**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 of this kit requires a minimum of 6-1/2" of clearance between the tire sidewall and the frame.*

**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 helper spring kit is, of course, the air 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.

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 P.S.I., this pressure may allow you to carry too heavy of a load on some vehicles. Check your vehicle owner's manual 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.*

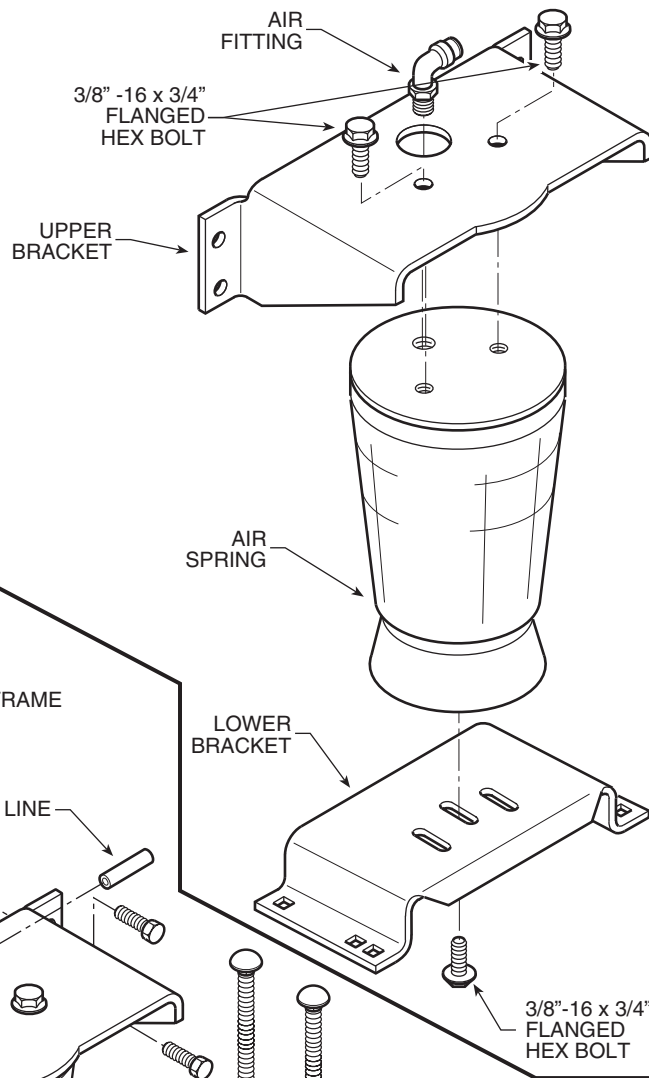
**PARTS LIST**

AIR SPRING	9000	2	3/8"-16 x 1-1/2" HEX BOLT	8
UPPER BRACKET	5237	2	5/16" FLAT WASHER	4
LOWER BRACKET	5092	2	PUSH-TO-CONNECT	
BRACKET STRAP/SHIM 1/2"	5086	4	INFLATION VALVE	2
BRACKET STRAP/SHIM 1"	5093	4	INFLATION VALVE CAP	2
AIR LINE TUBING		1	PUSH-TO-CONNECT	
3/8"-16 FLANGED LOCK NUT		18	ELBOW FITTING	2
3/8"-16 x 3/4" FLANGED HEX BOLT		8	THERMAL SLEEVE	2
3/8"-16 x 4-1/2" CARRIAGE BOLT		8	NYLON TIE	6
3/8" LARGE WASHER		8	CAUTION TAG	2

