

**banks**

with Installation Instructions

# Owner's Manual

## **Banks Ram-Air<sup>®</sup> Intake System**

**2008-2010 Ford Power Stroke 6.4L  
Turbo Diesel F250/F350/F450 Trucks**

THIS MANUAL IS FOR USE WITH SYSTEM 42185

Gale Banks Engineering  
546 Duggan Avenue • Azusa, CA 91702  
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565

**bankspower.com**

**banks**

# Also Available from Banks Power



## **Banks IQ System**

- 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 Monster® Exhaust System Single & Dual (P/N 49780-49787)**

- Increases exhaust flow, cuts backpressure, lowers exhaust gas temperatures (EGTs) and increases power.

## **Banks Techni-Cooler® System (P/N 25984)**

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

## **Banks Exhaust Brake (P/N 55469)**

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

## **Banks SpeedBrake (P/N 55464)**

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

## **Banks Diesel Tuner Six-Gun (P/N 63907)**

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

## **OttoMind Programmer (P/N 66063)**

- 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- Has upgradeable functionality, so it will never be out of date

**For More Information please call (888) 635-4565  
or Visit us online @ [www.bankspower.com](http://www.bankspower.com)**

**Six-Gun Bundle**  
**(P/N 46652-46655)**

**Contains:**

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

**Big Hoss Bundle**  
**(P/N 46656-46659)**

**Contains:**

- Monster Exhaust (single and dual)
- Ram-Air Intake
- Six-Gun Tuner w/ Banks iQ
- Techni-Cooler

# 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 12 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 view of the Ram-Air assembly (page 3) 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. 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. During installation, keep the work area clean. If foreign debris is transferred to any Banks system component, clean it thoroughly before installing.

## Notification

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

## Tools Required:

- Standard and #3 Phillips head screwdrivers
- Clean shop towels or rags
- 1/4" and 5/16" nut drivers

## Table of Contents

<b>Section 1</b> .....	<b>3</b>
General Assembly	
<b>Section 2</b> .....	<b>4</b>
Ram-Air Installation	
<b>Section 3</b> .....	<b>12</b>
Filter Maintenance	

# Section 1

## GENERAL ASSEMBLY

Figure 1



Item	Component #	Description	Qty
1	42186	HOUSING, RAM-AIR FILTER	1
2	42187	COVER, RAM-AIR HOUSING	1
3	42188	AIR FILTER ELEMENT, RAM-AIR SYSTEM	1
4	42189	INTAKE TUBE, RAM-AIR SYSTEM	1
5	92904	HOSE CLAMP, #104	1
6	93071	GASKET, MAF SENSOR	1
7	91242	MACHINE SCREW, TRUSS HEAD, PHILLIPS 5/16"-18 X 1 1/4"	2
8	91226	MACHINE SCREW, TRUSS HEAD, PHILLIPS, 5/16"-18 X 3/4"	2
9	91719	MACHINE SCREW, TRUSS HEAD, PHILLIPS, #6-32 X 1/2"	2
10	92987	Torx Bit, T20-1/4" Drive, Tamper Proof Screw Style	1
11	96009	Urocal, Banks Power, Small-Red, Black & Silver	2

## 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.** Loosen the hose clamp on the air cleaner bellows located next to the Mass Air Flow (MAF) sensor. See **Figures 2** and **3**.
- 2.** Press and hold the air filter restriction gauge's release tab while removing the connector.

- 3.** Remove the restriction gauge by gently twisting and pulling it out of the rubber grommet. See **Figure 4**. Remove the rubber grommet. These will be re-used later.

- 4.** Locate the MAF sensor connector. Slide the connector lock back and press the release tab while carefully removing the MAF connector. Set it aside.

