



LoadLifter 5000™

S E R I E S

Installation
Guide



1999-2004 Ford F-250 and F-350 Super Duty

Kits 57390 | 88390

4WD (Single and dual rear wheel)

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

Protect your Air Lift Purchase by Completing your Warranty Registration



Thank you for purchasing an Air Lift load support product!

Take a photo of your sales receipt and then scan the QR code to complete your online warranty registration.

IDENTIFYING THE DIFFERENCES BETWEEN KITS

Should you need to contact Air Lift customer service, you will need to know which kit you are inquiring about: standard LoadLifter 5000 or LoadLifter 5000 Ultimate. The kits are easily identifiable by looking at the roll plates.

- Standard **LoadLifter 5000** — Zinc-plated steel roll plates.
- LoadLifter 5000 Ultimate** — Black powder-coated roll plates.



LoadLifter 5000
silver zinc-plated steel
roll plate



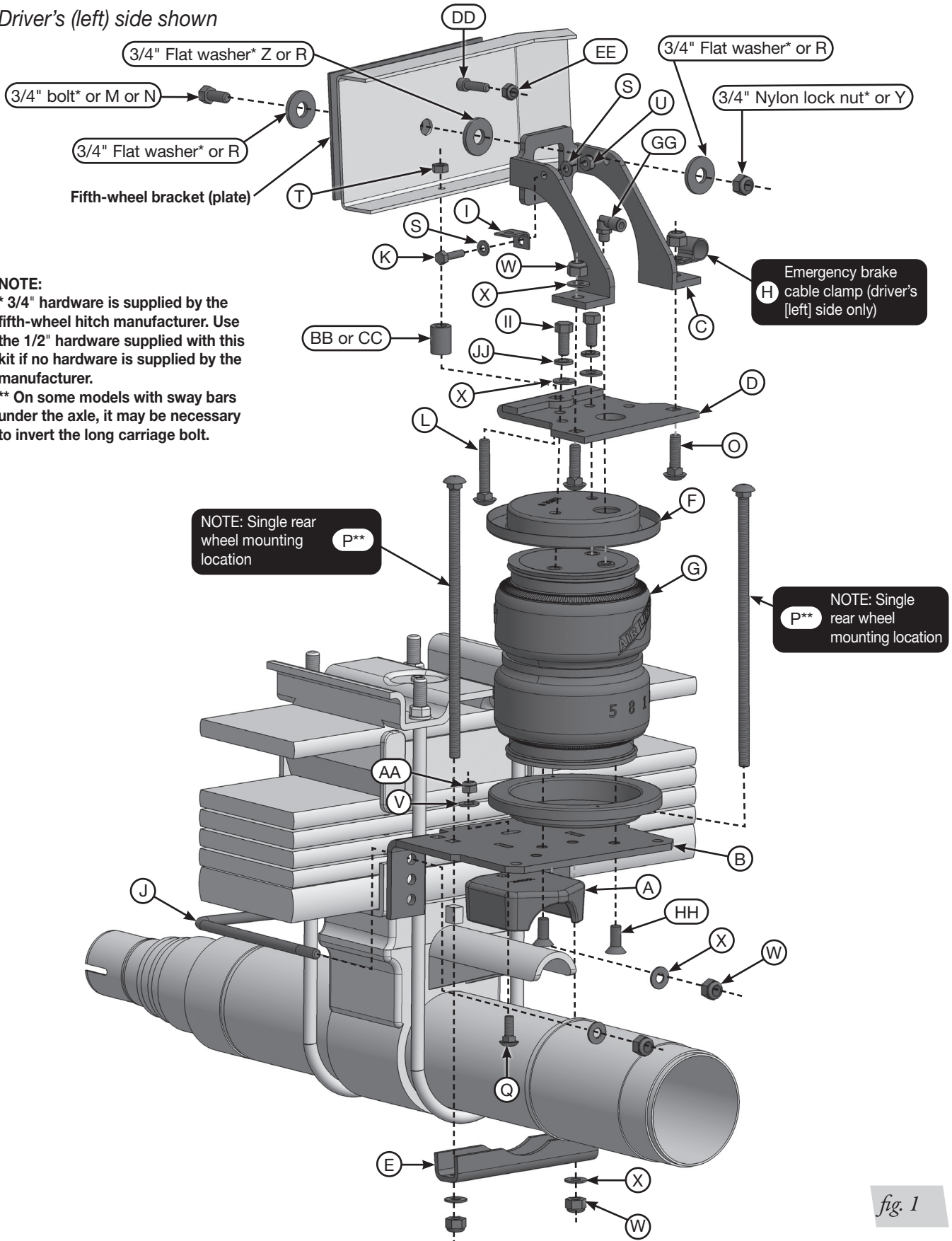
LoadLifter 5000 Ultimate
black powder-coated
roll plate

TABLE OF CONTENTS

Installation Diagram	2
Hardware and Tools Lists	3
Introduction	4
Notation Explanation	4
Installing the LoadLifter 5000 Series System	5
Getting Started	5
For Vehicles Equipped with Emissions Lines	6
Upper Brace Installation	6
Air Spring and Bracket Assembly	7
Attaching the Assemblies to the Frame	9
Attaching the Lower Bracket	11
Installing the Air Lines	13
Installing Nylon Air Lines	13
Installing the Heat Shield	14
Finished Installation Photos	15
Installation Checklist	16
Maintenance and Use Guidelines	16
Minimum and Maximum Pressure	16
Limited Warranty and Return Policy	17

Installation Diagram

Driver's (left) side shown



NOTE:
 * 3/4" hardware is supplied by the fifth-wheel hitch manufacturer. Use the 1/2" hardware supplied with this kit if no hardware is supplied by the manufacturer.
 ** On some models with sway bars under the axle, it may be necessary to invert the long carriage bolt.

