**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.

**NOTE:**

Chevrolet P30 class "A" motor homes with a gross vehicle weight between 10,500 and 14,500 GVW have an "offset differential". Chevrolet motor homes with a 16,000 GVW have a centered differential. Please note each application will require specific lower brackets for proper installation.

**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 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**

AIR SPRING	0335	2	3/8" -24 NYLON INSERT NUT	12
UPPER BRACKET	0150	2	3/8" -24 FLANGED LOCK NUT	4
LOWER BRACKET	1162	2	3/8" -24 x 2-1/2"	
LOWER BRACKET	5064	1	RIBBED NECK BOLT	0829
LOWER BRACKET	5065	1	3/8" -24 x 1-1/4"	8
BRACKET STRAP	1163	4	RIBBED NECK BOLT	8082
BRACKET STRAP	5038	1	3/8" -16 x 3/4" HEX BOLT	4
HEAT SHEILD	1004	2	5/16" FLAT WASHER	4
18 ft. TUBING	0938	1	NYLON TIE	6
PUSH-TO-CONNECT ELBOW	3101	2	THERMAL SLEEVE	2
PUSH-TO-CONNECT INFLATION VALVE	3098	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.

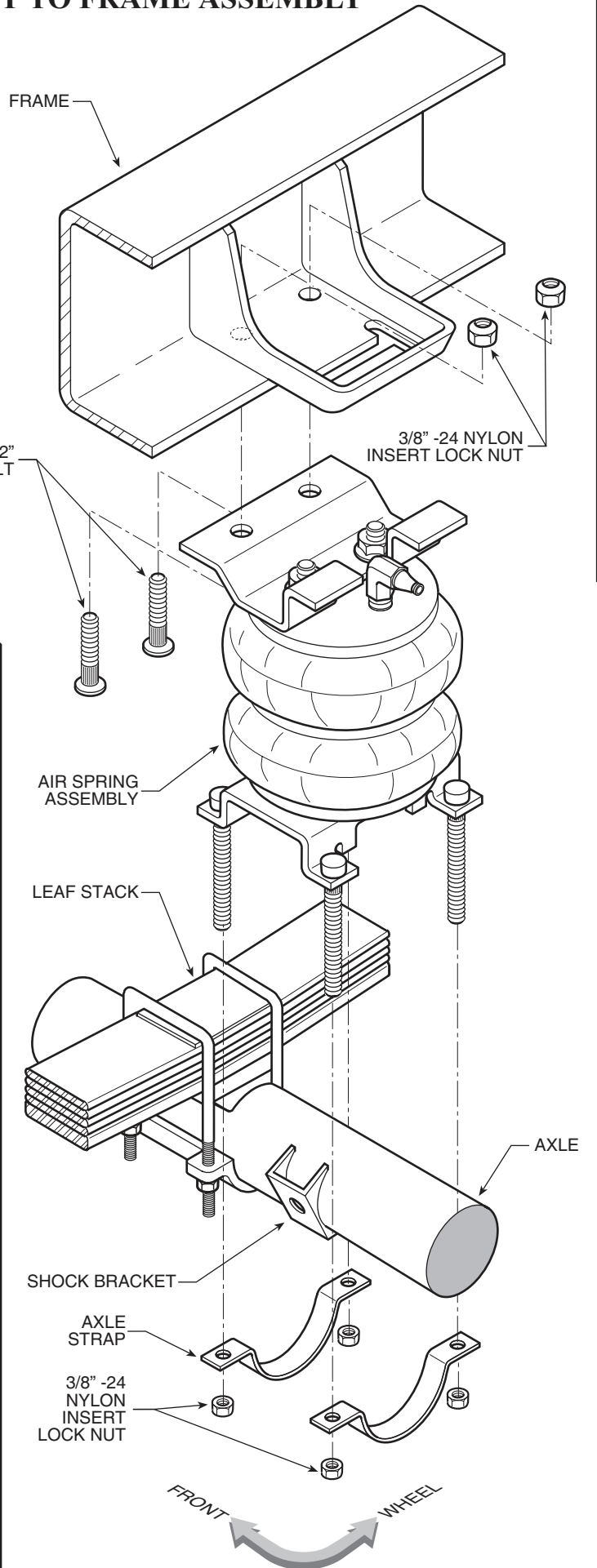
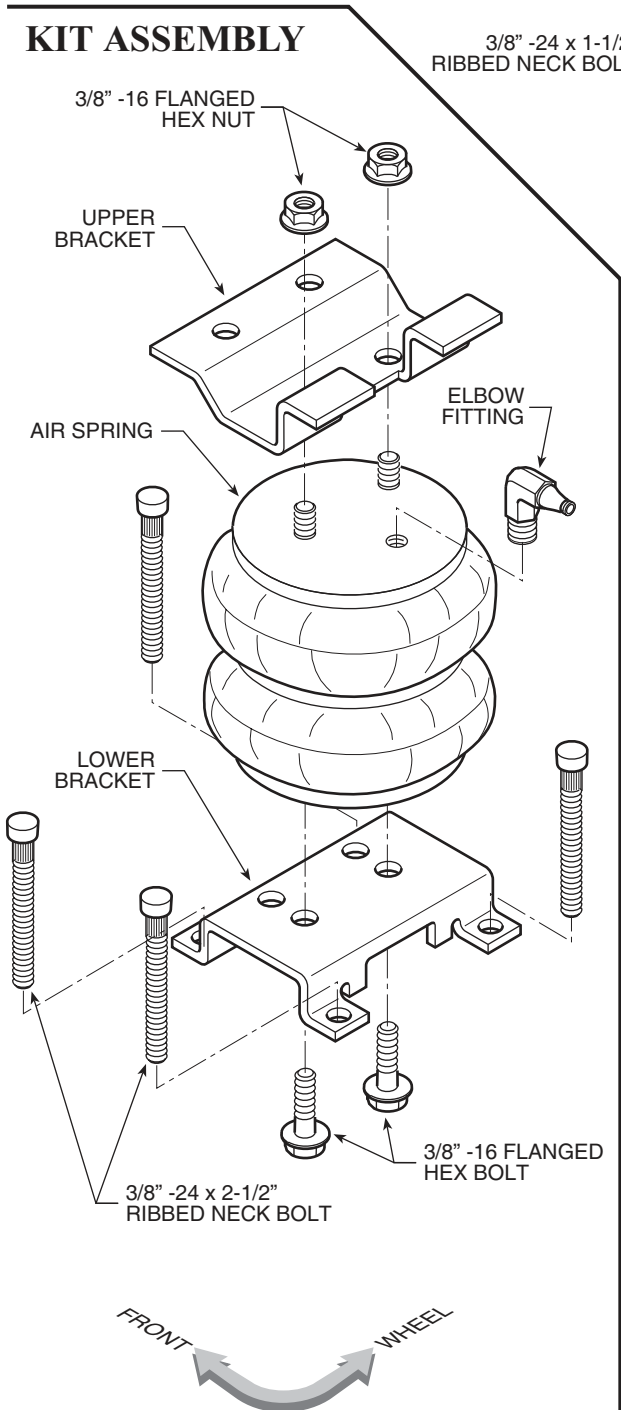
**IMPORTANT!**

