

Load**LIFTER**7500XL™



Installation Guide

Kit 57599

Ford Super Duty



Representative vehicle image

MN-1040 • (031901) • ECR 9144

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.

Load**LIFTER**7500**XL**

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A. Installation Diagram

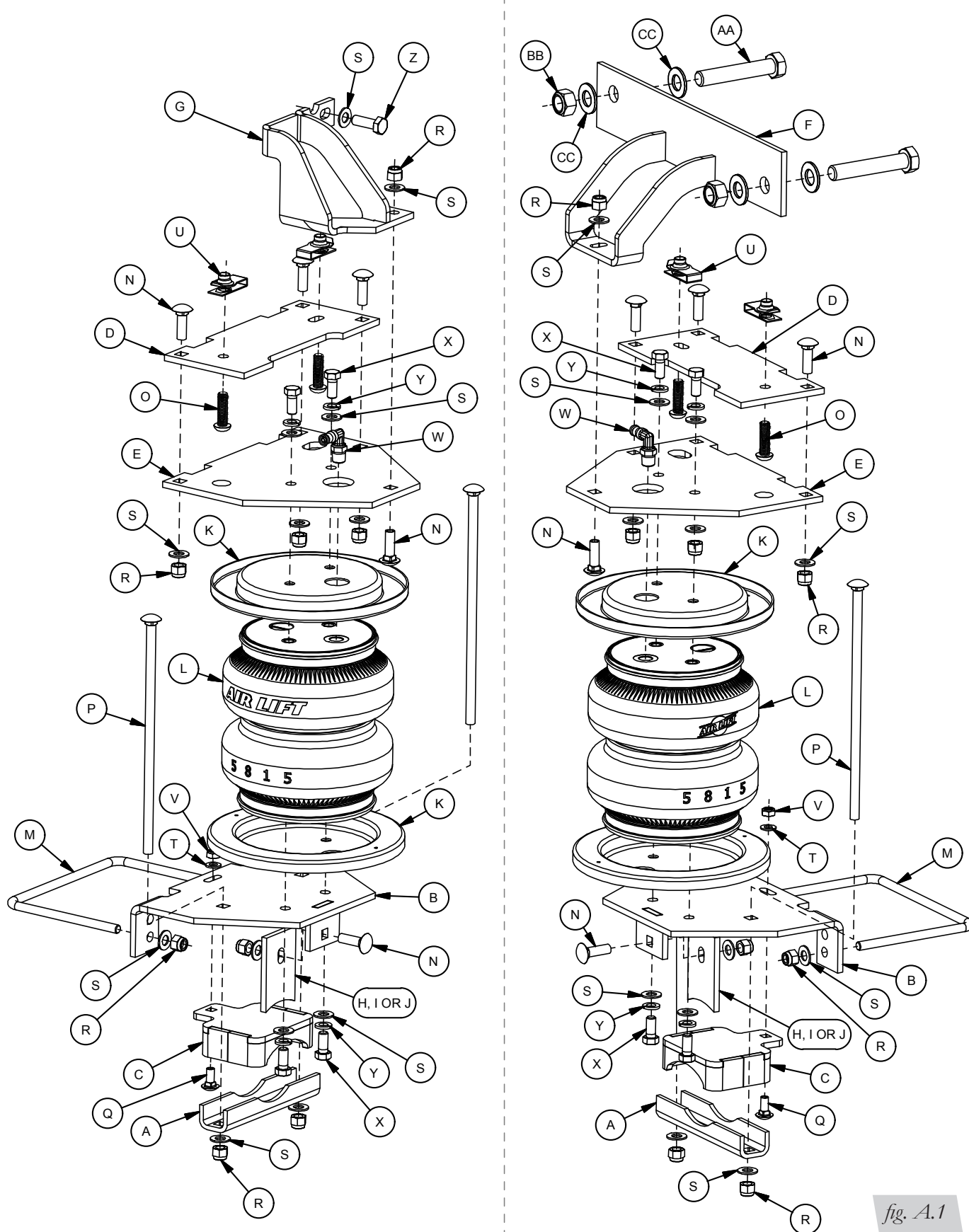


fig. A.1

B. Hardware and Tools Lists

HARDWARE LIST

Item	Part #	Description	Qty
A	01531	Clamp bar	2
B	03818	Lower bracket.....	2
C	03225	Lower bracket cup.....	2
D	07974	Upper chassis bracket.....	2
E	07925	Upper air spring bracket.....	2
F	07895	RH upper frame brace	1
G	07873	LH upper frame brace	1
H	03913	Lower leg adapter, 3.5" axle	2
I	03914	Lower leg adapter, 4.0" axle	2
J	03915	Lower leg adapter, 4.5" axle	2
K	11897	Roll plate.....	4
L	58115	Air spring	2
M	11770	U-bolt.....	2
N	17361	3/8"-16 x 1 1/4" Carriage bolt	10
O	17366	M10-1.5 x 35mm Button head cap screw	4
P	17387	3/8"-16 x 10" Carriage bolt	4
Q	17500	5/16"-18 x 3/4" Carriage bolt	2
R	18435	3/8"-16 Nylon lock nut.....	18
S	18444	3/8" Flat washer	27
T	18501	M8 Flat washer	4
U	18622	M10-1.5mm, Short universal nut.....	4
V	18613	5/16"-18, Nylon lock nut.....	2
W	21830	1/4" NPT x 1/4" PTC swivel 90-degree fitting	2
X	17203	3/8"-24 x 7/8" Hex bolt	8
Y	18427	3/8" Lock washer.....	8
Z	17409	M10-1.5 x 30mm Hex cap screw	1
AA	17348	5/8"-11 x 4.5" Hex cap screw	2
BB	18548	5/8"-11 Nylon lock nut.....	2
CC	18449	5/8"-11 Flat washer	4
DD*	20086	Air line with 2 Schrader valves.....	1
EE*	10466	Zip ties	6
FF*	21230	Valve caps	2
GG*	21234	Rubber washers	2
HH*	18411	Small star washer	2
II*	21233	5/16" Hex nut	4

*Not shown in Figure A.1

TOOLS LIST

Description.....	Qty
Metric & standard open-end box wrenches.....	set
Ratchet with metric and standard sockets.....	set
Drill and 5/16" drill bit.....	1
Torque wrench.....	1
Hex key wrenches metric and standard.....	set
Hose cutter, razor blade or sharp knife	1
Hoist or floor jack	1
Safety stands.....	2
Safety glasses	1
Air compressor or compressed air source	1
Spray bottle with dish soap/water solution	1



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

C. Introduction

