



LoadLifter 5000™

S E R I E S

Installation
Guide



2011-2019 Chevrolet Silverado HD and GMC Sierra HD
Kits 57338 | 88338 | 89338



Watch the video
Info on next page

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

MN-1051 • (031910) • ECR 9350

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

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, LoadLifter 5000 Ultimate or LoadLifter 5000 Ultimate Plus. The kits are easily identifiable by looking at the roll plates and air lines.

- Standard **LoadLifter 5000** — Zinc-plated steel roll plates and black nylon air lines.
- LoadLifter 5000 Ultimate** — Black powder-coated roll plates and black nylon air lines.
- LoadLifter 5000 Ultimate Plus** — Stainless steel roll plates, braided stainless steel air lines, stainless steel air spring mounting hardware.



LoadLifter 5000
silver zinc-plated steel
roll plate



LoadLifter 5000 Ultimate
black powder-coated
roll plate



LoadLifter 5000 Ultimate Plus
stainless steel
roll plate



LoadLifter 5000
nylon air line



LoadLifter 5000 Ultimate
nylon air line



LoadLifter 5000 Ultimate PLUS
braided stainless steel air line

Air Lift offers two Ultimate Plus upgrade kits:

52300 - Braided stainless steel air line and fittings.

52301 - Stainless steel roll plates, air spring mounting hardware, braided stainless steel air lines and fittings.

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Hardware and Tools Lists

Common Parts Included in All 3 Kits

| Item | Part# | Description | Qty |
|------|-------|--|-----|
| D | 07276 | Upper bracket, right | 1 |
| E | 07377 | Upper bracket, left..... | 1 |
| G | 03962 | Lower bracket..... | 2 |
| H | 11046 | U-bolt..... | 4 |
| I | 18435 | 3/8"-16 Nylon lock nut..... | 12 |
| J | 18444 | 3/8" Flat washer | 12 |
| K | 17129 | 3/8" Self-tapping screw..... | 4 |
| L | 17142 | 3/8"-16 x 3 1/2" Carriage bolt | 4 |
| M | 01851 | Clamp bar | 2 |
| N | 18501 | M8 stainless steel flat washer | 5 |
| O | 17449 | M8-1.25 x 10mm Hex cap screw | 3 |
| P* | 18422 | 3/8"-16 Serrated flange lock nut | 1 |
| Q* | 26333 | Emergency brake cable bracket..... | 1 |
| EE* | 21234 | Rubber washer | 2 |
| FF* | 18411 | Stainless steel star washer..... | 2 |
| KK* | 13955 | Spacer | 1 |

* not pictured in the Installation Diagram

TOOLS LIST

| Description..... | Qty |
|--|-----|
| Standard and metric open-end or box wrenches | SET |
| Ratchet | 1 |
| Standard and metric, regular and deep-well sockets | SET |
| 7/32" Hex-key wrench..... | 1 |
| 5/16" Drill bits (very sharp) | 1 |
| Heavy-duty drill | 1 |
| Torque wrench..... | 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 |
| 13mm Ratcheting wrench | 1 |

The photos in this manual show the LoadLifter 5000 Ultimate kit.

Unique Parts in Each Kit

LoadLifter 5000™ KIT 57338

| Item | Part# | Description | Qty |
|------|-------|--------------------------------------|-----|
| A | 58437 | Air spring | 2 |
| B | 21848 | Push-to-connect fitting..... | 2 |
| C | 11951 | Roll plate (silver zinc plated)..... | 4 |
| F | 17215 | 3/8"-24 x 3/4" Flat-head screw | 8 |
| AA* | 20086 | Air line..... | 1 |
| BB* | 10466 | Zip tie..... | 6 |
| CC* | 21230 | Valve cap | 2 |
| GG* | 21233 | 5/16" Hex nut | 4 |

