

### 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. Do not inflate beyond 100 psi. Improper use or over inflation may cause property damage or severe personal injury.

This kit includes inflation valves and air lines for each air spring. This will allow you to compensate for unbalanced loads. If you would rather have a single inflation valve system to provide equal pressure to both air springs, your dealer can supply the optional "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 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.*

### PARTS LIST

AIR SPRING	6781	2	3/8"-16 X FLANGE LOCK NUT	16
LEFT UPPER BRACKET	5479	1	3/8"-16 NUT PLATE	2
RIGHT UPPER BRACKET	5480	1	5/16" FLAT WASHER	4
LEFT LOWER BRACKET	5521	1	18 ft. TUBING	0938 1
RIGHT LOWER BRACKET	5522	1	PUSH-TO-CONNECT	
CLAMP (SHORT)	5481	2	INFLATION VALVE	3032 2
CLAMP (LONG)	5486	2	PUSH-TO-CONNECT	
BRACKET CLAMP	5181	2	MALE CONNECTOR	3055 2
3/8"-16 X 1" HEX HEAD BOLT		2	THERMAL SLEEVE	0899 2
3/8"-16 X 1 1/2" HEX HEAD BOLT		6	NYLON TIE WRAP	6
3/8"-16 X 3/4" HEX HEAD BOLT		2	CAUTION TAG	2
3/8"-16 X 3 1/2" CARRIAGE BOLT		4		

