

# AiROCK™ Manifold Installation Instructions

## **IMPORTANT! AIR SUPPLY**

The AiROCK™ system requires an air supply that is filtered and regulated to 100PSI max. Failure to comply with this requirement will void any warranty of the AiROCK™ Suspension System. Filter/Regulator units are available from OffRoadOnly SEE FIGURE 7.1. The filter needs to be mounted in a vertical position and is recommended to be mounted as far from any high temp heat source as possible. They may be mounted under the hood. There is a small triangle on the face of the filter, the direction of flow is the direction the arrow points.

## **AIRLINE TRIMMING TECHNIQUE**

The airline and fittings selected for this kit are of the highest quality. These fittings are designed to allow the airline to be pushed into the opening and then give the line a slight tug to seat the internal o-ring. Although these fittings are high quality, it is possible to have a problem if the airline is not trimmed properly before it is inserted into the fitting. Most problems will be an O-ring that is not sealing due to damage by the airline. It is of the utmost importance to utilize the tubing cutter to insure a clean straight cut. Also, make sure there is no burrs or edges on the airline that may damage the o-ring upon installation. SEE FIGURE 7.2

Using the provided tube cutter, trim the airline so that the cut is square to the line itself, to great of an angle will cause a leak. Insert the line into the opening of the fitting. Once a slight resistance is met, a gentle but firm push will result in the line inserting a slight bit further. Give the line a tug, if it is seated properly, the line will not come out. To remove the line, simply push the outer ring of the push fitting towards the fitting while providing a slight pull on the line, once released it will allow the line to be removed. Pulling to hard on the line will not allow it to release. The upper front airspring fitting is down inside the mounting tube. This is difficult to access, but it is possible to install the line and also remove the line without removing the airspring from the bracket. A screwdriver or other tool may be used to reach down in the tube to depress the ring and remove the line.



FIGURE 7.1 EXAMPLE OF FILTER/REGULATOR FROM OFFROADONLY



FIGURE 7.2 AIRLINE BEING TRIMMED WITH SUPPLIED TUBING CUTTER

# AiROCK™ Height Sensor Installation

## HEIGHT SENSORS

The height sensors have been designed to mount to the Jeep chassis without drilling in most cases. The sensors are all preassembled and labeled for their corresponding positions. The label is a colored sticker. See the position guide earlier in this manual for description. See FIGURE 8.1 for the height sensors. The Front Sensor is on the foreground, with the Rear Sensor in the background.

## FRONT SENSOR MOUNTING

The Front Sensor mounts over the top edge of the upper front control arm mount on the chassis. The bracket will have a small lip under the leading edge that is designed to catch the front edge of the mount. There are two holes on the face of the bracket, one of these holes will line up with a hole already in the TJ control arm mount. Place the 1/4" washer over the 1/4-20 Flat head phillips screw as shown in FIGURE 8.2.

Place the sensor brackets on top of the upper front control arm mount and attached with screws provided. Be sure to align the sensor bracket with the edge of the control arm mount. Fine tuning can be done once the linkage is installed. Adjust the bracket side to side to reduce bind in the linkage joints.

## ROUND CONTROL ARM BRACKET AND LINKAGE POSITIONING

For round upper control arms, use the supplied bracket and hose clamp assembly. Position the bracket over the control arm as shown in FIGURE 8.3 The linkage should be placed 4 1/2" from the pivot of the control arm for a starting point. Some systems may need this adjusted to allow the sensor proper movement. The round bracket may be installed on either side, whichever allows for a better alignment of the sensor linkage.



FIGURE 8.1 AiROCK™ HEIGHT SENSORS, FOR STANDARD LENGTH UPPER ARMS MOUNTED TO THE CHASSIS IN THE STOCK LOCATION.



FIGURE 8.2 FRONT SENSOR MOUNTING BRACKET AND MOUNTING SCREW



FIGURE 8.3 ROUND CONTROL ARM SHOWN WITH SENSOR LINKAGE MOUNT INSTALLED. NOTE 4 1/2" REFERENCE FROM CENTER OF PIVOT POINT

# AiROCK™ Height Sensor Installation

## REAR HEIGHT SENSOR INSTALLATION

The rear height sensors are designed to be mounted to the inside edge of the rear upper control arm. Using the holes provided in the frame, they attach with self tapping screws, 3 of which are included in the kit, the fourth screw you will reuse the rear brakeline attachment screw on the driverside. The rear brackets have a little sensor protector/heat deflector on them. These brackets should be mounted so that the shield is towards the rear driveshaft of the vehicle.

## SENSOR LINKAGE INSTALLATION

The height sensors will come with linkage attached to the purple anodized aluminum arm. The other end will need to be attached to the upper control arms. If you have replaced the upper control arms with adjustable units, use the supplied stainless brackets that will encompass the control arm and will be held in place with a hose clamp. Simply attach the sensor link to the bracket and then adjust the clamp so that the center of the bolt hole on the clamp is approximately 4 1/2" from the center of the control arm pivot bolt.

With the stock control arms, a small angle bracket must be used to attach to the control arm. From the bottom, drill a 3/16" hole in the top of the upper control arm approximately 4 1/2" from the pivot bolt. Bolt the angle bracket to the control arm as shown in FIGURES 9.1 and 9.2. Attach the sensor linkage to the angle bracket. Ensure that at full compression and full extension the sensor linkages do not bind, they should not pivot over center either in up or down mode. Some adjustment of the mounting point on the upper control arm may be necessary. Moving the linkage away from the pivot point will help if the linkage is going over center on compression. Moving the linkage closer to the pivot point will help if the linkage is going over center on extension. See FIGURES 9.1 and 9.2 for approximate up and down positions of the linkage arm.



FIGURE 9.1 REAR RIGHT SENSOR SHOWN IN EXTENDED POSITION WITH ANGLE BRACKETS



FIGURE 9.2 REAR RIGHT SENSOR SHOWN IN COMPRESSED POSITION WITH ANGLE BRACKET.