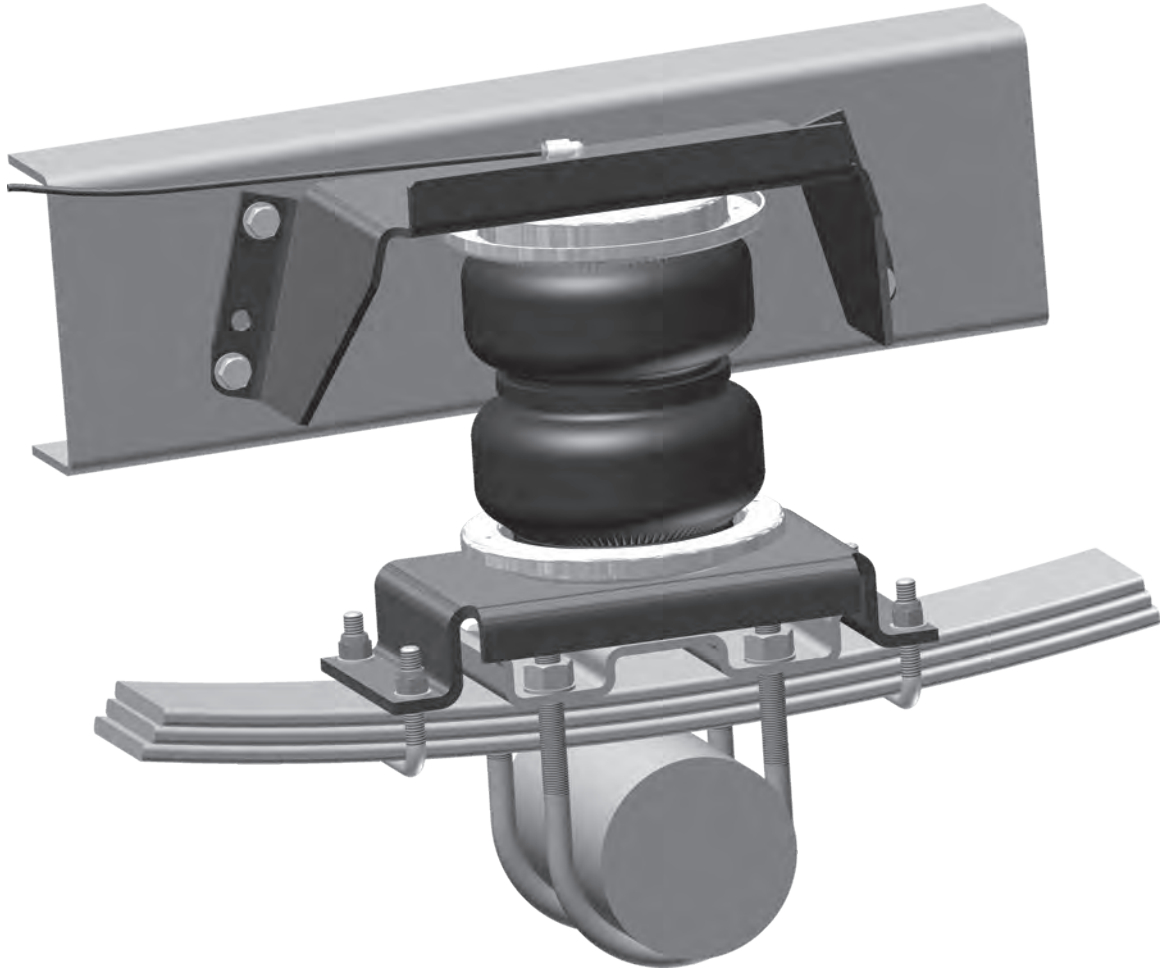


# LoadLIFTER 5000

by AIR LIFT®

# No. 57215 & 57207



## INSTALLATION GUIDE

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

*Failure to read these instructions can result in an incorrect installation.*

# Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the LoadLifter 5000 air spring kit. LoadLifter 5000 utilizes sturdy, reinforced, commercial grade single or double, depending on the kit, convolute bellows. The bellows are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 kits are recommended for most  $\frac{3}{4}$  and 1 ton pickups and SUVs with leaf springs and provide up to 5,000 lbs of load leveling support with air adjustability from 5-100 PSI. The kits are also used in motorhome rear kits and some motorhome fronts where leaf springs are used.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information here includes a hardware list, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

## IMPORTANT SAFETY NOTICE

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

**Gross Vehicle Weight Rating:** The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

**Payload:** The combined, maximum allowable weight of cargo and passengers that the vehicle is designed to carry. Payload is GVWR minus the Base Curb Weight.

## NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.

 **DANGER**

INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

 **WARNING**

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

 **CAUTION**

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

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## NOTE

*Indicates a procedure, practice or hint which is important to highlight.*

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# Installation Diagram

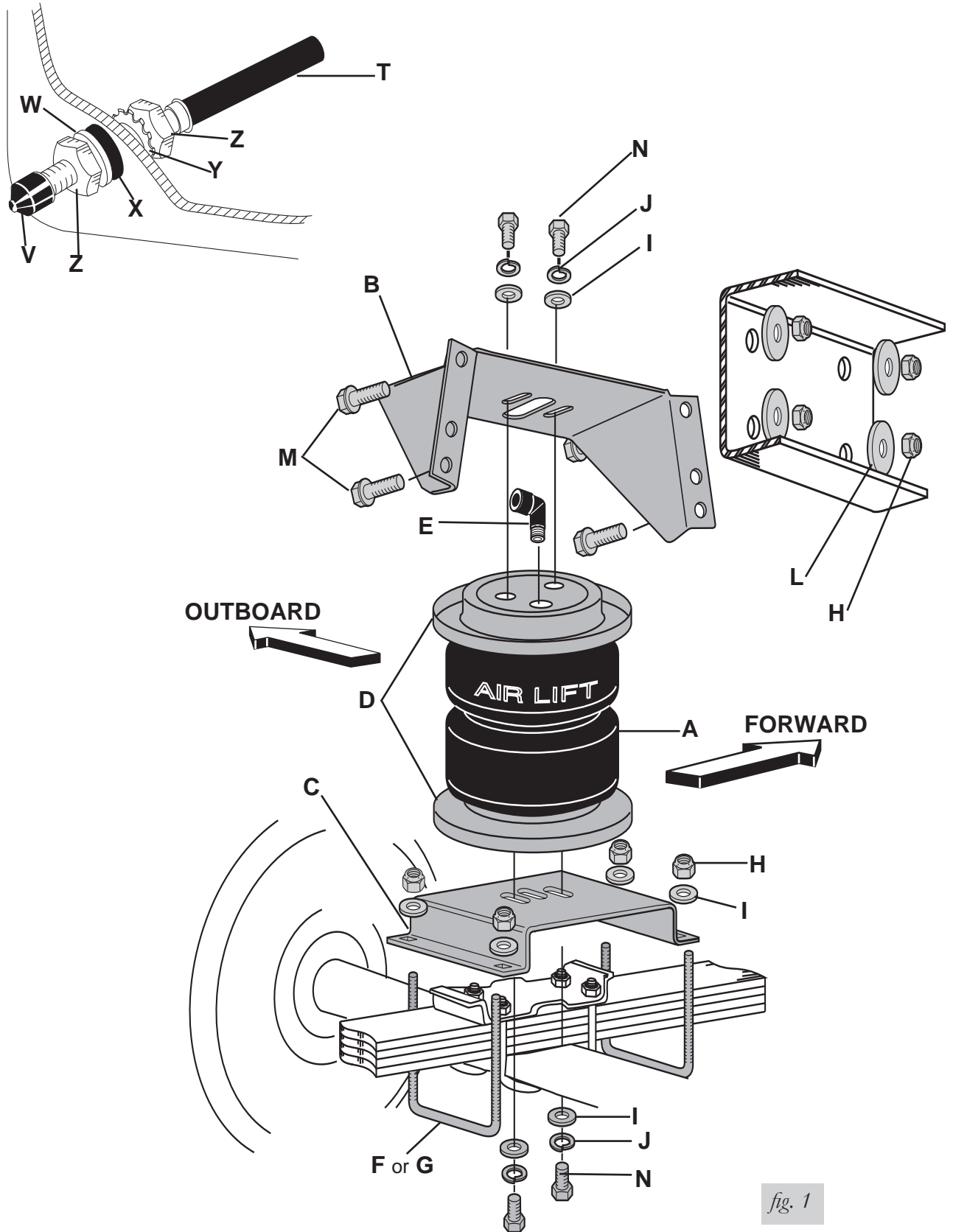


fig. 1

**HARDWARE LIST**

Item	Part #	Description.....Qty	Dodge Fenderwell Spacer Parts	
A <sup>1</sup>	58437	Bellows (57215) .....2	P	17182 1/2" x 2" HHCS* .....2
A <sup>2</sup>	58491	Bellows (57207) .....2	Q	20947 Fenderwell liner spacer* .....2
B	07475	Upper bracket .....2	R	18419 10/32" Flat washer* .....6
C	03102	Lower bracket .....2	S	18425 1/4" Nyloc nut* .....2
D	11951	Roll plate .....4	<b>Air Line Assembly</b>	
E	33606	Elbow fitting.....2	T	20086 Air line assembly* .....1
F	10594	2" U-bolt .....4	U	10466 Tie strap* .....6
G	10583	4.5" U-bolt .....4	V	21230 Valve caps* .....2
H	18435	Nyloc nut .....16	W	18405 5/16" Flat washer* .....2
I	18444	3/8" Flat washer .....16	X	21234 Rubber washer* .....2
J	18427	3/8" Lock washer.....8	Y	18411 Small star washer* .....2
K	13377	Upper bracket spacer* .....8	X	21233 5/16" Hex nut* .....4
L	18447	3/8" Large flat washer .....8	*Not shown in fig. 1.	
M	17159	3/8" x 1.5" Washer head frame bolt ....8		
N	17203	3/8" x 7/8" Hex head cap screw .....8		
O	01525	Spacer bar* .....4		

