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W21-760-2032

INSTALLATION INSTRUCTIONS

All work should be carried out in a properly equipped workshop with due regard to Health and Safety Regulations. No further reference to Health and Safety Regulations will be made, but they must be considered at all times.

The kit should be opened and the contents checked against the parts list provided.

Identify the various components and familiarise yourself with them using drawings and information provided.

WARNING

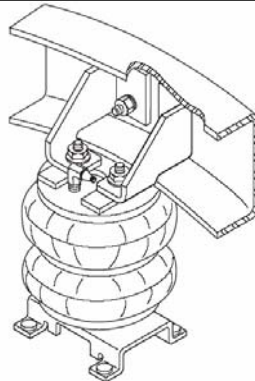
Do not inflate this assembly when it is unrestricted. When installed, a minimum of 10 psi should be maintained in the air bellows at all times to avoid damage. Do not inflate beyond 100 psi.

IMPORTANT

This kit is not designed to increase the GVW of your vehicle. For your safety and to prevent possible damage to your vehicle, do not exceed the maximum load recommended by the vehicle manufacturer.

Parts List

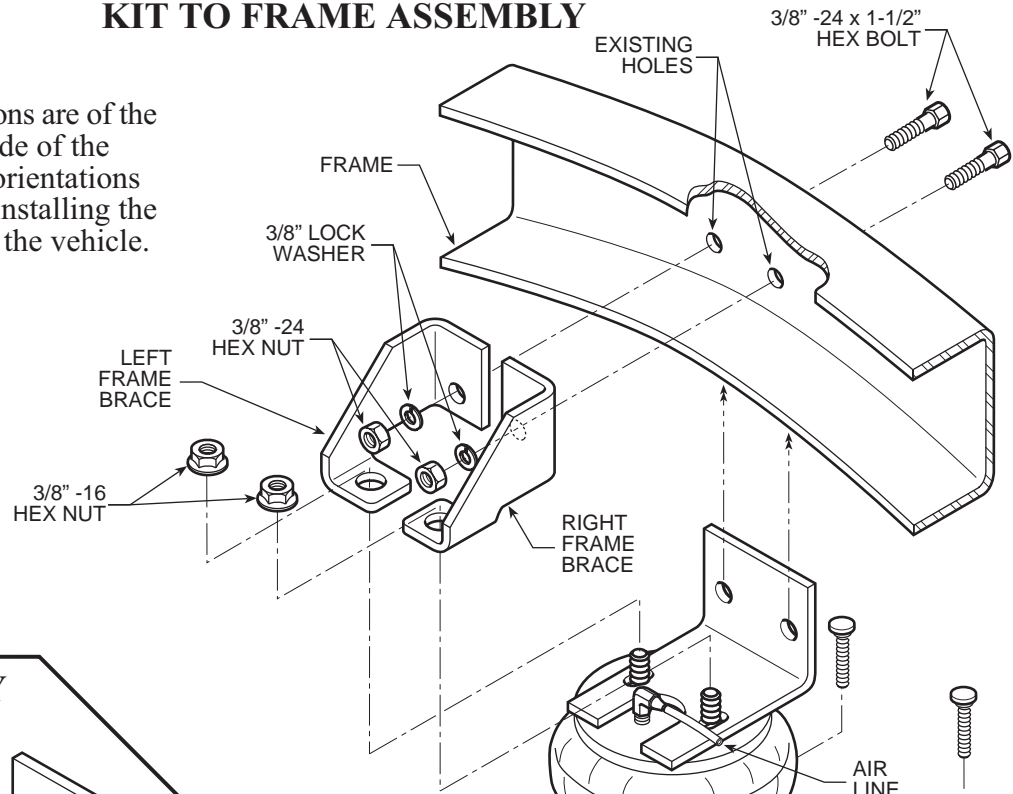
AIR SPRING	6859	2	3/8" -16 HEX NUT	4
UPPER BRACKET	5022	2	3/8" -24 x 1-1/2" HEX HEAD BOLT	4
LOWER BRACKET	1162	2	3/8" -24 x 1-7/8"	
LEFT FRAME BRACE	5024	2	RIBBED NECK BOLT	8084
RIGHT FRAME BRACE	5023	2	PUSH-TO-CONNECT ELBOW	
HEAT SHIELD	1004	2	PUSH-TO-CONNECT	
BRACKET STRAP	1163	4	INFLATION VALVE	
18 ft. AIR LINE TUBING		1	5/16" FLAT WASHER	
3/8"-24 HEX NUT		12	THERMAL SLEEVE	0899
3/8" LOCK WASHER		16	NYLON TIE	
3/8" -16 x 3/4" HEX BOLT		4		