LoadLifter 5000™ ULTIMATE KIT 88338

| Item | Part# | Description | Qty |
|------|-------|---------------------------------------|-----|
| A | 58496 | Air spring with jounce bumper..... | 2 |
| B | 21848 | Push-to-connect fitting..... | 2 |
| C | 11967 | Roll plate (black powder coated)..... | 4 |
| F | 17215 | 3/8"-24 x 3/4" Flat-head screw | 8 |
| AA* | 20086 | Air line..... | 1 |
| BB* | 10466 | Zip tie..... | 6 |
| CC* | 21230 | Valve cap | 2 |
| GG* | 21233 | 5/16" Hex nut | 4 |

LoadLifter 5000™ ULTIMATE PLUS+ KIT 89338

| Item | Part# | Description | Qty |
|------|-------|---|-----|
| A | 58496 | Air spring with jounce bumper..... | 2 |
| B | 21815 | AN-type fitting | 2 |
| C | 11880 | Roll plate (stainless steel) | 4 |
| F | 17363 | 3/8"-24 x 3/4" Stainless steel flat-head screw..... | 8 |
| N | 18501 | M8 Flat washer | 3 |
| AA* | 20987 | Stainless steel braided air line..... | 2 |
| BB* | 10466 | Zip tie..... | 12 |
| HH* | 21709 | Schrader valve with cap & nut..... | 2 |
| II* | 21813 | AN to PTC fitting | 2 |
| JJ* | 20084 | Air line assembly..... | 1 |

Introduction

The purpose of this publication is to assist with the installation and maintenance of the standard 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. LoadLifter 5000 Ultimate kits add internal jounce bumpers and black powder-coated roll plates. LoadLifter 5000 Ultimate Plus kits also have internal jounce bumpers, but add stainless steel roll plates, air lines and air spring mounting hardware.

The air springs are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 series kits are available for most 1/2-, 3/4- and 1-ton vehicles with leaf springs and 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 or performing any maintenance, service or repair.

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.

Installing the LoadLifter 5000 Series System

GETTING STARTED

1. Raise the frame and support the frame with safety stands. Lower the axle as far as it can go.
2. Remove the jounce bumpers from the jounce bumper brackets on both sides by prying them out with a pry bar or large screwdriver (Figs. 2 & 3).