# Installing the LoadLifter 5000 System

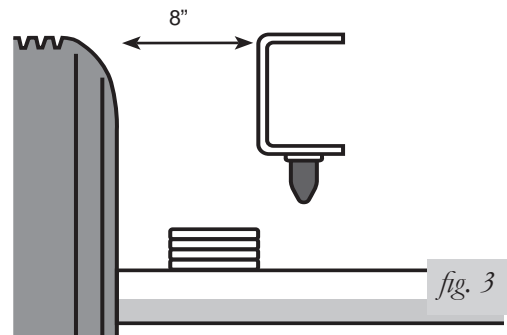
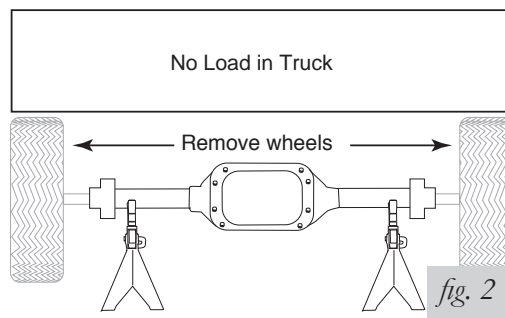
## 5TH WHEEL HITCH



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.

### GETTING STARTED

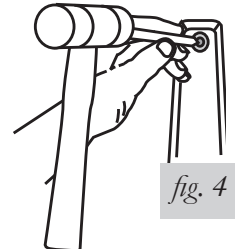
1. Support the axle with jack stands, remove the wheels, and raise or lower to obtain normal ride height (figs. 2 and 3).



## SPECIAL APPLICATION INSTRUCTIONS

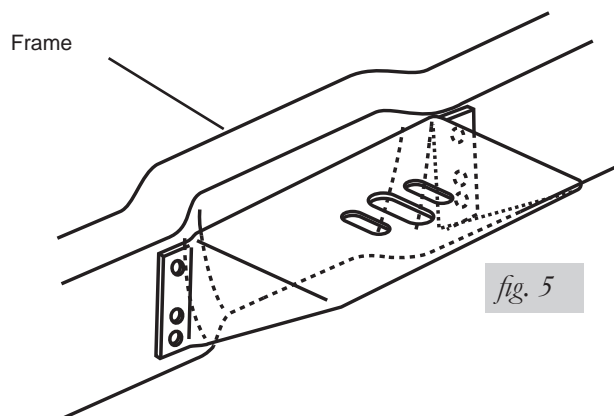
### 1. 1994 model and newer Dodge 4WD pickups only:

It will be necessary to remove the inner fenderwell liner on late model 4WD Dodge trucks. This is done by carefully driving the pin through the fasteners with a center punch (fig. 4). These fasteners will be reused along with a special spacer to reattach the line and provide clearance for the air spring. (See page 10 for reinstallation instructions.)



### 2. Ford trucks only:

When installing the upper bracket on an F-250 or F-350, the mounting bolt holes can line up directly over the indent in the frame. This is an acceptable situation and is an approved method of installation for the product (fig. 5). Torque the mounting hardware to specifications, as noted. Do not over torque.

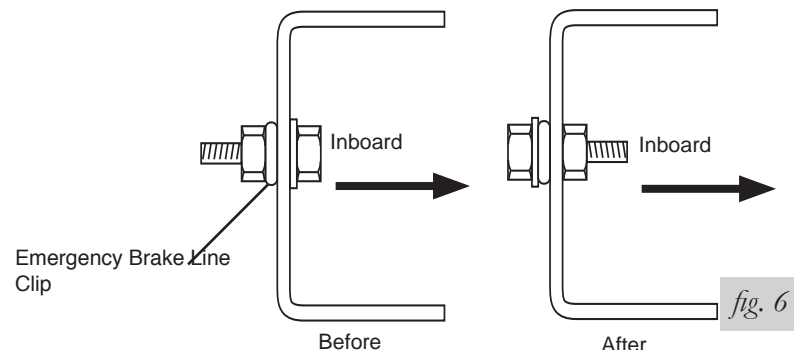


### 3. For 1999 and later SuperDuty F-250 and F-350 trucks:

Remove the bolt which holds the emergency brake cable to the outside of the frame rail. Reinstall the bolt in the reverse order, with the nut on the inside of the frame rail, to prevent rubbing against the air spring (fig. 6).



