

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

AIR SPRING	6401	2	3/4"-16 X 3" HEX HEAD BOLT	2	
UPPER BRACKET	5381	2	3/4"-16 HEX HEAD NUT	4	
LOWER BRACKET	5380	2	3/4" INTERNAL TOOTH LOCK WASHER	2	
SADDLE BRACKET	5379	2	3/4" LOCK WASHER	2	
AXLE STRAP	1163	2	3/4" LARGE FLAT WASHER	8	
HEAT SHIELD	1004	1	5/16" FLAT WASHER	4	
BAILCLAMP	3077	2	AIR LINE TUBING	0937 1	
3/8"-16 FLANGE LOCK NUT		18	INFLATION VALVE	3032 2	
3/8"-16 X 3/4" FLANGE BOLT		2	ELBOW FITTING	3031 2	
3/8"-16 X 3" CARRIAGE BOLT		4	THERMAL SLEEVE		2
3/8"-16 X 2-1/2" HEX HEAD BOLT		2	NYLONTIE		6
3/8"-16 X 1" HEX HEAD BOLT		8	CAUTIONTAG		2

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 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'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.

Find the closest point between the exhaust pipe and the air spring. Mount the heat shield in this location

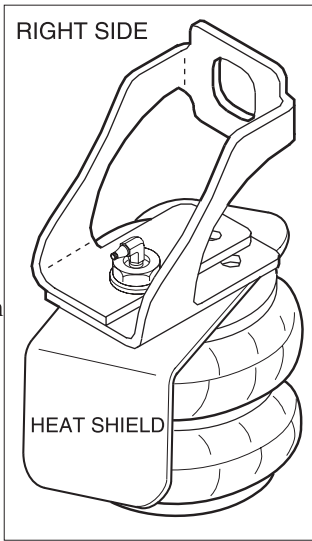
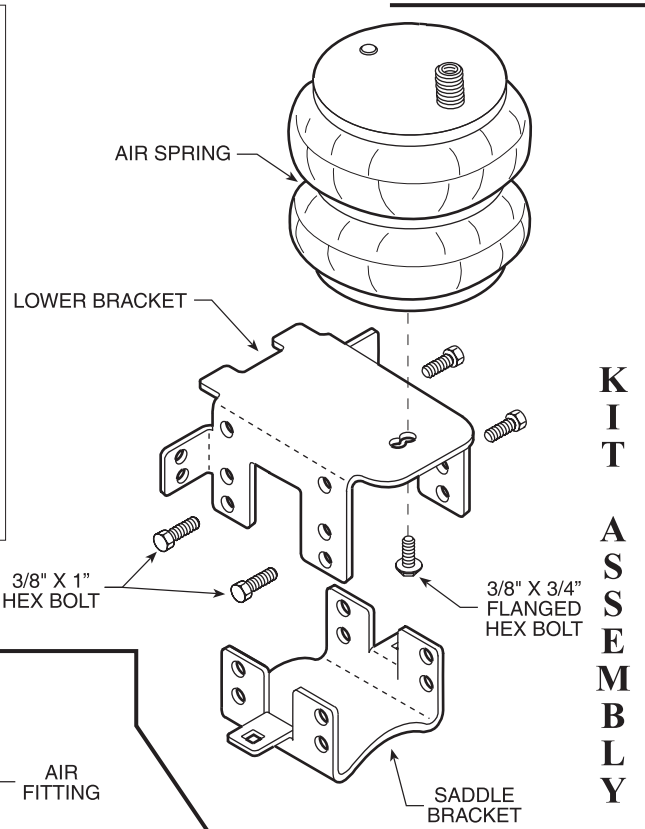


FIGURE "A"

