

INSTALLATION INSTRUCTIONS

Congratulations - your new Air Helper Springs are quality products capable of improving the handling and comfort of your vehicle. As with all products, proper installation is the key to obtaining all of the benefits your kit is capable of delivering. Please take a few minutes to read through the instructions to identify the components and learn where and how they are used. It is a good idea to start by comparing the parts in your kit with the parts list below.

The heart of the air spring kit is, of course, the air helper springs. Remember that the air helper springs must flex and expand during operation, so be sure that there is enough clearance to do so without rubbing against any other part of the vehicle.

Be sure to take all applicable safety precautions during the installation of the kit. The instructions listed in this brochure and the illustrations all show the left, or driver's side of the vehicle. To install the right side assembly simply follow the same procedures.

WARNING:

Do not inflate this assembly when it is unrestricted. The assembly must be restricted by the suspension or other adequate structure. Once installed, do not inflate beyond 100 psi. Improper use or over inflation may cause property damage or severe personal injury.

Your kit includes separate inflation valves and air lines for each air helper spring. This will allow you to level your vehicle from side to side as well as from front to back. If you would rather have a single valve inflation system, your dealer can supply the required "T" fitting.

IMPORTANT!

For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer (GVWR). Although your Air Helper Springs are rated at a maximum inflation pressure of 100 psi, this pressure may allow you to carry too great a load on some vehicles. It is best to have your vehicle weighed once it is completely loaded and compare that weight to the maximum allowed. Check your vehicle owner's manual or data plate on driver's side door for maximum loads listed for your vehicle.

When inflating your Air Helper Springs, add air pressure in small quantities, checking pressure frequently during inflation. The air spring requires much less air volume than a tire and, therefore, inflates much quicker.

TOOLS REQUIRED

- (2) 9/16" END WRENCHES
- (2) 1/2" END WRENCHES
- UTILITY KNIFE
- ELECTRIC DRILL
- 5/16" DRILL BIT

PARTS LIST

AIR SPRING	6781	2	3/8"-16 FLANGED LOCK NUT	8
UPPER BRACKET	5306	2	3/8"-16 X 3/4" FLANGED HEX BOLT	2
LOWER BRACKET	5305	2	5/16"-18 FLANGED LOCK NUT	8
18 ft. TUBING	0938	1	3/8"-16 X 1-1/2" CARRIAGE BOLT	2
PUSH-TO-CONNECT INFLATION VALVE	3098	2	5/16" FLAT WASHER	4
PUSH-TO-CONNECT ELBOW	3101	2	"J" HOOKS	8
THERMAL SLEEVE	0899	2	NYLON TIES	8
3/8"-16 X 1-1/2" HEX BOLT		2	CAUTION TAGS	2

NOTE: Both illustrations are of the left, or drivers side, of the truck. Refer to step 3 for the proper lower bracket alignment.