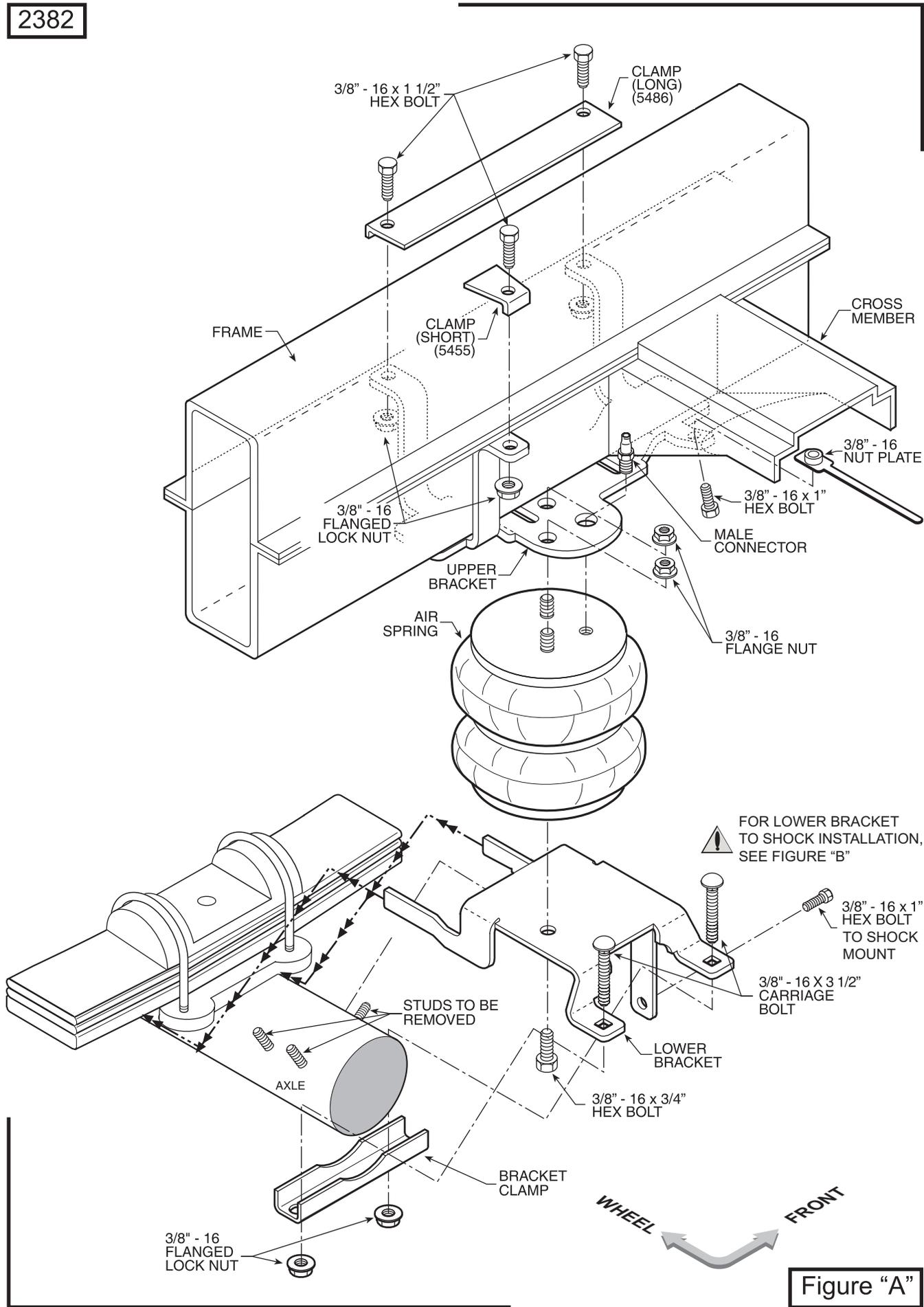
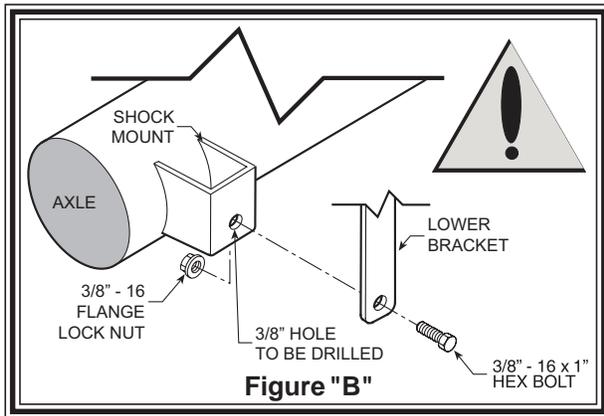
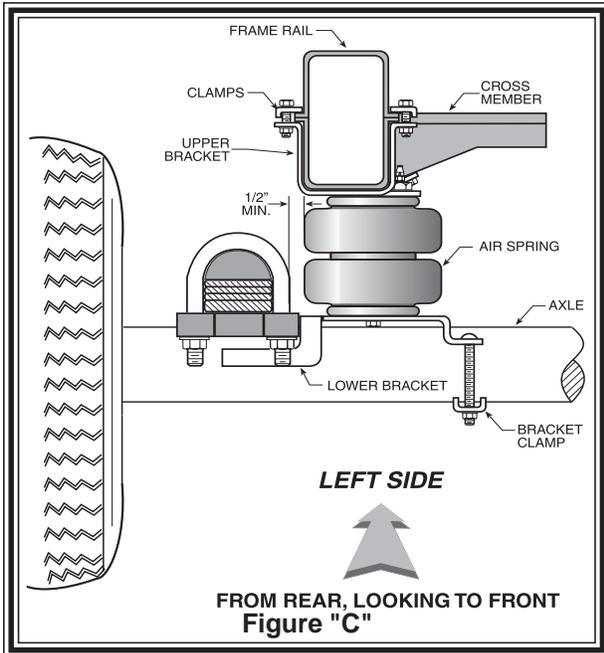


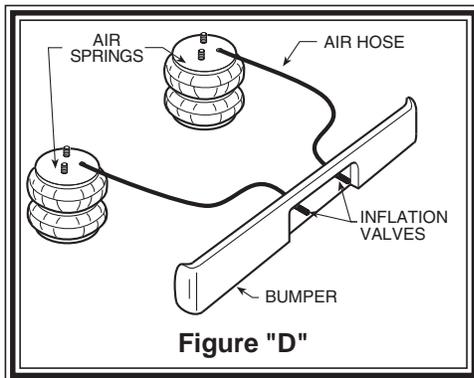
Figure "A"