*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 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.*

**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"**



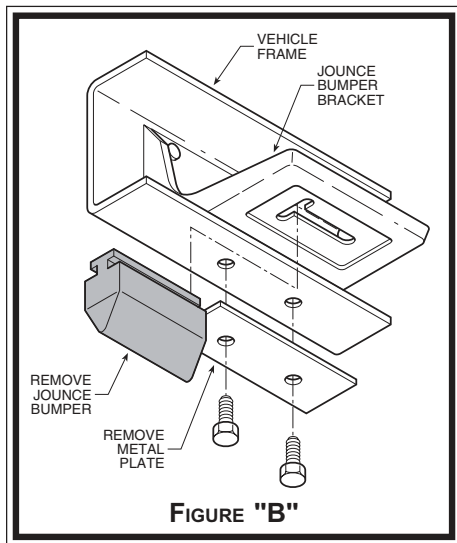


FIGURE "B"

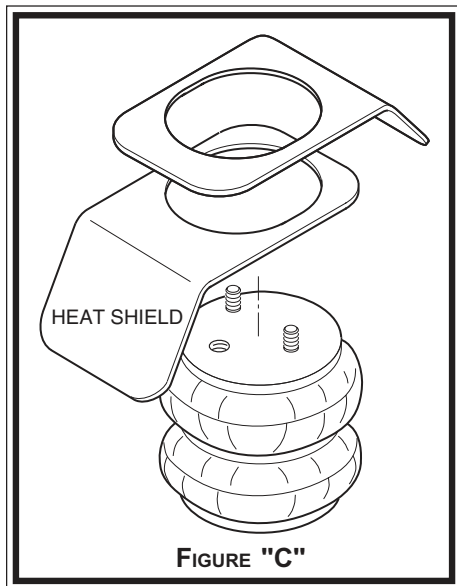


FIGURE "C"