The purpose of this publication is to assist with the installation and maintenance of the LoadLifter 7500 XL air spring kit. LoadLifter 7500 XL utilizes sturdy, reinforced, commercial-grade double convolute bellows. The bellows are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 7500 XL kits are recommended for most 3/4- and 1-ton pickups and SUVs with leaf springs and provide up to 7,500 pounds of load-leveling support with air adjustability from 5-100 PSI.

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 guidelines and operating tips.

Air Lift Company reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Company at **(800) 248-0892** or visit **airliftcompany.com**.

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.

NOTE

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

D. Installing the LoadLifter 7500 XL System

GETTING STARTED

1. Raise the vehicle and support it in a way, using safety stands or equivalent, that the axle can be safely dropped away from the frame. This will need to be done in order for the air spring assembly to be put into position between the axle and frame (Fig. D.1).

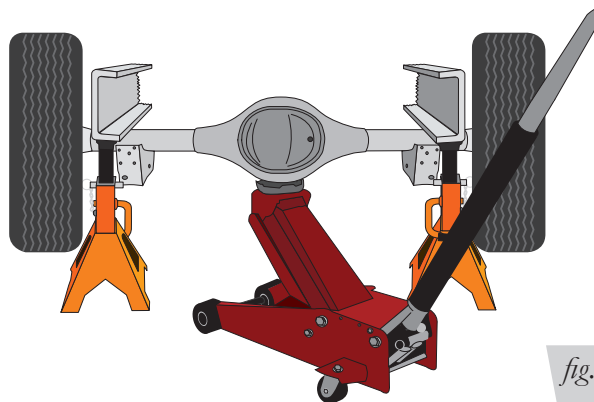


fig. D.1

INSTALLING THE UPPER CHASSIS BRACKETS

1. Unbolt and remove the jounce bumper assembly from under the frame on both sides (Fig. D.2).



fig. D.2

2. Remove the clip-in studs by prying on the hinged end with a screwdriver to release. Pull all four out of the frame (Fig. D.3).



fig. D.3

3. Install the universal nuts (U) into the frame rail, lining up the holes in the frame and the threads in the nuts so that a bolt can be installed (Fig. D.4).

TECH TIP

A flat-tipped screwdriver works well in prying the universal nut into position.

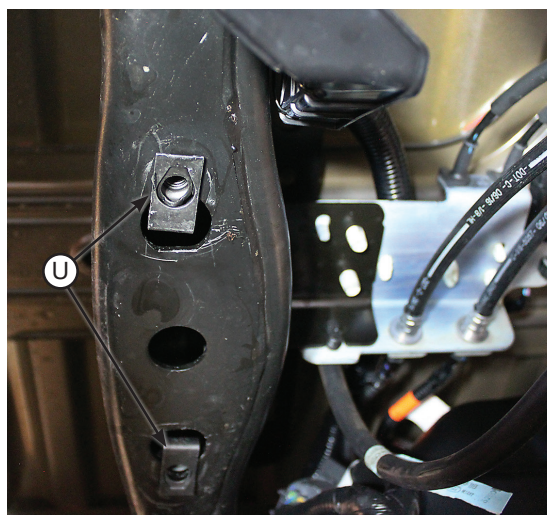


fig. D.4

4. Insert the 3/8"-16 x 1 1/4" carriage bolts (N) into the upper chassis bracket (D). Install the upper chassis bracket onto the frame using the M10-1.5 x 35mm button head cap screws (O) so that the large cut-out on the side of the bracket is inboard of the frame rail and the slotted hole in the center is forward (Fig. D.5). Torque hardware to 38 lb.-ft. (52Nm).