KIT ASSEMBLY

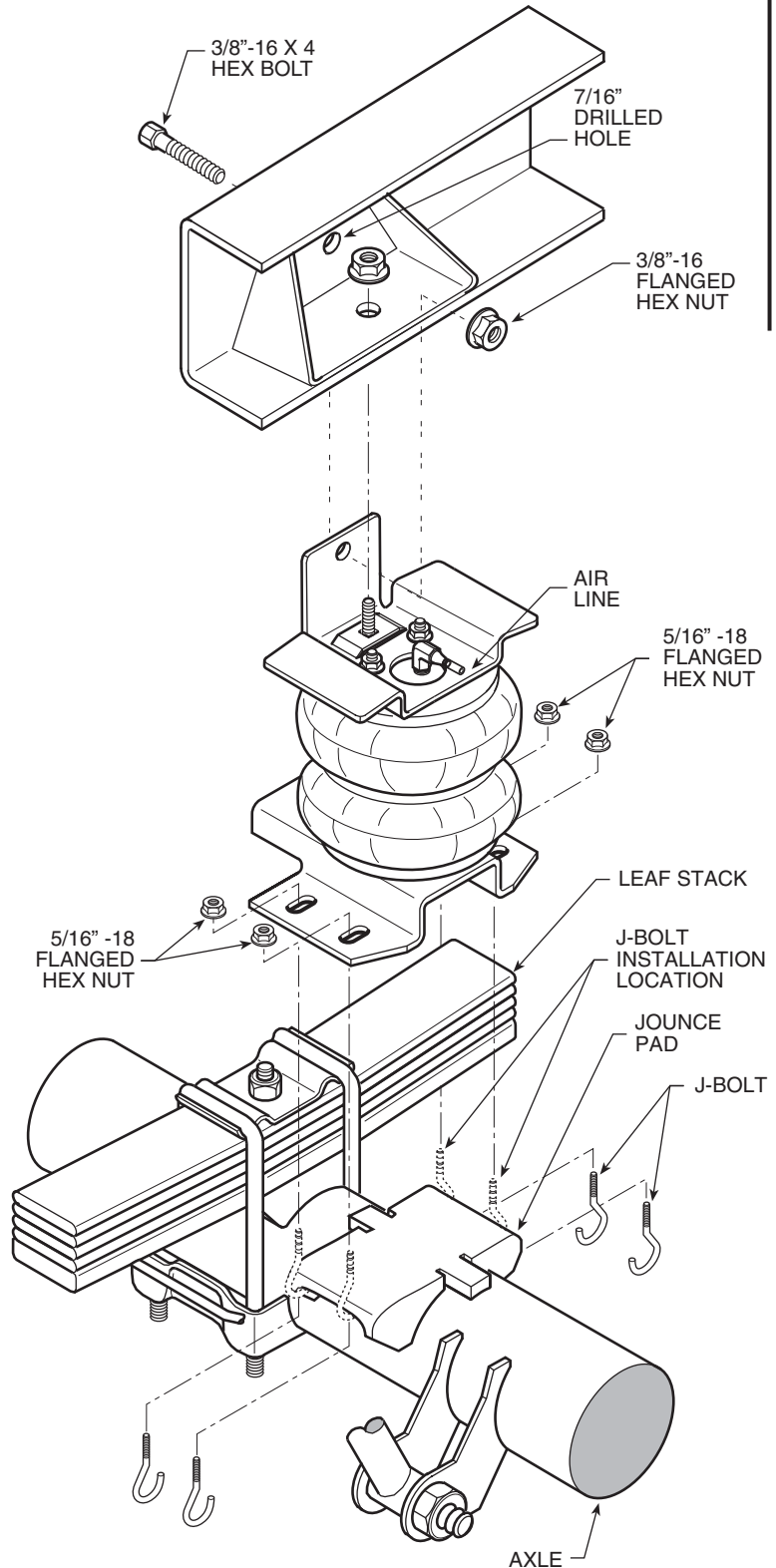
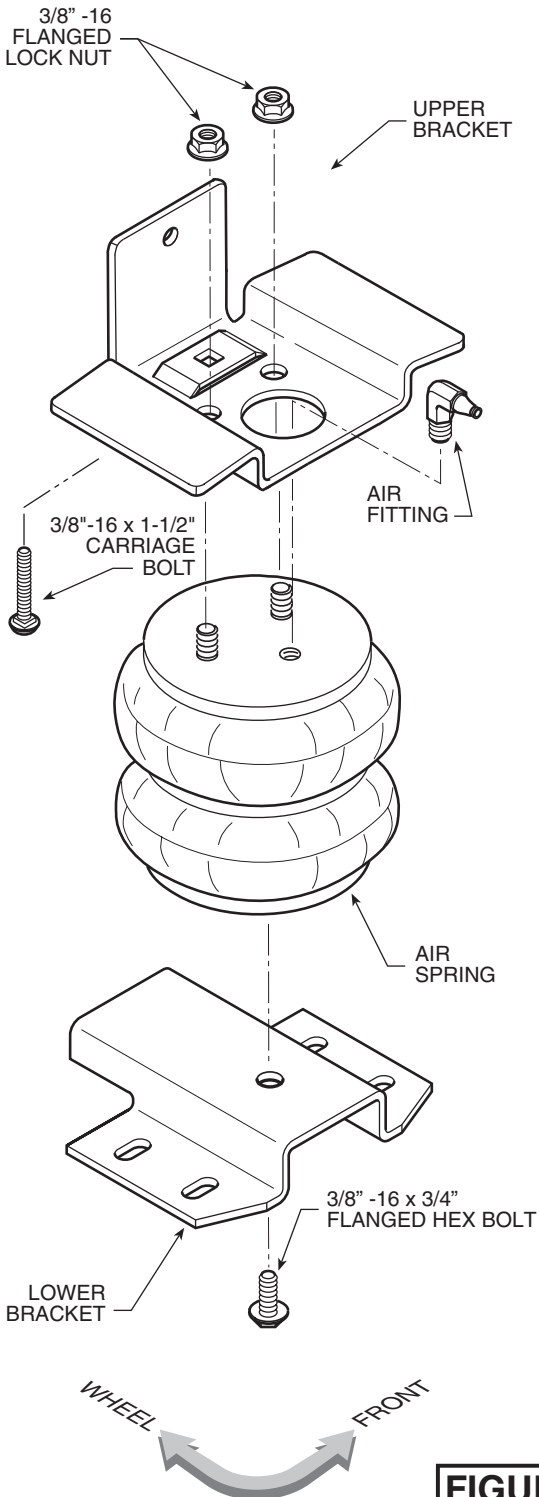
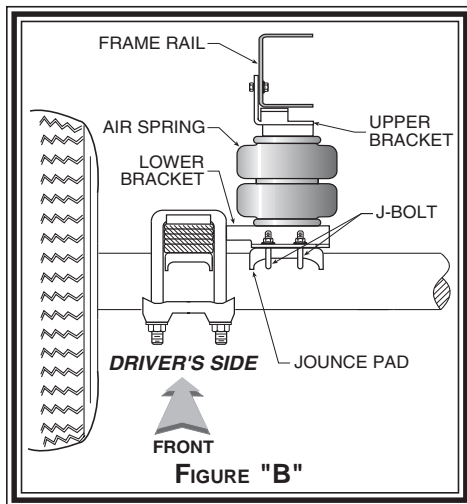