FAILURE TO SWITCH THIS BOLT WILL CAUSE AIR SPRING TO RUPTURE.



## ASSEMBLING THE AIR SPRING UNIT

See fig. 7 below for assembly.

1. Set a roll plate on both ends of the air spring. The radiused (rounded) edge of the roll plate will be towards the air spring so that the air spring is seated in both roll plates.
2. Install a 90° swivel air fitting. It should only be finger tight plus 1½ turns. Do not overtighten.
3. Place the upper bracket onto the top of the air spring and roll plate with the legs facing down.
4. Set the air spring on the lower bracket aligning the two holes in the base of the air spring with the two outer slots in the top of the lower bracket.
5. Loosely attach the upper bracket to the assembly using flat washers, lock washers, and hex head bolts. Remember that the bracket legs face down.
6. Loosely attach the lower bracket to the assembly using flat washers, lock washers, and hex head bolts.

### NOTE

*The flange on the bracket must face the outside (tire-side) of the vehicle.*

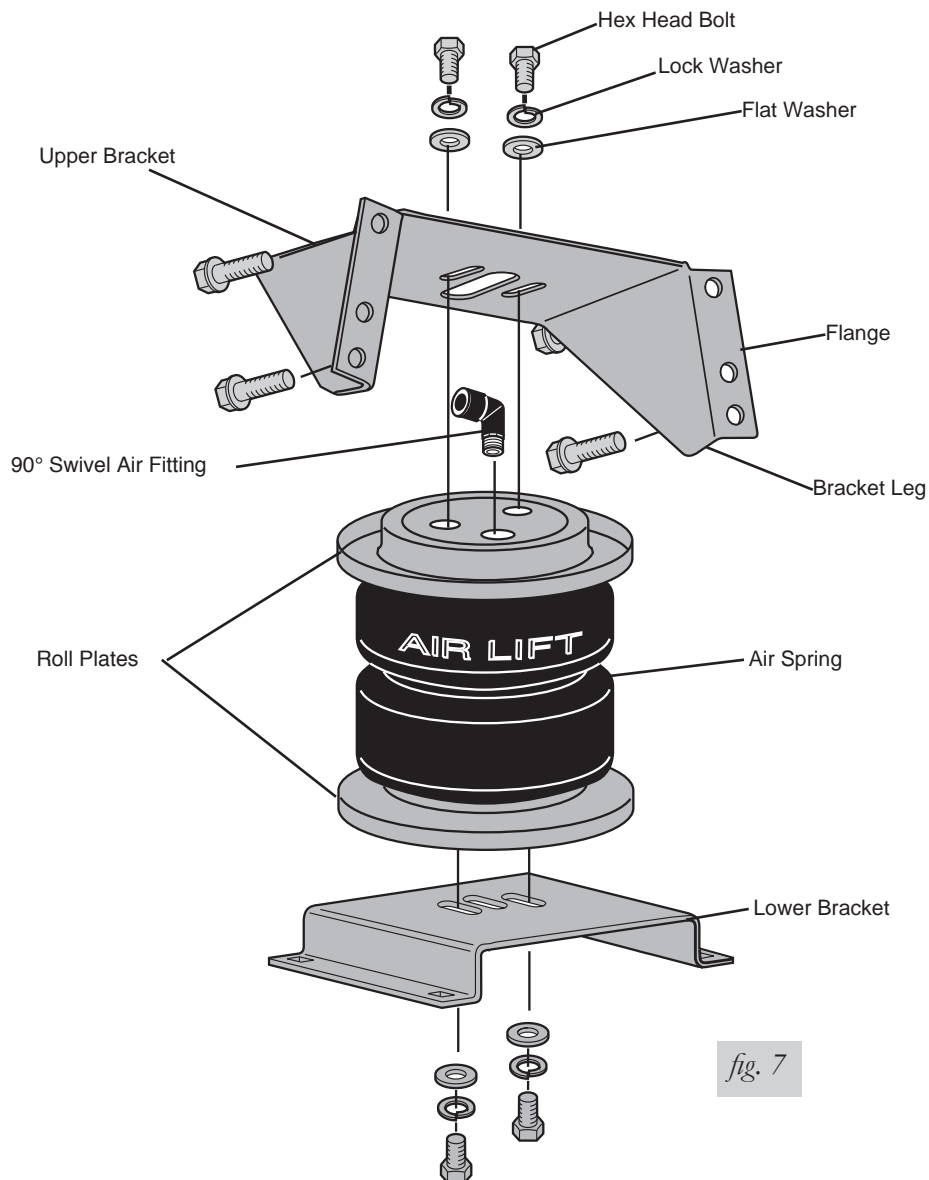


fig. 7

## POSITIONING THE BRACKETS

1. The air spring must be installed between 5" and 8" from both the upper bracket to the lower bracket (fig. 8). It is best to position the upper bracket as high as possible.