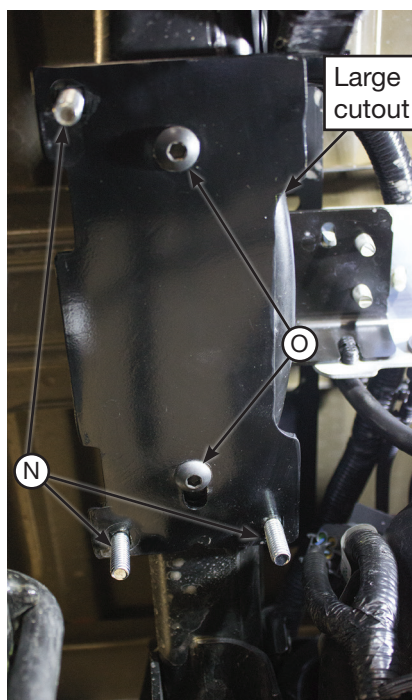


fig. D.5

AIR SPRING AND BRACKET ASSEMBLY

1. Install the swivel elbow fitting (W) into the top of the air spring finger tight. Tighten the swivel fitting an additional one and a half turns. Place a roll plate (K) on top of the air spring (Fig. D.6).



fig. D.6

2. Insert 3/8"-16 x 1 1/4" carriage bolts (N) into the square holes on the brackets, then secure the upper air spring bracket (E) onto the top of the air springs using 3/8"-24 x 7/8" hex bolts (X), 3/8" lock washers (Y) and 3/8" flat washers (S). At this stage, the air spring assemblies are left- and right-hand units. Push the brackets as far forward as possible (Fig. D.7). Torque the hardware to no more than 20 lb.-ft. (27Nm).

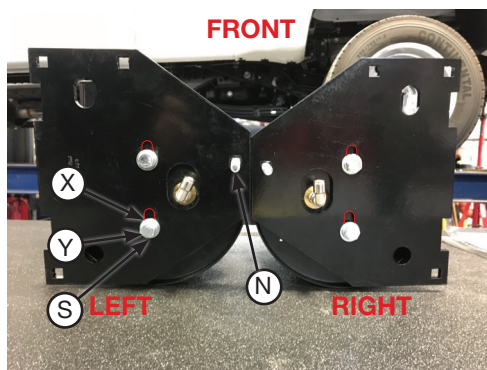


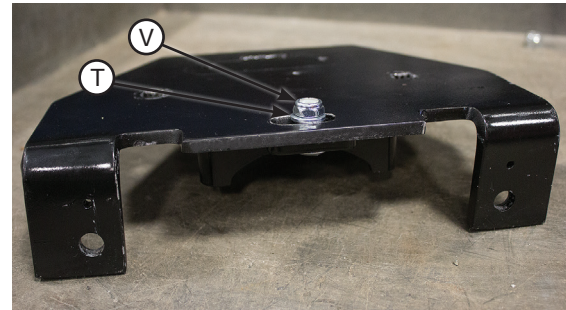
fig. D.7

3. Flip the assemblies over and set a roll plate onto the bottom of the air spring (Fig. D.8).

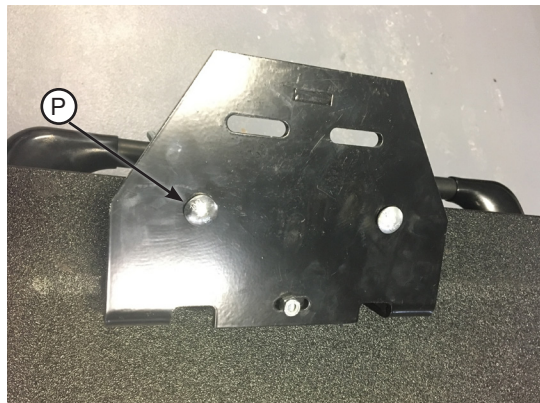


fig. D.8

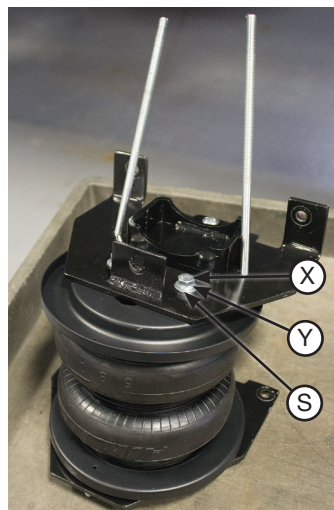
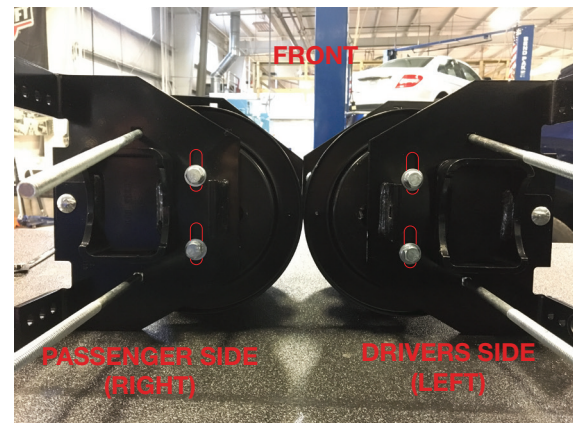
4. Install the lower bracket cup (C) onto the lower bracket main plate using a 5/16"-18 x 3/4" carriage bolt (Q) (Fig. D.9). Cap with an M8 flat washer (T) and 5/16"-18 nylon lock nut (V) (Fig. D.10). Snug the bolt, but leave loose enough for the bracket to move freely in the slot.


