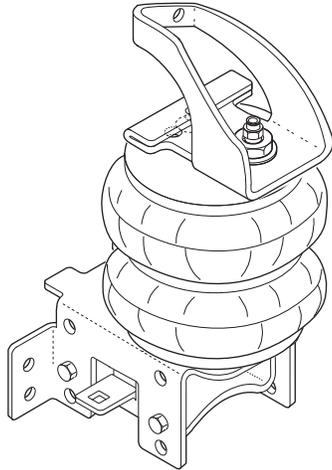


**DO NOT INSTALL if the truck has been lifted and the stock jounce bumper spacers are not on the vehicle.**



**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.

**PARTS LIST**

224C AIR SPRING	6401	2
RIGHT UPPER BRACKET	5572	1
LEFT UPPER BRACKET	5717	1
LOWER BRACKET	5379	2
SADDLE BRACKET	5380	2
BRACKET STRAP	1163	2
1/2" SPACER	5477	2
BAIL CLAMP	3077	2
HEAT SHIELD	1004	1
AIR LINE TUBING		1

**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.

***The air springs in this kit have a minimum pressure of 5 psi and maximum of 100 psi after the truck is loaded.***

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 optional "T" fitting.

**IMPORTANT!**

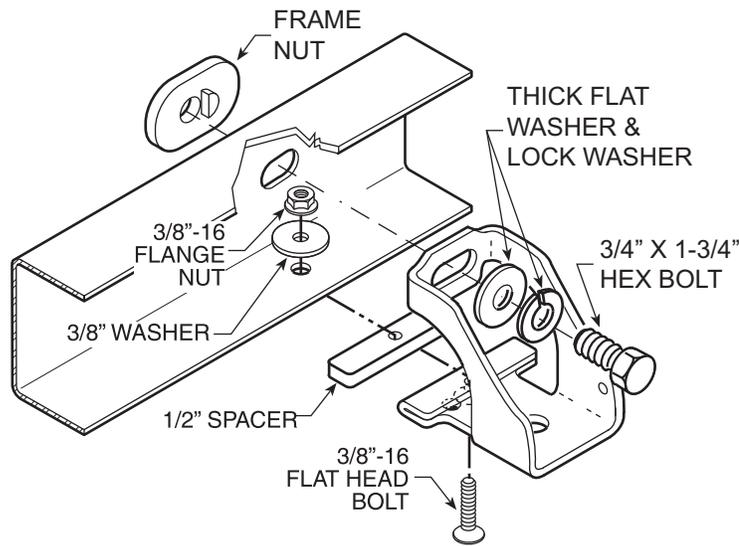
**For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer (GVWR).** Although your Air Helper Springs are rated at a maximum inflation pressure of 100 psi, this pressure may allow you to carry too great a load on some vehicles.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

**Remove the negative battery cable. It is not necessary to jack up the truck to install this Ride-Rite kit, if you DO, please use chocks in front of the front tires. Also, use jack stands beneath the truck's rear axle that are properly rated to support the trucks weight.**