NOTE: Single rear wheel mounting location
P**

NOTE: Single rear wheel mounting location
P**

Emergency brake cable clamp (driver's [left] side only)
H

fig. 1

Hardware and Tools Lists

Common Parts Included in Both Kits

Item	Part#	Description	Qty	Item	Part#	Description	Qty
A	03998	Lower bracket cup	2	W	18435	3/8"-16 Nylon lock nut	12
B	03999	Lower bracket main plate	2	X	18444	3/8" Flat washer	15
C	07996	Upper brace	2	Y	18460	1/2"-13 Nylon lock nut	2
D	07997	Upper bracket	2	Z	18556	3/4" Flat washer	2
E	01531	Clamp bar	2	AA	18613	5/16"-18 Thin nylon lock nut	2
H	10181	Emergency brake cable P-clamp	1	BB	13964	Spacer	2
I	10886	"L" Bracket	1	CC	13978	Spacer	2
J	11717	U-bolt	2	DD	18443	7/16" Spacer	1
K	17135	1/4"-20 x 1" Hex-head cap screw	1	EE	18495	M10-1.5 Nylon lock nut	1
L	17141	3/8"-16 x 2 1/2" Carriage bolt	2	FF*	20086	Air line assembly	1
M	17208	1/2"-13 x 2" Hex-head cap screw	2	GG	21837	90-degree Swivel elbow air fitting	2
N	17271	1/2"-13 x 3" Hex-head cap screw	2	HH	17215	3/8"-24 x 3/4" Flat-head socket cap screw	4
O	17361	3/8"-16 x 1 1/4" Carriage bolt	4	II	17203	3/8"-24 x 7/8" Hex-head cap screw	4
P	17387	3/8"-16 x 10" Carriage bolt	4	JJ	18427	3/8" Split lock washer	4
Q	17500	5/16"-18 x 3/4" Carriage bolt	2	KK*	10466	Zip ties	6
R	18207	1/2" Thick flat washer	6	LL*	18411	5/16" Lock washer	2
S	18419	#12 Flat washer	2	MM*	21230	Valve cap	2
T	18422	3/8"-16 Serrated-flange lock nut	2	NN*	21233	5/16" Hex nut	4
U	18425	1/4"-20 Nylon lock nut	1	OO*	21234	Rubber washer	2
V	18433	5/16" Flat washer	2	PP*	18501	Flat washer	2

* Item not shown on Figure 1

Tools List

Description	Qty
Standard and metric open-end or box wrenches	2
Adjustable wrench	1
Ratchet with 3/8", 9/16", & 1/2" deep well sockets	1
5/16" (8mm) Drill bits (very sharp)	1
Standard hex keys	Set
Die grinder	1
Hacksaw	1
Heavy duty drill	1
Torque wrench	1
Standard, metric and SAE sockets and wrenches	1
Hose cutter, razor blade, or sharp knife	1
Hoist or floor jacks	1
Safety stands	2
Safety glasses	1
Air compressor or compressed air source	1
Spray bottle with dish soap/water solution	1

Unique Parts in Each Kit

LoadLifter 5000™ KIT 57390

Item	Part#	Description	Qty
F	11951	Zinc-plated silver roll plate	4
G	58437	Air spring	2

LoadLifter 5000™ KIT 88390 **ULTIMATE**

Item	Part#	Description	Qty
F	11967	Black painted roll plate	4
G	58496	Air spring with jounce bumper	2

The photos in this manual show the LoadLifter 5000 and LoadLifter 5000 Ultimate kits.



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

Introduction

The purpose of this publication is to assist with the installation and maintenance of the LoadLifter 5000 Series air spring kits. All LoadLifter 5000 Series kits utilize sturdy, reinforced, commercial-grade single or double, depending on the kit, convolute bellows. They also incorporate an internal jounce bumper.

The air springs are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 Series kits provide up to 5,000 pounds (2,268kg) of load-leveling support with air adjustability from 5-100 PSI (.34-7BAR).

It is important to read and understand the entire installation guide before beginning installation.

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.



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



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



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

Installing the LoadLifter 5000 Series System

GETTING STARTED

1. Raise the vehicle and support it in a way, using safety stands or equivalent, so that the axle can be safely dropped away from the frame. (Fig. 2).

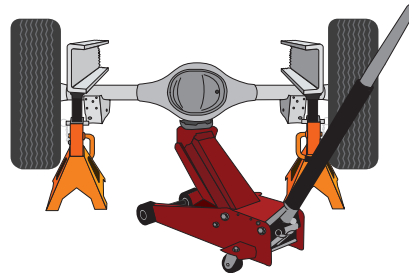


fig. 2

2. Remove the jounce bumpers from under the frame, over the axle (Fig. 3).



fig. 3

3. For dual-rear-wheel vehicles (DRW) it may be necessary to remove the sway bar bolts and straps holding the sway bar to the axle. If removed, retain for reinstallation.
4. Disconnect the wiring harness from the driver's (left) side frame rail (Fig. 4).

