

### 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.

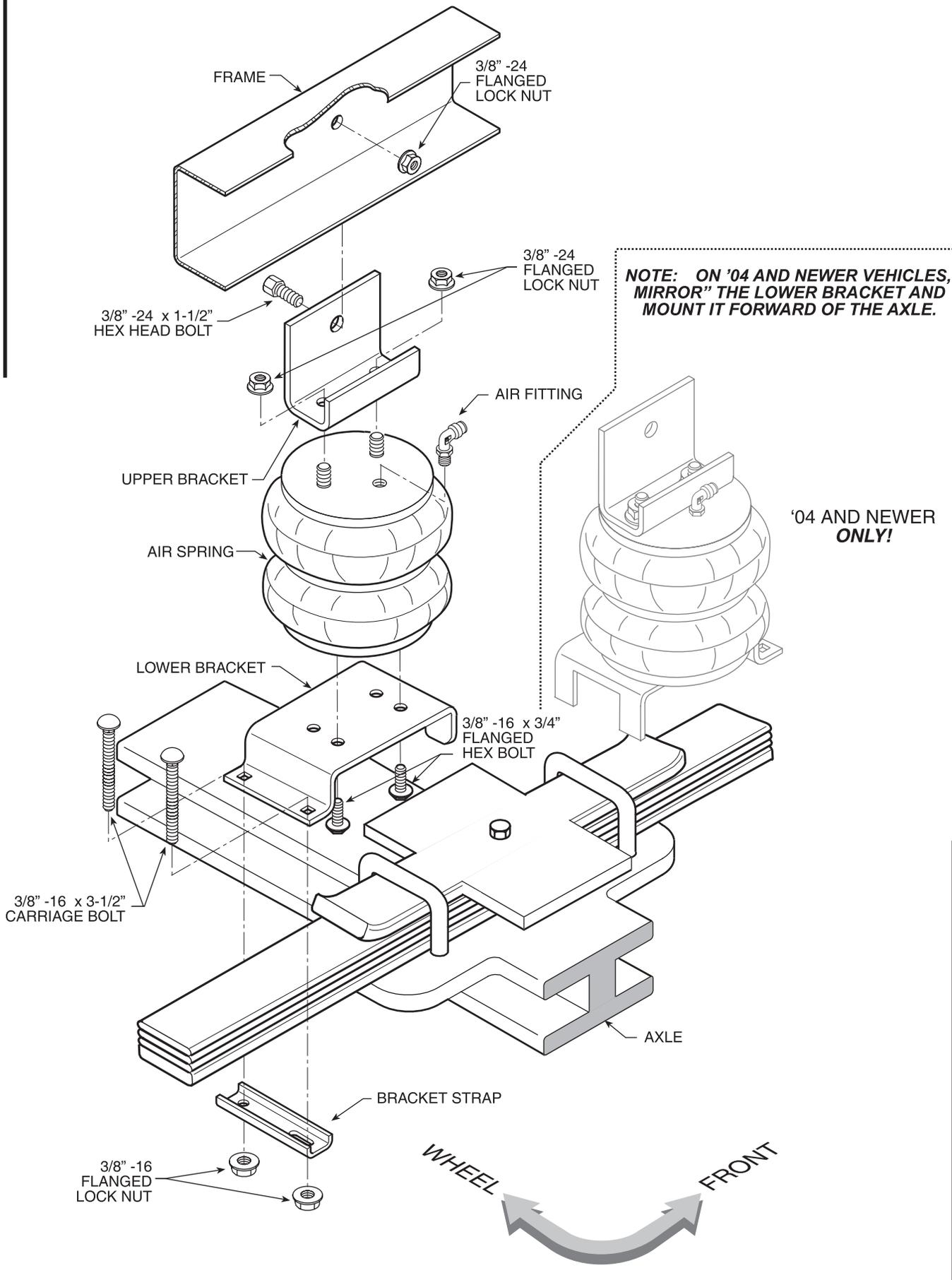
### IMPORTANT!