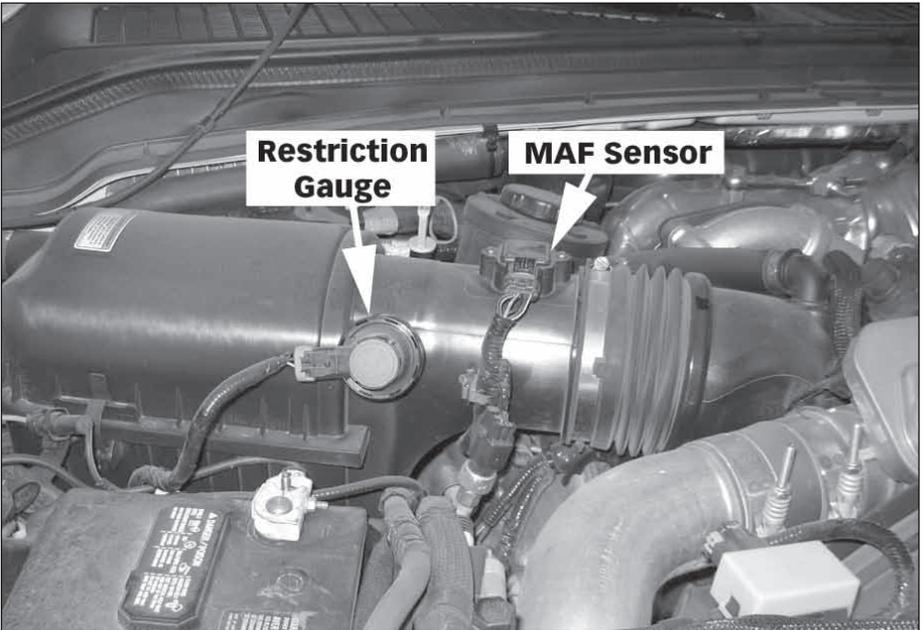
- 5.** Remove the warm air intake hose from the air cleaner housing (**Figure 5**).

- 6.** Gently pry the MAF wiring harness clip loose from the air filter housing with a bladed screwdriver (**Figure 6**).

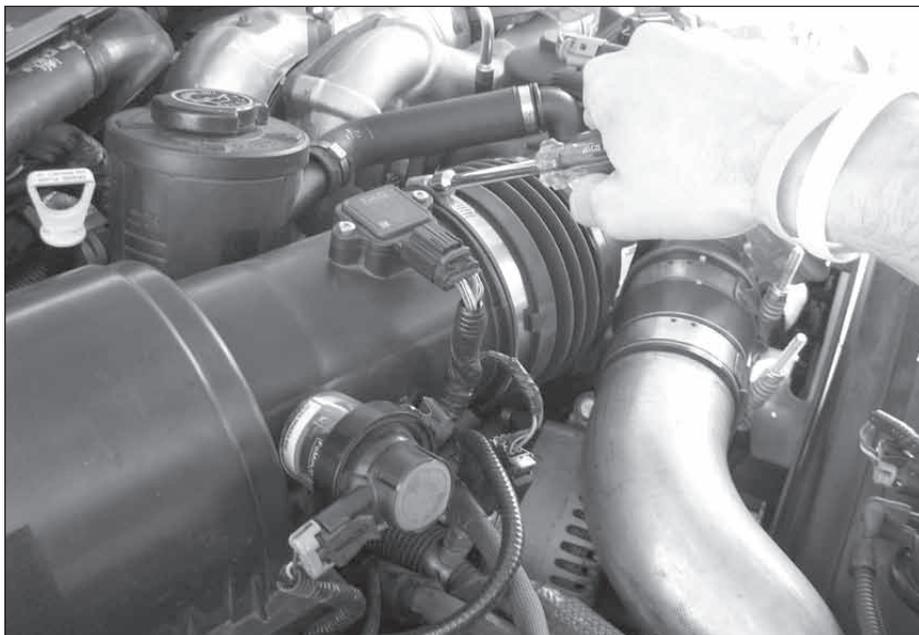
- 7.** Remove the MAF sensor Torx (T-20) screws using the supplied Banks Torx tool bit.

- 8.** Carefully remove the MAF sensor and set aside. The MAF sensor will be re-used later.

