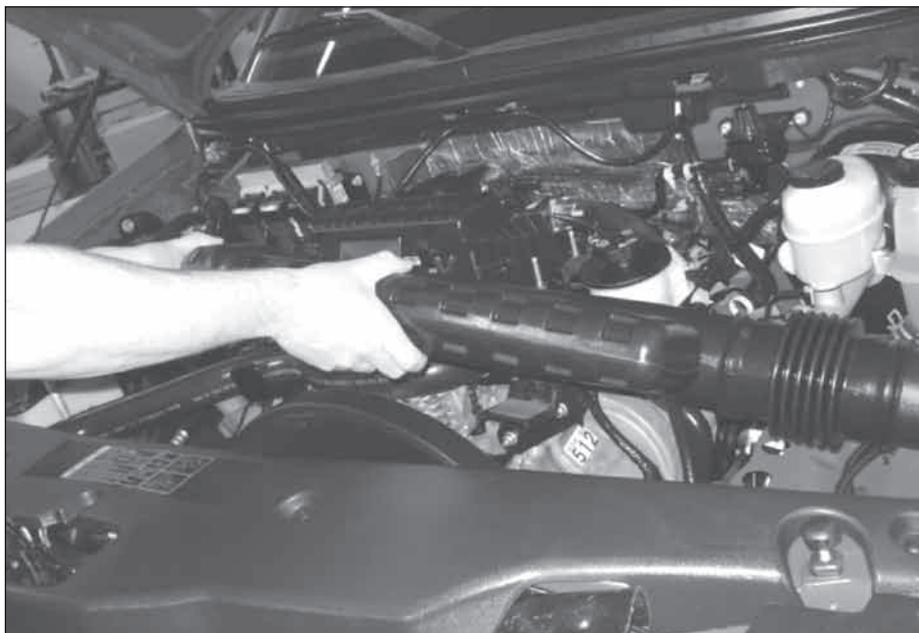
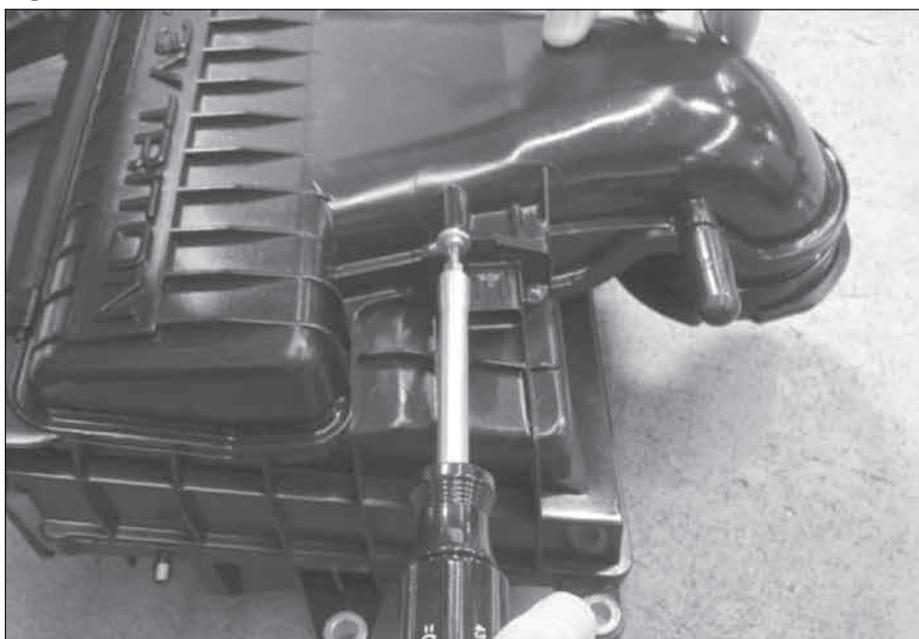


Figure 6



9. Using the supplied screws, lightly tighten the MAF sensor to the Banks High-Ram intake tube.

10. Remove the stock throttle body gasket from stock air filter housing. See **Figure 8**.

11. Insert throttle body gasket onto the Banks High Ram. Make sure the throttle body gasket is installed flush past the beaded lip.

12. Install the supplied brackets using the supplied phillips head screws (1/4-20) screws to the Banks High Ram. Install the 'wide' bracket on the side with the aluminum hose connection as shown. See **Figure 9**.

13. Install the Banks High Ram onto throttle body. Make sure to fit all the way flush to bottom of the throttle body lip.

14. With the two supplied brackets fastened to the Banks Ram Air Intake,

align the brackets to the intake manifold. Fasten the brackets to the engine manifold using the four supplied M6 flange head bolts. *Note: These are the only metric bolts in the kit.* See **Figure 10**.