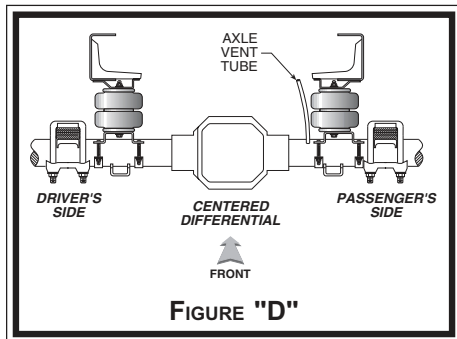


FIGURE "D"

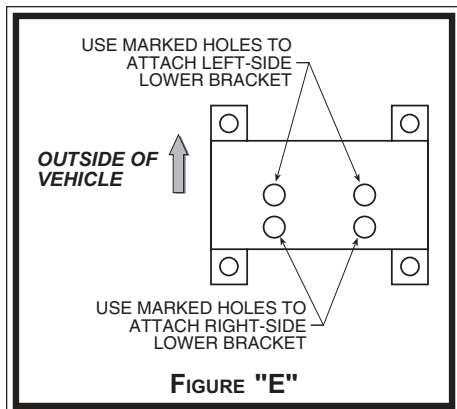


FIGURE "E"

## STEP 1 - PREPARE THE VEHICLE

With the vehicle on a solid level surface, chock all four wheels and apply the parking brake. It will not be necessary to raise the rear of the vehicle for this installation, however, raising the vehicle may provide easier installation.

Your vehicle is equipped with rubber jounce bumpers. The bumpers are attached to a bracket on the frame directly above the axle. Remove these bumpers by pulling them out, while leaving the bracket intact *see Figure "B"*. This bumper will not be reused with this kit.

On most vehicles, a metal plate is attached to the bottom of the frame rail beneath the jounce bumper bracket. If your vehicle has this plate, remove it and discard the plate and mounting bolts *see Figure "B"*. The holes left in the frame from the mounting bolts will be used to attach the upper bracket to the frame rail.

## STEP 2 - USE OF THE HEAT SHIELD

*Note: The use of two heat shields is required on the exhaust side of the vehicle.* The heat shields will mount between the upper bracket and the air helper spring *see Figure "C"*. Position the shields between the nearest point of the exhaust pipe to the air spring. Ensure that the heat shields will not interfere with the normal operation of the air spring or the vehicle's suspension. Do not position the face of the shields directly over the axle, as they may contact the axle on full suspension compression.

## STEP 3 - PRE-ASSEMBLE THE KIT

Pre-assembly will begin with the left (driver's) side of the vehicle. All pictures depict the installation on the left side of the vehicle unless noted otherwise. Select one of the air springs and install the push-to-connect air fitting in the air spring and tighten the air fitting so as to make contact with the nylon ring and then tighten 1/4 turn to snug the fitting. Nothread sealant is needed. Point the air fitting so that it points toward the rear of the vehicle and away from the exhaust pipe.

Select an upper bracket from your kit and install two 3/8" -24 x 1-1/2" ribbed neck bolts in the bracket. Insert the ribbed neck bolts into the holes in the upper bracket and seat them in place with a hammer *see Figure "A"*. Insert the threaded studs on the air spring through the holes in the upper bracket. The elbow fitting must be located between the tabs on the upper bracket *see Figure "A"*. Secure the upper bracket to the air spring with the provided 3/8" -24 flanged lock nuts.

### A) CENTERED DIFFERENTIAL

On vehicles with the differential centered on the axle, the lower brackets that are identical to each other will be used. The right-side lower bracket will be installed on the axle closer to the outside of the vehicle to clear the axle vent tube *see Figure "D"*. When attaching the right-side lower bracket to the air spring, the holes offset to the inside of the bracket must be used to keep the air spring in proper vertical alignment. When attaching the left-side lower bracket to the air spring, use the holes centered in the lower bracket *see Figure "E"*.

