

Please read these instructions completely before proceeding with installation

Kit Parts List

Item	P/N	Description	Qty.
A	58407	Air Springs	2
B	07705	Upper Bracket	2
C	03006	Lower Bracket	2
D	21848	Elbow Fitting	2
E	17203	3/8"-24 x 7/8" Bolt	8
F	18427	3/8" Lock Washer	8
G	18444	3/8" Flat Washer	12
H	18435	3/8" Nylock Nut	4
I	17142	3/8"-16 x 3.5" Carriage Bolt	4
J	17146	1/2"-13 x 1.5" Bolt	2
K	18414	1/2" Flat Washer	2
L	18429	1/2" Lock Washer	2
M	18431	1/2" Hex Nut	2
N	09484	Thermal Sleeve	2
O	01665	Clamp Bar	2
AA	20086	Air Line Assembly	1
BB	10466	Tie Strap*	6
CC	21230	Valve Cap*	2
DD	18405	5/16" Flat Washer*	2
EE	21234	Rubber Washer*	2
FF	18411	5/16" Star Washer*	2
GG	21233	5/16" Hex Nut*	4

* (not shown in Figure 1)

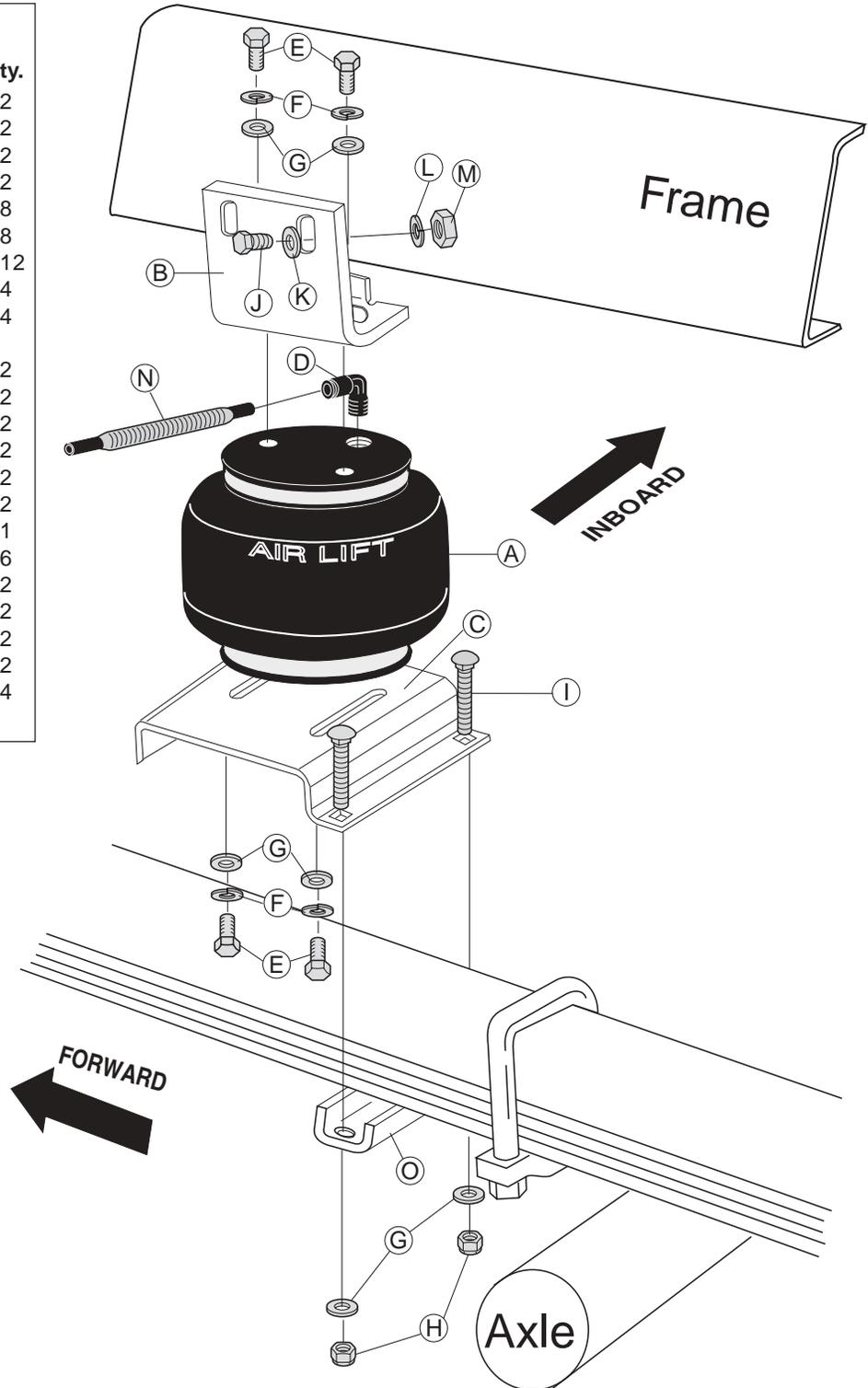


Figure 1

Tools Needed

$\frac{7}{16}$ " and $\frac{9}{16}$ " open-end or box wrenches
Crescent Wrench
Ratchet with $\frac{3}{8}$ ", $\frac{9}{16}$ ", and $\frac{1}{2}$ " deep well sockets
 $\frac{3}{8}$ " and $\frac{5}{16}$ " drill bits (very sharp)
 $\frac{3}{8}$ " Nut Driver
Heavy Duty Drill
Torque Wrench

Hose Cutter, Razor Blade, or Sharp Knife
Hoist or Floor Jacks
Safety Stands
Safety Glasses
Air Compressor, or Compressed Air Source
Spray Bottle with Dish Soap/Water Solution

IMPORTANT: Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist product could affect brake performance. It is recommended that you check with your dealer before installing this type of product. If your vehicle DOES NOT have a rear brake proportioning valve or is equipped with an anti-lock type brake system, installation of a load assist product will have NO EFFECT ON BRAKE SYSTEM PERFORMANCE.

DANGER: Compressed air can cause injury and damage to the vehicle and parts if it is not handled properly. For your safety, do not try to inflate the air springs until they have been properly secured to the vehicle.

I. Assembling the Air Spring Assembly

Refer to Figure 1.

1. Consult your User's Manual to determine the normal ride height of your vehicle.
