

**banks**

# Owner's Manual with Installation Instructions

## **Banks Ram-Air® Intake System**

**2018-2020 Jeep JL Wrangler 3.6L  
2020 Jeep JT Gladiator 3.6L**

THIS MANUAL IS FOR USE WITH KIT 41843 & 41843-D

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Installation Support: (888) 839-2700

**bankspower.com**

# 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.
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.

**NOTICE** 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:

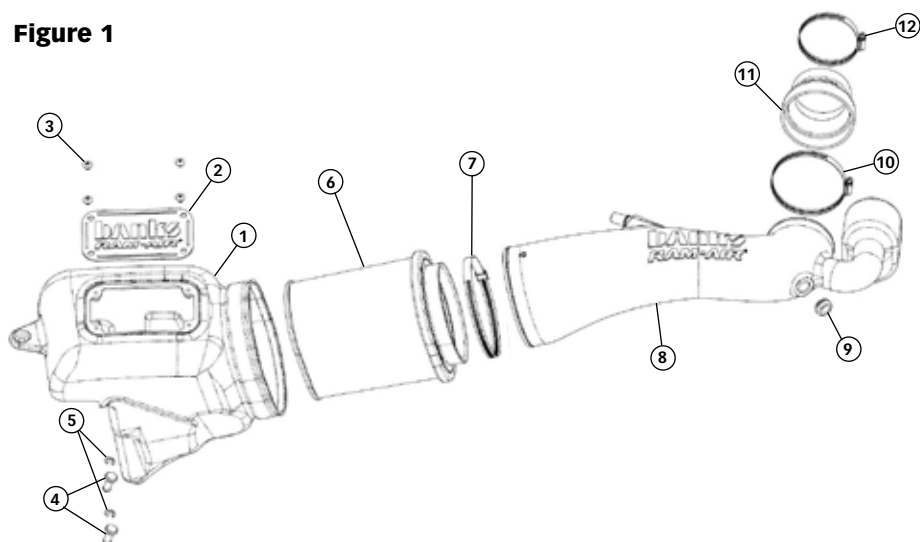
- 8mm or 5/16" nut driver or flat end screwdriver
- Phillips screw driver
- 10mm socket and ratchet
- Clip pry/remove tool
- Long nose pliers

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# Section 1: GENERAL ASSEMBLY

**Figure 1**



P/N	Item	Description	QTY
41845	1	Housing	1
41788	2	Window	1
91128	3	Window screws	4
92153	4	Mounting peg	2
91701	5	Retaining Clips	2
41848 (-D)	6	Air Filter	1
92868	7	Hose Clamp #104	1
41846	8	Tube	1
93650	9	Sensor Grommet	1
92872	10	Hose Clamp #72	1
94332	11	Hose	1
92857	12	Hose Clamp #56	

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 caution when removing stock air intake components from damaging them.

## Section 2: REMOVAL OF FACTORY INTAKE SYSTEM

**1.** Remove the IAT sensor. Pull the locking clip towards you and twist counter clockwise about 45 degrees until it stops rotating. Pull the sensor out of the factory intake tube. See **Figure 2**

**Figure 2**



**2.** Unhook the 2 clips securing the IAT harness to the factory intake tube. Pull the sensor and harness out of the way. See **Figure 3**

**Figure 3**



**3.** Unhook the coolant hose from the factory intake tube if equipped.

**4.** Remove the crank case vent line from the factory intake tube by pressing on the grey tab and pulling away from the tube. See **Figure 4**

**Figure 4**



**5.** Using an 8mm or 5/16" nut driver, loosen the clamp holding the factory intake tube to the throttle body. See **Figure 5**

**Figure 5**



**6.** Using a 10mm socket, remove the 2 bolts securing the factory intake tube to the vehicle's fan shroud. These will not be reused. See **Figure 6**

**Figure 6**



**7.** Using a 10mm socket, remove the bolt securing the factory intake box to the inner fender. See **Figure 7**

**Figure 7**



**8.** Remove the complete factory intake from the vehicle. Grip the intake tube hose with your right hand and make sure that it is free from the throttle body. Grip the neck of the factory intake housing with your left hand. Lift up until the 2 grommets holding the bottom of the housing onto the vehicle release.

**9.** Remove the 2 grommets from the legs on the bottom of the factory intake housing. They will be reused on the Banks Ram-Air system. See **Figure 8**

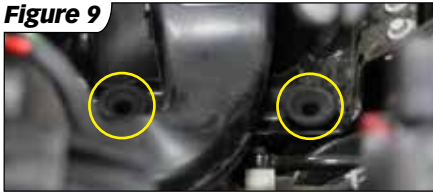
**Figure 8**



## Section 3: INSTALLING BANKS RAM-AIR SYSTEM

1. Insert the factory grommets into the 2 holes in the vehicle. See **Figure 9**

**Figure 9**



2. Install the mounting pegs to the Banks Ram-Air Intake housing. Push the legs out of the holes in the bottom of the housing and slide the retaining clips into the grooves. See **Figure 10**

**Figure 10**



3. Install the Banks Air filter into the Banks Ram-Air Intake housing. See **Figure 11**

**Figure 11**



- NOTE:** Make sure that the arrow on the filter is positioned towards the top and pointing down.

4. Install the housing into the vehicle. Line up the pegs to the grommets and push down until you feel them pop into the grommets.

- a. Slide the appropriate hose clamps onto the Banks hose. Slide the smaller end onto the throttle body. Leave the clamps loose. See **Figure 12**

**Figure 12**



5. Install the supplied grommet into the IAT port in the Banks intake tube. See **Figure 13**

**Figure 13**



6. Install the Banks intake tube. First insert the tube into the air filter opening. Next insert the tube into the Banks hose at the throttle body. See **Figure 14**

**Figure 14**



- NOTE:** Take care not to pinch or trap the pcv line under the tube. Line up the arrows on the filter and tube before tightening all 3 hose clamps.