### B) OFFSET DIFFERENTIAL

On vehicles with the differential offset on the axle, the dissimilar lower brackets must be used. The air spring assembly will be installed on the axle housing so that it straddles the shock bracket. The left-side assembly will use the taller lower bracket and two axle straps of unequal size to secure the lower bracket to the axle. The small axle strap will secure the lower bracket to the axle housing while the large axle strap will secure the lower bracket to the differential housing. The left-side assembly will be installed so that the lower bracket straddles the shock bracket while butting against the differential housing. The right-side assembly will be installed with two axle straps of equal size and straddle the shock bracket *see Figure "F"*.

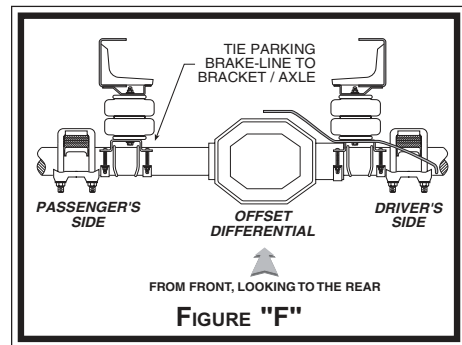
Select the proper lower bracket for your kit and install four 3/8" -24 x 2-1/2" ribbed neck bolts in the bracket. Insert the ribbed neck bolts into the holes in the bracket and seat them in place with a hammer. Attach the lower bracket to the air spring with two 3/8" -16 x 3/4" flanged hex bolts *see Figure "A"*.

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

Place the air spring assembly on top of the axle housing so that the lower bracket straddles the shock bracket. Extend the air spring upward so that the upper bracket is flush against the bottom of the frame rail and the jounce bumper brace. The ribbed neck bolts in the upper bracket will extend through the holes in the bottom of the frame rail. Install two 3/8" -24 nylon insert lock nuts on the ribbed neck bolts and tighten them to secure the upper bracket to the frame *see Figure "A"*.

Install the axle straps necessary for your application underneath the axle housing, aligning the ribbed neck bolts in the lower bracket with the holes in the axle straps. Move the lower bracket inward or outward on the axle housing as necessary to ensure that the air spring is aligned vertically. Secure the axle straps to the lower bracket by installing four 3/8" -24 nylon insert lock nuts on the ribbed neck bolts *see Figures "A", "D", & "F"*.

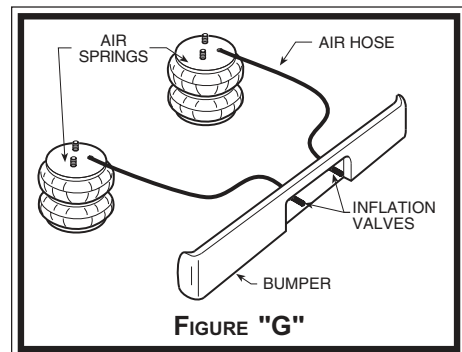
When installing the driver's side assembly, ensure that the parking brake-line does not contact the rubber air spring. The brake-line must be moved downward and secured to the axle or lower bracket. Use a nylon tie to secure the parking brake-line to the lower bracket or axle *see Figure "F"*.



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

Uncoil the air tubing and cut it in two equal lengths. **DO NOT FOLD OR KINK THE TUBING.** Make the cut as square as possible. Insert one end of the tubing into the push-to-connect elbow fitting installed in the top of the air helper spring 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 still maintain accessibility for the air chuck *see Figure "G"*. Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports *see Figure "H"*. Run the 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 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 *see Figure "H"*.



#### STEP 6 - INSTALL THE PASSENGER'S SIDE ASSEMBLY

Follow steps 2-5 for assembly and installation of the passenger's side assembly.

#### STEP 7 - 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 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 squarely as possible and that it is pushed completely into the fitting. The tubing can easily be removed from the fittings by first releasing the pressure from the air springs, then by pushing the collar towards the body of the fitting and then pulling out the tube. If a leak is detected where the elbow fitting screws into the air spring, screw the elbow into the spring until the leak stops. Reinstall the tubing and reinflate the air springs and check for leaks as noted above.

This now completes the installation. 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 also not provide the possible improvement in handling. **TO PREVENT POSSIBLE DAMAGE, MAINTAIN A MINIMUM OF 20 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.