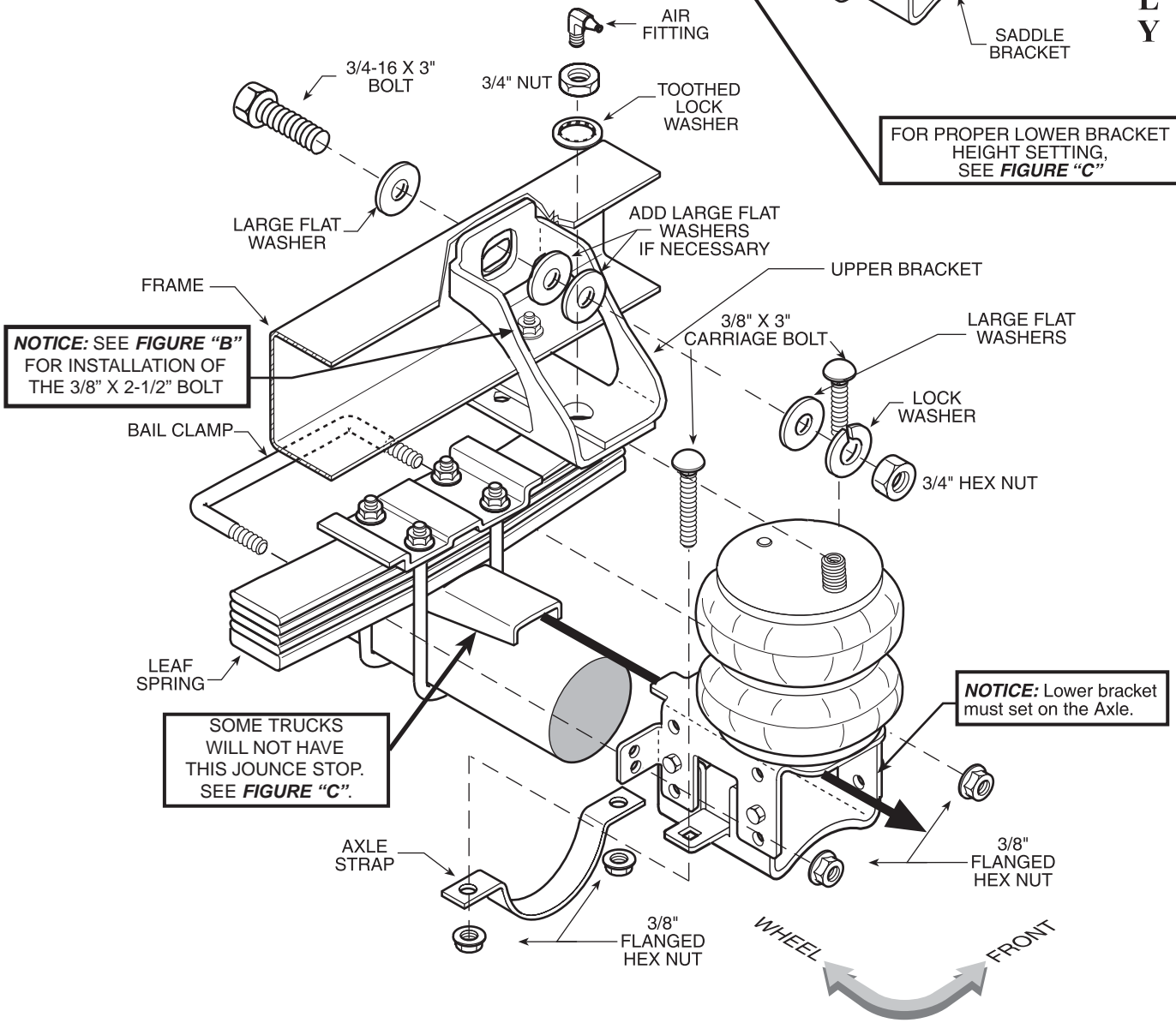
NOTE: This diagram is of the left side of the truck. Reverse any orientations when assembling and installing the right side of the vehicle.



K I T A S S E M B L Y

KIT TO FRAME ASSEMBLY

⚠ See Figure "B" for Upper Bracket mounting. ⚠



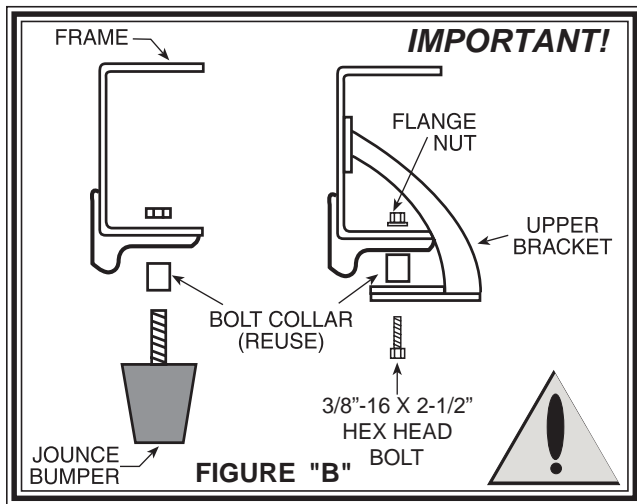
FOR PROPER LOWER BRACKET HEIGHT SETTING, SEE FIGURE "C"

NOTICE: SEE FIGURE "B" FOR INSTALLATION OF THE 3/8" X 2-1/2" BOLT

SOME TRUCKS WILL NOT HAVE THIS JOUNCE STOP. SEE FIGURE "C".

NOTICE: Lower bracket must set on the Axle.





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 truck's existing rubber jounce bumpers. When the rubber bumper is unbolted, it will have a collar on it. *See Figure "B"*. Remove this collar for use in the next step.