**BOLT PACK (A217602535)**

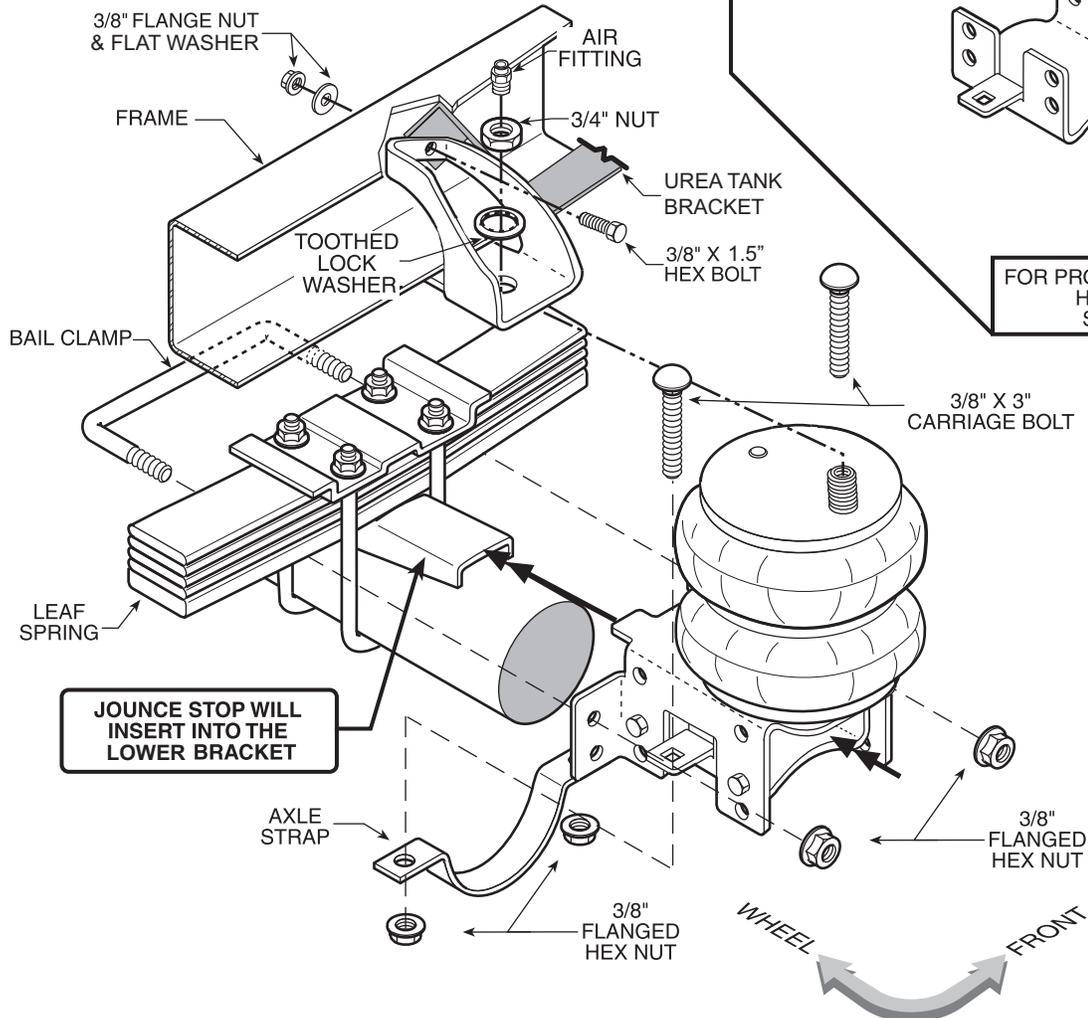
3/8"-16 X 1-1/2" HEX HEAD BOLT		1
3/8" FLAT WASHER		1
5/16" FLAT WASHER		4
3/8"-16 X 3/4" HEX HEAD BOLT		2
3/8"-16 X 1" HEX HEAD BOLT		8
3/8"-16 X 2 1/2" FLAT HEAD BOLT		2
3/8"-16 FLANGE LOCK NUT		19
3/8" LARGE FLAT WASHER		2
3/8"-16 X 3" CARRIAGE BOLT		4
3/4"-16 X 1-1/4" HEX HEAD BOLT		1
3/4"-16 HEX NUT		2
3/4"-16 FRAME NUT	3412	1
3/4" INTERNAL TOOTH LOCK WASHER		2
3/4" THICK FLAT WASHER		1
3/4" FLAT WASHER		1
3/4" LOCK WASHER		2
INFLATION VALVE	3032	2
STRAIGHT FITTING	3046	2
THERMAL SLEEVE		2
NYLON TIE		6
CAUTIONTAG		2



### PASSENGER'S SIDE UPPER BRACKET ATTACHMENT

NOTE: The driver's side will not use the large oval hole in the frame. Instead, remove the factory installed bolt & p-clip from the urea tank bracket. Use the provided 3/8"-16 x 1-1/2" hex bolt, washer, and flange nut to attach the upper bracket and urea tank bracket to the frame. See below.