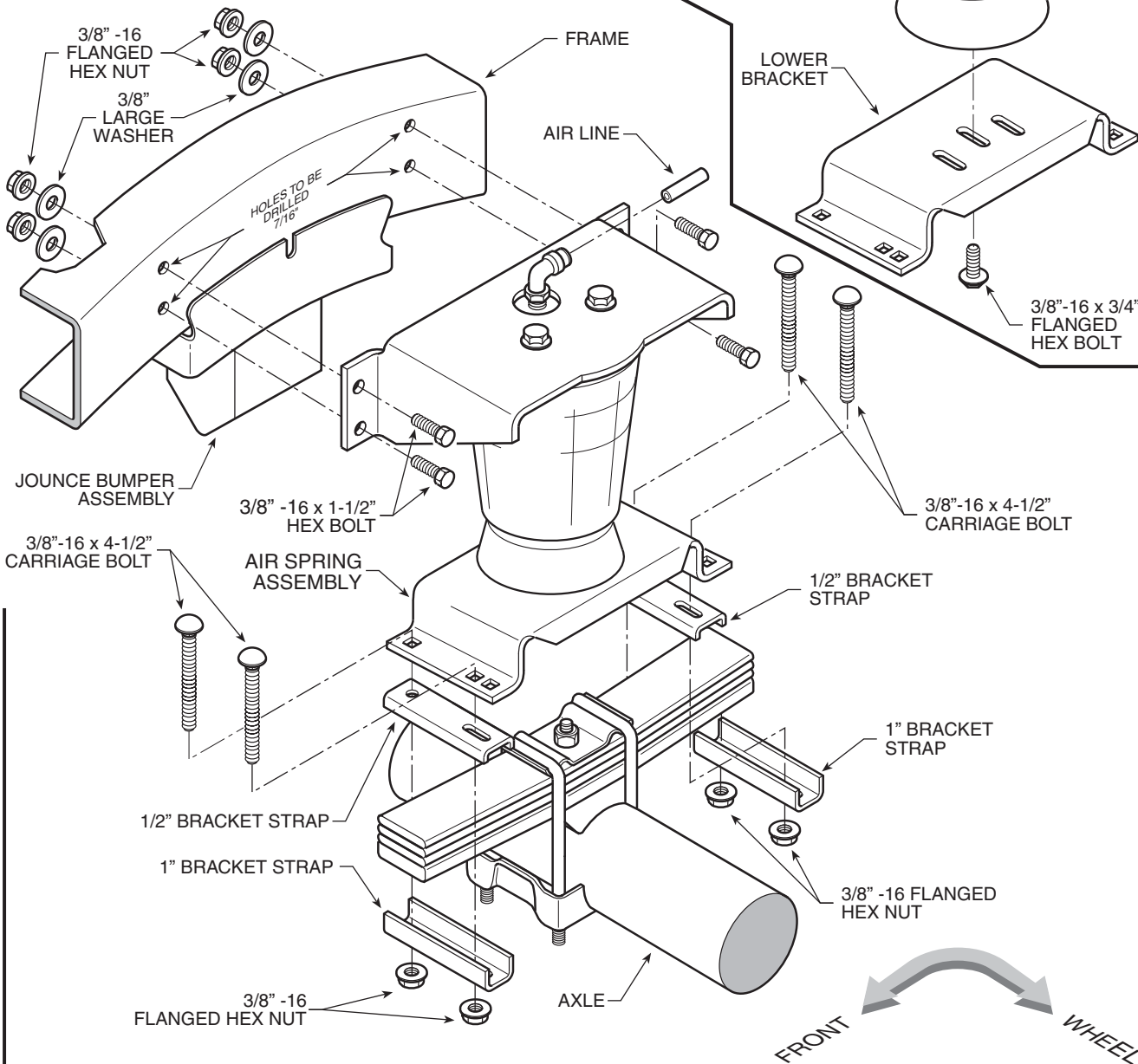
**NOTE:** Both illustrations are of the left, or driver's side, of the vehicle. Reverse any orientations when assembling and installing the right, or passenger's side of the vehicle.

