**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.

**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 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.

**PARTS LIST**

268C AIR SPRING	6762	2	3/8" SPECIAL WASHER	2
LEFT UPPER BRACKET	5478	1	3/8"-16 X 1 1/2 CARRIAGE BOLTS	2
RIGHT UPPER BRACKET	5221	1	5/16" FLAT WASHER	4
LOWER BRACKET	5472	2	PUSH TO CONNECT	
BRACKET STRAP	1163	2	INFLATION VALVE	2
HEAT SHIELD	1004	1	PUSH TO CONNECT	
AIR LINE TUBING		1	STRAIGHT FITTING	2
3/8"-16 FLANGE LOCK NUT		10	THERMAL SLEEVE	2
3/8"-16 X 3/4" HEX BOLT		2	NYLON TIE	6
3/8"-16 x 3" CARRIAGE BOLTS		4	SLEEVE	5224 2

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!**

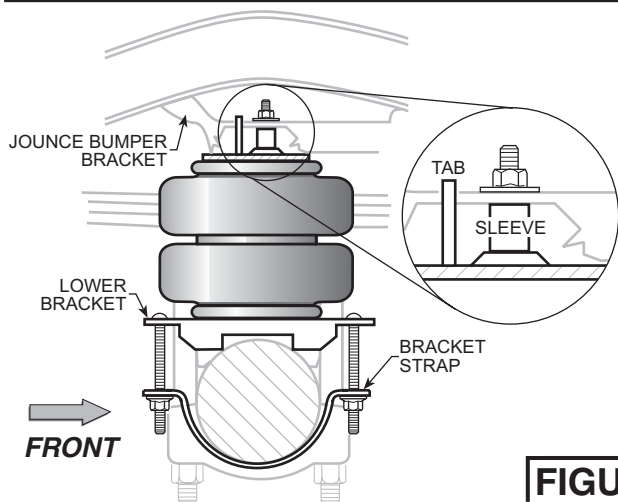
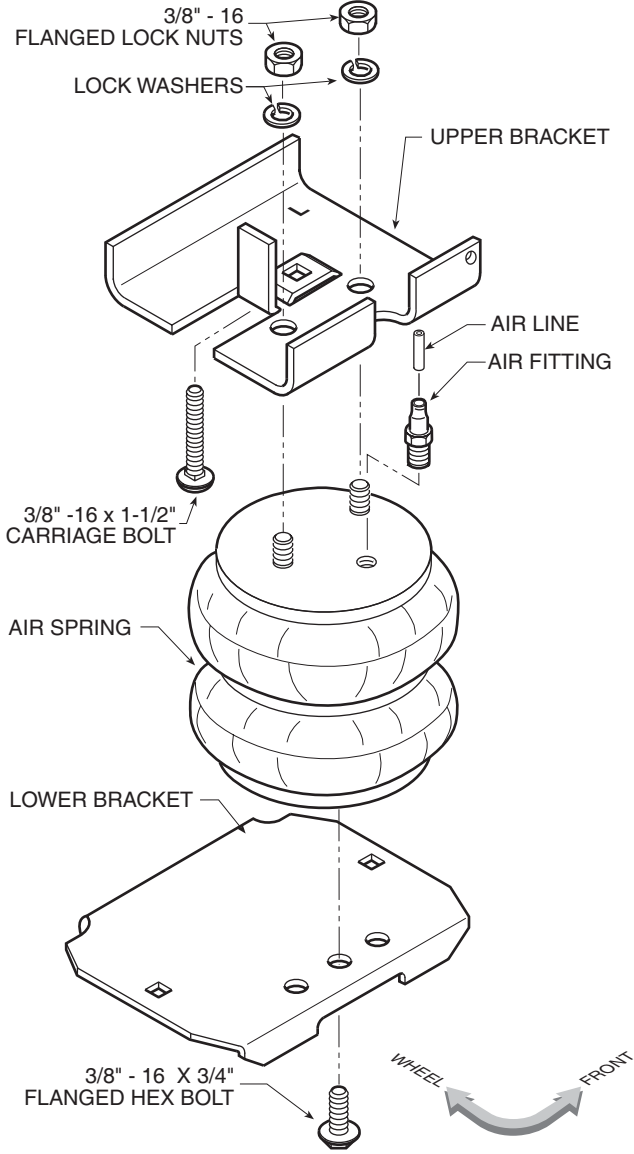
*For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer (GVWR). Although your Ride-Rite Air Helper Springs are rated at a maximum inflation pressure of 100 P.S.I., this pressure may allow you to carry too great a load on 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.*