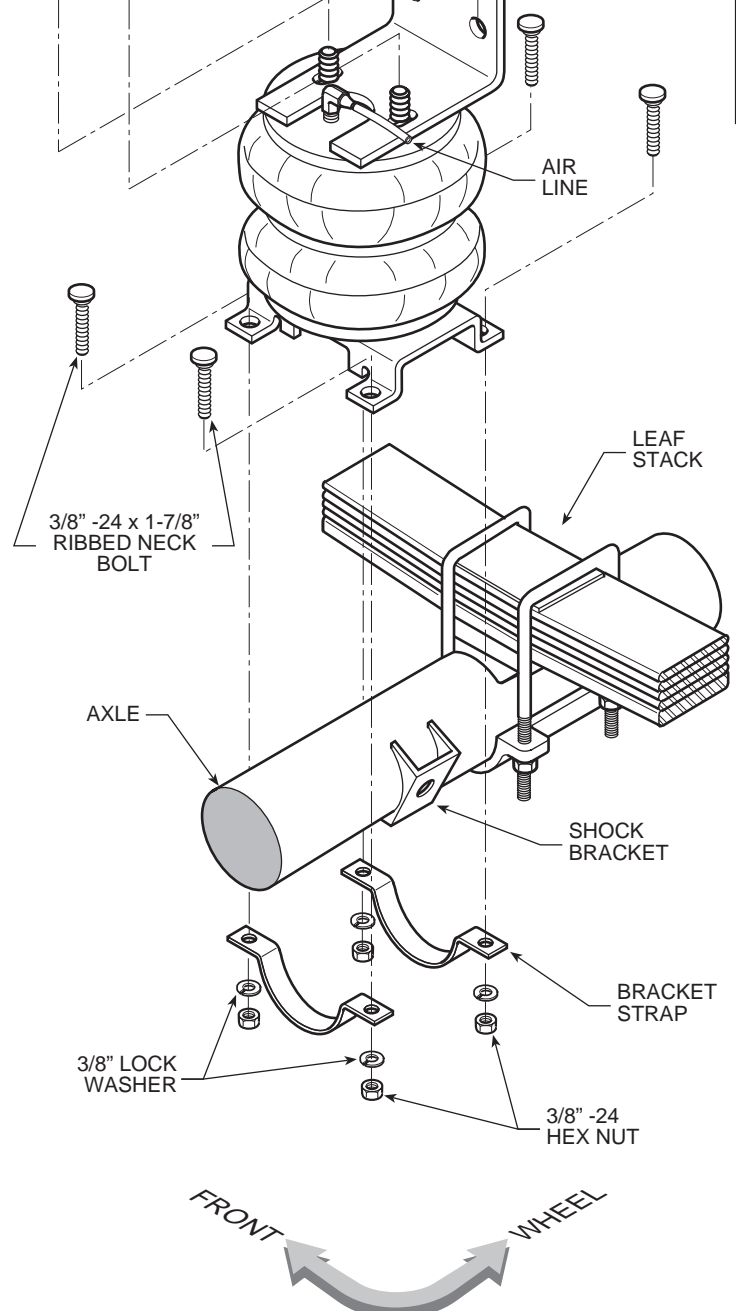
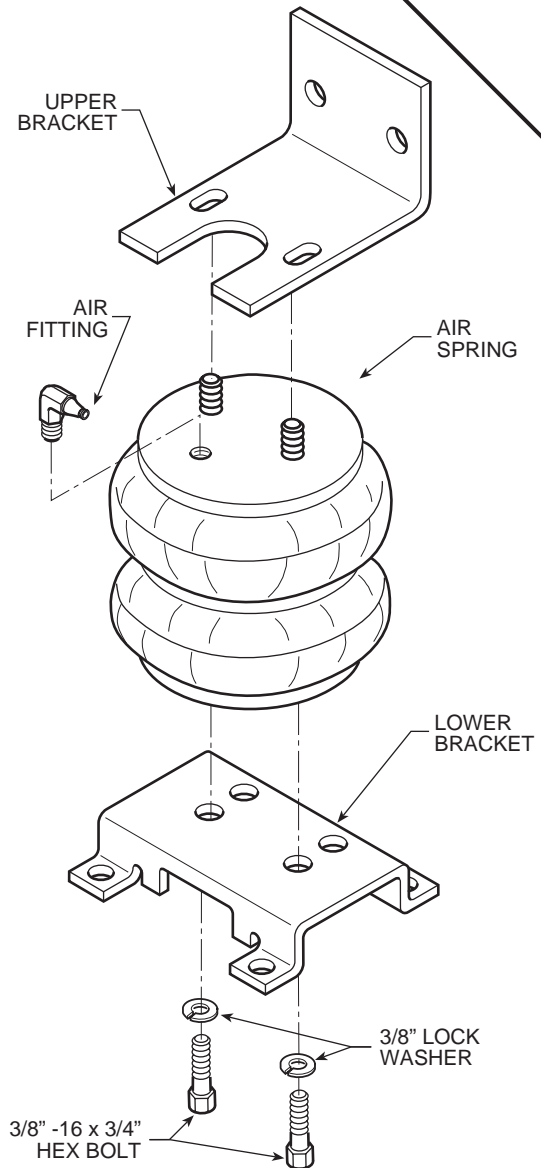
KIT TO FRAME ASSEMBLY