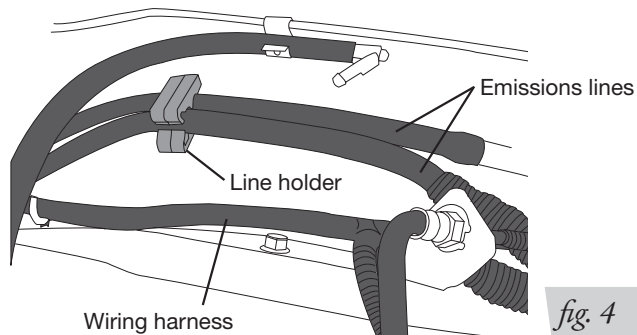


fig. 4

5. Remove the bolt and reinsert through the emergency cable bracket, from the outside of the frame in. Install the 7/16" spacer (DD) on the bolt and cap with the new M10-1.5 nylon lock nut (EE) (Fig. 1). Tighten hardware securely.
6. If the truck has a fifth-wheel hitch already installed, remove the 3/4" hardware that bolts the side bracket to the outside of the frame above the axle (Figs. 1 & 5).

NOTE

Some hitch models have a spacer between the bracket and the frame rail. Be sure to reinstall the spacer when attaching the upper bracket.

FOR VEHICLES EQUIPPED WITH EMISSIONS LINES

1. If the truck has emissions lines running along the inside frame rail on the driver's (left) side, move the lines to create space for the upper brace. If not equipped, skip to the *Upper Brace Installation* section.
2. Carefully push the line holder out of the frame above the axle. Try to minimize damage because it will be reused. Remove any holders forward or rearward of the axle to aid in positioning the lines once the upper brace has been installed (Fig. 4).

UPPER BRACE INSTALLATION

Set the upper frame brace (C) against the driver's (left) side of the frame (Fig. 5). Once the following procedure has been completed for the driver's (left) side, repeat for the passenger's (right) side.

Fifth-Wheel Hitches

No Fifth-wheel Hitch Plate

If the truck has no fifth-wheel hitch or a hitch that does not have a plate running alongside the full length of the frame (these will have an "L" bracket forward and behind the axle, leaving the middle frame open) use the 1/2"-13 x 2" hex-head cap screw (M) with a flat washer (R) through the slot in the side of the frame, then through another flat washer (R) and finally through the upper frame brace. Cap with a flat washer (R) and a 1/2"-13 nylon lock nut (Y) (Fig. 5). Leave loose at this time.

Fifth-wheel Hitch Using Frame Slot

If the truck has an aftermarket fifth-wheel hitch that has a bracket (plate) running alongside of the frame and it uses this slot to secure the bracket to the frame with existing hardware, install the existing hardware previously removed in the *Getting Started* section from the fifth-wheel installation for securing the brace (Fig. 5). Make sure to install the large 3/4" flat washer (Z) between the brace and frame (Fig. 5). Do not tighten at this time.

Fifth-wheel Hitch Plate Not Using Frame Slot

If the truck has an aftermarket fifth-wheel hitch that has a bracket (plate) running alongside of the frame and it does not have any attaching hardware on the side where the slot in the frame is, drill a 1/2" hole through the plate using the slot in the frame as a template.

It may be necessary to mark and remove the bracket (plate) from the side of the frame in order to drill the hole correctly. Re-attach once the hole is drilled.

Insert a 1/2"-13 x 3" hex-head cap screw (N) with a 1/2" thick flat washer (R) through the fifth-wheel plate previously drilled, the frame, then through another 1/2" flat washer (R) and finally the upper frame brace. Cap with a 1/2" thick flat washer (R) and a 1/2"-13 nylon lock nut (Y) (Fig. 5). Leave loose at this time.

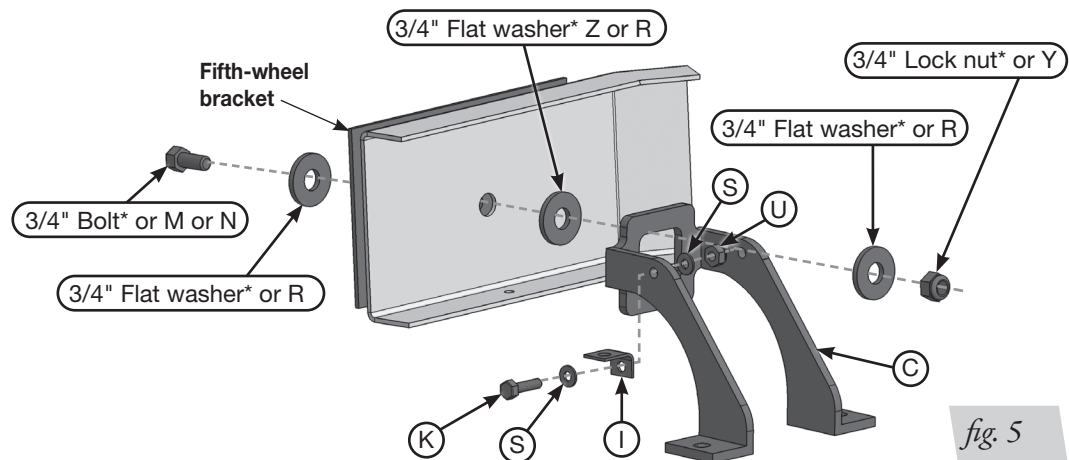


fig. 5

AIR SPRING AND BRACKET ASSEMBLY

1. Set roll plates (F) over the top and bottom of the air spring (G) (Fig. 1).

NOTE

The radiused (rounded) edge of the roll plate (F) will be toward the air spring so that the air spring is seated inside both roll plates.