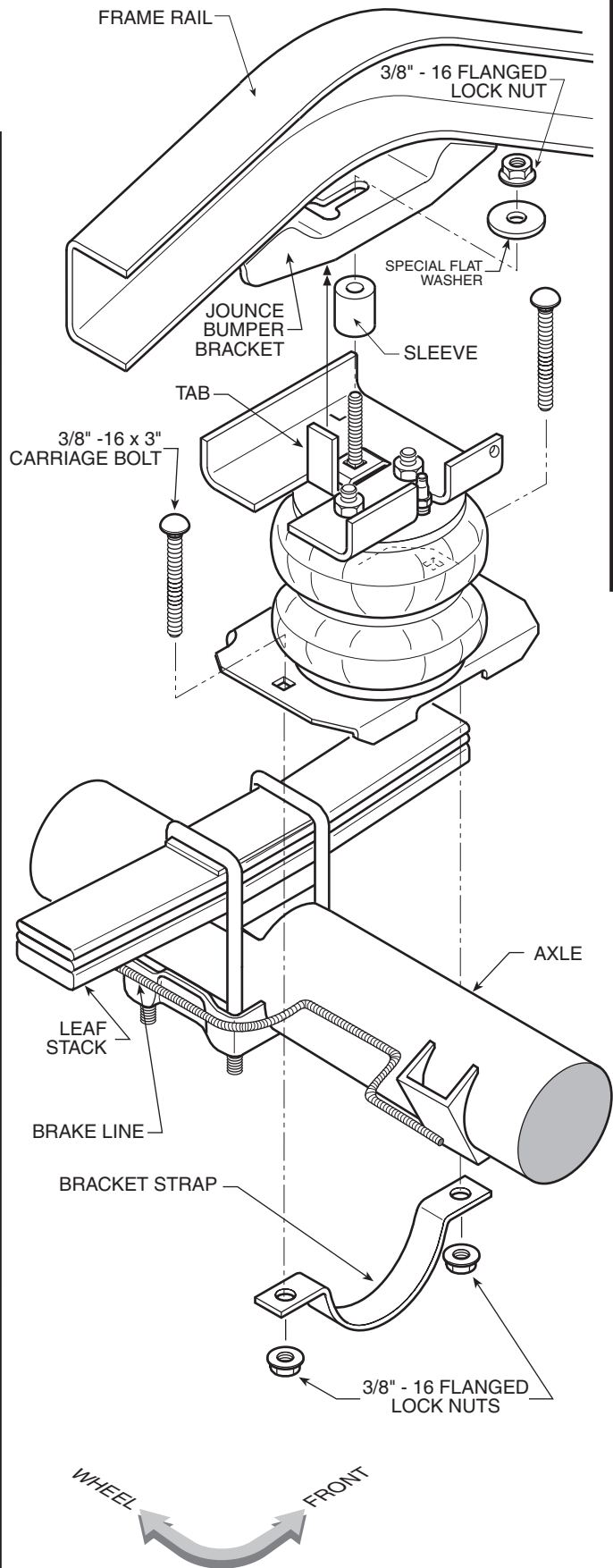
# RR 2173

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

## KIT ASSEMBLY



## KIT TO FRAME ASSEMBLY



**FIGURE "A"**

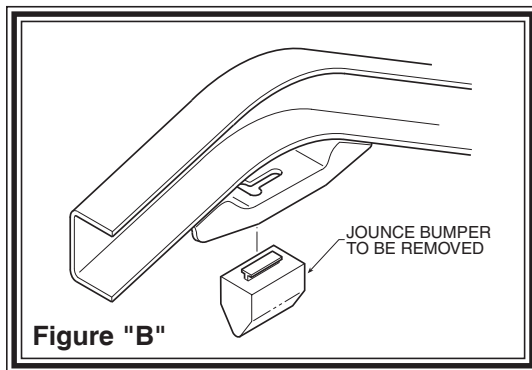


Figure "B"

