**WARNING:**

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

Firestone Industrial Products  
Carmel, Indiana, USA

## INSTALLATION INSTRUCTIONS

Congratulations - your new Ride-Rite 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 Ride-Rite kit is, of course, the air helper springs. Remember that they 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 hand assembly simply follow the same procedures.

Your kit includes separate inflation valves and air lines for each air 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" fittings.

**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 Ride-Rite Air Helper Springs are rated at a maximum inflation pressure of 100 p.s.i., this pressure may allow you to carry too great of a load on some vehicles. Check your vehicle owner's manual for maximum loads listed for your vehicle.**

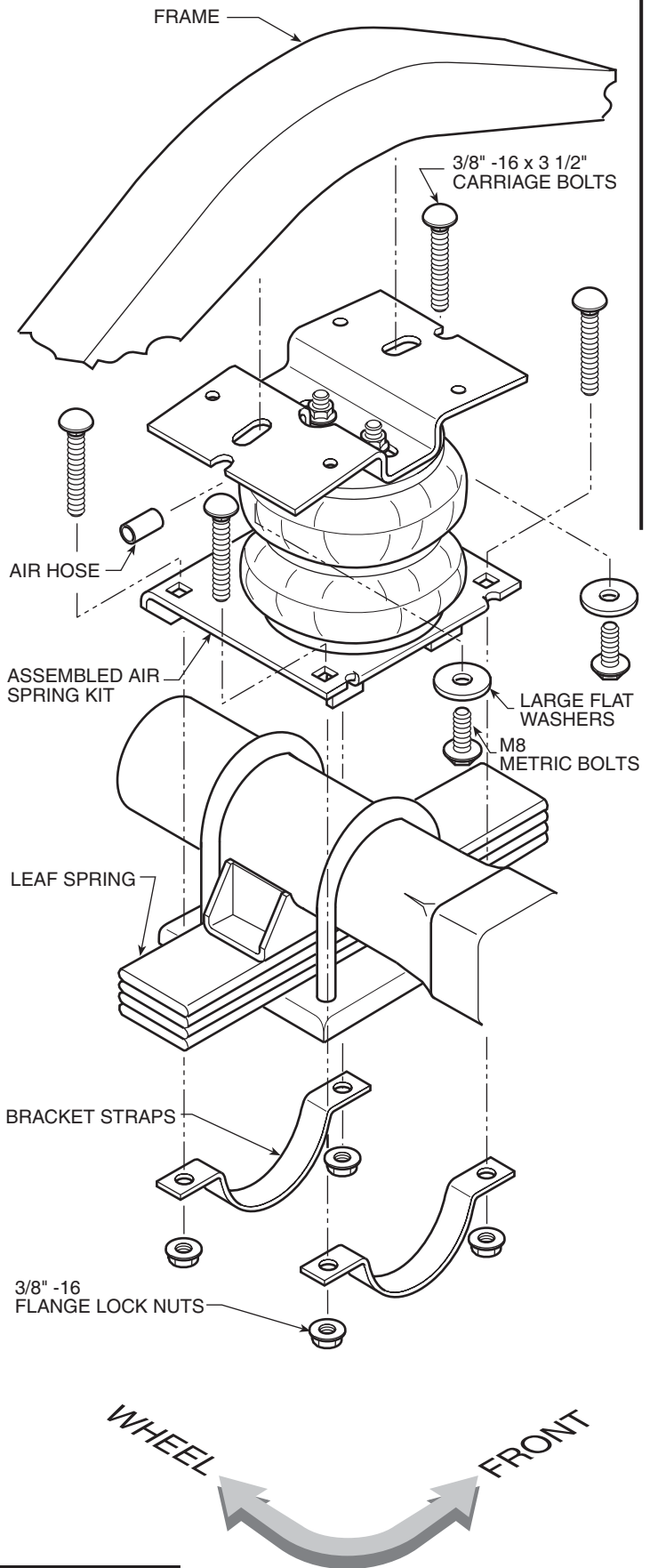
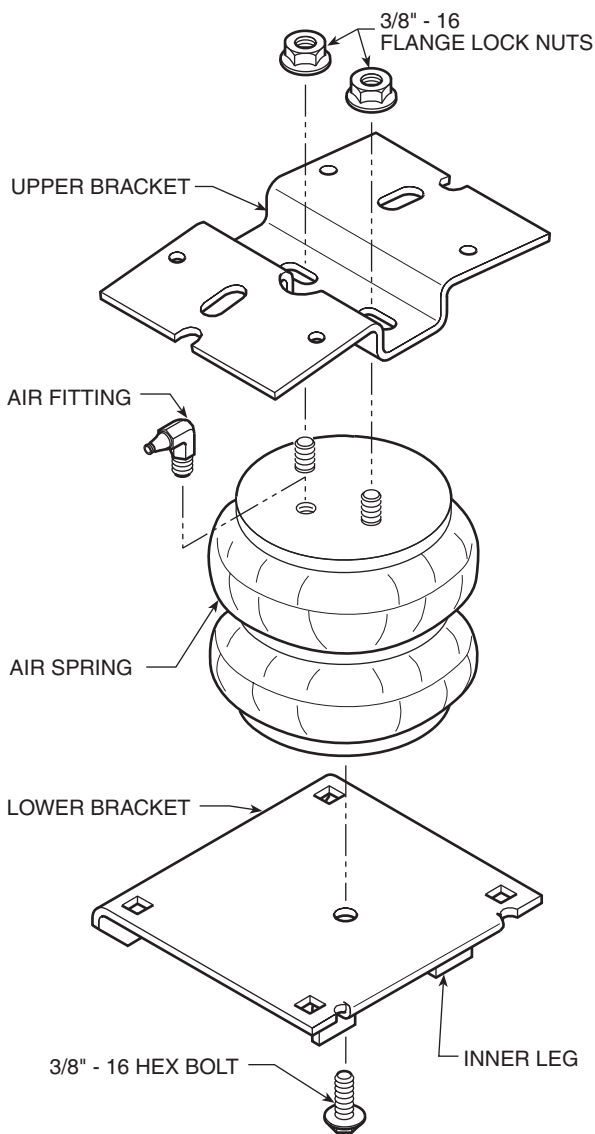
**When inflating your Ride-Rite Air Helper Springs, add air pressure in small quantities, checking pressure frequently during inflation. The air spring requires much less air volume than a tire and, therefore, inflates much quicker.**