2. Install the swivel elbow fitting (GG) into the top of the air spring finger-tight plus 1 1/2 turns.
3. Insert a 5/16"-18 x 3/4" carriage bolt (Q) through the square hole in the lower bracket cup (A). Make sure to insert the carriage bolt on the flanged side of the bracket. Set the assembly onto the lower bracket main plate (B) making sure the lower bracket cup is on the flanged side of the bracket (Fig. 6).

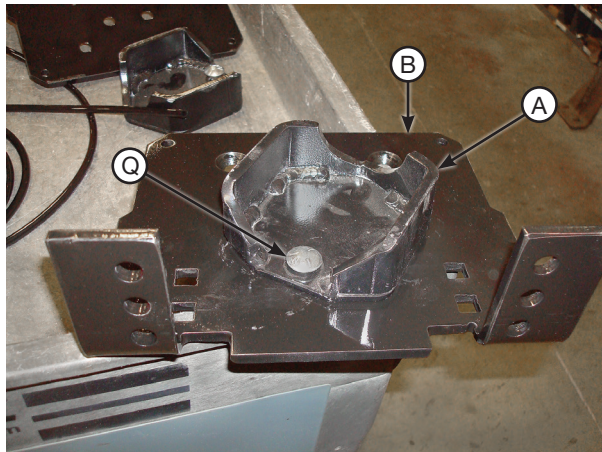


fig. 6

4. Turn the lower bracket main plate over and cap the carriage bolt with a 5/16"-18 thin lock nut (AA) and a 5/16" washer (V). Tighten the nut only tight enough so that the cup swivels on the lower bracket main plate (Fig. 7).

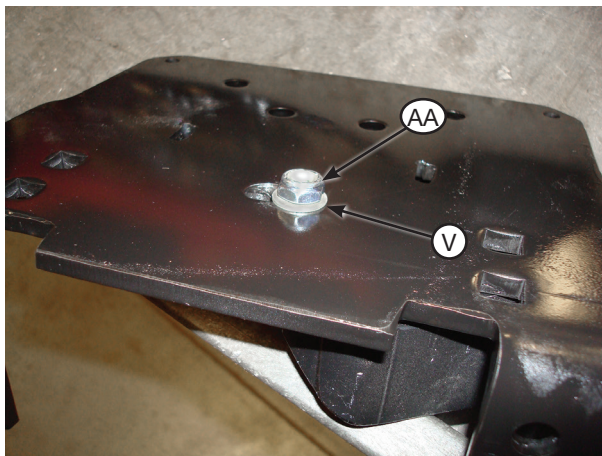
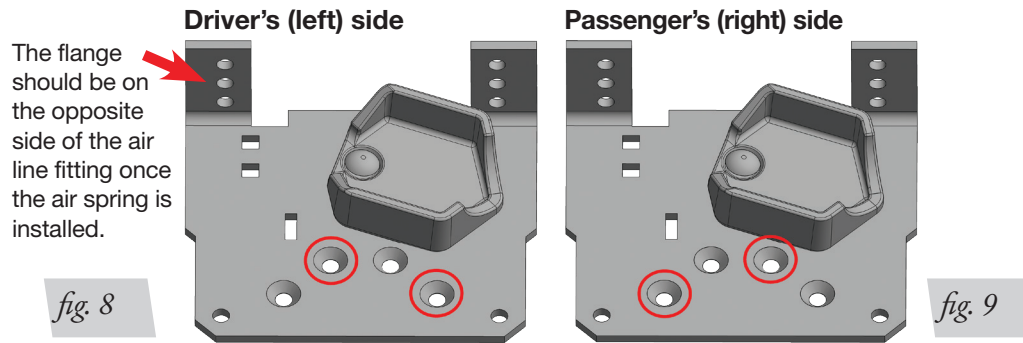


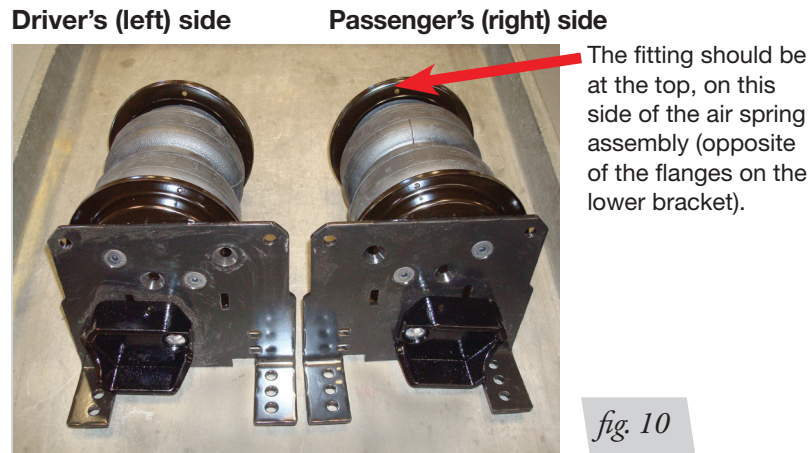
fig. 7

- The lower bracket (B) has two sets of air spring mounting holes. Using the corresponding holes in the lower bracket designated (Figs. 8 & 9), attach the air spring to the brackets using the 3/8"-24 x 3/4" flat-head socket cap screw (HH). Torque mounting screws to no more than 20 lb.-ft. (27Nm).