2. Loosely attach the 90° elbow fitting (D) to the top of the air spring. Tighten finger tight plus 1 and $\frac{1}{2}$ turns. Be careful to tighten on the metal hex nut only. DO NOT OVERTIGHTEN.
3. Loosely attach the upper bracket (B) to the air spring (A) with two $\frac{3}{8}$ " bolts (E), two $\frac{3}{8}$ " lock washers (F), and two $\frac{3}{8}$ " flat washers (G).
4. Attach the air spring to the lower bracket (C) with two $\frac{3}{8}$ " bolts (E), two $\frac{3}{8}$ " lock washers (F), and two $\frac{3}{8}$ " flat washers (G). Leave loose at this time.

II. Attaching the Lower Bracket

Refer to Figure 1.

1. Insert two $\frac{3}{8}$ " carriage bolts (I) through the lower bracket. Attach the lower bracket to the leaf spring forward of the axle by securing the carriage bolts to a clamp bar (O) underneath the leaf spring.
2. Secure the carriage bolts with two $\frac{3}{8}$ " flat washers (G) and $\frac{3}{8}$ " nyloc nuts (H). Tighten all nuts to 20 ft.lbs.

III. Attaching the Upper Bracket

Refer to Figure 1.

1. Position the upper bracket (B) on the frame rail so that it is aligned front-to-rear and inboard-to-outboard. Upper and lower brackets are slotted for adjustment.

NOTE: The short end of the upper bracket must be positioned so that it is touching the underside of the frame rail (Figure 2).

2. Put the upper bracket into position on the frame rail and drill one 1/2" hole in the side of the frame rail (Figure 3).

CAUTION: Do not drill holes in the frame before checking for hydraulic lines, gas lines and/or electrical wires that may have to be moved out of the way to either side of the frame.

3. Recheck the alignment. Using the slots in the lower bracket, align the air spring so that it is square, vertically and horizontally, to the upper bracket.
4. Tighten the air spring mounting bolts to 20 ft.lbs. Attach the upper bracket using one 1/2"-13 x 1.5" bolt (J), one 1/2" flat washer (K), one 1/2" lock washer (L), and one 1/2" hex nut (M). Only one bolt is required to secure the bracket to the frame.