**NOTE**

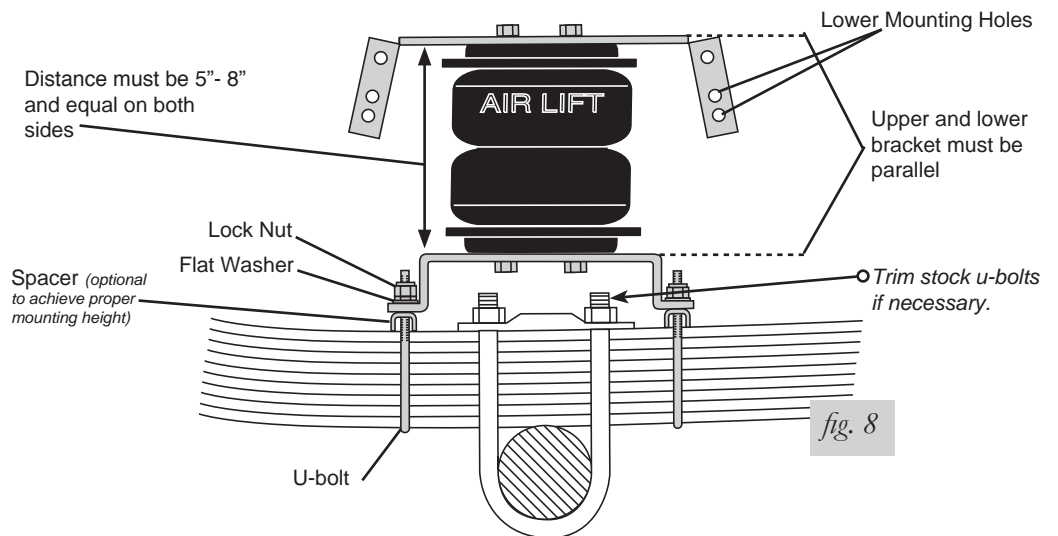
*Failure to mount the air spring at the recommended height can result in the air spring bottoming out.*

*The top rear mounting hole may be above the frame rail. If this condition exists, use the two lower mounting holes to mount the bracket (fig. 8).*

2. Set the air spring assembly on the leaf spring over the axle (fig. 8).
3. Position the upper bracket so that at least four bolt holes (two on each side) will be on the flat section of the frame rail. Keep the edge of drilled holes no closer than 3/4" from the top or bottom radius of the frame rail.
4. In some cases, it may be necessary to use the optional spacers to achieve the 5"- 8" space (fig. 8). For example, if only the top two holes contact above the lower radius edge of the frame rail, it may be necessary to move up the spacers under the lower bracket to achieve mounting height.

**NOTE**

*If you find that the lower bracket needs to set flat onto the leaf spring in order to achieve the correct height and the stock u-bolts are too high to allow this, it will be necessary to trim the stock u-bolts.*



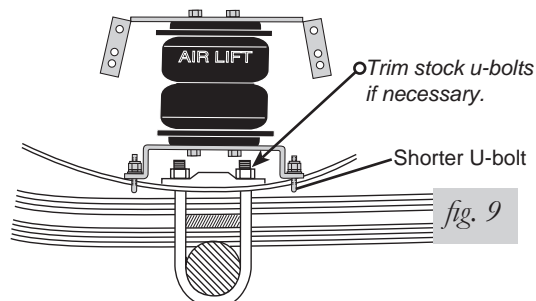
## ATTACHING THE LOWER BRACKET

1. If the spacer is not used, attach the lower bracket securely using the provided U-bolts, flat washers, and lock nuts. Torque nuts to 16 ft/lbs. See figures 1 and 9.

**NOTE**

*Use shorter U-Bolts when attaching to frame contact overload springs.*

2. If the spacer is used, place the spacers legs down on the leaf spring and attach the lower bracket securely using the provided U-bolts, flat washers, and lock nuts. Torque nuts to 16 ft/lbs (fig. 9).



## ATTACHING THE UPPER BRACKET

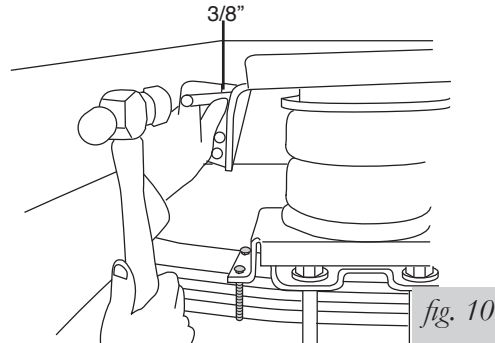
### CAUTION

BEFORE DRILLING, CHECK THE BACK-SIDE OF THE FRAME FOR CLEARANCE ISSUES WITH THE BRAKE LINES, GAS LINES, AND ELECTRICAL LINES. ANY OBSTACLES WILL NEED TO BE TEMPORARILY RELOCATED TO CLEAR THE AREA.