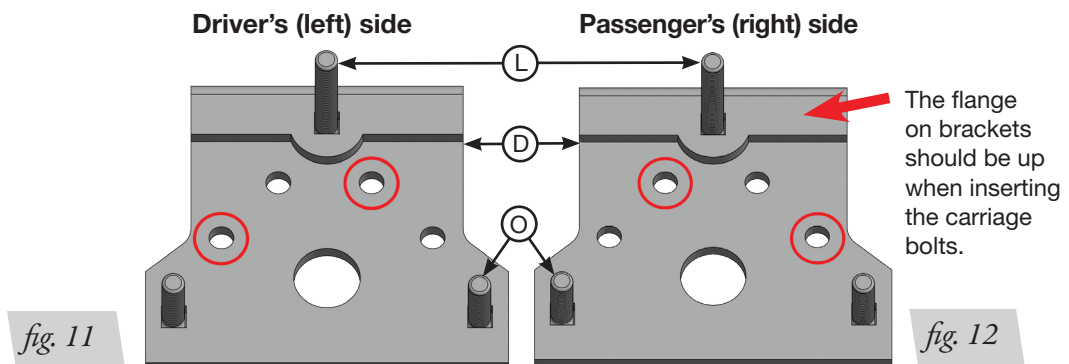


When installing on the air spring, make sure the bracket edge facing you is on the fitting side of the air spring.

- Figure 10 shows the driver's (left) and passenger's (right) side lower bracket assemblies.



- Set the lower bracket assemblies aside. Insert two 3/8"-16 x 1 1/4" carriage bolts (O) up through the two square holes in both upper brackets (D) (Figs. 11 & 12). Also install one 3/8"-16 x 2 1/2" carriage bolt (L) through the remaining hole. The head of this carriage bolt will be hidden once the upper bracket is mounted to the air springs.



8. Make sure the roll plates (F) are on top of both air spring assemblies previously assembled. Set the driver's (left) side upper bracket onto the driver's (left) side air spring assembly using the holes in the upper bracket designated (Figs. 10 & 11) and attach to the air spring with two 3/8" flat washers (X), split lock washers (JJ) and 3/8"-24 x 7/8" hex-head cap screws (II). Torque the hardware to no more than 20 lb.-ft. (27Nm).
9. Repeat the above process for the passenger's (right) side assembly (Figs. 10 & 12). Figure 14 shows the finished assemblies.

NOTE

One of the 3/8"-16 x 1 1/4" carriage bolts (O) will not be covered by the roll plate and may fall out. If so, retain for use in the "Attaching the Assemblies to the Frame" section later in this manual.

Driver's (left) side Passenger's (right) side

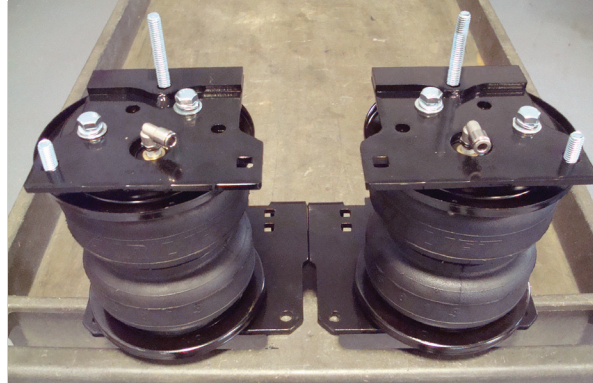


fig. 13

ATTACHING THE ASSEMBLIES TO THE FRAME

1. If not done so yet, drop the axle or raise the frame to make room for the assemblies to be put into position.
2. Two spacer (BB or CC) lengths are supplied to properly fit between the frame jounce bumper bracket and frame. Which one is used depends on the model. Use the spacer that can be inserted where the stock jounce bumper was removed, which when butted against the frame, will be flush (or close to) the bottom of the jounce bumper bracket that is riveted to the frame (Figs. 14a, 14b & 14c).

NOTE

There is a possibility that the stock spacer will remain in the jounce bumper bracket. It can be left there and reused.

Spacer is too short. Use the longer one.

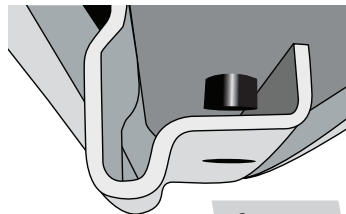


fig. 14a

Spacer is too long. Use the shorter one.

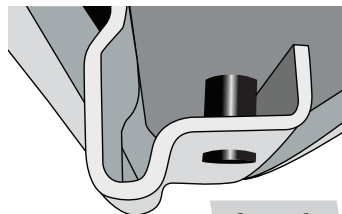


fig. 14b

Spacer is the right length if it is flush with the bottom of the jounce bumper bracket.

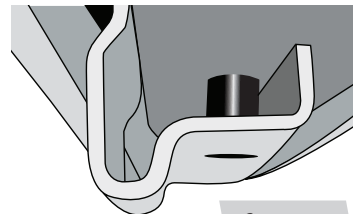


fig. 14c

- Set the driver's (left) side assembly onto the jounce bumper strike plate (Fig. 17). Raise the axle up just enough to insert the long carriage bolt (L) and correct spacer (BB or CC) that is installed in the upper bracket through the existing jounce bumper hole in the bottom of the frame (Fig. 15). At the same time, line up the upper brace previously installed onto the remaining two carriage bolts (O) in the upper bracket. Do this just enough for the carriage bolt to hold the assembly into position on the jounce bumper strike plate.

NOTE

The upper bracket should rest on the spacer and the stock jounce bumper bracket.