fig. D.9

fig. D.10

5. Insert two 3/8"-16 x 10" carriage bolts (P) through the square holes in the lower bracket main plate (B) (Fig. D.11).


fig. D.11

6. Set the lower bracket assemblies onto the air spring with a roll plate installed and attach with two 3/8"-24 x 7/8" hex bolts (X), 3/8" lock washers (Y) and 3/8" flat washers (S) (Fig. D.12). Torque the hardware to no more than 20 lb.-ft. (27Nm). Push the lower bracket as far forward as possible. Refer to Figure D.13.


fig. D.12

fig. D.13

7. Select the appropriate lower leg adapter for the specific vehicle. This is determined by the diameter of the axle (See Table 1). This brace will be attached with a 3/8"-16 x 1 1/4" carriage bolt (N), a nylon lock nut (R) and a flat washer (S). Torque the nylon lock nut to 10 lb.-ft. (14Nm) (Figs. D.14 & D.15).

Axle Diameter	Part #
3.5"	03913
4.0"	03914
4.5"	03915

Table 1



fig. D.14

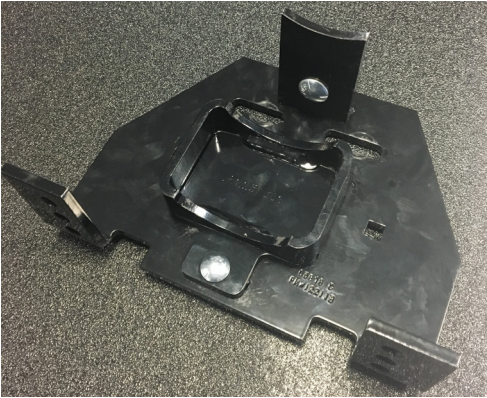


fig. D.15

NOTE

To determine the diameter of the axle, use a tape measure to measure the circumference. Divide the circumference by pi (3.14) (diameter = circumference/3.14).

8. Figure D.16 shows the driver's and passenger's side assemblies.

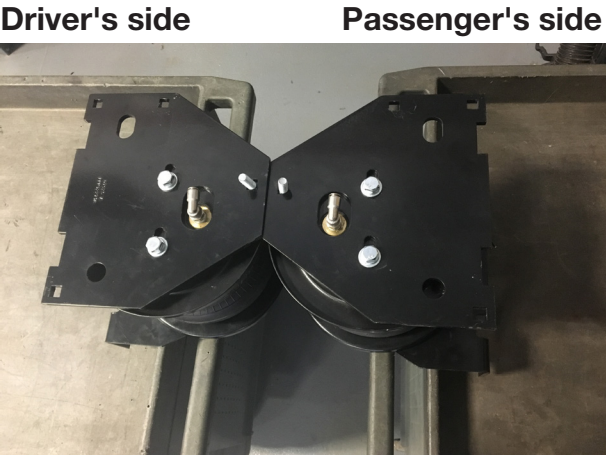


fig. D.16

INSTALLING THE ASSEMBLIES

1. With the vehicle supported by safety stands, drop the axle or raise the body so that the assemblies can be put into position in between the axle and frame. Set the driver's side and passenger's side assemblies into position so that the lower bracket cup nests on the jounce bumper strike plate. Push the lower bracket so that it is flush against the leaf spring stack and both flanges on the lower bracket are locked around the stock U-bolts (Fig. D.17).

NOTE

The flanges need to be oriented so that they lock around the truck's existing leaf spring U-bolts.

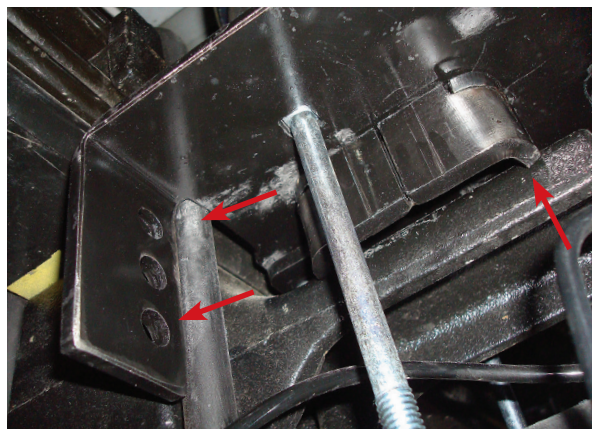


fig. D.17

NOTE

On the driver's side, the long carriage bolt in the lower bracket will be between the hard brake line and axle (Fig. D.23). On the passenger's side, the carriage bolt will be on the back side of the brake line (Fig. D.24).