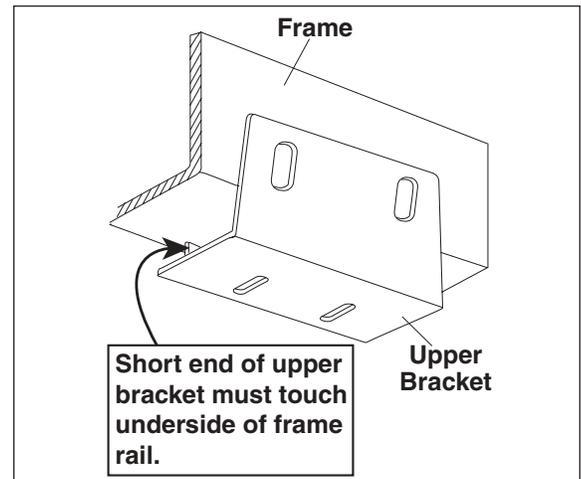


Figure 2

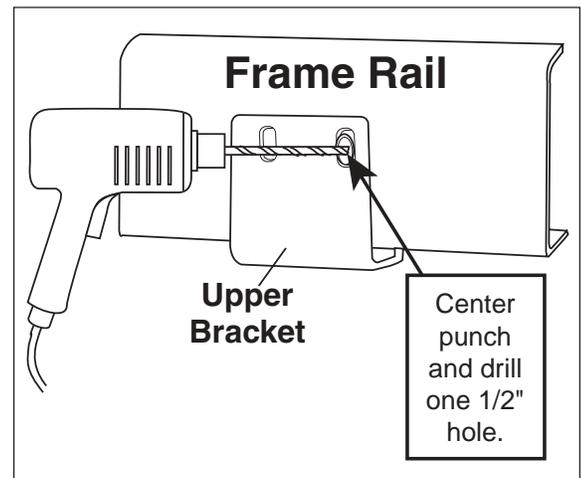


Figure 3

IV. Installing other Air spring

1. Installation for one air spring is now complete. Continue by repeating steps II–III for the other side.
2. Proceed to step V when the second air spring is installed.

V. Installing the Air Lines

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are in the wheel well flanges, in the stowage area, or under the body flange.

NOTE: Whatever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.

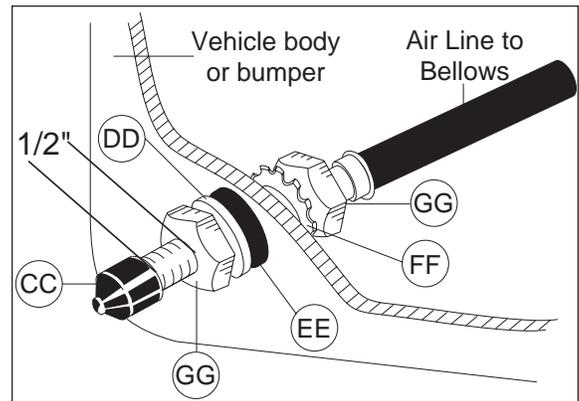


Figure 4

2. Drill a $\frac{5}{16}$ " hole to install the inflation valves.
3. Cut the air line assembly (AA) in two equal lengths.

CAUTION: When cutting or trimming the air line, use a hose cutter, a razor blade, or a sharp knife. A clean, square cut will ensure against leaks. Do not use wire cutters or scissors to cut the air line. These tools may flatten or crimp the air line, which causes leakage around the O-ring seal inside the elbow fitting.