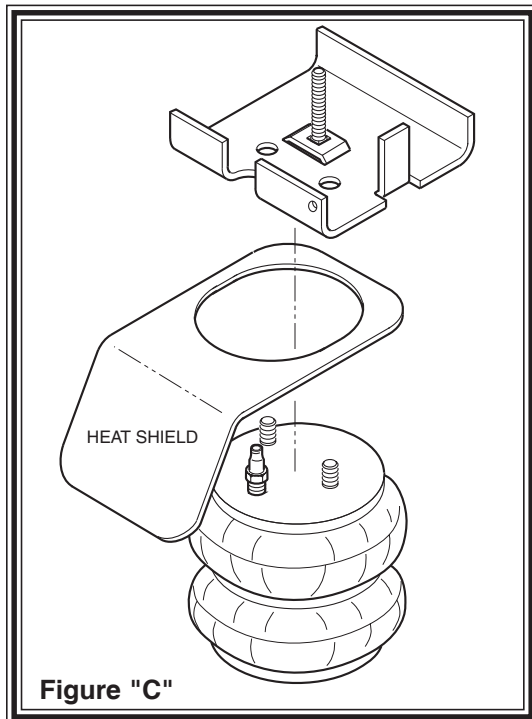


Figure "C"

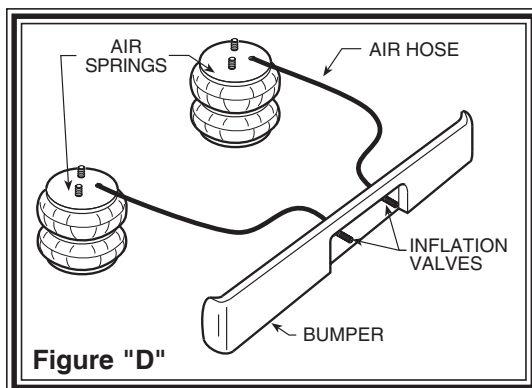


Figure "D"

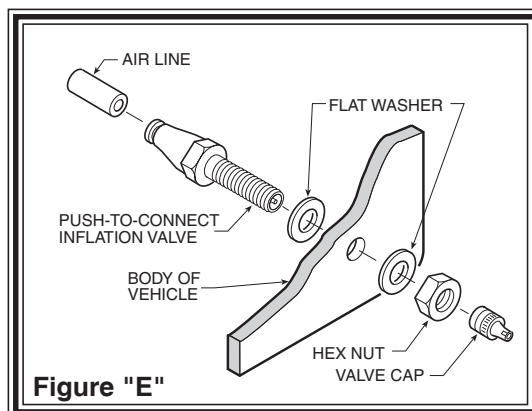


Figure "E"

## STEP 1 - PREPARE THE VEHICLE

Make sure that the vehicle is on a solid level surface. Take necessary safety precautions such as using wheel chocks when working under your vehicle. This vehicle does not have to be jacked up to install the kit. Remove the positive battery cable. Remove the rubber jounce bumper under the frame rail, *see Figure "B"*.

## STEP 2 - PREASSEMBLE THE RIDE-RITE KIT

Select one air helper spring from your kit and install the air fitting as shown in *Figure "A"*. Tighten the air fitting securely to engage the orange thread sealant. Insert the 1-1/2" carriage bolt into the square hole on the left upper bracket marked "L". Align the studs on the air spring with the holes on the upper bracket making sure the air fitting aligns with the circular cut out, *see Figure "A"*. Use the 3/8"-16 flanged lock nuts to secure the upper bracket to the air spring. Position the lower bracket as shown in *Figure "A"*. Fasten the lower bracket to the air helper spring using a 3/8"-16 x 3/4" flanged hex bolt (*finger tight*).