2. The ABS sensor line is attached to the axle via a clip on the brake line bracket (circled in red) (Fig. D.18). Remove this clip and zip tie the line to the brake hard line (blue circle) to keep it away from the lower support leg (Fig. D.19).



fig. D.18

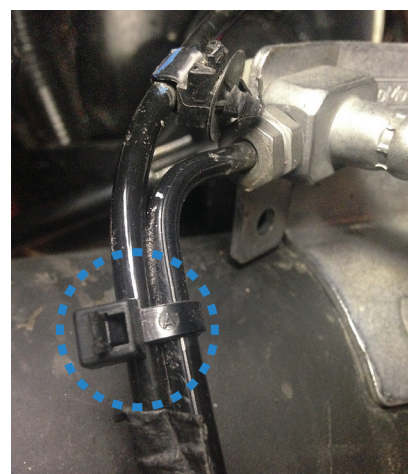


fig. D.19

- 3 Install the U-bolts (M) around the jounce bumper strike plate/spacer blocks and insert through either set of holes in the lower bracket (Fig. D.20). Cap with the 3/8" flat washers (S) and 3/8"-16 nylon lock nuts (R). Snug the bolts evenly, just enough to hold the lower bracket flush against the stock U-bolts.



fig. D.20

4. Set the lower clamp bar (A) over the carriage bolts under the axle (Fig. D.21). Attach with 3/8" flat washers (S) and 3/8"-16 nylon lock nuts (R). Evenly torque the lower clamp bar hardware to 16 lb.-ft. (22Nm). Finish tightening the U-bolt hardware previously snugged by torquing to 10 lb.-ft. (14Nm).

NOTE

On vehicles with anti-sway bars, it may be necessary to trim the front carriage bolt that secures the clamp bar.

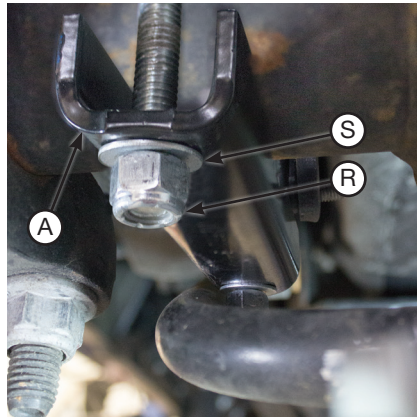


fig. D.21

5. Snug the nut that holds the lower bracket main plate and lower bracket cup together to finish the lower bracket installation (Fig. D.22).

TECH TIP

This nut will be difficult to tighten. It may be necessary to flip over the wrench a couple times and move to the front/back side of the axle to tighten completely.



fig. D.22

6. Figures D.23 & D.24 show the lower bracket installed. Note the location of the carriage bolts in conjunction with the hard brake and ABS lines.

Driver's side

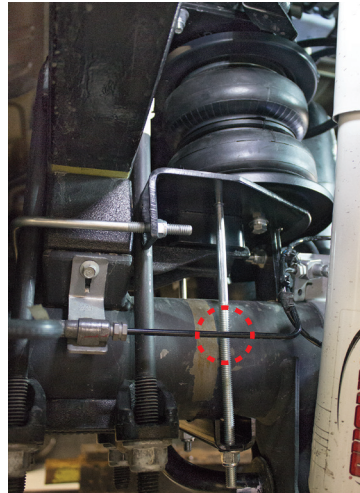


fig. D.23

Passenger' side

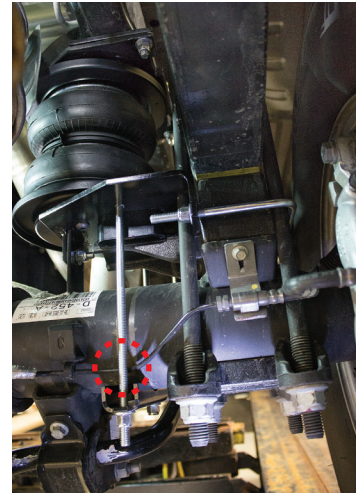


fig. D.24

CAUTION

IT WILL BE NECESSARY TO PUSH THE HARD BRAKE LINE AWAY FROM THE LOWER BRACKET CARRIAGE BOLT IF THE LINE IS RESTING ON IT.