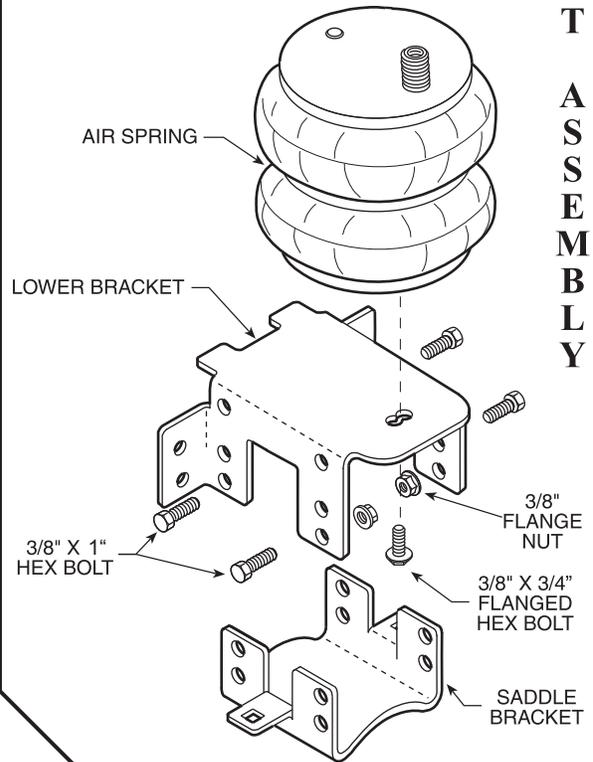
### KIT TO FRAME ASSEMBLY



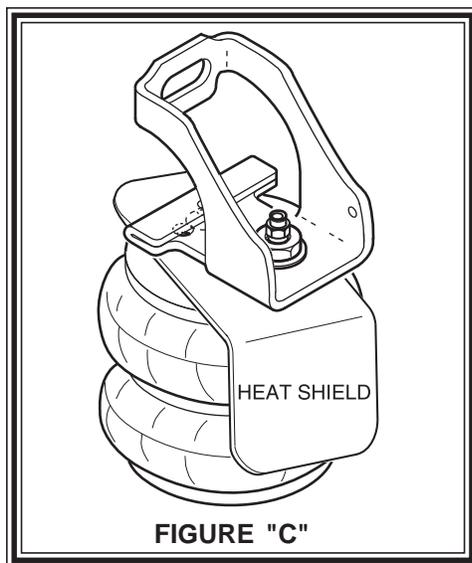
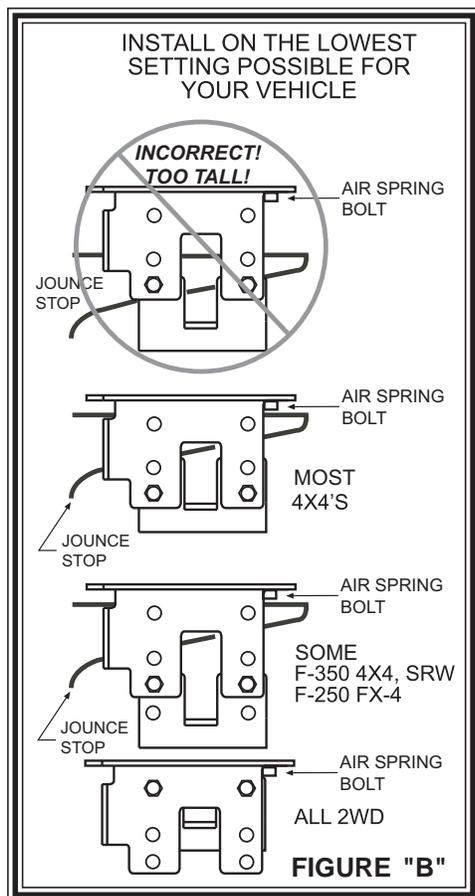
**FIGURE "A"**

NOTE: This diagram is of the left side of the truck. Reverse any orientations when assembling and installing the right side of the vehicle.

**KIT ASSEMBLY**



FOR PROPER LOWER BRACKET HEIGHT SETTING, SEE FIGURE "C"



Some trucks will have a cast iron jounce tongue as shown in *figure A*. If this jounce tongue is present, the height setting of the lower bracket will be just above the jounce tongue (to clear the head of the bolt going into the bottom of the air spring). If there is no jounce tongue, simply assemble the lower and saddle brackets at the shortest setting. *See figure "B"*.

*The lower bracket assembly should be installed on the lowest setting possible for the vehicle. See Figure "B"*.

The saddle and lower brackets are bolted together using the four 3/8" x 1" bolts and flange nuts. When the lower brackets are bolted together at the proper height, install the 3/8" x 3/4" bolt thru the forward hole in the lower bracket and into the bottom of the air spring and tighten.

Place the lower bracket assembly against the leaf spring stack making sure that the top of the bottom bracket is wedged between the axle U-bolts.

### STEP 1 - PREPARE THE VEHICLE

Your vehicle is equipped with rubber jounce bumpers attached to the frame directly above the axle. Remove these bumpers by un-bolting from the inside of the frame flange. These bumpers and nuts will not be re-used with this kit.

### STEP 2- UPPER BRACKET INSTALLATION

On the passenger's side, or right side, insert the 3/8"-16 x 2-1/2" flat head bolt into the right upper bracket and then slide the spacer over the bolt. Install the upper bracket onto the frame. Make sure that no part of the vehicle's wiring will be pinched between the upper bracket and the frame. Tighten the 3/8"-16 flat head bolt with a 3/8"-16 flange nut and the large 3/8" washer.

Install the 3/4"-16 x 1-3/4" hex bolt thru the upper bracket and thru the existing hole in the frame rail. Secure the 3/4" bolt with a thick flat washer, lock washer, and a 3/4" frame nut. Use an additional 3/4" flat washer if needed.

The emergency brake cable will have to be tie-wrapped out of the way using the hole provided in the upper bracket. *See Figure "A"*.

On the driver's side, or left side, remove the bolt securing the urea tank bracket to the frame. Next, remove the p-clip from the urea tank bracket. Insert the 3/8"-16 x 2-1/2" flat head bolt into the right upper bracket and then slide the spacer over the bolt. Install the upper bracket onto the frame. Make sure that no part of the vehicle's wiring will be pinched between the upper bracket and the frame. Tighten the 3/8"-16 flat head bolt with a 3/8"-16 flange nut and the large 3/8" washer.