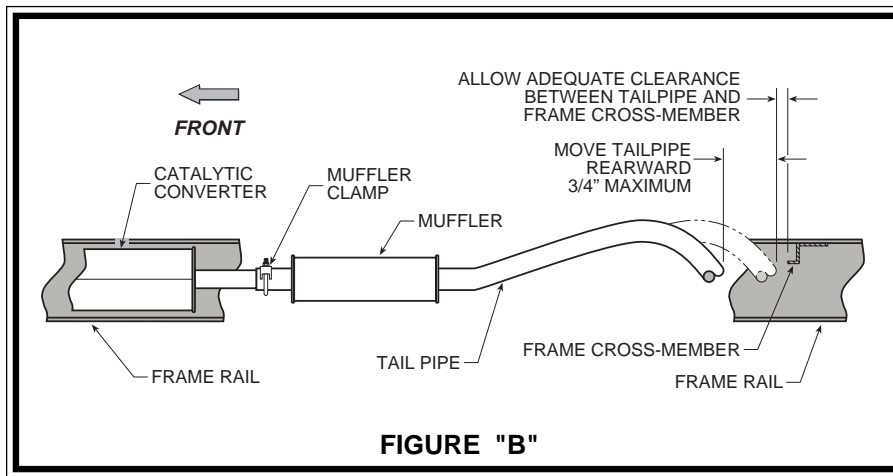
NOTE: Both illustrations are of the right, or passenger's side of the vehicle. Reverse any orientations when assembling and installing the left, or driver's side of the vehicle.