7. Install the IAT sensor into the Banks intake tube. Position the locking tube in the 9 o'clock position. See **Figure 15**

**Figure 15**



8. Push the PCV line onto the aluminum fitting of the Banks intake tube. See **Figure 16**

**Figure 16**



- NOTE:** Make sure that the connector clicks into place and is locked.

## Section 3: CONTINUED

**9.** Install the factory bolt thru the Banks housing and into the inner fender. Make sure the housing is in place and the gaps around it are even before tightening the bolt. See **Figure 17**

**Figure 17**



**10.** Install the Banks window onto the housing using a phillips screwdriver and the 4 supplied screws. Apply the supplied thread locker on the screws to prevent them from backing out over time.

## Section 4: FILTER MAINTENANCE

**NOTICE** The Banks Ram-Air Oiled Air Filter comes pre-oiled and no oiling is necessary for initial installation. 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 Bank Ram-Air Oiled Air Filter.

### 1. PRE-CLEANING

Tap the element to dislodge any large embedded dirt, then gently brush with a soft bristle brush.

**NOTE:** If complete cleaning is not practical at this time, reoil the element and reinstall in your vehicle.

### 2. SPRAY-ON CLEANING

Spray air-filter cleaner liberally onto the entire element and let soak for 10 minutes.

### 3. PAN CLEANING

Large air-filter elements can be rolled or soaked in a shallow pan of air-filter cleaner. Remove immediately and let soak for approximately 10 minutes.

**NOTICE** NEVER use gasoline, steam, caustic solutions, strong detergents, high-pressure nozzles, or cleaning solvents to clean the filter element. All of these can cause harm to the filter media as well as SHRINK and HARDEN the rubber end caps.

### 4. RINSING

Rinse off the element with low pressure water. Tap water is okay. Always flush from the clean side to dirty side. This removes the dirt and does not drive it into the filter.

### 5. DRYING

Always dry naturally. After rinsing, shake off all excess water and let the element dry naturally.

### 6. AEROSOL OILING

After cleaning air filter always reoil before using. Spray air filter oil down into each pleat with one pass per pleat. Wait 10 minutes and re-oil any white spots still showing.

### 7. OILING HINTS

Never use a Banks Ram-Air oiled filter without oil (the filter will not stop the dirt without the oil). Use only air filter oil. Air-filter oil is a compound of mineral and animal oil blended with special polymers to form a very efficient tack barrier. Red dye is added to show just where you have applied the oil. Eventually the red color will fade but the oil will remain and filter the air. NEVER USE Automatic Transmission Fluid. NEVER USE Motor Oil. NEVER USE Diesel Fuel. NEVER USE WD40, LPS, or other light-weight oils.

### 8. REINSTALL

Reinstall your Banks Ram-Air filter element with proper care. Make sure the element seats properly in the filter case.

Install the cover making sure it's in the right position. Tighten all the nuts, bolts, screws or clips to factory specifications.

### **9. DO NOT DISCARD**

Affix the "Do Not Discard" sticker to the filter case (included with every Banks replacement element). Make sure you put the sticker in a highly visible place to alert your mechanic not to discard.

### **10. PERFORMANCE HINTS**

Service every 50-100,000 miles on street-driven applications. Service more often in offroad or heavy-dust change the element when the air-filter restriction reaches 18"–H<sub>2</sub>O.

**⚠ CAUTION** Extremely fine dust from agriculture or offroad use will pull the oil from the element. Frequent reoiling 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 air-filter cleaner and air-filter oil.

### **DRY FILTER CLEANING**

Clean every 50-100,000 miles on street-driven applications. Clean more often in offroad or heavy-dust conditions. If an air-filter restriction gauge is installed, then change the element when the air-filter restriction reaches 18"–H<sub>2</sub>O.

#### **1. PRE-CLEANING**

Carefully tap the air filter element to dislodge any large embedded dirt or debris.

#### **2. CLEANING**

Spray an appropriate DRY AIR-FILTER CLEANER SOLUTION liberally onto both sides of the entire filter element with the majority applied to the dirty side. Soak for 10 minutes. Do not allow the DRY AIR-FILTER CLEANER SOLUTION to dry on the air filter.

**NOTICE** NEVER use gasoline, steam, caustic solutions, strong detergents, high-pressure nozzles, or cleaning solvents to

clean the filter element. All of these can cause harm to the filter media as well as SHRINK and HARDEN the rubber end caps.

#### **3. RINSING**

Rinse the filter element with cool or warm (not hot) water from the clean side out in order to flush the dirt out of the filter. It may be necessary to use your fingers on the hose to apply light water pressure. Repeat steps 2 and 3, until the water flowing through the media is completely clear of any dirt and debris.

#### **4. DRYING**

After rinsing, gently shake off excessive water and allow to dry naturally. Re-install the filter onto the intake system, airbox or custom assembly once it is dry or just slightly damp. Follow all original installation instructions.

#### **5. REINSTALL**

Reinstall your Banks Ram-Air filter element with proper care. Make sure the element seats properly in the filter case. Install the cover making sure it's in the right position. Tighten all the nuts, bolts, screws or clips to factory specifications.

#### **7. DO NOT DISCARD**

Affix the "Do Not Discard" sticker to the filter case (included with every Banks replacement element). Make sure you put the sticker in a highly visible place to alert your mechanic not to discard.

#### **8. PERFORMANCE HINTS**

Service every 50-100,000 miles on street-driven applications. Service more often in offroad or heavy-dust conditions. If an air-filter restriction gauge is installed, then change the element when the air-filter restriction reaches 18"–H<sub>2</sub>O.

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