Jounce bumper
in mounting cup

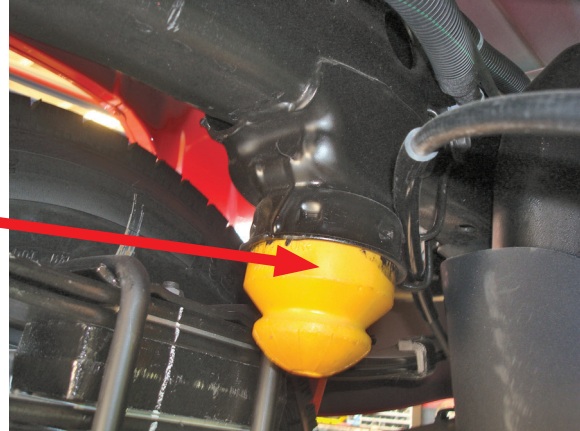


fig. 2

Jounce bumper
removed



fig. 3

3. Remove the bolt that holds the emergency bracket to the inside of the driver's (left) side frame rail (Figs. 4 & 5).

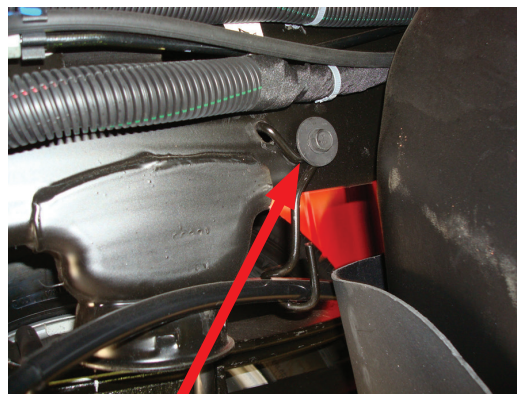


fig. 4

Remove the bolt and discard
the wire retaining bracket

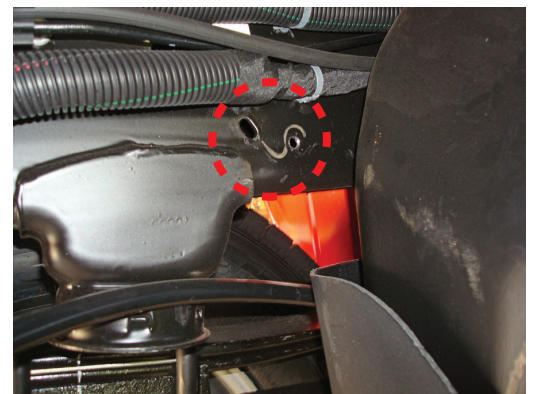


fig. 5

4. Remove the three bolts that hold the brake line and emergency brake cable brackets to the jounce bumper strike plates, forward and behind the rear axle (Figs. 6 & 7).
5. Pull the lines clear of the jounce bumper strike plate on the axle to make room for the lower bracket (Fig. 7).

Remove the bolt holding the brake line bracket to the jounce bumper strike plate in the rear on both driver's (left) and passenger's (right) side.

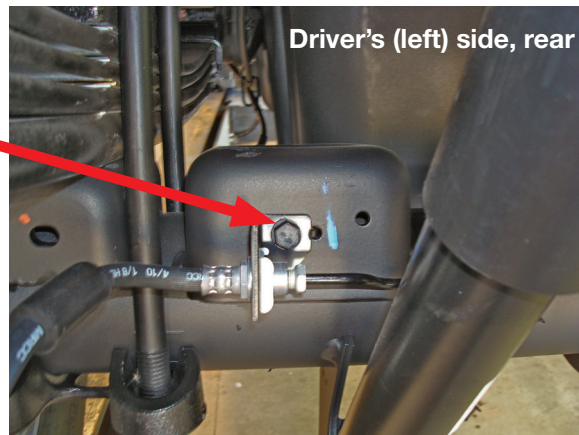


fig. 6

Remove the bolt holding the emergency brake cable bracket on the front of the passenger's (right) side jounce bumper strike plate.

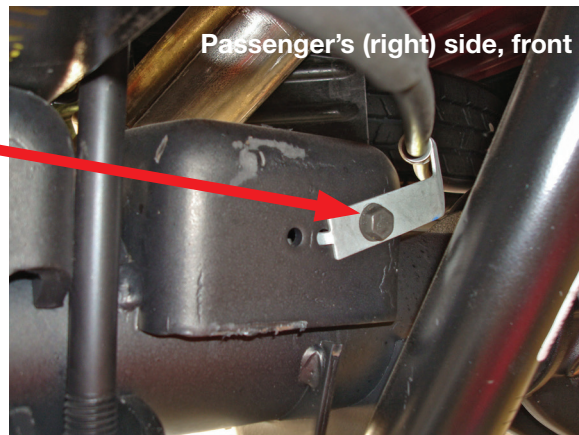


fig. 7

BUILDING THE AIR SPRING ASSEMBLY

1. Set a roll plate (C) on both ends of the air spring (A). The radiused (round) edge of the roll plate will be toward the air spring, enabling the air spring to be seated in both roll plates.
2. Install the 90 degree elbow fitting (B) on top of the air spring. Tighten finger-tight plus 1 1/2 turns. Be careful to only tighten on the metal hex nut. Do not over tighten (Fig. 1).
3. Install the upper brackets (D or E) onto the top of the air springs using the 3/8" flat-head bolts (F) (Fig. 1). Tighten securely.
4. Install the lower brackets onto the air spring assembly using the 3/8" flat-head bolts.

NOTE

The angled portion of the lower bracket will be on the fitting side of the air spring (Fig. 1).