FIGURE "A"



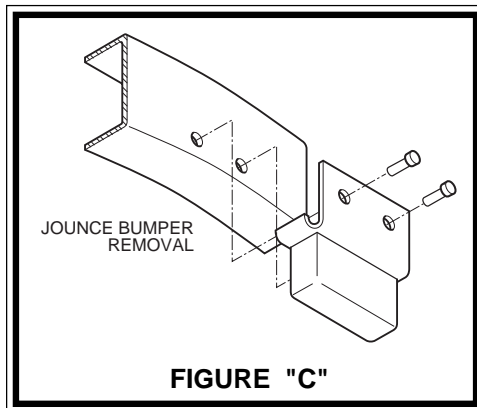
KIT ASSEMBLY





NOTE:

To install this kit on your vehicle, the exhaust pipe may require modification *see Figure "B"*. The exhaust pipe clamp must be loosened between the catalytic converter and the muffler. Move the exhaust pipe and muffler by pushing the assembly toward the rear of the vehicle approximately 1/2" to 3/4". Re-tighten the exhaust pipe clamp between the catalytic converter and the muffler. This modification may or may not be required, depending on the placement of the exhaust pipe at the factory.

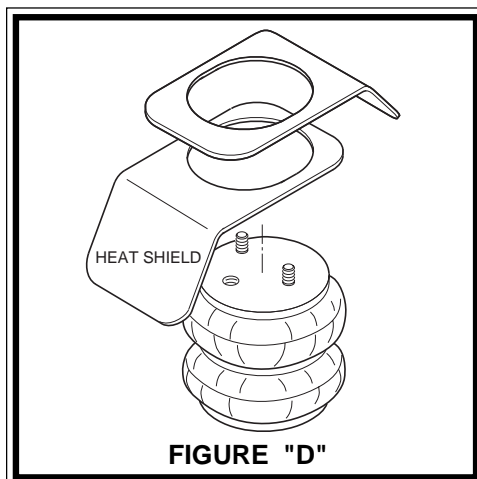


STEP 1 - VEHICLE PREPARATION

Remove the negative battery cable. With the vehicle on a solid, level surface chock the front wheels. Raise the vehicle by the axle and remove the rear wheels. After the removal of the wheels, lower the vehicle so the axle rests on jack stands rated for your vehicles weight.

Your vehicle is equipped with rubber jounce bumpers. The bumpers are attached to the frame directly above the axle. Remove and discard the jounce bumper and bracket *see Figure "C"*. This bumper will not be reused with this kit.

Remove the jounce bumpers by first drilling out the center of the rivet heads holding the bumper in place. Remove the rivet heads with a hammer and cold chisel. Lastly, remove the hex nut on the inside of the frame flange. The jounce bumper can now easily be removed.



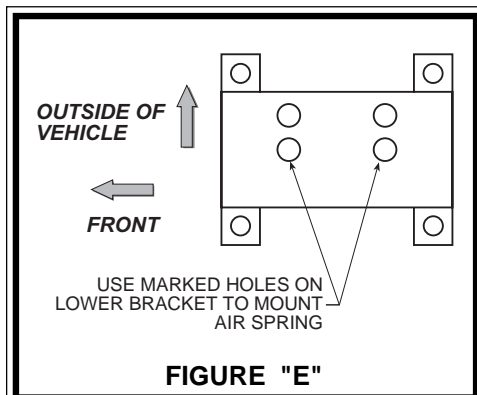
STEP 2 - USE OF THE HEAT SHIELD

Your vehicle will require the use of two heat shields. The shields are used to deflect heat away from the air spring. The heat shields are mounted between the upper bracket and the upper plate of the air spring on the exhaust side of the vehicle *see Figure "D"*. Position the shields between the exhaust pipe and 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 faces of the shields directly over the axle, as they may contact the axle on full suspension compression.

STEP 3 - PRE-ASSEMBLE THE KIT

Install the elbow fitting into the air spring. Tighten the air fitting securely to engage the orange thread sealant. Position the elbow so that it points toward the anticipated location of the air inflation valve *see Figures "A" & "G"*.