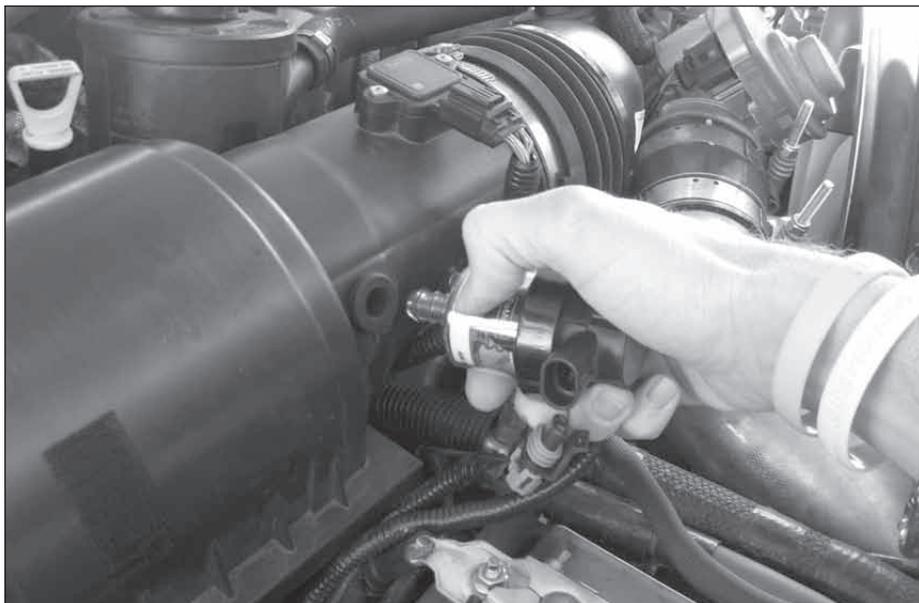
**Figure 2**



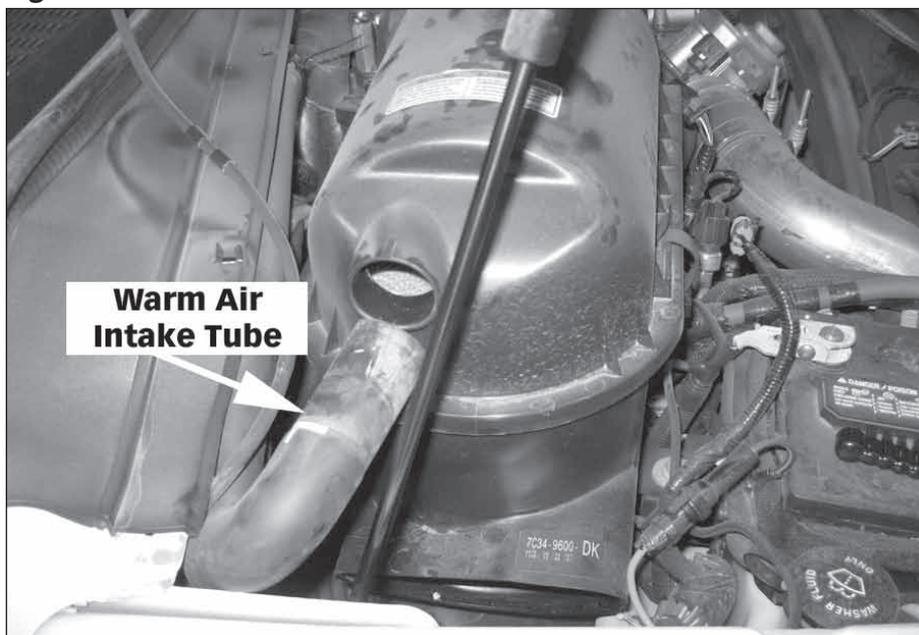
**Figure 3**



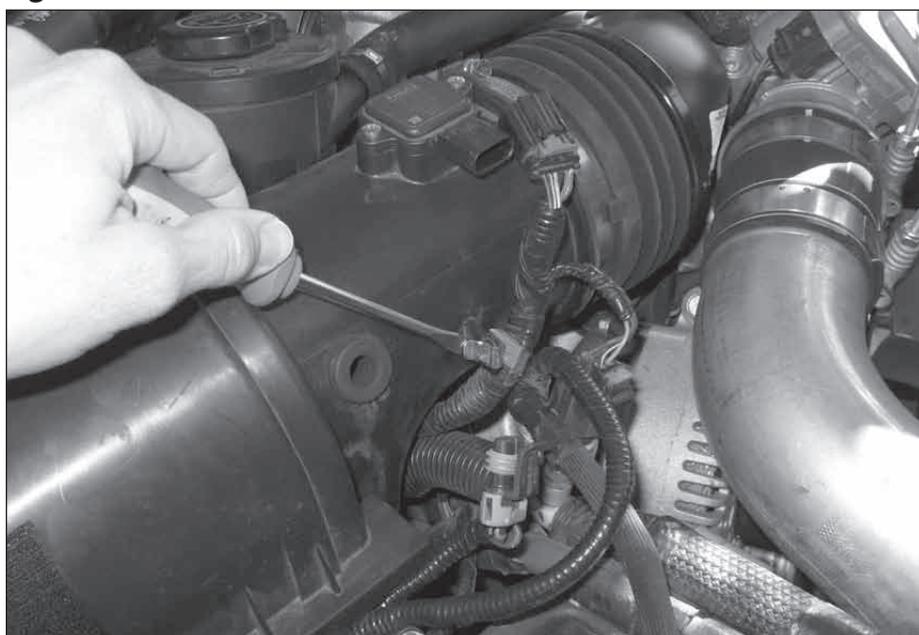
**Figure 4**



**Figure 5**



**Figure 6**



**9.** Push the air cleaner bellows away from the air filter housing while pulling up on the MAF side of the air filter. Lift and remove the air filter housing in the direction shown in **Figure 7**.

**10.** Locate the supplied Banks MAF sensor gasket. Install the supplied gasket under the MAF sensor.

**11.** Install the MAF sensor to the Banks Intake Tube using the supplied screws. Make sure the MAF sensor connection is on the same side as where the restriction gauge will go.

*Note: Do not over tighten the screws.*