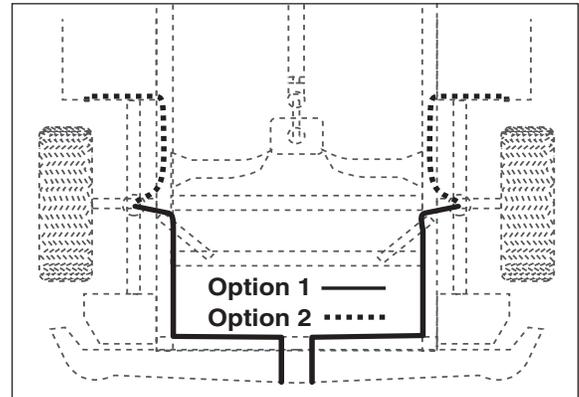


Figure 5

4. Place a $\frac{5}{16}$ " nut (GG) and a star washer (FF) on the air valve. Leave enough of the valve in front of the nut to extend through the hole and have room for the rubber washer (EE), flat washer (DD), and $\frac{5}{16}$ " nut (GG) and cap (CC). There should be approximately $\frac{1}{2}$ " of the valve exposed after installation to easily apply a pressure gauge or an air chuck (Figure 4).
5. Push the inflation valve through the hole and use the rubber washer (EE), flat washer (DD), and another $\frac{5}{16}$ " nut (GG) to secure it in place. Tighten the nuts to secure the assembly in place (Figure 4).
6. Route the air line along the frame to the air fitting on the air spring (Figure 5). Keep at least 6" of clearance between the air line and heat sources, such as the exhaust pipes, muffler, or catalytic converter. Avoid sharp bends and edges. Use the plastic tie straps (BB) to secure the air line to fixed, non-moving points along the chassis. Be sure that the tie straps are tight, but do not pinch the air line. Leave at least 2" of slack to allow for any movement that might pull on the air line.
7. On the exhaust side only, place the provided thermal sleeve (P) on the air line near the exhaust.
8. Cut off air line, leaving approximately 12" of extra air line. A clean square cut will ensure against leaks. Insert the air line into the push-to-connect air fitting. Simply push the air line into the 90° swivel fitting until it bottoms out ($\frac{9}{16}$ " of air line should be in the fitting).

VIII. Checking for Leaks

1. Inflate the air spring to 60 p.s.i. and spray all connections and the inflation valves with a solution of $\frac{1}{5}$ liquid dish soap and $\frac{4}{5}$ water to check for leaks. Leaks will be spotted easily by looking for bubbles in the soapy water.
2. After the test, deflate the springs to the minimum pressure required to restore the Normal Ride Height, but not less than 20 p.s.i.
3. **IMPORTANT:** Check the air pressure again after 24 hours. A 2 to 4 p.s.i. loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

IX. Fixing Leaks

1. If there is a problem with the swivel fitting, then:
 - a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square. Reinsert the air line into the push-to-connect fitting.
 - b. Check the threaded connection by tightening the swivel fitting another $\frac{1}{2}$ turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible, then use a wrench for an additional two turns.
2. If there is a problem with the inflation valve, then:
 - a. Check the valve core by tightening it with a valve core tool.
 - b. Check the air line connection by removing the air line from the barbed type fitting. **CAUTION: Do not cut it off. As this will usually nick the barb and render the fitting useless.** Cut air line off a few inches in front of the fitting and use a pair of pliers or vise-grips to pull/twist the air line off the fitting.
3. If the preceding steps have did not resolve the problem, call Air Lift Technical Support at 1-800-248-0892 for assistance.

X. Troubleshooting Guide

Problems maintaining air pressure, without on-board compressor.

1. Leak test air line connections and threaded connection of the elbow into the air spring. See Section VIII to repair.
2. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core. See Section VIII for repair.
3. Inspect air lines to be sure it is not pinched at the tie straps. Loosen or replace strap and replace leaking components.
4. Inspect air line for holes and cracks. Replace as needed.
5. A kink or fold in the air line. Reroute as needed.

You have now tested for all of the most probable leak conditions that can be easily fixed. At this point the problem is most likely a failed air spring - either a factory defect or an operating problem. Please call Air Lift at 1-800-248-0892 for assistance or a replacement air spring.

XII. Maintenance and Operations

Minimum Air Pressure	Maximum Air Pressure
40 p.s.i.	100 p.s.i.
<i>Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, over-extension, or rubbing against another component will void the warranty.</i>	

By following these steps, vehicle owners will obtain the longest life and best results from their air springs.

1. Check the air pressure weekly.
2. Always maintain Normal Ride Height. Never inflate beyond 100 p.s.i.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring. (See page 8.)
4. When increasing load, always adjust the air pressure to maintain the Normal Ride Height. Increase or decrease pressure from the system as necessary to attain Normal Ride Height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.
5. **IMPORTANT:** For your safety and to prevent possible damage to your vehicle, *do not exceed maximum Gross Vehicle Weight Rating (GVWR), as indicated by the vehicle manufacturer.* Although your air springs are rated at a maximum inflation pressure of 100 p.s.i., this pressure may represent too great a load on some vehicles. Check your vehicle owners manual and do not exceed the maximum load listed for your vehicle.
6. Always add air to springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
7. *Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.*

Thank you for purchasing Air Lift Products



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