Select one lower bracket and insert the 3/8" -24 x 1-7/8" ribbed neck bolts into the mounting holes on the ears of the bracket *see Figure "A"*. To properly install the bolts in the lower bracket it will be necessary to hammer them into place. Next, select one air helper spring and align the holes in the lower plate with the holes in the center of the lower bracket *see Figures "A" & "E"*. Attach the lower bracket to the air spring with the 3/8" -16 x 3/4" hex bolts and 3/8" lock washers.

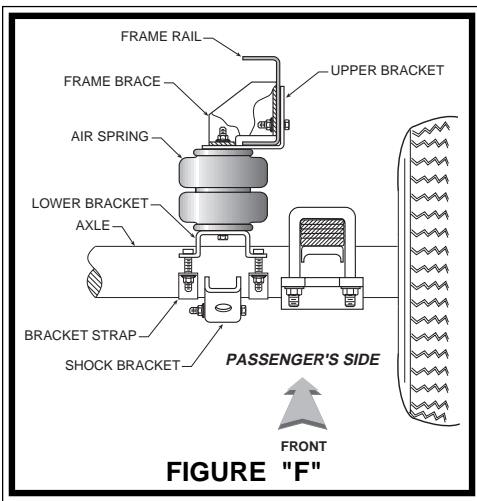


STEP 4 - INSTALL THE ASSEMBLY TO THE VEHICLE

Place the air spring assembly on the axle housing making sure the end of the lower bracket straddles the vehicle's shock bracket *see Figures "A" & "F"*.

Next, place the upper bracket on the outside of the frame rail, aligning the holes in the bracket with the existing holes in the frame rail. Insert the 3/8" -24 x 1-1/2" hex bolts through the holes in the upper bracket and frame rail. Next,

install the left and right frame braces over the hex bolts on the inside of the frame rail *see Figure "A"*. Ensure that the frame braces are installed so that they allow the brake and electrical lines to pass underneath them, inside the frame rail. Secure the upper bracket and frame braces to the frame by installing the 3/8" lock washers and 3/8" -24 hex nuts over the hex bolts through the frame, making



them only finger tight. Next, extend the air spring, inserting the threaded studs on the top plate through the holes in the upper bracket and frame braces. Secure the air spring to the frame braces and upper bracket with the 3/8" -16 hex nuts, making them only finger tight.

While holding the upper bracket flush against the outside and bottom of the frame rail, ensure that the frame braces are flush against the inside of the frame rail and the upper bracket where it attaches to the air spring. Tighten the 3/8"-16 hex nuts and the 3/8" -24 bolts to secure the bracket and frame braces to the frame *see Figures "A" & "F"*.

Attach the assembly to the axle by installing the bracket straps under the axle, aligning the holes in the strap with the ribbed neck bolts. Secure the bracket strap to the assembly by installing the 3/8" lock washers and 3/8" -24 hex nuts over the ribbed neck bolts.

STEP 5 - INSTALL THE DRIVER'S SIDE ASSEMBLY

Reverse any orientations when assembling and installing the left, or driver's side of the vehicle.

STEP 6 - INSTALL THE AIR LINE AND THE INFLATION VALVE

Uncoil the air line 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 spring. Push the tubing into the fitting as far as possible *see 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 "F"*. 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 inflation valve, routing it to avoid direct heat from the 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 "H"*.

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 square as possible and is pushed completely into the fitting. The tubing can easily be removed from the fitting by first releasing the air pressure, then by

pushing the collar towards the body of the fitting and then pulling out the tube. If a leak is detected where the brass fitting screws into the spring, first release the air pressure then remove the tubing, followed by screwing the brass fitting into the air 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. Install the wheels and torque the lug nuts to the manufactures specifications. Raise the vehicle by the rear axle and remove the jack stands and lower the vehicle back to the ground. Re-attach 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 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.**

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.