## PARTS LIST

AIR SPRING	6781	2	ELBOW AIR FITTING	3101	2
UPPER BRACKET	5175	2	INFLATION VALVE	3098	2
LOWER BRACKET	5176	2	5/16" FLAT WASHER	3069	4
BRACKET STRAP	0530	4	NYLON TIES	9036	6
18 ft. TUBING		1	THERMAL SLEEVE	0899	2
3/8"-16 x 3 1/2" CARRIAGE BOLT		8	M8 METRIC BOLT		4
3/8"-16 FLANGE LOCK NUT		12	WASHER		4
3/8"-16 x 3/4" FLANGE BOLT		2			

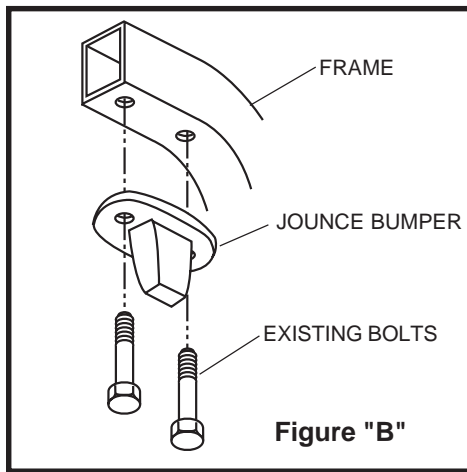
**NOTE:** Both illustrations are of the left, or drivers side, of the truck. Reverse any orientations when assembling and installing the right, or passenger, side of the vehicle.