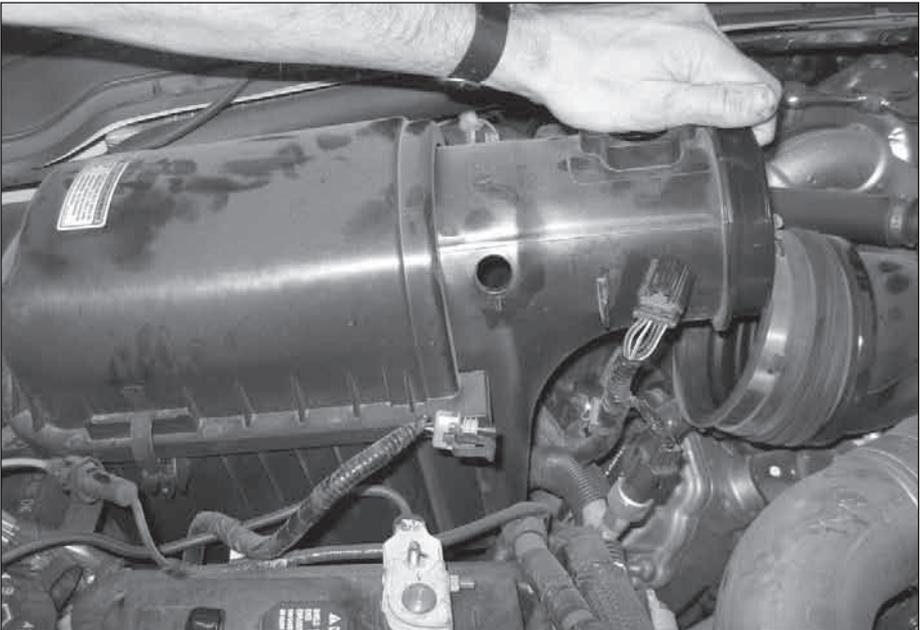
**12.** Attach the Banks Air Filter Element to the Banks Intake Tube with the supplied hose clamp. An audible snap should be heard when installing the Filter to the Tube. Tighten to 44 lb-in (5 Nm).

**CAUTION: Filter may come loose at connection point due to oil residue. Clean the air filter connection points with a non-oil based solvent such as Acetone, Mineral Spirits, Denatured Alcohol, or Lacquer Thinner. Read and follow the manufacture's operation instruction for non-oil based solvent cleaner. Be careful not to apply cleaner to cotton filter media or damage to media may result.**