15. Remove the stock air intake hose 'L' bracket attached to the power steering reservoir bracket. See **Figure 11**.

16. Reinstall the stock nut to refasten the stock power steering reservoir bracket. *Note: Only one nut will be used to refasten the stock power steering bracket.*

17. Connect the MAF connector to MAF sensor.

18. Connect the factory PCV vent hose to the PCV connection on the Banks Ram Air Intake.

19. Locate the supplied filter hose clamp and install on filter.

Figure 7

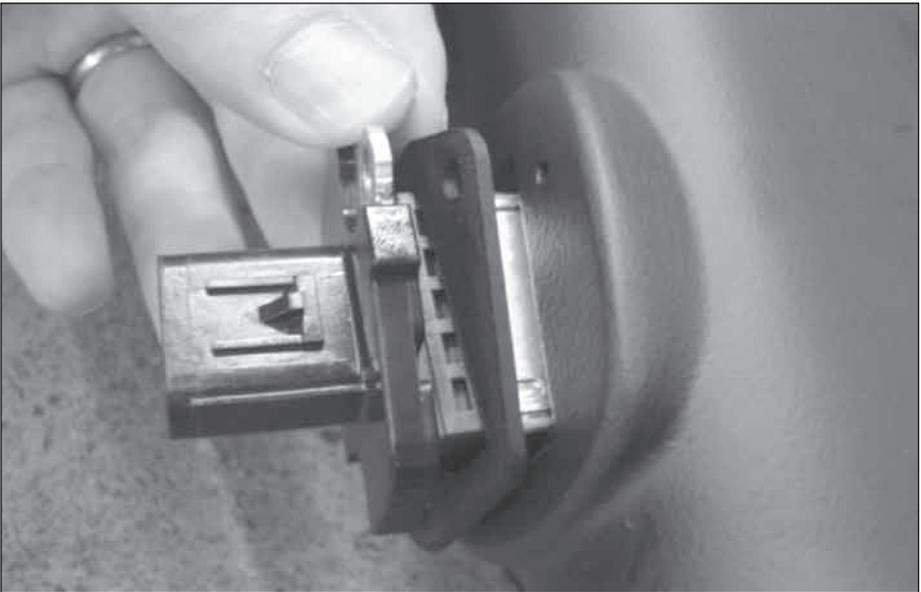


Figure 8



Figure 9



Figure 10

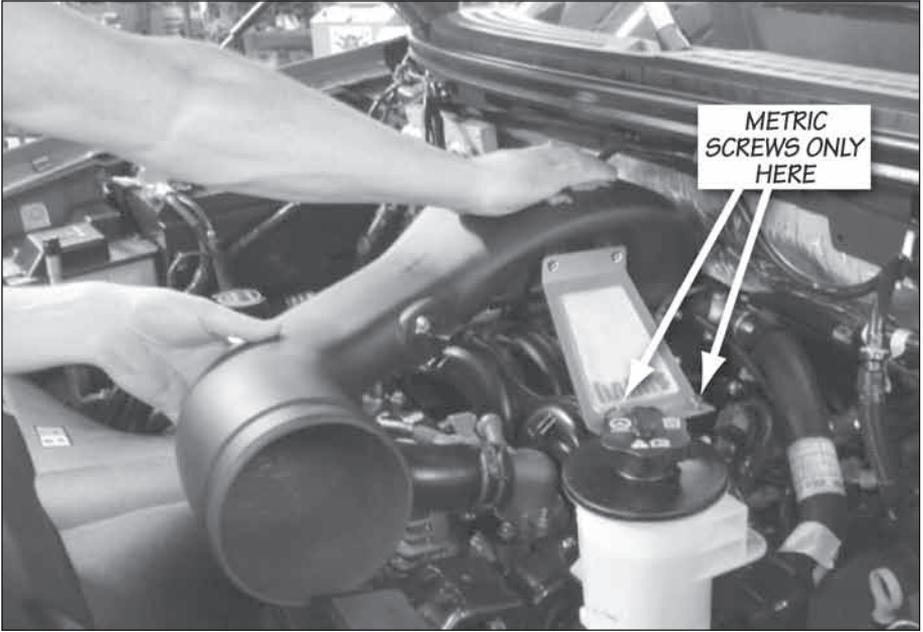


Figure 11

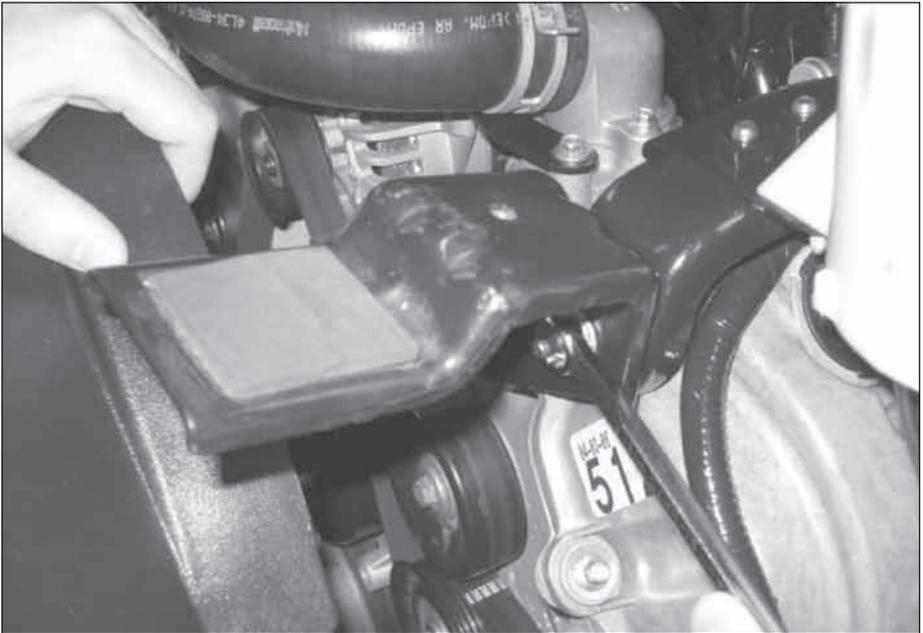


Figure 12



20. Locate the Banks filter cover. Install the Banks filter onto the Banks filter cover. Tighten Banks filter hose clamp. See **Figure 12**.

21. Insert Banks filter cover onto the Banks air housing. Locate supplied $\frac{5}{16}$ -18 screws and fasten the cover to the housing. *Note: make sure the Banks cover is lined up correctly.* See **Figure 13**.

22. Locate the previously removed stock intake snorkel gasket and install it onto the Banks housing as shown. See **Figure 14**.

23. Locate the grommets supplied in your kit and install as shown in **Figure 15**. Install the grommet end into the larger hole then slide into smaller hole. Do both grommets.

24. Locate the supplied bellows and bellows hose clamps. Fit both hose

clamps onto each end of the bellows. Install one end of the bellows onto the Banks housing then tighten the hose clamp.

25. Install Banks housing into vehicle compartment. Insert snorkel into stock air intake opening then slide Banks housing feet into previously installed rubber grommets. See **Figure 16**.

26. Fit the Banks bellows into the Banks High Ram Intake. Tighten the hose clamp.

27. Re-connect battery grounds.

28. You have successfully completed the installation of the Banks Ram-Air Intake system. See **Figure 17**. Make sure to go over all hose clamps for tightness and connectors for a sure fit. Make sure that the intake tube is not touching any engine components.