1. Position the upper bracket so that it is parallel with the lower bracket and align the assembly vertically and horizontally.
2. Using the upper bracket as a template, center punch and drill one  $\frac{3}{8}$ " locator hole through the frame at one of the top bolt holes (fig. 10).

### NOTE

*After achieving the proper alignment, repeat for the opposite side of the bracket.*



3. Except for Dodge vehicles, loosely install a washer head frame bolt, oversized flat washer, and lock nut (fig. 11).

**For Dodge trucks only:** The top two, or the bottom two, holes (depending on the model of the truck) will fall into a horizontal indentation. Spacers are provided to compensate for the indentation. Loosely install a washer head frame bolt, two upper bracket spacers, an oversized flat washer, and a lock nut for such instances (fig. 12).

4. Install a washer head frame bolt, oversized flat washer, and lock nut.

**For Dodge trucks only:** It may be necessary to add two of the provided spacers (fig. 12).

#### All models, except some late model Dodge trucks

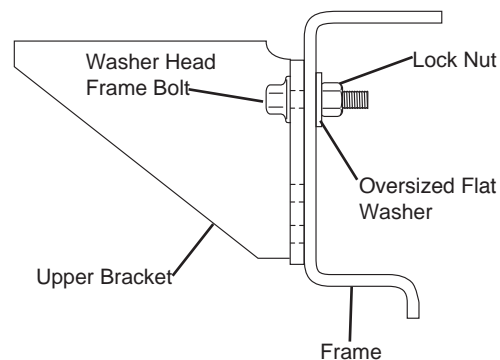


fig. 11

#### Dodge trucks with ditch (ditch can be on top or bottom portion of the frame, depending on vehicle model)

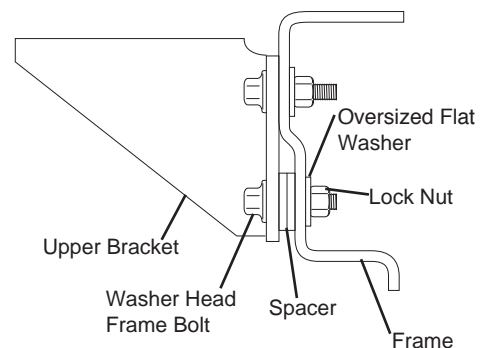
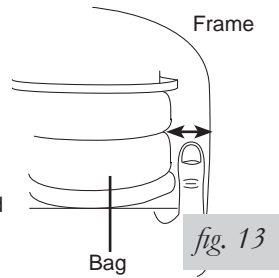


fig. 12



- Remove the clamps and drill the remaining two holes. Install the appropriate hardware and torque the nuts to 44 ft/lbs.
- Align the air spring uniformly between the upper and lower brackets and check the air spring alignment (fig. 13).

Move the air spring in the slots of the upper and lower brackets to align. Make sure there is **at least** a thumbs width of clearance between the uninflated bag and the frame.



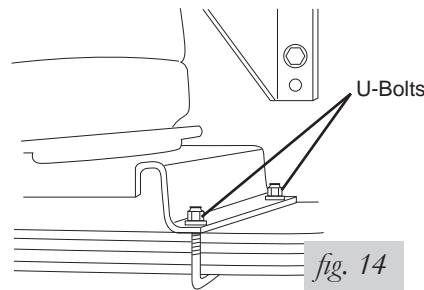
## SECURING THE AIR SPRING TO THE BRACKETS

- Secure the air spring to the upper and lower brackets using an open ended  $\frac{9}{16}$ " wrench by tightening the two bolts on the top and the two bolts on the bottom of the spring assembly.

**CAUTION**

DUE TO THE THICKNESS OF THE LEAF SPRING STACK, TRIM ALL FOUR U-BOLTS ON EACH SIDE OF THE VEHICLE TO PREVENT BOTTOMING OUT ON THE UPPER BRACKET (FIG. 14).

- Check bolts and connectors to ensure that all hardware is secure and repeat the process for the other side of the vehicle.



## INSTALLING THE AIR LINES

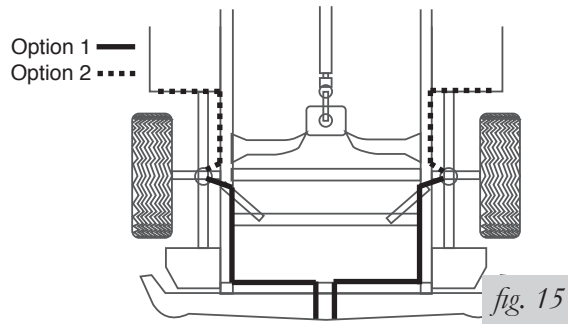
**CAUTION**

WHEN INSTALLING THE AIR LINES, THERE MUST BE AT LEAST SIX INCHES OF CLEARANCE BETWEEN THE AIR LINES AND ANY HEAT SOURCES.

- Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valves are: The wheel well flanges; The license plate recess in bumper; Under the gas cap access door; or through the license plate (fig. 15).
- Secure air lines with provided tie straps.

**NOTE**

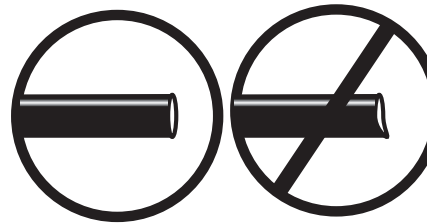
*Whatever the chosen location for the line is, make sure there is enough clearance around the inflation valves for an air chuck.*



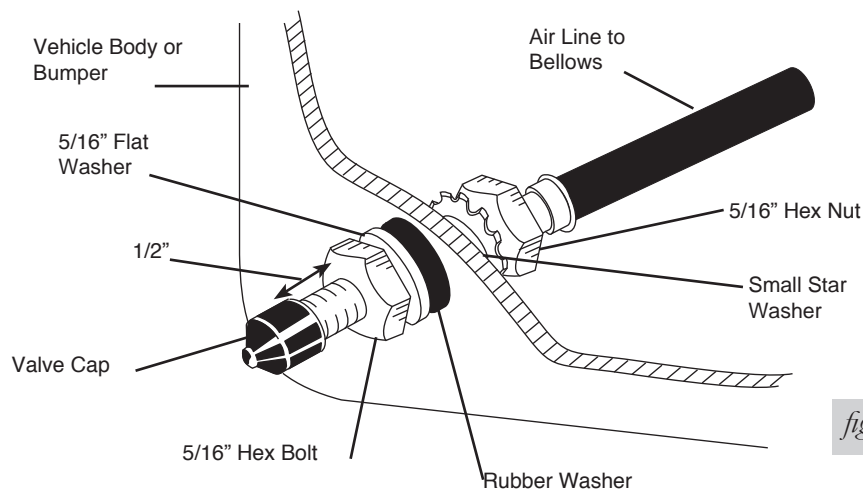
3. Drill a  $\frac{5}{16}$ " hole to install the inflation valves.
4. Cut the air line assembly (AA) in two equal lengths.

**CAUTION**

WHEN CUTTING OR TRIMMING THE AIR LINE, USE A HOSE CUTTER (AIR LIFT P/N 10530), 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 CAUSING IT TO LEAK AROUND THE O-RING SEAL INSIDE THE ELBOW FITTING (FIG 16).


**Good Cut**
**Bad Cut**
*fig. 16*

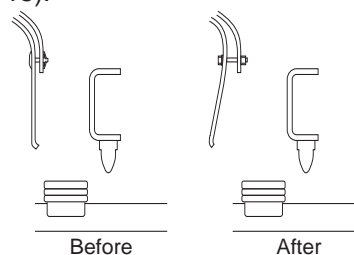
5. Install the inflation valves as shown in fig. 17.


*fig. 17*

6. 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. Leave at least 2" of slack when securing the air lines to allow for any movement that might pull on the air line (fig. 18).
7. Cut off air line leaving approximately 12" of extra air line. Insert the air line into the 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).

## REINSTALLING THE FENDERWELL LINER — LATE MODEL 4WD DODGE ONLY

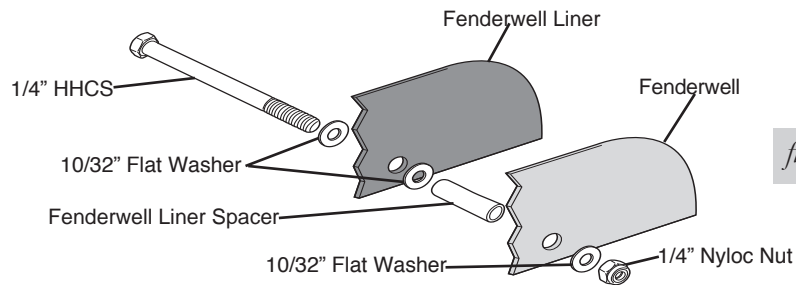
1. If this installation was on a late model 4WD Dodge truck, it is now necessary to reinstall the inner fenderwell liner using the original fasteners and provided spacers to allow for air spring clearance (fig. 18).