DRIVER'S SIDE UPPER BRACE INSTALLATION

1. Locate the M10 bolt that holds the brake line bracket to the chassis and remove it (Fig. D.25). While raising the axle or lowering the body of the vehicle, align the upper air spring bracket carriage bolts with the frame bracket so the carriage bolts protrude through the bracket.



fig. D.25

2. Place the upper frame brace on top of the air spring bracket, against the side of the frame. Use an M10 bolt (Z) and 3/8" flat washer (S) to attach the bracket to the frame via the same hole from which the factory bolt was removed. The lower hole on the upper bracket attaches to the carriage bolt from Fig. D.7 with a flat washer (S) and nylon lock nut (R). After the bracket is in place, proceed to torque the upper M10 bolt and the 3/8" lock nut to 16 lb.-ft. (22Nm) (Fig. D.26).

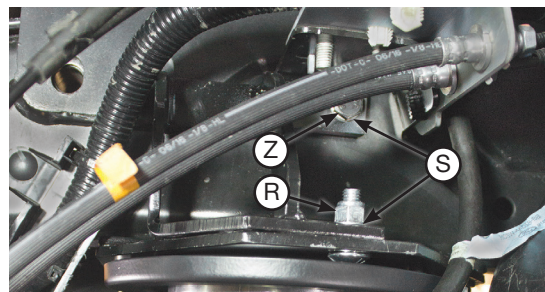


fig. D.26

PASSENGER'S SIDE UPPER BRACE INSTALLATION

1. Locate the clip (blue circle) that holds the wiring harness for the O₂ sensor. Discard the clip, as it will no longer be needed (Fig. D.27).

NOTE

Some models may not have the O₂ sensor clip.

2. Some models come equipped with a factory fifth-wheel bracket. It will be necessary to remove the hardware from these holes if the vehicle has this bracket. Find the two holes located under the upper frame brace. Attach the upper frame brace using the included 5/8" hex cap screws (AA), nuts (BB) and washers (CC) (Fig. D.28).

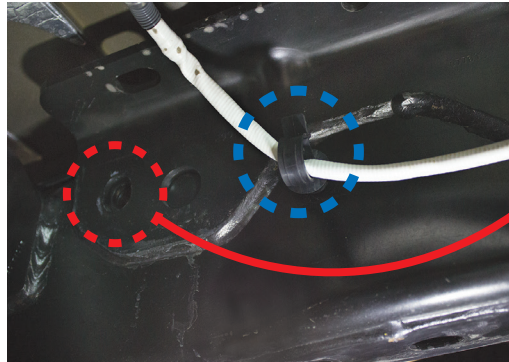


fig. D.27

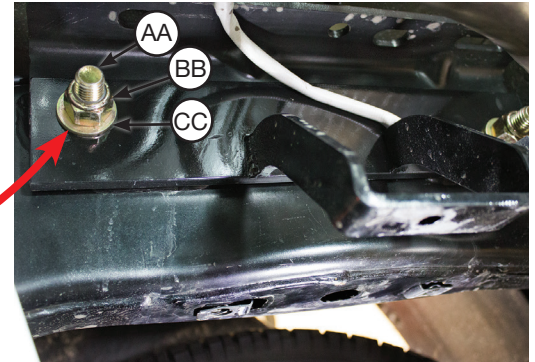


fig. D.28

3. The upper chassis bracket is attached with the previously installed 3/8"-16 x 1 1/4" carriage bolt, 3/8" flat washer (S) and 3/8"-16 nylon lock nut (R) (Fig. D.29). After the upper brace is in place, torque all the hardware that attach the upper brackets to each other and the frame. Torque the 3/8"-16 nut to 16 lb.-ft. (20Nm) and the 5/8"-11 nut to 50 lb.-ft. (68Nm).

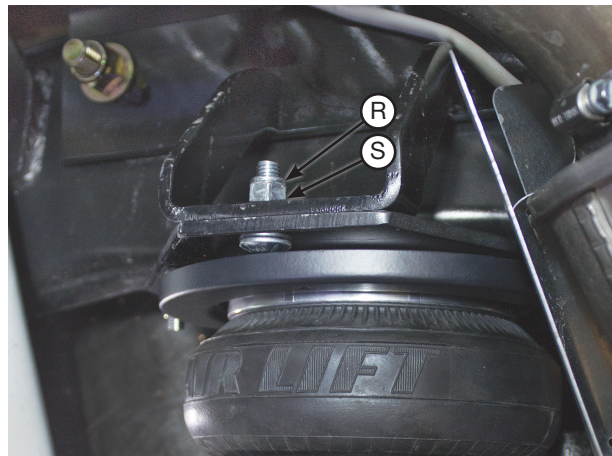
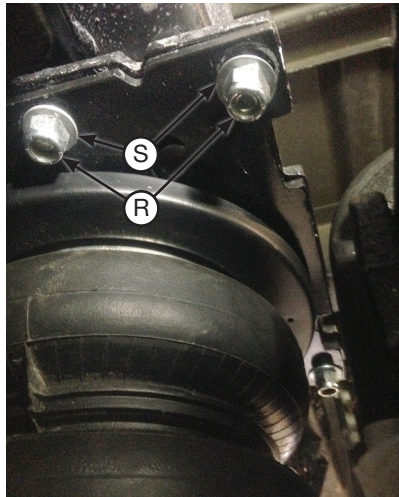
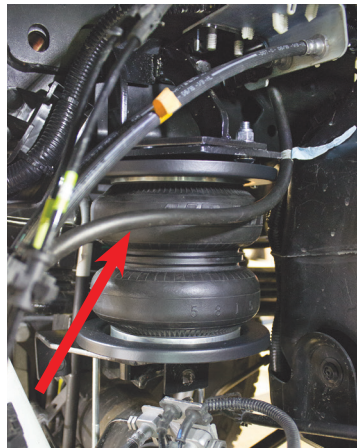


