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## W21-760-2304

### 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	6957	2	3/8"-16 NUT PLATES	4
UPPER BRACKET	5363	2	3/8"-16 X 1" HEX HEAD BOLT	4
LOWER BRACKET	5364	2	3/8"-16 FLANGE NUT	8
FLATBRACKET STRAP	5028	2	3/8"-16 X 3/4" FLANGE LOCK	2
BRACKETSTRAP	5086	2	3/8"-16 X 1" HEX BOLT	4
18 ft. TUBING	0938	1	3/8"-16 X 3-1/2" CARRIAGE BOLT	4
PUSH-TO-CONNECT INFLATION VALVE	3098	2	5/16" FLAT WASHER	4
PUSH-TO-CONNECT ELBOW	3101	2	NYLON TIE WRAP	7
HEAT SHIELD	1004	1	CAUTION TAG	2
			THERMAL SLEEVE	2

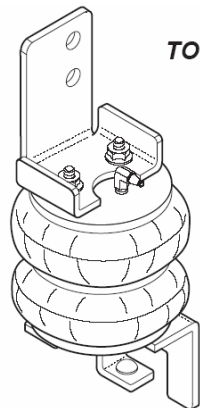
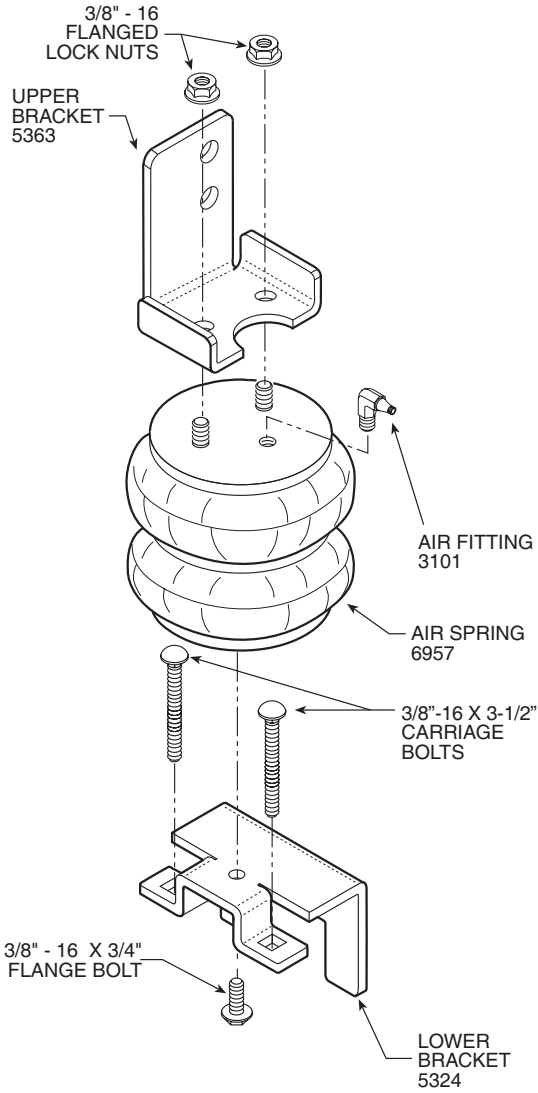


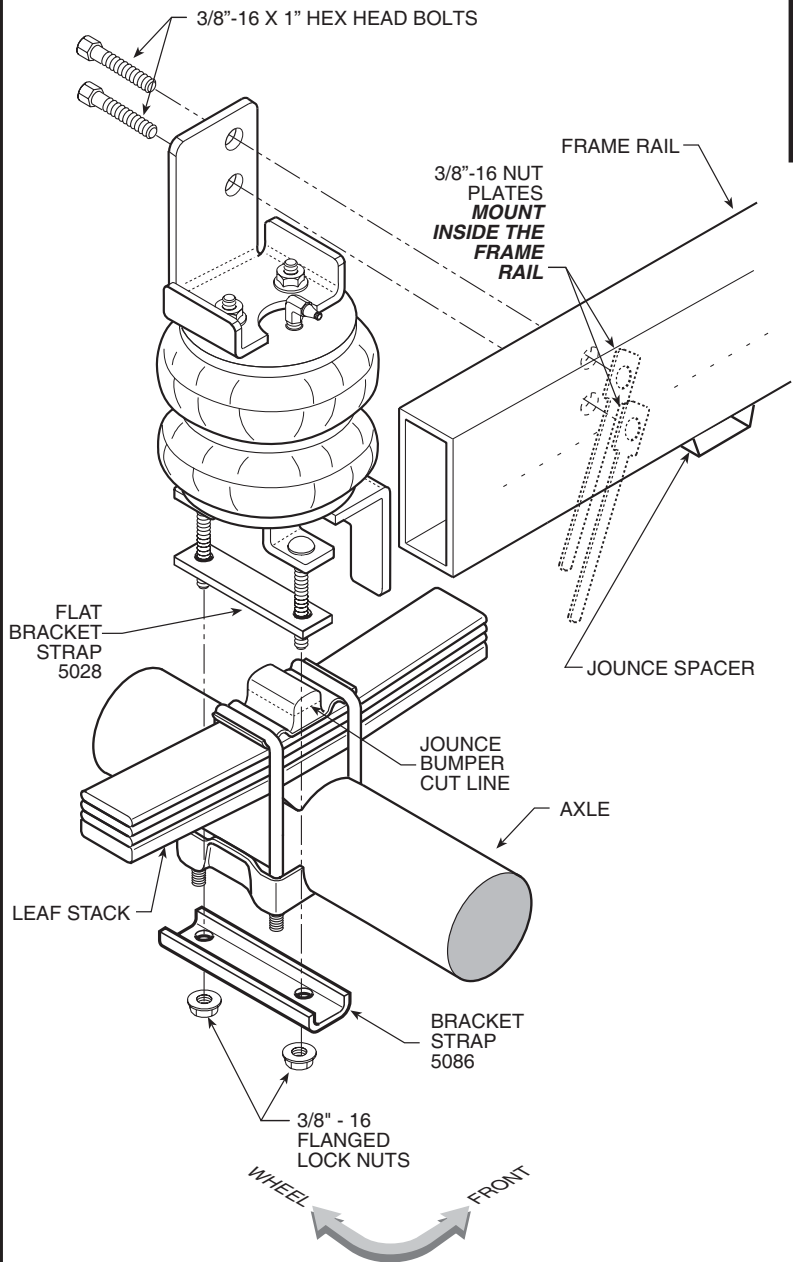
FIGURE "A"