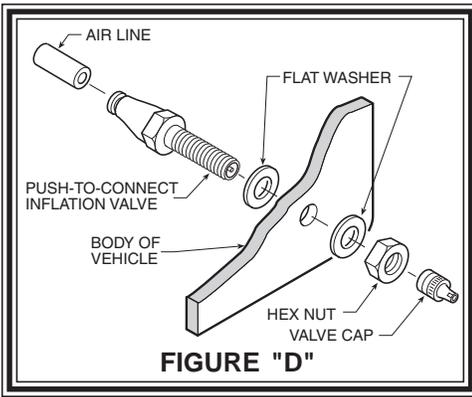
Install the 3/8"-16 x 1-1/2" hex bolt thru the upper bracket and thru the hole in the urea tank bracket, and into the frame rail. Secure the 3/8" bolt with a flat washer and 3/8" flange nut. *See Figure "A"*.

### STEP 3 - AIR SPRING INSTALLATION

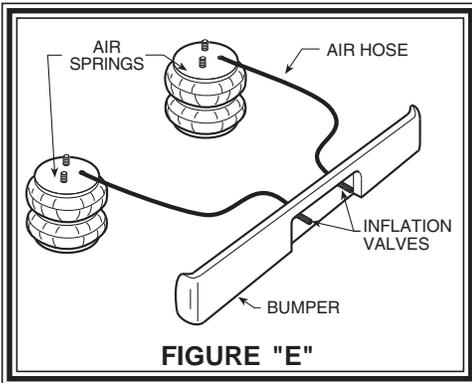
Install the air springs and heat shield. The heat shield will be used on the exhaust side of the truck only. It is placed between the upper bracket and the top of the air spring. *See Figure "C"*. The top of the air spring has a button which will be put into the hole in the upper bracket, towards the front of the truck on both sides. When the air spring is in place and properly aligned, place the internal tooth lock washer and then the large 3/4" nut onto the stud of the air spring. On the right (exhaust) side, you can move the heat shield into alignment before tightening the nut on the air spring. Make sure the heat shield will not interfere with the normal operation of the air spring or the vehicle's suspension. Do not position the face of the shield directly over the axle, as it may contact the axle on full suspension compression.

Now install the air fitting into the stud of the air spring. Tighten the air fitting securely to engage the orange thread sealant.

### STEP 4 - LOWER BRACKET INSTALLATION



**FIGURE "D"**



**FIGURE "E"**

Place the bail clamp around the axle block and install the flange nuts onto the bail clamp and tighten the 3/8" flange nuts. *See Figure "A"*.

Insert the carriage bolts thru the saddle bracket being very careful not to chaff or pinch the brake lines on the axle. Next, push the axle strap onto the bottom of the axle and over the carriage bolts. When the flange nuts are tightened, they will draw the axle strap into place.

**STEP 5 - AIR LINE INSTALLATION**

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.

Select a location on the vehicle for the air inflation valves. This can be on the bumper or the body of the vehicle, as long as it is protected so the valves will not be damaged. Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports. Route the tubing from the air helper spring to the inflation valve, avoiding direct heat from the engine, exhaust pipe, and away from sharp edges. The air line tubing should not be bent or curved sharply as it may buckle with time. Secure the tubing in place with the nylon ties provided. Push the end of the air line tubing into the inflation valve as far as possible. *See Figures "D" & "E"*.

**STEP 6 - CHECK THE SYSTEM**

Final inspection. Visually check for loose attaching bolts. Make sure that no part of the truck is rubbing against the air springs. Again, make sure that the truck's brake lines are not pinched or being rubbed by any part of your Ride-Rite™ kit.

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, deflate the air spring by depressing the valve core. The tubing can easily be removed from the fittings by pushing the collar towards the body of the fitting while pulling out the tube. Next, check the tubing connection to ensure that the air tubing is cut as square as possible and that it is pushed completely into the fitting.

If a leak is detected where the air fitting screws into the air spring, gently tighten the air fitting into the spring until the leak stops. Also, check the core of the inflation valve. This valve core can be tightened using the cap. Re-inflate the air spring and check for leaks again if needed. This now completes the installation. Reconnect the battery cable and remove the wheel chocks.

**NOTE: THE OPERATING PRESSURE OF THIS KIT IS 5 PSI MIN. TO 100 PSI MAX.**

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 5 psi IN THE AIR HELPER SPRINGS AT ALL TIMES.**

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.

<b>NOTE:</b>	
<b>MIN PRESSURE</b>	<b>5 PSI</b>
<b>MAX PRESSURE (LOADED)</b>	<b>100 PSI</b>