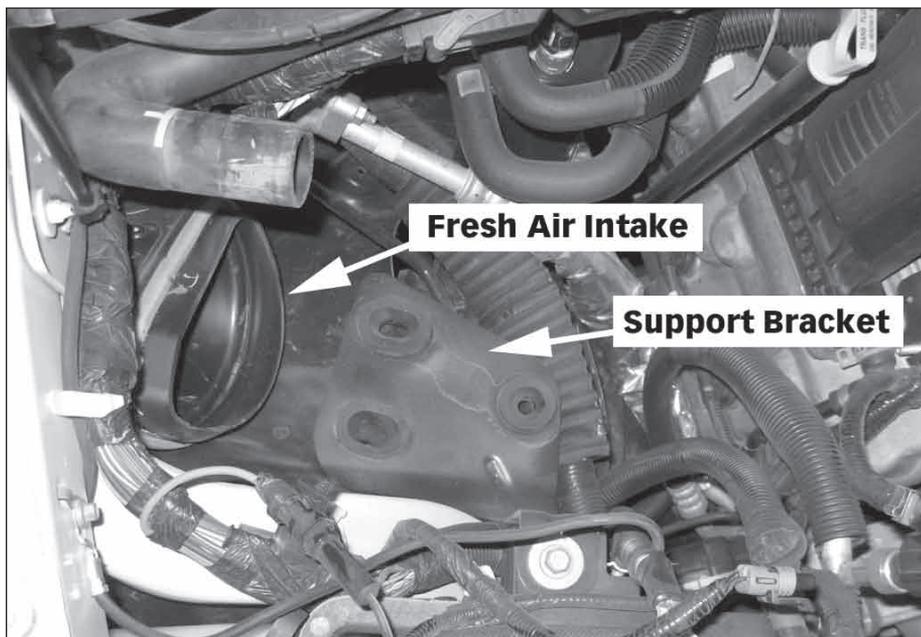
**13.** Install the restriction gauge's rubber grommet to the Banks Intake tube.

**14.** Install the Banks Ram-Air Filter Housing. Line up the fresh air intake with the matching opening on the Banks Ram-Air Filter Housing (**Figures 8, 9**). The three feet on the bottom of the Filter Housing will go into the

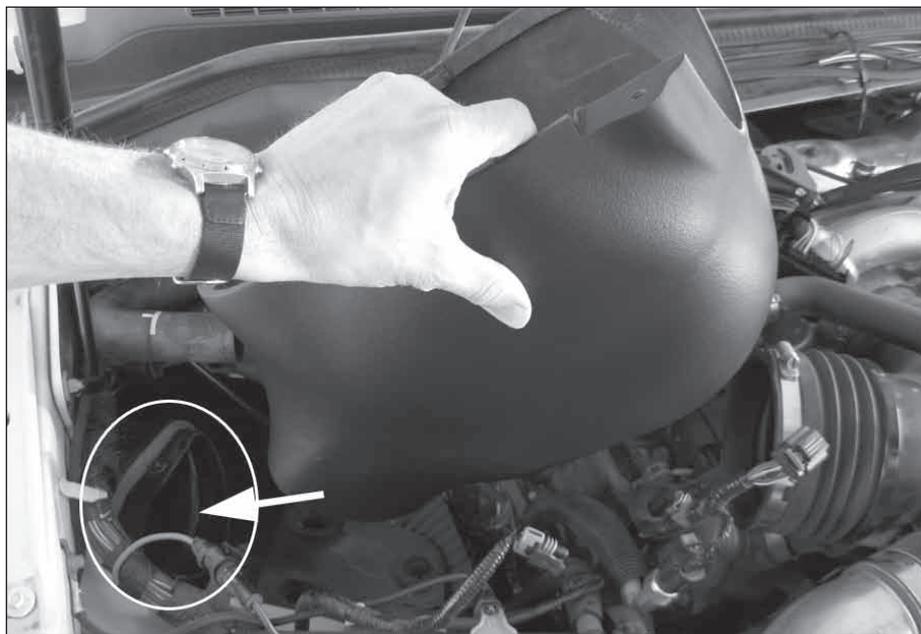
**Figure 7**



**Figure 8**



**Figure 9**



rubber isolators in the support bracket. Make sure to push the Filter Housing all the way down into the rubber isolators.

**15.** Install the Banks Intake Tube into the air cleaner bellows as shown in **Figure 10**.

**16.** Twist the Banks Intake Tube 180° as shown in **Figures 11, 12**. Make sure the bellows fully seat against the stop on the Banks Intake Tube. The Intake Tube tabs should line up with the Filter Housing. Be careful not to damage the MAF sensor while twisting.