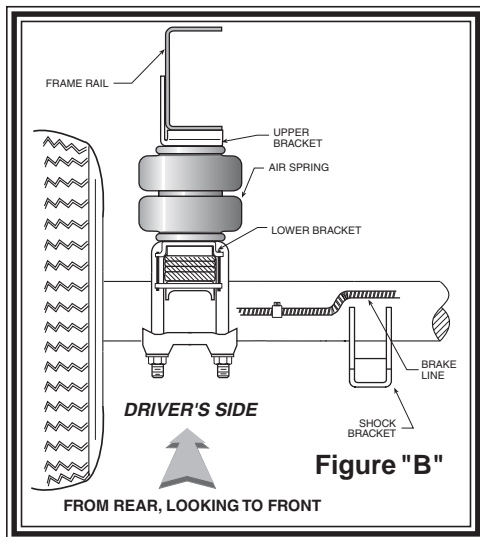
**NOTE:** Both illustrations are of the left, or drivers side, of the truck. Refer to step 3 for the proper lower bracket alignment.

**KIT ASSEMBLY**



**KIT TO FRAME ASSEMBLY**





#### NOTE:

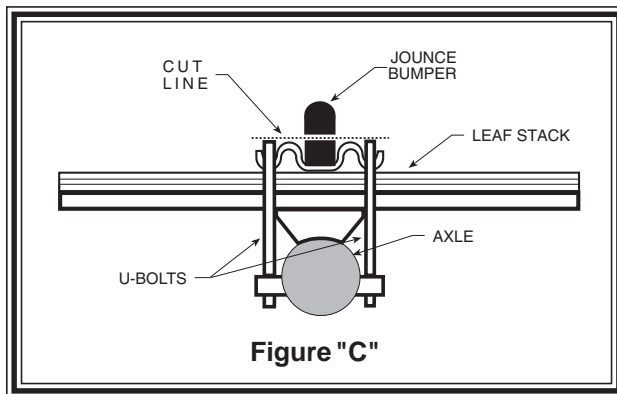
Please read through this manual completely before installing the air spring kit to your vehicle. A heat shield is required on the exhaust side of the vehicle as noted in Step 4.

#### STEP 1 - PREPARE THE VEHICLE

With the vehicle on a solid, level surface chock the front wheels. Remove the negative battery cable. 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. With a hack saw, cut the jounce bumper located under the frame rail **even with the U-bolts**, refer to Figures "A" and "C".

#### STEP 2 - PRE-ASSEMBLE THE KIT

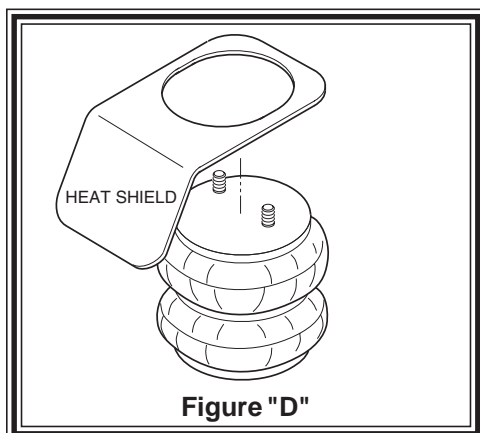
Select a lower bracket from the kit and place the 3/8"-16 x 3-1/2" carriage bolts into their designated holes. Select one air helper spring from your kit. Attach the lower bracket to the air spring using a 3/8"-16 x 3/4" flange hex bolt, see Figure "A". Install the air fitting in to the air spring as shown in Figure "A". Tighten the air fitting so as to make contact with the nylon ring and then tighten 1/4 turn to snug the fitting. No thread sealant is needed. Next, select an upper bracket from the kit and bolt the upper bracket to the air spring using 3/8"-16 flanged lock nuts. **Please note that a heat shield is required on the exhaust side of the vehicle**, refer to Step 4.