**KIT ASSEMBLY**



**NOTE:** The air fitting on the passenger, or right, side of the truck will be facing the front of the vehicle. Care should be taken not to bend the air line to sharply if routing the tubing to the rear of the vehicle.

**FIGURE "A"**

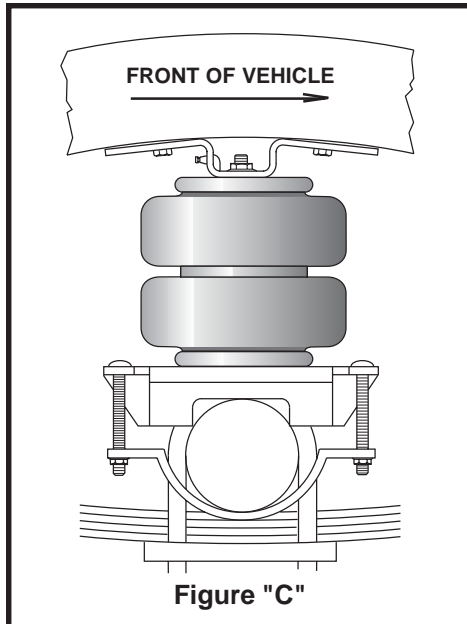


### STEP 1 - PREPARE THE VEHICLE

Place the vehicle on a solid level surface. Take necessary safety precautions such as using wheel chocks when working under your vehicle. Remove the jounce bumpers as shown in (Figure "B"). This vehicle does not have to be jacked up to install the kit.

### STEP 2 - PREASSEMBLE THE KIT

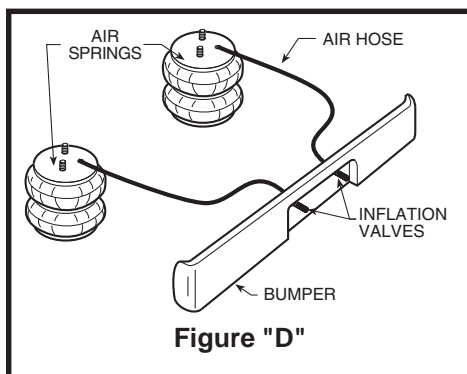
Select the left side upper bracket and an air spring from your kit. Install the elbow fitting into the air spring through the large access hole in the upper bracket. Tighten the air fitting so as to make contact with the nylon ring and then tighten 1/2 turn to snug the fitting. Nothread sealant is needed. Position the elbow so as to point in the anticipated location of the air inflation valve. Next attach the upper bracket to the air spring using the 3/8" -16 flange lock hex nuts. Tighten the hex nuts (torque to 10-15 ft. lbs.). Select the lower left bracket from your kit (see Figure "A" and "C"). Attach the lower bracket to the air spring using the 3/8"-16 x 3/4" flanged hex bolt. Tighten the bolt making sure the bracket is in the correct position (see Figure "A" and "C") (torque to 15-20 ft. lbs.).



### STEP 3 - INSTALL THE PREASSEMBLY TO THE VEHICLE

Place the preassembly on the vehicle by installing the upper bracket directly beneath the frame rail. The air helper spring will be offset to the center of the vehicle (see Figure "A"). The lower bracket will set on the top of the axle with the inner leg butted up against the inner "U" bolt (see Figure "A" and "C").