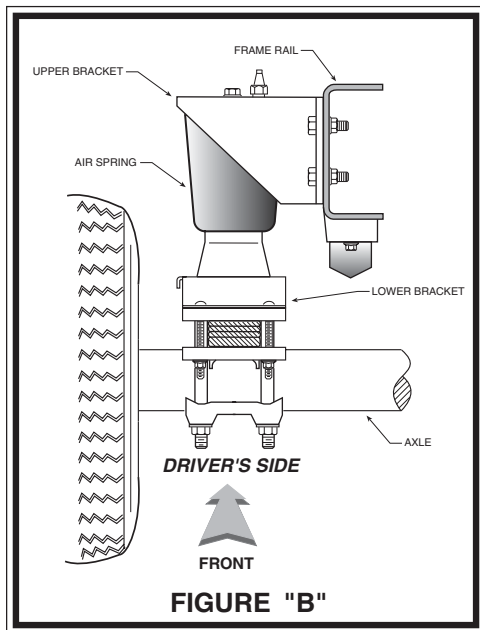
**FIGURE "A"**

**KIT ASSEMBLY**

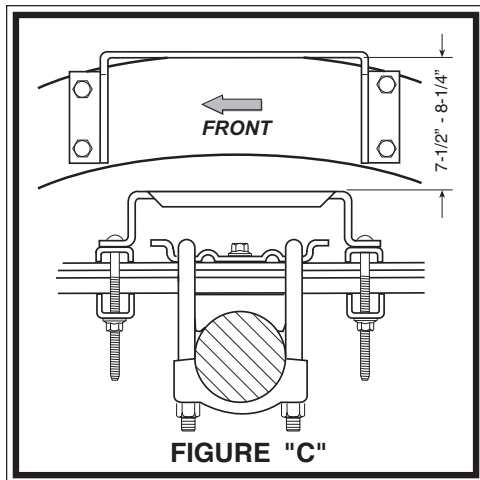


**KIT TO FRAME ASSEMBLY**





**FIGURE "B"**



**FIGURE "C"**

### **STEP 1 - PREPARE THE VEHICLE**

Remove the negative battery cable. With the vehicle on a solid level surface, chock the front wheels. 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 for your vehicles weight. *This installation assumes that there is no load in the bed of the truck.*

### **STEP 2 - PRE-ASSEMBLE THE KIT**

Pre-assembly will begin with the left or driver's side of the vehicle. All pictures show the left side unless noted otherwise. Select one air helper spring and an upper bracket from your kit. Thread the air fitting into the inflation hole in the top of the spring *see Figure "A"*. Tighten the air fitting so that the nylon ring contacts the top of the air spring and then tighten 1/4 turn to snug the fitting. No thread sealant is needed. Align the air spring's threaded mounting holes with the mounting holes on the upper bracket. Attach the upper bracket to the air spring using two 3/8" - 16 x 3/4" flanged hex bolts. Select a lower bracket and orient it so that the lip will be closest to the tire *see Figure "A"*. Fasten the lower bracket to the air spring using a 3/8" - 16 x 3/4" flanged hex bolt through the center slot in the lower bracket *see Figure "A"* (finger tight).

### **STEP 3 - PRE-FIT AND MARK / DRILL HOLES**

Position the air spring assembly on the leaf spring stack. The lower bracket should straddle the leaf spring retainer and the upper bracket mounting flanges should be flush against the frame *see Figure "B"*. Depending on the application, the lower bracket may have to be raised due to interference with the U-bolts, leaf spring retainer, brake drum, or other vehicle components. Two pairs of bracket straps/shims are included in this kit. These are included to provide adjustment to the air spring height, as well as allowing the air spring and lower bracket to clear the leaf spring retainer or any other component of the vehicle. One set is 1/2" tall while the other set is 1" tall. The bracket straps/shims may be interchanged to provide maximum clearance and proper air spring height. Furthermore, the shims can be mixed (using the 1/2" on one side and the 1" or none on the other side) to adjust for leaf spring slant. Use the proper combination of bracket straps/shims to ensure that the upper and lower brackets are as parallel as possible *see Figure "C"*.