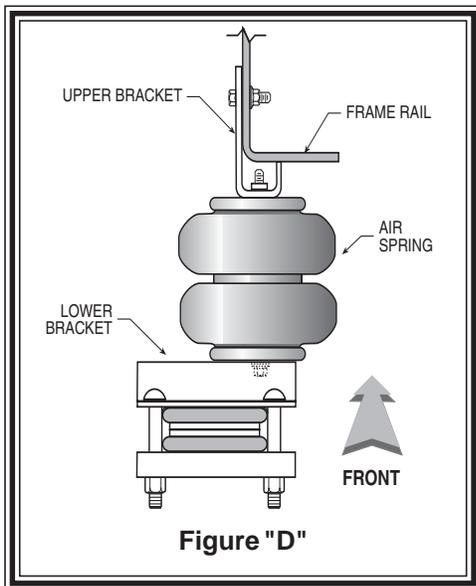
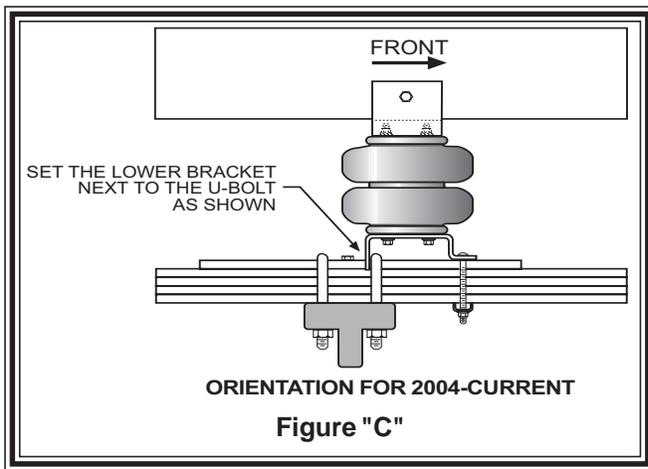
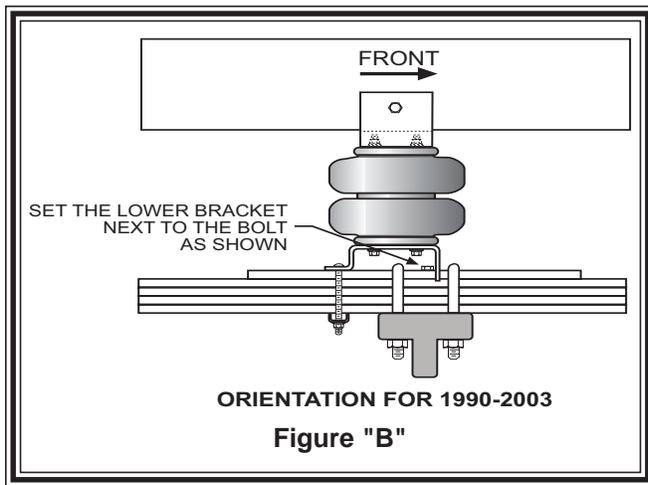
*For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer (GVWR). Although your Air Helper Springs are rated at a maximum inflation pressure of 100 psi, this pressure may allow you to carry too great a load on some vehicles. 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	0335	2	3/8"-16 FLANGE NUT	4
UPPER BRACKET	5094	2	3/8"-24 FLANGE LOCK NUT	6
LOWER BRACKET	5095	2	3/8"-16 X 3/4" FLANGE BOLT	4
BRACKET CLAMP	5103	2	3/8"-16 X 3 1/2" CARRIAGE BOLT	4
18 ft. TUBING	0938	1	3/8" FLAT WASHER	4
INFLATION VALVE	3032	2	5/16" FLAT WASHER	4
ELBOW FITTING	3031	2	NYLON TIE WRAP	7
THERMAL SLEEVE		2	CAUTION TAG	2
3/8"-24 X 1-1/2" HEX BOLT		2		





#### **NOTE:**

Please read through this manual completely before installing the air spring kit to your vehicle.