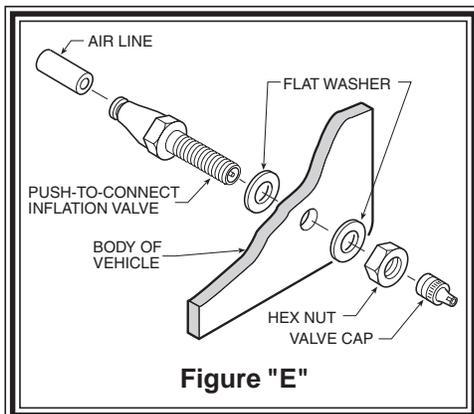
**Figure "B"**



**Figure "C"**



**Figure "D"**



**Figure "E"**

**NOTE:**

Please read through this manual completely before installing the air spring kit to your vehicle. All illustrations reference the left side of the vehicle. Reverse all orientations for the right side.

**STEP 1 - PREPARE THE VEHICLE**

It is not necessary to raise the vehicle for installation. However, if you do, chock the front wheels and use jack stands rated to your vehicles weight. Remove the negative battery cable.

Remove the 1 1/4" studs that are along the axle on both sides of the vehicle. (see Figure "A") Remove the vehicle's existing rubber jounce bumpers.

**STEP 2 - UPPER BRACKET INSTALLATION**

Install the left upper bracket marked "5479" onto the frame rail. The bracket will need to be positioned with the short tab underneath the cross member. Using one of the long clamps and one of the short supplied clamps and three 3/8"-16 X 1 1/2" hex bolts and nuts loosely bolt these to the three arms that extend to the frame flange (see Figure "A"). Using one of the supplied nut plates slide it down the cross member and secure it to the small tab using a 3/8"-16 X 1" hex bolt (see Figure "A"). Once this bolt has been secured tighten the remaining bolts.

**STEP 3 - LOWER BRACKET INSTALLATION**

Preassemble one air spring and the left lower bracket. Bolt the air spring to the bracket with the supplied 3/8"-16 X 3/4" hex bolt. Install the preassembly onto the axle at a 45° angle between the leaf stack and the differential making sure that the lower bracket flanges extend under the leaf spring support casting (see Figures "A" & "C"). Roll the

lower bracket into place until it is firmly seated on the axle tube. Using the supplied 3/8"-16 X 3 1/2" carriage bolt, bracket clamp, and 3/8"-16 flange lock nuts, secure the lower bracket to the axle tube on the side closest to the differential and tighten down. Align the air spring with the upper bracket and secure to the upper bracket with the supplied 3/8"-16 flange nuts. Install the male connector into the air spring and tighten to engage the orange thread sealant (see Figure "A").

Using the support flange of the lower bracket as a template, drill a 3/8" hole into the shock mount. Fasten the support to the shock mount using a 3/8"-16 X 1" hex bolt and nut. See Figures "A" & "B".

**STEP 4 - INSTALLATION OF THE RIGHT SIDE**

Follow steps 1-3 with reverse orientations for assembly and installation of the right side.

### **STEP 5 - INSTALL THE AIR LINE AND INFLATION VALVE**

Uncoil the airline tubing and cut it into two equal lengths. *DO NOT FOLD OR KINK THE AIRLINE TUBING.* Try to make the cut as square as possible. Insert one end of the airline tubing into the air fitting installed in the top of the air helper spring. Push the airline 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 airline 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 airline tubing should not be bent or curved sharply as it may buckle. Secure the airline tubing in place with the nylon ties provided. Push the end of the airline tubing into the inflation valve as illustrated (*see Figure "E"*).

### **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, with a gentle pull, remove the airline tubing. If a leak is detected where the air fitting screws into the spring, deflate the air springs and remove the tubing, then screw the air fitting into the air spring one additional turn or until the leak stops. Reinstall the tubing and re-inflate the air springs and check for leaks as noted above. This now completes the installation. 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 50 lbs. of load for each 1 psi of inflation pressure (per pair). For example, 50 psi of inflation pressure will support a load of 2500 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 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:**

**MIN PRESSURE**

**5 PSI**

**MAX PRESSURE (LOADED) 100 PSI**

**NOTE:**

Should it become necessary to raise the vehicle by the frame, deflate both air helper springs completely. Reinflate the air springs after the vehicle is lowered to the ground.