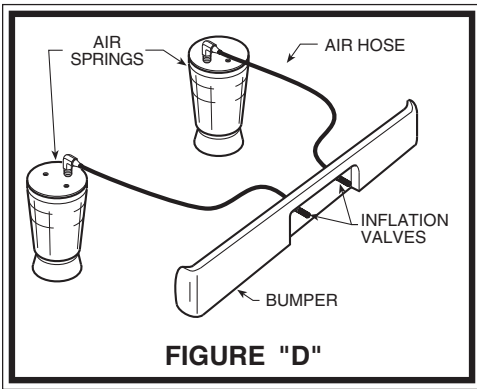
Once the height of the lower bracket has been established, adjust the position of the upper bracket so that the mounting flanges are flush with the side of the frame rail. It may be necessary to slide the entire assembly fore or aft along the leaf spring in order to provide proper mounting on the frame rail. Before marking and drilling the holes for the upper bracket, make sure the mounted height of the air spring is between 7-1/2" and 8-1/4" *see Figure "C"*, and the upper and lower brackets are as parallel as possible. Using the mounting holes in the upper bracket as a template, mark the four holes to be drilled in the frame rail with a center punch, then remove the air spring assembly. *Before drilling the holes, make sure all electrical, brake, and fuel lines are cleared from the path of the drill.* Damage to lines can be avoided by inserting a piece of wood between the frame rail and any lines in the path of the drill. Drill the four holes in the frame rail using a 7/16" drill bit *see Figure "A"*.

### **STEP 4 - INSTALL THE ASSEMBLY TO THE VEHICLE**

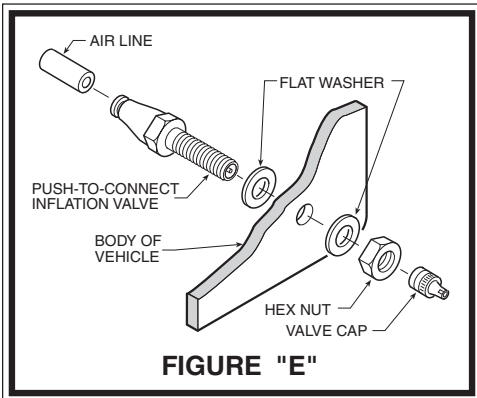
After drilling the holes in the frame rail, place the air spring assembly back on the leaf stack, making sure the lower bracket is placed over the leaf spring retainer *see Figures "A" & "C"*. Insert the 3/8"-16 x 1-1/2" flanged hex bolts through the holes in the upper bracket and the holes drilled in the frame rail. Fasten the upper bracket to the frame rail using the 3/8"-16 flanged hex nuts and flat washers *see Figure "A"*. Next, attach the lower bracket to the leaf stack. Use the bracket strap/shims that are not being used as spacers and attach the air spring assembly to the leaf stack using the 3/8"-16 x 4-1/2" carriage bolts and 3/8"-16 flanged hex nuts *see Figure "B"*. Ensure that the air spring is aligned as close to vertical as possible, *see Figure "B"* and then tighten the 3/8" - 16 x 3/4" flanged hex bolt securing the bottom of the air spring to the lower bracket.

### **STEP 5 - INSTALL THE PASSENGER'S SIDE ASSEMBLY**

Follow steps 1 - 4 for the assembly and installation of the right, or passenger's side of the vehicle. Reverse any orientations when assembling and installing the right side of the vehicle.



**FIGURE "D"**



**FIGURE "E"**

**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 elbow fitting installed in the top of the air helper spring. Push the tubing into the fitting as far as possible *see 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 *see 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, 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. Release the air pressure from the air springs. Push the collar towards the body of the fitting and pull out the tube. If

a leak is detected where the fitting screws into the spring, remove the tubing as noted above, then screw the 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.

This now completes the installation. Install the wheels and torque the lug nuts to the manufacturer's specifications. Raise the vehicle by the rear axle and remove the jack stands and lower the vehicle back to the ground. Reattach the negative battery cable and remove the wheel chocks from the 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 air helper springs will support approximately 25 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 1250 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 10 P.S.I. 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.

**NOTE:**

**MIN PRESSURE 10 PSI**

**MAX PRESSURE (LOADED) 100 PSI**