**17.** Insert the warm air intake tube into the Banks Ram-Air Housing Cover. Install the Housing Cover onto the Filter Housing.

**18.** Install the supplied Phillips Truss Head Screws into the cover. The

longer Screws go on the engine side (**Figure 13**). Tighten the Screws with a #3 Phillips screwdriver.

*Note: Take care not to over tighten the Screws and damage the Housing.*

**19.** Re-install the restriction gauge and re-attach it's connector.

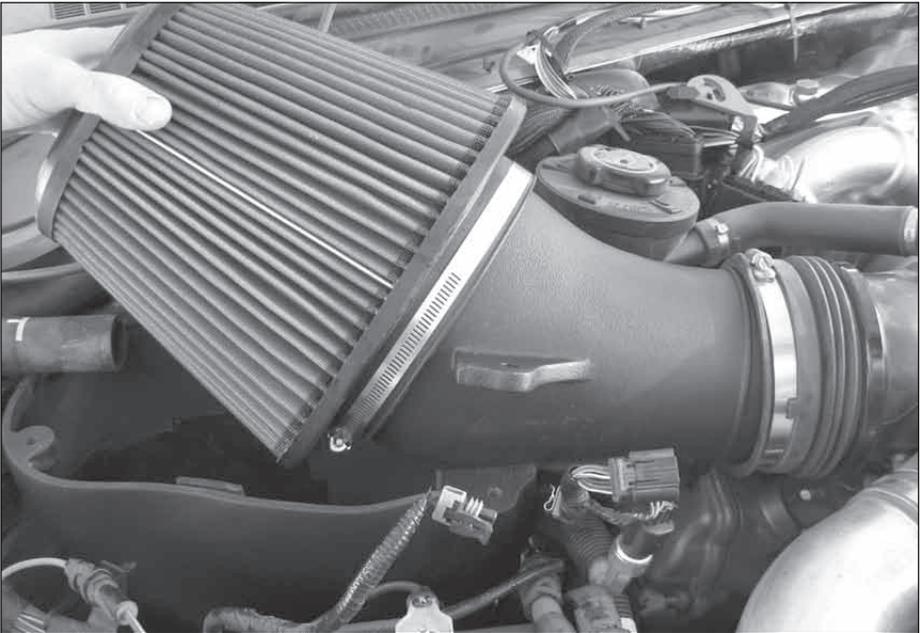
**20.** Re-attach the MAF connector to the MAF sensor. Slide it's connector lock into the locked position.

**21.** Tighten the air filter bellows' hose clamp to 44 lb-in (5 Nm).

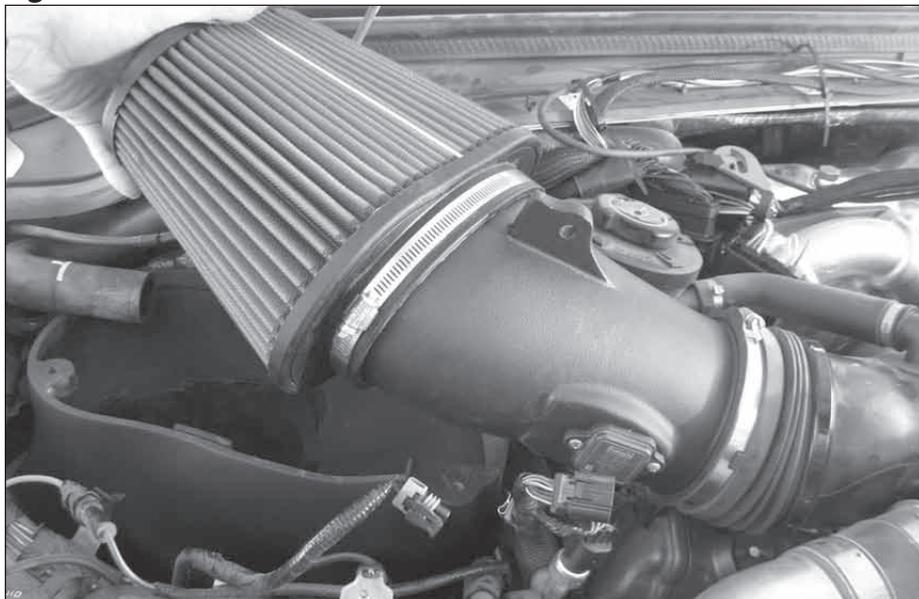
**22.** You have successfully completed the installation of the Banks Ram-Air Intake system. See **Figure 14**. Make sure to go over all hose clamps for tightness and connectors for a secure fit.