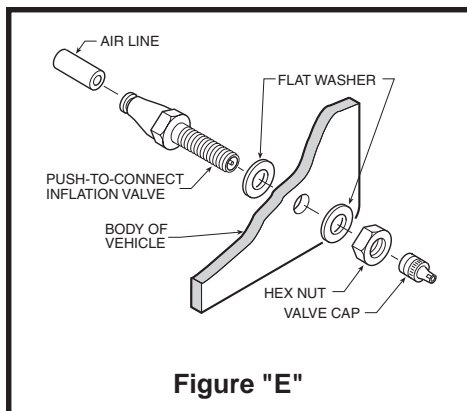
Match the slots in the upper bracket to the existing holes in the frame rail left by the removal of the jounce bumper. Replace the existing bolts from the jounce bumper removal with the M8 metric bolts included in the kit. The air helper spring will be offset to the inside of the vehicle. (see Figure "A")



Insert the four 3/8" -16 x 3" carriage bolts into the designated holes (see Figure "A"). Place the bracket straps under the axle and align with the carriage bolts (see Figure "A" and "C"). Use the 3/8" -16 flanged lock nuts to attach the bracket straps to the kit assembly. Check the positioning of the air helper spring assembly making sure that it is vertical and not at an angle. This will ensure proper alignment of the air helper spring.

### STEP 4 - INSTALL THE AIR LINE

Uncoil the air tubing and cut it into two equal lengths. DO NOT FOLD OR KINK THE TUBING. The air line tubing should not be bent or curved sharply as it may buckle with age. Make the cut as square as possible. Insert one end of the tubing into the elbow fitting installed in the top of the air helper spring.



Select a location on the vehicle for the air inflation valves. The locations can be on the bumper or the body of the vehicle, but be sure that it is in a protected location so the valve will not be damaged yet still be accessible for the air chuck (see Figure "D"). Drill a 5/16" hole or use an existing hole and install the air inflation valve using two 5/16" stainless steel flat washers per valve as supports (see Figure "E"). Run the tubing from the air spring to the inflation valve, routing it to avoid direct heat from the muffler or tailpipe, and away from sharp edges. Tubing protectors have been provided for these conditions. Push the end of the air line tubing into the inflation valve as illustrated (see Figure "E"). Secure the tubing in place with the nylon ties provided.

## STEP 5 - CHECK THE AIR SYSTEM

Once the inflation valves are installed, inflate the air springs and check the fittings for air leaks with an applied solution of soap and water. If a leak is detected at a tubing connection then check to make sure that the tube is cut as square as possible and that it is pushed completely into the fitting. The tubing can easily be removed from the fittings by pushing the collar towards the body of the fitting and then pulling out the tube. If a leak is detected where the brass elbow fitting screws into the spring, screw the elbow into the spring until the leak stops. Reinflate the air helper springs and check for leaks as noted above. Further information on trouble-shooting can be found in the General Operation Instruction book included with this kit.

## STEP 6 - INSTALLATION OF THE PASSENGER'S SIDE ASSEMBLY

Follow steps 1-5 for assembly and installation of the passenger's side assembly. Use tubing protectors to shield any overexposed air line tubing from heat or sharp edges that may damage the air line tubing. The air helper spring should be offset to the center of the vehicle. The air fitting should face the front of the vehicle on the passenger, or right, side of the truck. Care should be taken not to bend the air tubing to sharply when routing the tubing to the rear of the vehicle.

This now completes the installation. Before proceeding, check once again to be sure you have proper clearance around the bellows. With a load on your vehicle and the helper air springs inflated, you must have at least 1/2" clearance around the bellows. As a general rule, the Ride-Rite Air Helper Springs will support approximately 40 lbs. of load for each p.s.i. of inflation pressure (per pair). For example, 50 P.S. I. of inflation pressure will support a load of 2000 lbs. per pair of air helper springs. FOR BEST RIDE use only enough air pressure in the air helper springs to level the vehicle when viewed from the side (front to rear). This amount will vary depending on the load, location of load, condition of existing suspension and personal preference.

**NOTE:** Too much air pressure in the helper springs will result in stiffer ride, while too little air pressure will allow the air spring to bottom out over rough conditions. Too little air pressure will also not provide the improvement in handling that is possible. TO PREVENT POSSIBLE DAMAGE MAINTAIN A MINIMUM OF 3-5 P.S.I. IN THE RIDE-RITE AIR 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.



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