## STEP 3 - ATTACHMENT TO THE FRAME

Place the round sleeve over the 1-1/2" carriage bolt installed earlier (*see Figure "A"*). Position the assembly on the axle under the frame rail in the location shown in *Figure "A"*. The tab on the upper bracket will fit into the jounce bumper bracket opening. Note that the carriage bolt will also fit into the existing slot on the jounce bumper bracket as shown in *Figure "A"*. Using the 3/8" special flat washer and 3/8"-16 flanged hex nut attach the upper bracket to the jounce bumper bracket, *see Figure "A"*. *Hint: Use a boxed ratchet style wrench to tighten the upper bracket to the jounce bumper bracket.*

## STEP 4 - LOWER BRACKET ATTACHMENT

Positioning of the lower bracket is determined by the air spring. Visually align the air spring so that it is as vertical as possible. Once the air spring is correctly aligned install the 3/8"-16 x 3" carriage bolts in the square holes of the lower bracket as shown in *Figure "A"*. The lower bracket is then secured by two bracket straps which are placed under the axle and fastened with 3/8"-16 flanged lock nuts, *see Figure "A"*. *After the lower bracket is fastened to the axle tighten the air spring to the lower bracket making sure the air spring remains in a vertical position.*

## STEP 5 - INSTALLATION TO THE PASSENGER'S SIDE ASSEMBLY

Reverse any orientations when assembling and installing the right, or passenger, side of the vehicle. Use the upper bracket stamped "R", follow steps 2-4 for assembly and installation. *Note: The use of a heat shield is required on the passenger's side of the vehicle refer to Figure "C"*. The heat shield will mount between the upper bracket and the air helper spring. Angle the heat shield so it is placed halfway between the air helper spring and the closest point on the exhaust. Be sure that the heat shield will not contact any other component as the suspension compresses. (*i.e.* brake lines, shock absorbers, lower bracket assembly)

## STEP 6 - INSTALL THE AIR LINE AND THE INFLATION VALVE

Uncoil the air line tubing and cut it into two equal lengths. *DO NOT FOLD OR KINK THE TUBING*. Try to make the cut as square as possible. Insert one end of the tubing into the straight fitting installed in the top of the air helper spring. Push the tubing into the fitting as far as possible refer to *Figure "A"*.

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 maintain accessibility for the air chuck, *see Figure "D"*.

Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports, *see Figure "E"*. Run the tubing from the air helper spring to the inflation 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. If a thermal sleeve is required simply slide the sleeve over the air line tubing to the location requiring protection. 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 as illustrated in *Figure "E"*.

### **STEP 7 - CHECK THE AIR SYSTEM**

Once the inflation valves are installed inflate the air helper springs to 70 P.S.I. 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 fitting screws into the spring, remove the tubing (see trouble shooting section of the operating instruction manual for removal procedure), then screw the brass fitting into the air spring one additional turn or until the leak stops. Reinstall the tubing and reinflate the air 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.

This now completes the installation. Re-attach the positive battery cable and remove the wheel chocks from the front wheels. Before proceeding, check once again to be sure you have proper clearance around the air springs. With a load on your vehicle and the air helper springs inflated, you must have at least 1/2" clearance around the air springs. As a general rule, the Ride-Rite Air Helper Springs will support approximately 32 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 1600 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 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 also not provide the improvement in handling that is possible. ***TO PREVENT POSSIBLE DAMAGE MAINTAIN A MINIMUM OF 20 P.S.I. IN THE RIDE-RITE AIR HELPER SPRINGS AT ALL TIMES.***

Enclosed with this kit are Ride-Rite Operating Instructions. Please read them for proper and safe operation.

### **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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