-END, SECTION 2-

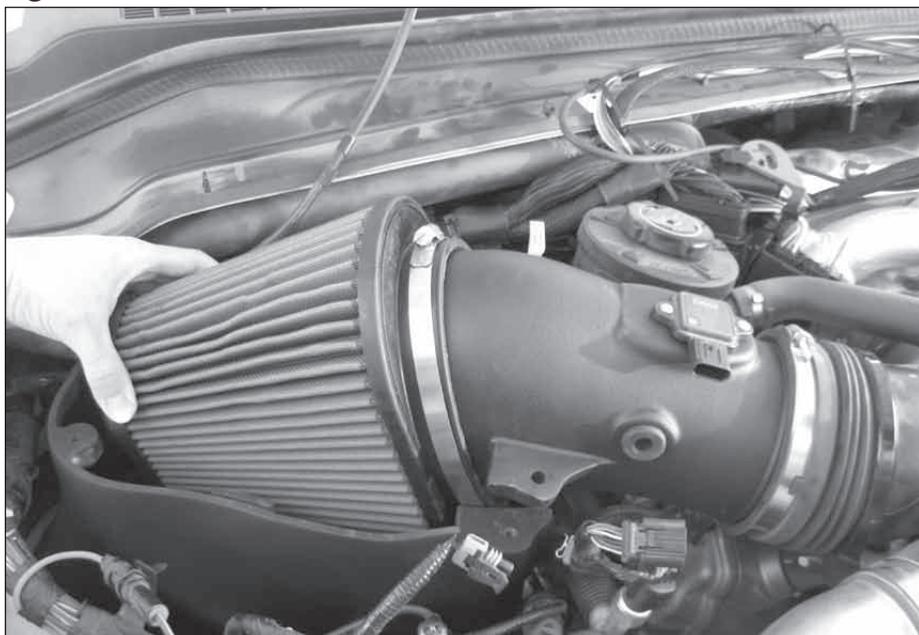
**Figure 10**



**Figure 11**



**Figure 12**



**Figure 13**



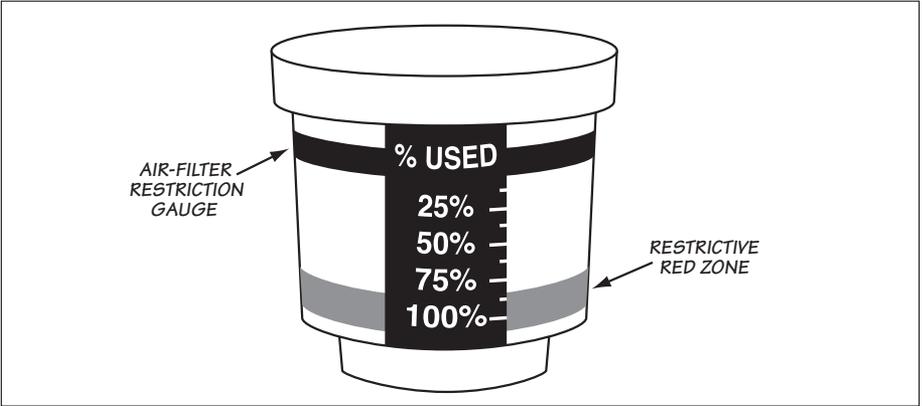
**Figure 14**



# Section 3

## FILTER MAINTENANCE

**Figure 15** Typical air-filter restriction gauge



### Notification

**The Banks Ram-Air Filter comes pre-oiled and no oiling is necessary for 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. If an air-filter restriction gauge is installed, then clean the element when the air-filter restriction gauge enters the restrictive red zone. See **Figure 15**.

**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. Service only with Banks Ram-Air-filter cleaner and Banks Ram-Air-filter oil.**

-END, SECTION 3-

# Notes

Gale Banks Engineering  
546 Duggan Avenue • Azusa, CA 91702  
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565

**bankspower.com**