POSITIONING THE AIR SPRING ASSEMBLY ON THE AXLE

1. With the suspension hanging, set the left and right hand units over the axle jounce bumper strike plates (Fig. 1).

NOTE

The fittings will be on the inside of the frame.

2. Position the upper brackets to nest around the jounce bumpers that are under the frame (Fig. 1).

ATTACHING THE UPPER BRACKETS

There are two ways to attach the upper bracket:

For trucks that do not have a fifth-wheel hitch bracket along side of the frame:

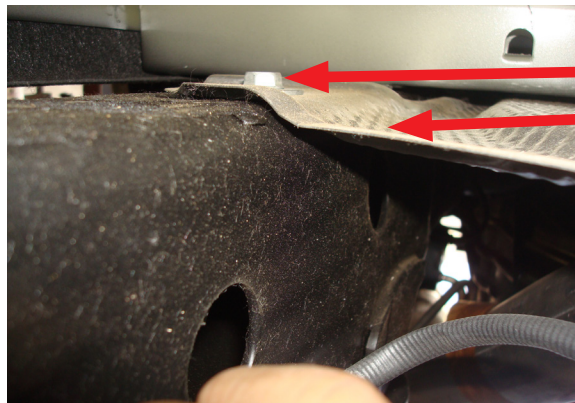
NOTE

On late model vehicles, there is a heat shield above and forward of the axle, on the passenger's (right) hand side of the vehicle that will be in the way of the U-bolt. For models without a heat shield, proceed directly to step 3.



HEAT SHIELD HAS SHARP EDGES, USE CAUTION WHEN REMOVING THE BOLT.

1. On late model vehicles with a heat shield, use a ratcheting wrench to remove the bolt that holds the heat shield on the frame above and forward of the axle. Set the bolt aside (Fig. 8).



Bolt and heat shield located above and forward of the axle

fig. 8

2. Set spacer (KK) between the frame and heat shield and reattach the heat shield with the stock bolt previously removed (Fig. 9).



Spacer (KK)

fig. 9

3. Insert two U-bolts (H) onto the top of the frame and through the upper bracket mounting holes (Fig. 10).

NOTE

It may be necessary to raise the axle at this point for the upper bracket to reach the frame.

Insert the U-bolts (H) between the brake line and harness as shown. Do not pinch these items between the U-bolt and frame.

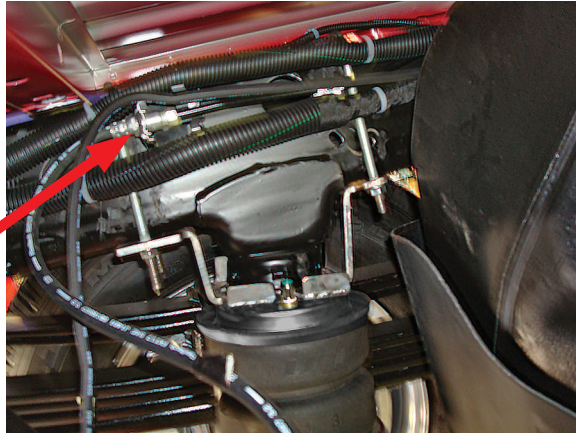


fig. 10

4. Cap with four 3/8" nylon lock nuts (I) and flat washers (J). Torque U-bolts evenly in a criss cross pattern to 10 lb.-ft. (14Nm). Repeat for the opposite side.

TECH TIP

Use a shop towel between the gas tank and shield to keep washer or nut from falling in between in case they are dropped during installation.

CAUTION

THE DRIVER'S (LEFT) SIDE HAS A BRAKE LINE AND A WIRING HARNESS RUNNING ALONG THE INSIDE OF THE FRAME. MAKE SURE THE U-BOLT IS BETWEEN THESE ITEMS AND THE FRAME (DO NOT PINCH THESE ITEMS) (FIG. 10).

NOTE

On the passenger's (right) side of some models, it may be necessary to bend the heat shield slightly to allow the U-bolt to go over the frame correctly (Fig. 11).