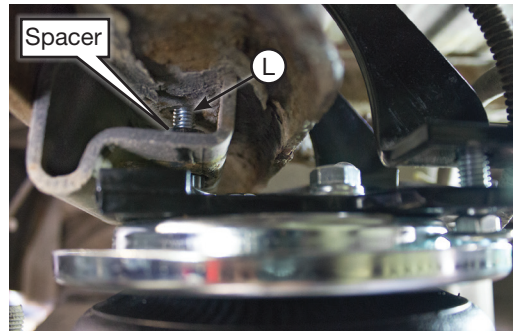


fig. 15

Driver's (left) side



fig. 16

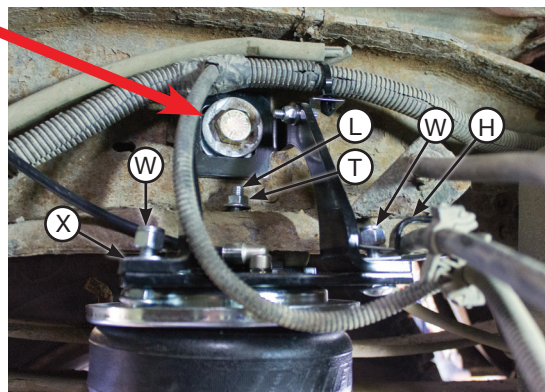
Passenger's (right) side



fig. 17

- Repeat for the passenger's (right) side. (Fig. 17).
- Install the 3/8"-16 serrated lock nut (T) on the carriage bolt (L) that went through the existing jounce bumper hole. Leave loose at this time (Fig. 18).

Torque the upper hardware, torque to 44 lb.-ft. (60Nm).



Torque 3/8" hardware, torque to 35 lb.-ft. (47Nm).

fig. 18

CAUTION

BE SURE NOT TO PINCH THE PREVIOUSLY MOVED WIRING OR LINES INSIDE THE LEFT FRAME RAIL.

6. Install the emergency brake cable P-clamp (H) over the emergency brake cable and attach to the forward brace/upper bracket bolt (O) (Fig. 18) on the driver's (left) side. Cap with a 3/8"-16 nylon lock nut (W).
7. Both sides: Cap the remaining brace/upper bracket bolts (O) with 3/8" flat washers (X) and 3/8"-16 nylon insert lock nuts (W). Torque all 3/8" hardware attaching the upper bracket to the frame to 35 lb.-ft. (47Nm) (Fig. 18).
8. With the spacers (BB or CC) on the upper brackets tight to the bottom of the frame and the braces tight to the upper bracket, tighten the 1/2" or 3/4" hardware, previously installed, that hold the brace to the frame. Torque the hardware to 44 lb.-ft. (60Nm) (Fig. 18).
9. If the truck is equipped with the emissions line previously removed, attach the L-bracket (I) to the back or front leg of the frame brace using the 1/4"-20 x 1" hex-head cap screw (K), flat washers (S) and 1/4"-20 nylon lock nut (U) supplied (Figs. 5 & 19).
10. Insert the line holder post into the L-bracket (I) attached to the front or back leg of the upper left brace (C) (Fig. 19). It may be necessary to move the line holder post forward or back on the lines to line up correctly with the L-bracket hole. Reattach any line holders removed forward or behind the axle, if possible, that were removed to aid in positioning the upper brace.

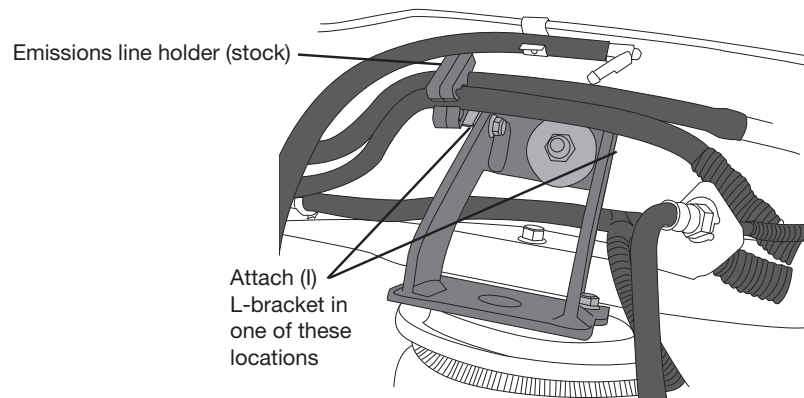


fig. 19

ATTACHING THE LOWER BRACKET

1. Determine which bolt holes to use for the 3/8"-16 x 10" carriage bolts (P) based on the type of truck (Figs. 20 & 21):
 - **Single-rear-wheel (SRW) trucks:** inside holes
 - **Dual-rear-wheel (DRW) trucks:** outside holes

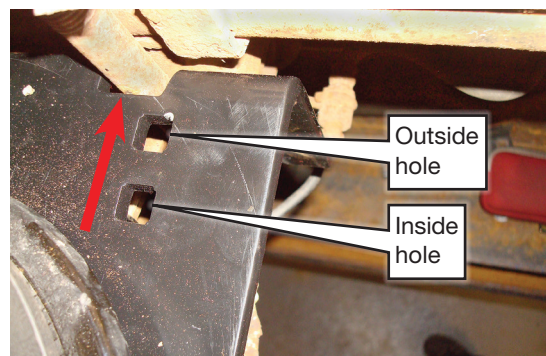


fig. 20

2. Push the lower bracket (B) up against the stock U-bolts so that the flanges are locked into position around the stock U-bolts (Fig. 20). It may be necessary to rotate the lower bracket cup (A) on the jounce bumper strike plate (Fig. 21).