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

This kit can be installed without removing the front wheels. Chock the wheels for safety before working under the vehicle.

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

Select one air helper spring and an upper bracket from your kit. Insert the studs on the air spring in the mounting holes in the upper bracket. Fasten the upper bracket to the air spring by installing two 3/8"-24 flanged hex nuts on the air spring's studs. Next, install the air fitting into the air spring. Tighten the air fitting so as to make contact with the nylon ring and then tighten 1/2 turn to snug the fitting. No thread sealant is needed. Select one lower bracket from you kit. Fasten the air spring to the lower bracket using the two 3/8"-16 flanged hex bolt in the hole in the lower bracket, *see Figure "A"*.

#### **STEP 3 - INSTALLING THE ASSEMBLY TO THE VEHICLE**

Place the assembly on the drivers side leaf stack. The lower bracket will be butted up next to the bolt on the leaf between the two retainers, *see Figures "A", "B" & "C"*. Use the upper bracket as a template to properly locate the hole. Drill the hole in the side of the frame using a 3/8" drill. ***Before drilling any holes make sure all electrical, brake and fuel lines are cleared from the path of the drill bit.*** 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. Attach the upper bracket to the frame rail

using the 3/8"-24 x 1-1/2" bolt, 3/8" flat washer, and 3/8"-24 flange nut. Next, insert the 3/8"-16 x 3 1/2" carriage bolts through the square holes in the lower bracket. The lower bracket should be aligned over the leaf spring, *see Figure "B" & "C"*. The carriage bolts should be straddling the leaf stack. Slide the bracket strap on the carriage bolts and secure it with two 3/8"-16 flanged lock nuts, *see Figure "A"*. Once the assembly is in place, ensure that there is at least 1/2" of clearance around the air spring.

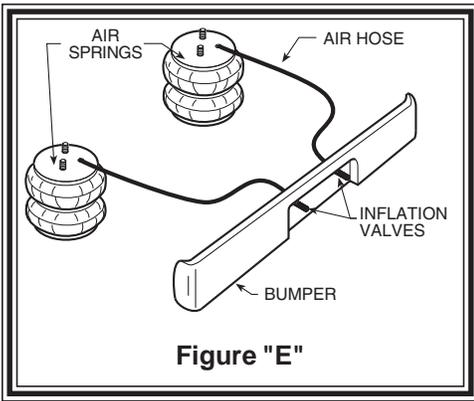
#### **STEP 4 - INSTALLATION OF THE PASSENGER'S SIDE ASSEMBLY**

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

#### **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. Select a location on the vehicle for the air inflation valves. The location can be on the bumper or

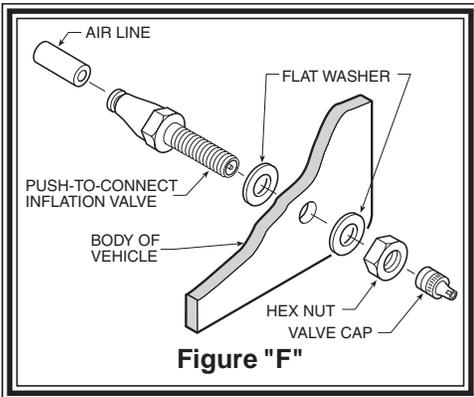
the body of the vehicle, as long as it is in a protected location so the valve will not be damaged, but maintain accessibility for the air chuck *see Figure "E"*. Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports *see Figure "F"*. Run the airline 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 "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 a 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, screw the air fitting into the air spring until the leak stops. Reinflate the air springs and check for leaks as noted above.

This now completes the installation. 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 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 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:

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.