fig. D.29

4. Cap the carriage bolts with the 3/8" flat washers (S) and 3/8"-16 nylon lock nuts (R) (Fig. D.30). After the bracket is in place, proceed to torque down the three upper bracket nuts to 10 lb.-ft. (14Nm).

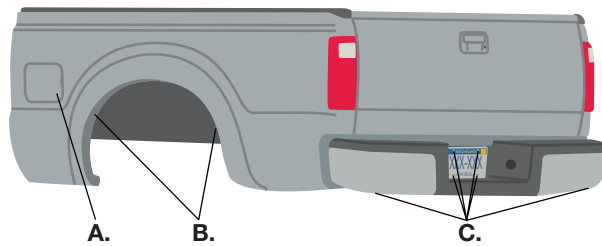
*fig. D.30*

5. The axle vent tube will also have to be zip tied to one of the brake soft lines in order to keep it out of the way of the air spring assembly (Figs. D.31 & D.32).

*fig. D.31**fig. D.32*

E. Installing the Air Lines

Air lines are routed from the air springs to Schrader valves. LoadLifter 5000 series air lines come in two styles: nylon and braided stainless steel. Begin by choosing locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. E.1).



* For LoadLifter 5000 Ultimate Plus kits, the recommended location for the Schrader valves is the rear bumper area or license plate.

- A. Inside fuel tank filler door
- B. Inside rear wheel wells
- C. License plate or rear bumper area*

fig. E.1



CAUTION

KEEP AT LEAST 6" (150MM) OF CLEARANCE BETWEEN ALL AIR LINES AND THE EXHAUST SYSTEM. AVOID SHARP BENDS AND EDGES.

1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. E.2). Do not use scissors or wire cutters.
2. Use zip ties to secure the air line to fixed points along the chassis. Do not pinch or kink the air line. The minimum bend radius for the air line is 1" (25mm). Leave at least 2" (50mm) of slack in the air line to allow for any movement that might pull on the air line.

Good cut

Bad cut

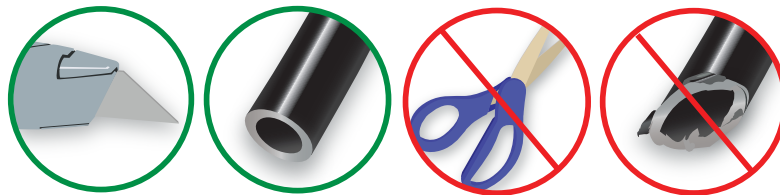


fig. E.2

3. Install the Schrader valve in the chosen location (Fig. E.3).

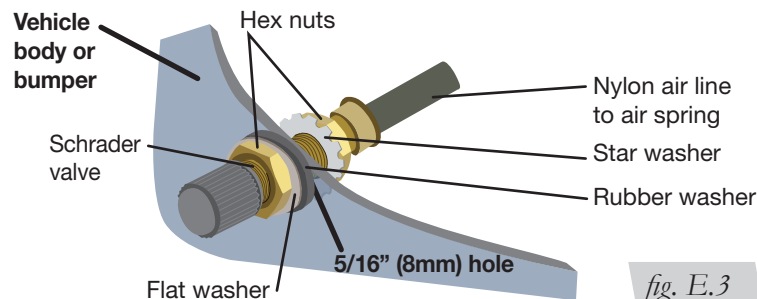
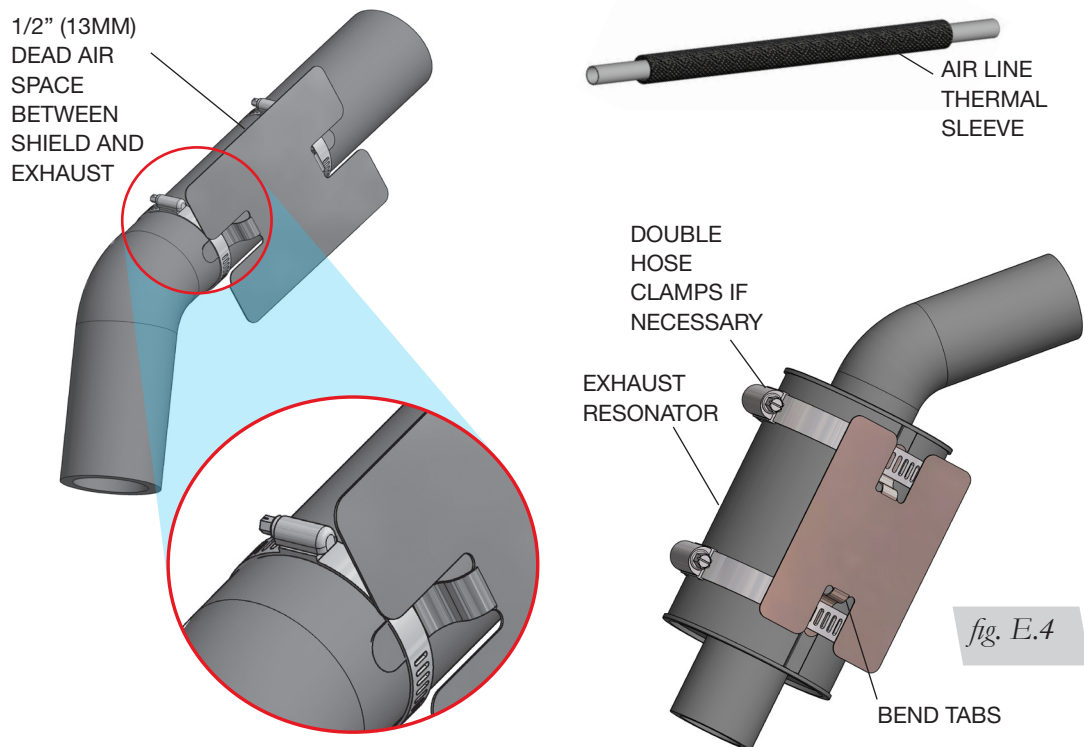