-END, SECTION 2-

Figure 13



Figure 14



Figure 15

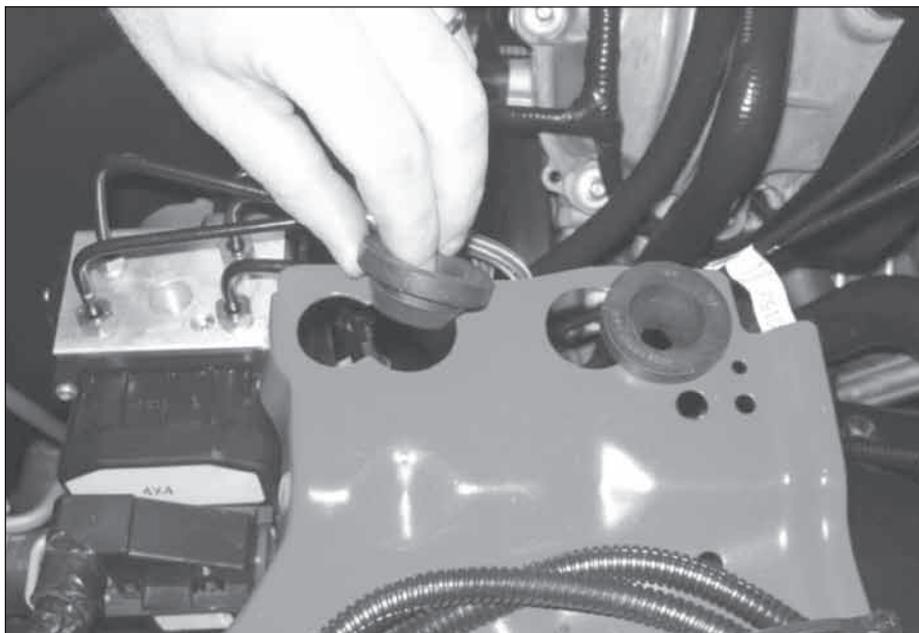


Figure 16

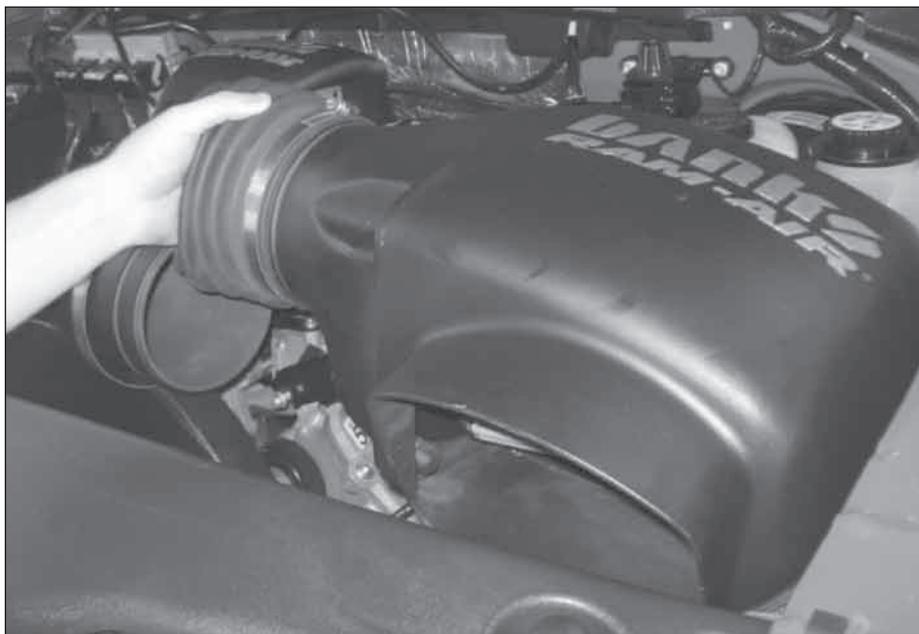
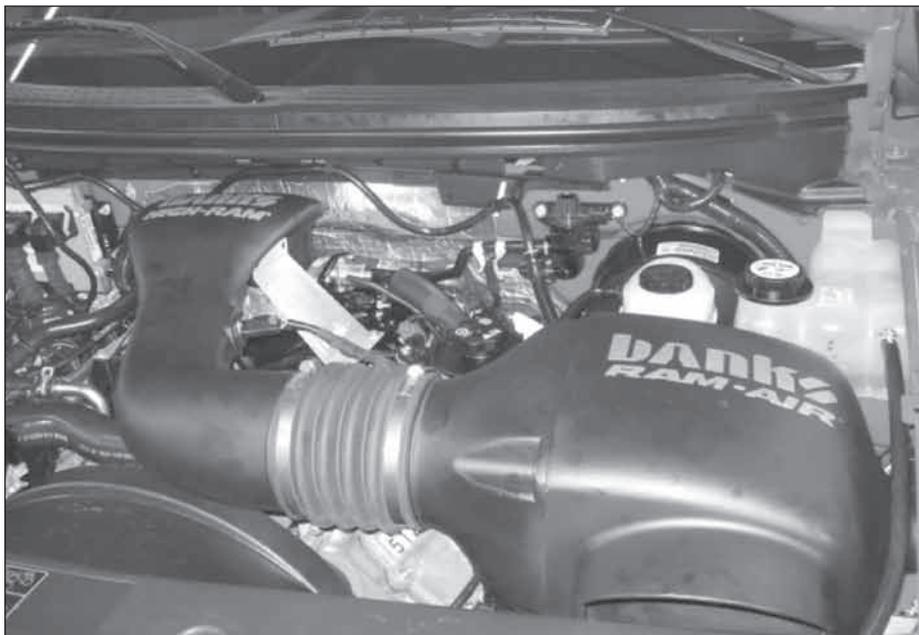


Figure 17



Section 3

FILTER MAINTANCE

Notification

The Banks Ram-Air Filter comes pre-oiled and no oiling is necessary for the initial installation. Service the filter as specified in this Section of the manual.

1. Service Banks Ram Air Filter every 50-100,000 miles on street-driven applications. Service more often in off-road or heavy-dust conditions.

2. Use Banks Ram Air Filter cleaning system (part # 90094), available from Gale Banks Engineering to service the Air Filter. Follow the instructions included with the cleaning system to clean and re-oil your Banks Ram Air Filter. No gasoline cleaning, No steam cleaning, No caustic cleaning

solutions, No strong detergents, No high pressure car wash, No parts cleaning solvents. Any of these No's can cause harm to the cotton filter media plus SHRINK and HARDEN the rubber end caps.

CAUTION! Extremely fine dust from agriculture or off-road use will pull the oil from the element. Frequent re-oiling of the element's clean side might be required. Completely service when practicable. For extra protection use an air-filter sealing grease on rubber ends of the element. Service only with Banks Ram-Air-filter cleaner and Banks Ram-Air-filter oil.

-END, SECTION 3-

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