Push the lower bracket against the stock U-bolts, with the bracket flanges locked around the U-bolts

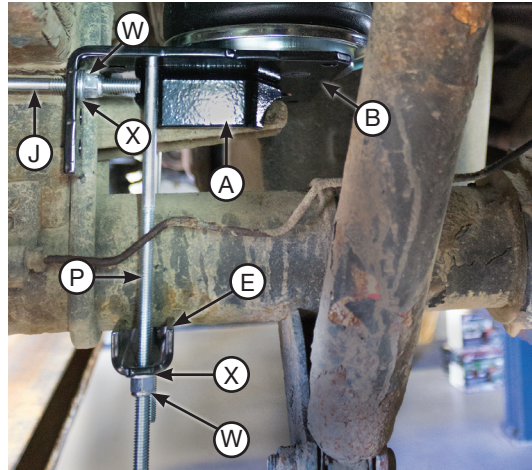


fig. 21

CAUTION

WHEN ATTACHING THE LOWER BRACKET ASSEMBLY, PLACE THE CARRIAGE BOLT IN BETWEEN OR BEHIND THE HARD BRAKE LINE, BEHIND THE AXLE. IT MAY BE NECESSARY TO ADJUST THE BRAKE LINE SLIGHTLY TO PROVIDE PROPER CLEARANCE. THE BRAKE LINE MUST NOT TOUCH THE CARRIAGE BOLT.

3. Position the U-bolt (J) around the leaf spring assembly and insert into the lower bracket (B) hole closest to the leaf spring stack (Fig. 21). The lower bracket flanges must be locked on the front and rear of the stock U-bolts that hold the leaf springs to the axle.
4. Cap the U-bolts with two 3/8" flat washers (X) and two 3/8"-16 nylon lock nuts (W) and evenly tighten only enough to draw the bracket up against the stock U-bolt (Fig. 21).
5. Set the clamp bar (E) over the long carriage bolts below the axle and cap with two 3/8" flat washers (X) and two 3/8"-16 nylon lock nuts (W) (Fig. 21).

NOTE

If the truck has a sway bar and the carriage bolt (P) interferes, invert the carriage bolt.

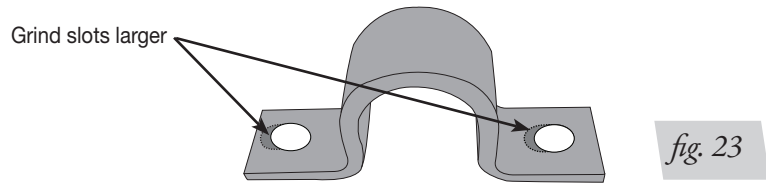
6. Tighten the axle clamp bar hardware evenly until it touches the axle. Torque the axle clamp bar bolts to 16 lb.-ft. (22Nm). Trim the 3/8"-16 x 10" carriage bolts below the nylon lock nuts if necessary.
7. Torque the leaf spring U-bolt nuts to 10 lb.-ft. (13Nm). Once tight, the upper and lower brackets will not be parallel and may look like they are out of alignment. This condition is considered normal because of the way the lower bracket and upper bracket mounts are designed. Some variance from one unit to another is to be expected.
8. Once the lower bracket hardware is tight, snug the lower mounting plate/swivel cup bracket mounting hardware with an open-end wrench (Fig. 22).



fig. 22

NOTE

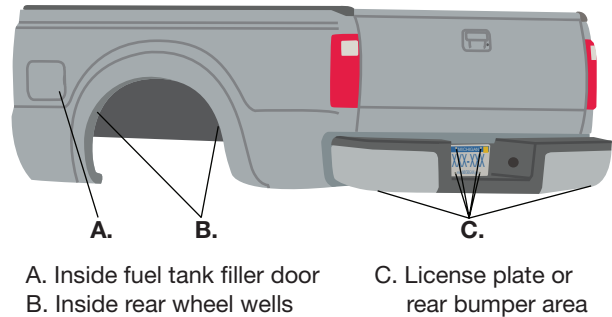
If the sway bar straps were removed during installation and they interfere with the lower bracket when trying to reinstall them, it may be necessary to slot the straps before reinstalling (Fig. 23).



Installing the Air Lines

Choose the locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. 24).

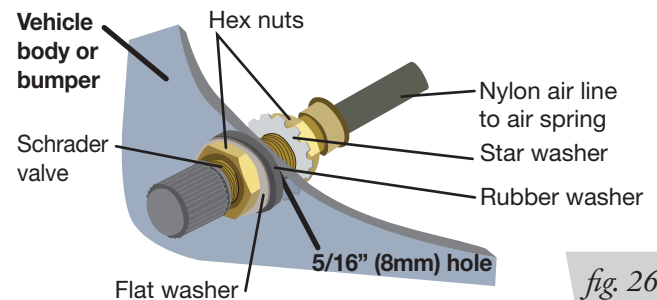
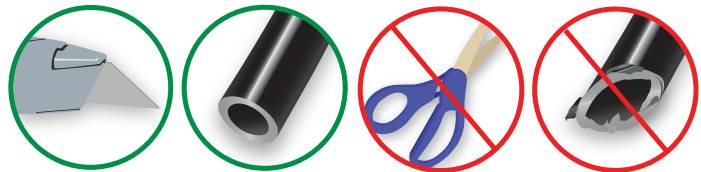
1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. 25). Do not use scissors or wire cutters.