FIGURE "A"

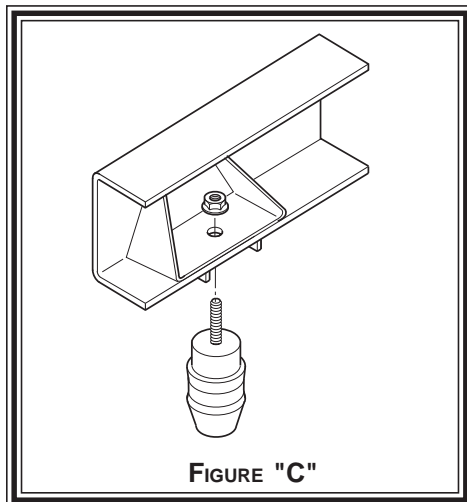


STEP 1 - PREPARE THE VEHICLE

With the vehicle on a solid, level surface chock the front wheels. Remove the negative battery cable. Raise the vehicle by the axle and remove the rear wheels. After the removal of the wheels lower the vehicle so the axle rests on jack stands rated to support your vehicles weight. Remove the jounce bumpers as shown in *Figure "C"*. The jounce bumper bracket is held to the frame by a single small tack weld on the outside of the frame. This weld can be broken and the bracket removed by gripping with pliers and twisting off.

STEP 2 - PRE-ASSEMBLE THE KIT

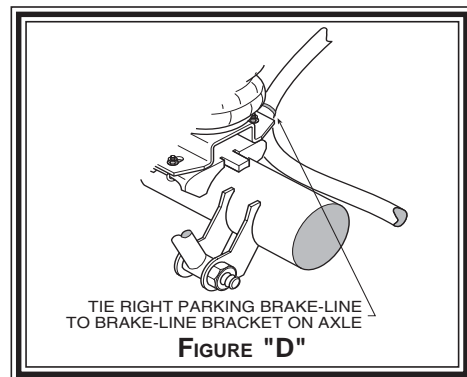
Select one air spring and one upper bracket from your kit. Insert the 1-1/2" carriage bolt upward into square space in upper bracket. Attach the upper bracket to the air spring using the 3/8"-16 flange lock nuts. Install the elbow fitting into the air spring through the large access hole in the upper bracket. Tighten the air fitting so as to make contact with the nylon ring and then tighten 1/2 turn to snug the fitting. Nothread sealant is needed. Position the elbow so as to point in the anticipated location of the air inflation valve. Select one lower bracket from your kit. Assemble the lower bracket assembly to the air helper spring using the 3/8"-16 x 3/4" flanged hex bolt as shown in *Figure "A"*.



STEP 3 - INSTALL THE ASSEMBLY TO THE VEHICLE

Place the assembly on the vehicle by installing the upper bracket so that it lays against the outside of the frame rail. Insert the carriage bolt in the upper bracket in the existing hole in the frame rail from the jounce bumper removal. Attach with a 3/8"-16 flange lock nut. The lower bracket will rest on the axle. Push the lower bracket toward the leaf spring stack until it rests next to the leaf spring "U" bolts.

Using the upper bracket as a template, drill a 7/16" hole in the side of the frame rail. **Before drilling, ensure that there are no electrical, fuel, or brake lines on the opposite side of the mounting surface that can be damaged by the drill.** Inserting a piece of wood between the frame rail and any lines in the path of the drill can help avoid damage to these lines. Using the previously drilled hole, attach the upper bracket to the frame rail using a 3/8"-16 X 1-1/2" hex bolt and 3/8"-16 flange lock nut.



Center the lower bracket on the jounce pad. Use the "J" bolts and 5/16" flanged lock nuts to secure the lower bracket to the jounce pad as shown in Figures "A" and "B". Using your fingers, tighten the flanged lock nuts on as far as possible. While making sure that the lower bracket stays centered on the jounce pad, tighten each nut two turns at a time with a wrench, switching to opposite nuts to ensure that the bracket is mounted evenly on the jounce pad. After the installation of the driver's side assembly is complete, secure the brake line to the corner of the lower bracket, using a nylon tie, to avoid interference with the air spring, refer to *Figure "D"*.