#### STEP 3 - INSTALLING THE ASSEMBLY TO THE VEHICLE

Slide the flat bracket strap over the carriage bolts until it rests against the lower bracket, see Figure "A". Place the assembly on top of the leaf stack just behind the axle. Make sure that the front of the

bottom bracket is over the top of the axle U-bolt, refer to Figure "A". Position the upper bracket so that the bellows are no closer than 1/2" from any part of the truck, refer to Figure "B". Once the position of the upper bracket is located, mark the frame where the two holes will be drilled. **Before drilling the holes make sure all electrical, brake and fuel lines are cleared from the path of the drill.** Damage to lines can be avoided by inserting a piece of wood between the frame rail and any lines in the path of the drill. Drill the two 3/8" holes in the frame rail where marked. Next bolt the bracket strap beneath the leaf stack using the 3/8"-16 flanged lock nuts. Attach the upper bracket to the frame rail and using the provided 3/8"-16 x 1" hex head bolts and the 3/8"-16 nut plates.



#### STEP 4 - INSTALLATION OF THE PASSENGER'S SIDE ASSEMBLY

Follow steps 1-3 with reverse orientations for assembly and installation of the passenger's side assembly. **Note: The use of a heat shield is required on the passenger's side of the vehicle**, see Figure "D". The heat shield will mount between the upper bracket and the air helper spring. Angle the heat shield so it will fall halfway between the air helper spring and the closest point on the exhaust. Be sure that the heat shield will not contact any other component as the suspension compresses (i.e. brake lines, shock absorbers, lower bracket assembly).

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

Uncoil the airline tubing and cut it into two equal lengths. **DO NOT FOLD OR KINK THE AIRLINE TUBING.** Try to make the cut as square as possible. Insert one end of the airline tubing into the air fitting installed in the top of the air helper spring. Push the airline tubing into the fitting 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 maintain accessibility for the air chuck see Figure "E" on the next page. Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers per valve as supports see Figure "F" on the next page. Run the airline 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 airline tubing should not be bent or curved sharply as it may buckle. Secure the airline tubing in place with the nylon ties provided. Push the end of the airline tubing into the inflation valve as illustrated see Figure "E".

## STEP 6 - 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. Using a spray bottle, apply a solution of soap and water to the fittings. If a leak is detected at a airline tubing connection then check to make sure that the airline tube is cut as square as possible and that it is pushed completely into the fitting. The airline tubing can easily be removed from the fittings by exhausting all the pressure in the air springs and then pushing the collar towards the body of the fitting and then, with a gentle pull, remove the airline tubing. Reinstall the tubing and reinflate the air springs and check for leaks as noted above. If a leak is detected where the air fitting screws into the spring and tighten the air fitting into the air spring until the leak stops.

This now completes the installation. Install the wheels and torque the lug nuts to the manufacturer's specification. Raise the vehicle by the axle and remove the jack stands. Lower the vehicle to the ground. Reattach 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 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 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.**

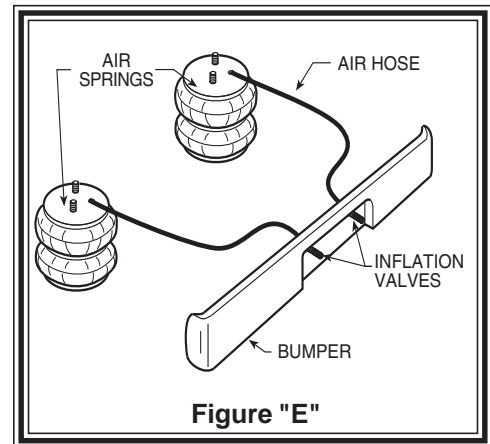


Figure "E"

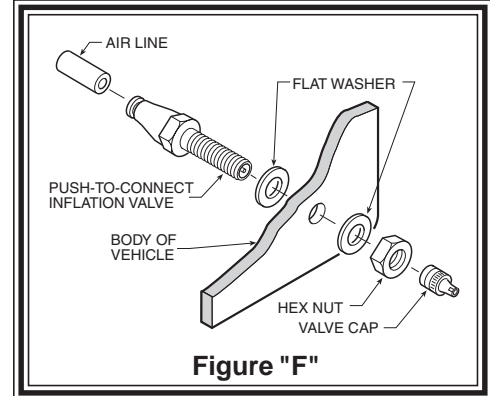


Figure "F"

### 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.



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