CAUTION

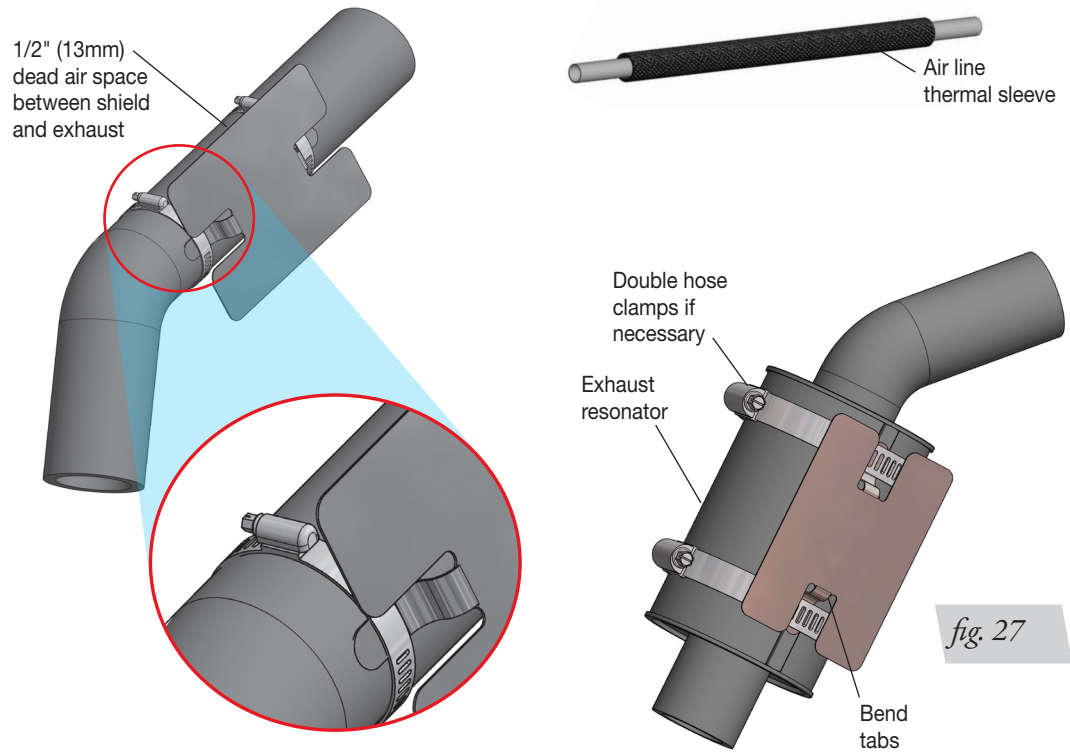
KEEP AT LEAST 6" (152MM) OF CLEARANCE BETWEEN ALL AIR LINES AND THE EXHAUST SYSTEM. AVOID SHARP BENDS AND EDGES.

2. Use zip ties to secure the air line to fixed points along the chassis. Do not pinch or kink the air line. Leave at least 2" (51mm) of slack in the air line to allow for any movement that might pull on the air line. The minimum bend radius for the air line is 1" (25mm).
3. Install the Schrader valve in the chosen location (Fig. 26).



INSTALLING THE HEAT SHIELD

1. Attach the metal heat shield to the exhaust where it is closest to the air spring. Slide the air line thermal sleeve over the air line and place it where the air line is closest to the exhaust (Fig. 27).



Finished Installation Photos

1. The following images show the finished installation of both sides (Figs. 28, 29, 30 & 31).



Driver's (left) side as seen from rear.



Driver's (left) side as seen from the middle of the truck.



Passenger's (right) side as seen from rear.



Passenger's (right) side as seen from the front.

INSTALLATION CHECKLIST

- Clearance test** — Inflate the air springs to 40-50 PSI (2.8-3.4BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against each sleeve. Be sure to check the tire, brakes, frame, shock absorbers and brake cables.
- Leak test before road test** — Inflate the air springs to 40-50 PSI (2.8-3.4BAR) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- Heat test** — Be sure there is sufficient clearance from heat sources, at least 6" (152mm) for air springs and air lines. If a heat shield was included in the kit, install it. If there is no heat shield, but one is required, call Air Lift customer service at **(800) 248-0892**.
- Fastener test** — Recheck all bolts for proper torque.
- Road test** — The vehicle should be road tested after the preceding tests. Inflate the air springs to recommended driving pressures. Drive the vehicle 10 miles (16km) and recheck for clearance, loose fasteners and air leaks.
- Operating instructions** — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all of the paperwork that came with the kit.

Maintenance and Use Guidelines

1. Check air pressure weekly.
2. Always maintain normal ride height. Never inflate beyond 100 PSI (7BAR).
3. If the system develops an air leak, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring.

Minimum Recommended Pressure	Maximum Air Pressure
5 PSI (.34BAR)	100 PSI (7BAR)

CAUTION

FOR SAFETY AND TO PREVENT POSSIBLE DAMAGE TO THE VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR) OR PAYLOAD RATING, AS INDICATED BY THE VEHICLE MANUFACTURER.

CAUTION

ALTHOUGH THE AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 100 PSI (7BAR), THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON LOAD AND GROSS VEHICLE WEIGHT RATING.

Limited Warranty and Return Policy

Air Lift Company provides a limited lifetime warranty to the original purchaser of its load support products, that the products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available at www.airliftcompany.com/warranty.

For additional warranty information contact Air Lift Company customer service.



Thank you for purchasing Air Lift Products – the Authorized Installer's choice!

Need Help?

Contact Air Lift Company Customer Service at (800) 248-0892
or email service@airliftcompany.com.

For calls outside the U.S. or Canada, dial (517) 322-2144.

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