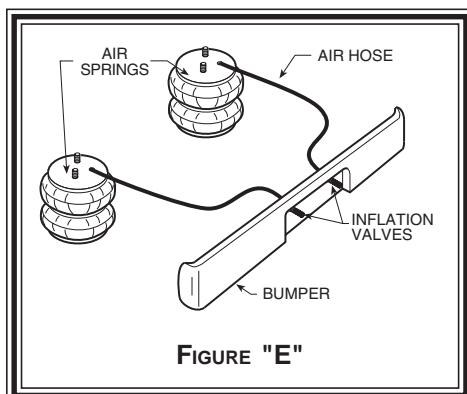
STEP 4 - INSTALL THE PASSENGER'S SIDE ASSEMBLY

Follow steps 2 - 5 for assembly and installation of the passenger's side assembly.

STEP 5 - INSTALL THE AIR LINE AND INFLATION VALVE

Uncoil the air tubing and cut it in two equal lengths. **DO NOT FOLD OR KINK THE TUBING.** Make the cut as square as possible. Insert one end of the tubing into the push-to-connect elbow fitting installed in the top of the air helper spring as far as possible.

Select a location on the vehicle for the air inflation valves. The location can be on the bumper or the body of the vehicle, as long as it is in a protected location so the valve will not be damaged, but still maintain accessibility for the air chuck see *Figure "E"*. Drill a 5/16" hole and install the air inflation valve using two



5/16" flat washers per valve as supports see *Figure "F"*. Run the tubing from the air helper spring to the valve, routing it to avoid direct heat from the engine, exhaust pipe, and away from sharp edges. Thermal sleeves have been provided for these conditions.

The air line tubing should not be bent or curved sharply as it may buckle. Secure the tubing in place with the nylon ties provided. Push the end of the air line tubing into the inflation valve *see Figure "F"*.

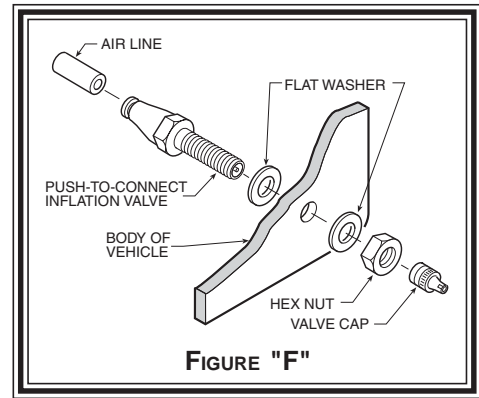
STEP 6 - CHECK THE AIR SYSTEM

Once the inflation valves are installed, inflate the air helper springs to 70 psi and check the fittings for air leaks. Using a spray bottle, apply a solution of soap and water to the fittings. If a leak is detected at an airline tubing connection then check to make sure that the airline tube is cut as square as possible and that it is pushed completely into the fitting. The airline tubing can easily be removed from the fittings by exhausting all the pressure in the air springs and then pushing the collar towards the body of the fitting and then, while still holding the collar against the body, gently pull on the airline tubing to remove. If a leak is detected where the air fitting screws into the air spring, screw the air fitting into the air spring until the leak stops. Reinstall the tubing and reinflate the air springs and check for leaks as noted above.

This now completes the installation. Install the wheels and torque the lug nuts to the manufacturers specifications. Raise the vehicle by the rear axle and remove the jack stands and lower the vehicle onto the ground. Re-attach the negative battery cable and remove the wheel chocks from the wheels. Check one again to be sure you have proper clearance around the air springs. With a load on your vehicle and the air springs inflated, you must have at least ½" clearance around the air springs. As a general rule, the air helper springs will support approximately 50 lbs. of load for each psi of inflation pressure (per pair). For example, 50 psi of inflation pressure will support a load of 2500 lbs. per pair of helper springs.

NOTE:

Too much air pressure in the air helper springs will result in a firmer ride, while too little air pressure will allow the air helper spring to bottom out over rough conditions. Too little air pressure will not provide the improvement in handling that is possible. ***TO PREVENT POSSIBLE DAMAGE MAINTAIN A MINIMUM OF 5 psi IN THE AIR HELPER SPRINGS AT ALL TIMES.***



NOTE:

Once the air helper springs are installed, it is recommended that the vehicle not be lifted by the frame, as over-extension may occur, resulting in damage to the air helper springs. However, should it become necessary to raise the vehicle by the frame, deflate both air helper springs completely.



FIRESTONE INDUSTRIAL PRODUCTS
12650 HAMILTON CROSSING BOULEVARD CARMEL, IN 46032
www.ride-rite.com