

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.

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 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.

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.

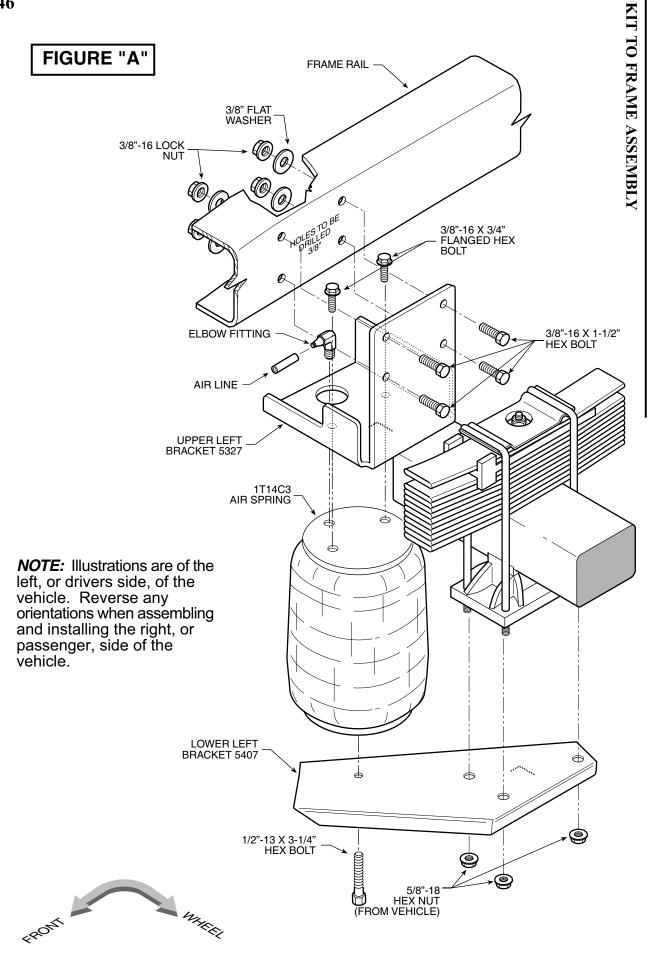
IMPORTANT!

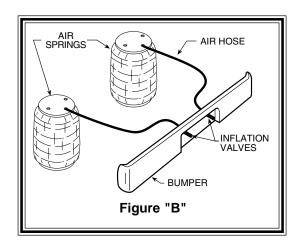
For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer (GVWR). Although your Air Helper Springs are rated at a maximum inflation pressure of 100 psi, this pressure may allow you to carry too great a load on some vehicles.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

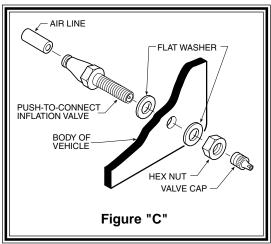
When inflating your Air Helper Springs, add air pressure in small quantities, checking pressure frequently during inflation. The air spring requires much less air volume than a tire and, therefore, inflates much quicker.

PARTS LIST

AIR SPRING	5405	2	3/8" FLAT WASHER		8
UPPER RIGHT BRACKET	5326	1	5/16" FLAT WASHER		4
UPPER LEFT BRACKET	5327	1	PUSHTO CONNECT		
LOWER RIGHT BRACKET	5408	1	INFLATION VALVE	3098	2
LOWER LEFT BRACKET	5407	1	VALVE CAP		2
18 ft. TUBING	0938	1	PUSHTO CONNECT		
3/8"-16 X 3/4" FLANGE LOCK BOLT 4		ELBOW FITTING	3031	2	
3/8"-16 X 1-1/2" HEX HEAD BOLT		8	THERMAL SLEEVE		2
3/8"-16 FLANGE LOCK HEX NUT		8	NYLON TIE		6
1/2"-13 X 3-1/4" HEX BOLT		2	CAUTIONTAG		2







STEP 1 - PREPARE THE VEHICLE

With the vehicle on a solid, level surface chock the wheels. This kit does not require the vehicle to be jacked up. Make sure the negative battery cable is disconnected from the battery. Remove two of the axle U-bolt nuts on the front side of the axle and one on the rear of the axle closest to the tire.

STEP 2 - INSTALLING THE LOWER BRACKET

Install the left lower bracket underneath the axle retaining plate, as shown in *Figure "A"*. Re-install the three 5/8"-18 hex nuts and washers and torque them to manufactures specifications.

STEP 3 - INSTALLING THE AIR SPRING

Pull the bottom of the air helper spring down to the lower bracket and then install the 1/2"-13 x 3-1/4" hex bolt. Install the upper bracket by aligning the threaded holes on the air spring with the small holes on the upper bracket. Fasten the upper bracket to the air spring using 3/8"-16 x 3/4" flanged hex bolts, as shown in *Figure "A"*. Install the fitting as shown in *Figure "A"*. Tighten the air fitting securely to engage the orange thread sealant. Position the elbow so as to point in the anticipated location of the air inflation valves, see *Figures "A" and "B"*.

STEP 4 - INSTALLING THE UPPER BRACKET

Align the air spring so that it is as close to verticle as possible and the upper and lower brackets are parallel. Using the upper bracket as a template, drill out the four holes that the upper bracket will use with a 3/8" drill bit, see *Figure "A"*. Before drilling the holes make sure all electrical, brake and fuel line are cleared from the path of the drill. *In order to prevent any damage to these lines it is recommended that a piece of wood be placed between the frame and the existing lines*. Once the holes have been drilled or enlarged, attach the upper bracket using the 3/8"-16 x 1-1/2" hex bolts, large flat washers and the flanged hex nut to the frame rail, see *Figure "A"*. Large flat washers and nuts to be applied to backside of the frame rail.

STEP 5- INSTALLATION OF THE PASSENGER'S SIDE ASSEMBLY

Follow steps 1-4 for assembly and installation of the right side assembly. Note: reverse any orientations for the right side installation.

STEP 6- INSTALL THE AIR LINE AND INFLATION VALVE

Uncoil the air 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 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 "B"). Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports (see Figure "C"). 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 "C").

STEP 7 - CHECK THE AIR SYSTEM

Once the inflation valves are installed inflate the air helper springs to 50 psi. 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, remove the tubing (see trouble shooting section of the operating instruction manual for removal procedure), then screw the elbow into the 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. Re-attach the negative 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 air helper springs will support approximately 65 lbs. of load for each psi. of inflation pressure (per pair). For example, 60 psi. of inflation pressure will support a load of 3900 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 psi. 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