STEP 2 - UPPER BRACKET INSTALLATION

(IMPORTANT) Make sure that no part of the truck's wiring will be pinched between the upper bracket and the frame. At this time, the collar that was on the jounce bumper will be reused. *See Figure "B"*. Insert the collar into the original hole on the frame. Put the upper bracket in place (to hold the collar) while you insert the 3/8" x 2-1/2" flat head bolt thru the upper bracket and collar. Secure the flat head bolt with a 3/8" flange nut installed finger tight.

Hold the upper bracket tight against the bottom of the frame. If the bracket appears to be level when the upper part of the bracket rests against the inside of the frame, install the (large) 3/4" x 3" bolt thru the frame rail (existing hole) and upper bracket. If the top of the bracket does not set level, install some of the large 3/4" flat washers between the bracket and the inside of the frame rail.

If you have existing hitch hardware, the 3/4" bolt should be long enough to extend thru the upper bracket, truck frame and the hitch brackets. Be sure to install at least one of the large flat washers and the large lock washer before installing the 3/4" nut onto the bolt.

After you install the upper bracket as level as possible, tighten the 3/8" x 2-1/2" hex head bolt in the bottom of the frame, then tighten the 3/4" x 3" bolt thru the side of the frame.

STEP 3 - AIR SPRING INSTALLATION

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. **The alignment pin on top of the air spring must be aligned with 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, install the internal tooth lock washer and 3/4" nut onto the stud of the air spring. On the right side, align the heat shield before tightening the 3/4" 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. Position the fitting to point to the anticipated location of the air inflation valves.

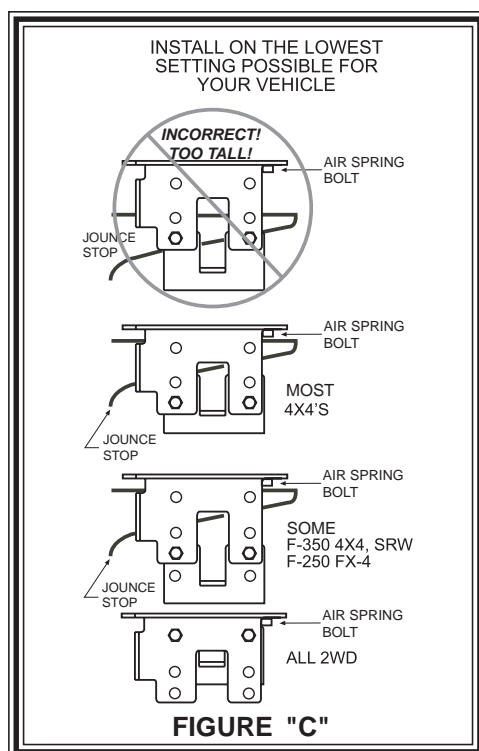
STEP 4 - LOWER BRACKET INSTALLATION

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

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

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

Place the lower bracket assembly against the leaf spring stack making sure that the top of the lower bracket fits between the axle U-bolts. Place the bail clamp around the axle block and install the flange nuts onto the bail clamp and tighten, *see Figure "A"*.



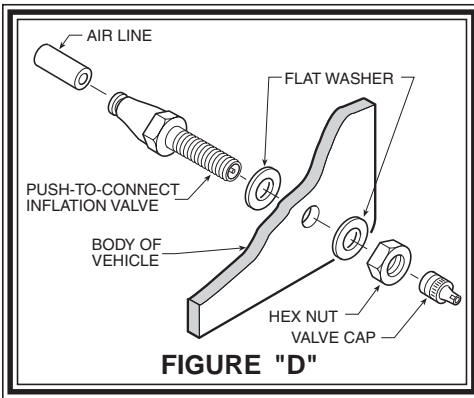


FIGURE "D"

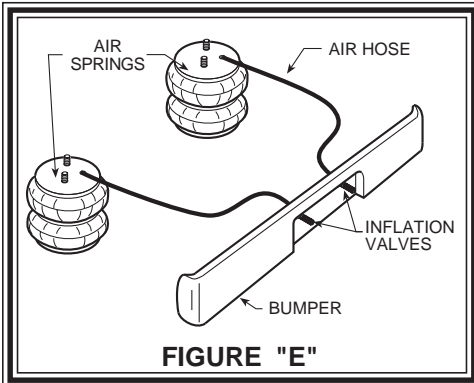


FIGURE "E"

Insert the carriage bolts into 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. Secure with the flange nuts.

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. *See Figure "D"*. 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.

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:

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.

MIN PRESSURE	5 PSI
MAX PRESSURE (LOADED)	100 PSI