*fig. 18*
**Before**
**After**

- Place the spacer between the fenderwell liner and the fenderwell at the center hole in the fenderwell liner (the hole nearest the air spring). Attach using the 1/4" Hex Head Cap Screw (HHCS), the 10/32" flat washers, and 1/4" nyloc nut provided (fig. 19).

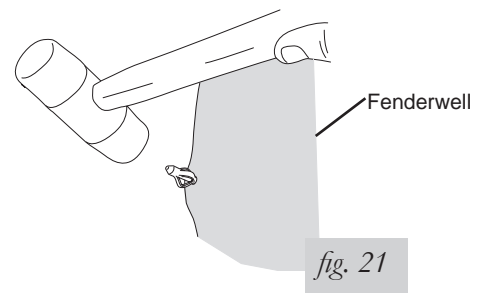
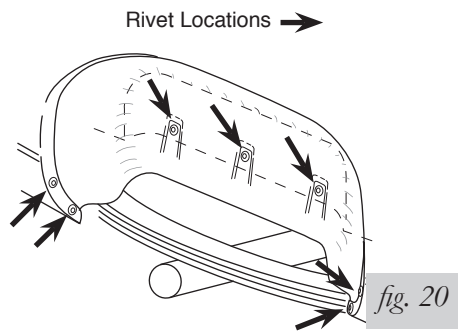
**NOTE**

*Fasten the HHCS with the washer and nut behind the fenderwell (fig. 19). Tighten securely.*



*fig. 19*

- Replace the remaining fenderwell liner rivets carefully. Push the rivets through the fenderwell liner by hand. They should push through completely (fig. 20).
- From the opposite side, use a rubber mallet and carefully tap the rivet posts back into the rivets in order to secure them properly (fig. 21). Repeat this process for all remaining rivets.



**CHECKING FOR LEAKS**

- Inflate the air spring to 30 PSI.
- Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water to check for leaks. You should be able to spot leaks easily by looking for bubbles in the soapy water.
- After the test, deflate the springs to the minimum pressure required to restore the normal ride height, but not less than 10 PSI.
- Check the air pressure again after 24 hours. A 2 - 4 PSI loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

**Maintenance and Servicing**

Minimum Air Pressure	Maximum Air Pressure
5 PSI	100 PSI
FAILURE TO MAINTAIN CORRECT MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD), BOTTOMING OUT, OVER-EXTENSION OR RUBBING AGAINST ANOTHER COMPONENT WILL VOID THE WARRANTY.	

## MAINTENANCE GUIDELINES

### NOTE

*By following the steps below, 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 PSI.
3. If you develop an air leak in the system, use a soapy water solution (1 part dish soap, 4 parts water) to check all air line connections and the inflation valve core before deflating and removing the air spring.
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.



### CAUTION

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.

5. Always add air to springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
6. Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 PSI) to reduce the tension on the suspension/brake components. Use of onboard leveling systems do not require deflation or disconnection.

# Product Use

## FREQUENTLY ASKED QUESTIONS

**Q. Will installing air springs increase the weight ratings of a vehicle?**

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

**Q. Is it necessary to keep air in the air springs at all times and how much pressure will they need?**

The minimum air pressure should be maintained at all times. The minimum air pressure keeps the air spring in shape, ensuring that it will move throughout its travel without rubbing or wearing on itself.

**Q. Is it necessary to add a compressor system to the air springs?**

No. Air pressure can be adjusted with any type of compressor as long as it can produce sufficient pressure to service the springs. Even a bicycle tire pump can be used, but it's a lot of work.

**Q. How long should air springs last?**

If the air springs are properly installed and maintained they can last indefinitely.

**Q. Will raising the vehicle on a hoist for service work damage the air springs?**

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

## TUNING THE AIR PRESSURE

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

**1. Level vehicle**

If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 22). Raise the air pressure to correct either of these problems and level the vehicle.

**2. Ride comfort**

If the vehicle has a rough and harsh ride it may be due to either too much pressure or not enough (fig. 23). Try different pressures to determine the best ride comfort.

**3. Stability**

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess (fig. 24). Tuning out these problems usually requires an increase in pressure.



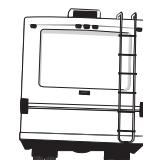
Bad headlight aim

fig. 22



Rough ride

fig. 23



Sway and body roll

fig. 24

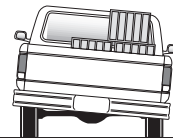
## GUIDELINES FOR ADDING AIR

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 25).
6. Adjust the pressure up and down to find the best ride.
7. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
8. It may be necessary to maintain different pressures on each side of the vehicle. Loads such as water, fuel, and appliances will cause the vehicle to be heavier on one side (fig. 26). As much as a 50 PSI difference is not uncommon.

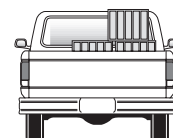


Bottoming out

*fig. 25*



Unlevel



Level

*fig. 26*