fig. E.3

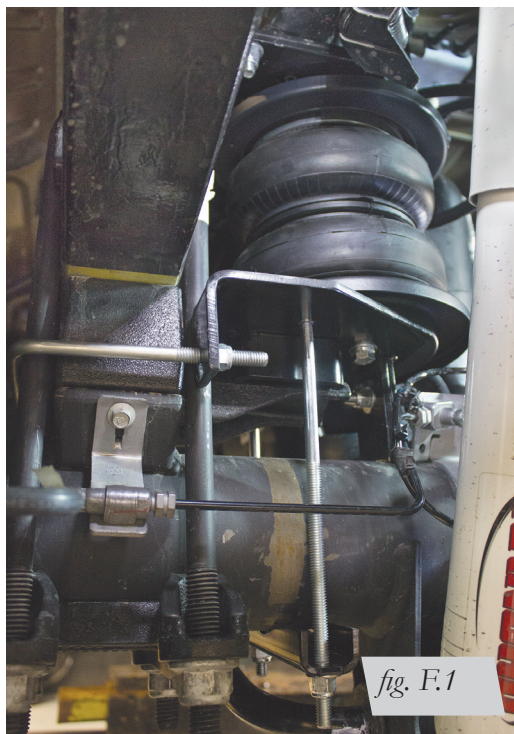
INSTALLING THE HEAT SHIELD

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. E.4).



F. Finished Installation Photos

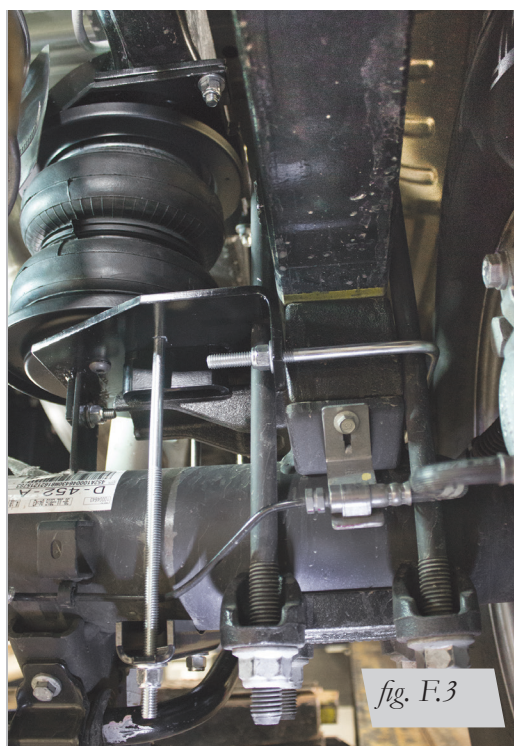
1. The following images show the finished installation of both sides (Figs. F.1, F.2, F.3 & F.4).



Left-hand installation from the rear.



Left-hand installation from the middle of the truck.



Right-hand installation from the rear.



Right-hand installation from the middle.

G. Before Operating

INSTALLATION CHECKLIST

- ☐ **Clearance test** — Inflate the air springs to 40-60 PSI (2.8-4.1BAR) 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 40-60 PSI (2.8-4.1BAR) 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 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

5 PSI (.34BAR)

Maximum Air Pressure

100 PSI (7BAR)



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.



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.



Notes

Notes

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 online at www.airliftcompany.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Need Help?

Contact Air Lift Company customer service department by calling (800) 248-0892.

For calls from outside the USA or Canada, dial (517) 322-2144.



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JJC-0219

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