Bend heat shield here if necessary.

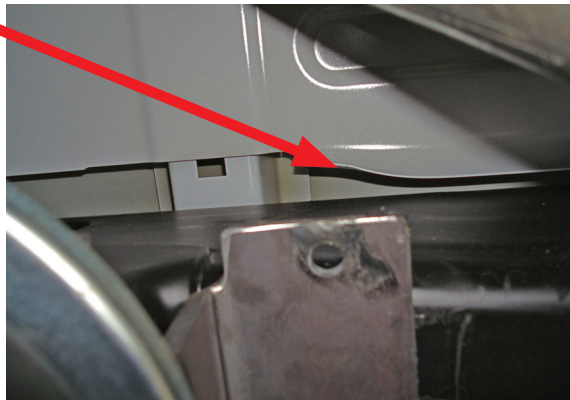


fig. 11

5. Figure 12 shows the U-bolt installed on models that have the heat shield above the axle with spacer installed on passenger's (right) side, forward of the axle. Continue with *Attaching the Lower Brackets*.

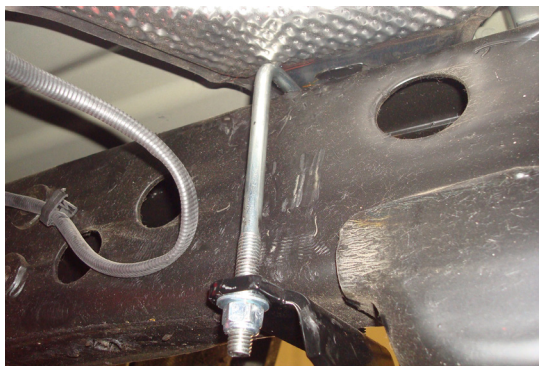


fig. 12

For trucks that have fifth-wheel hitch brackets alongside the frame rail:

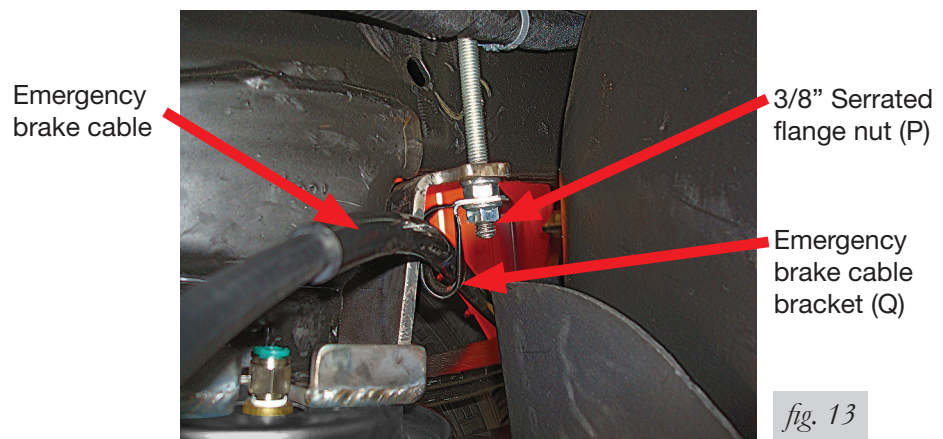
1. There are holes in the middle of the bracket just forward and behind the jounce bumper mounting cups on the upper bracket (Fig. 1). Once the upper brackets are in position, drill two 5/16" holes through the bottom of the frame using the holes as a template and attach the upper brackets using the self-tapping screws (K). Torque all four fasteners to 15 lb.-ft. (20Nm).

REATTACHING THE EMERGENCY BRAKE CABLE TO FRAME

1. Attach the emergency brake cable removed in the *Getting Started* section with the emergency brake cable bracket (Q) and 3/8" serrated flange lock nut (P) (Fig. 13). Use the inside forward leg of the U-bolt on the driver's (left) side for the attachment. Tighten securely.

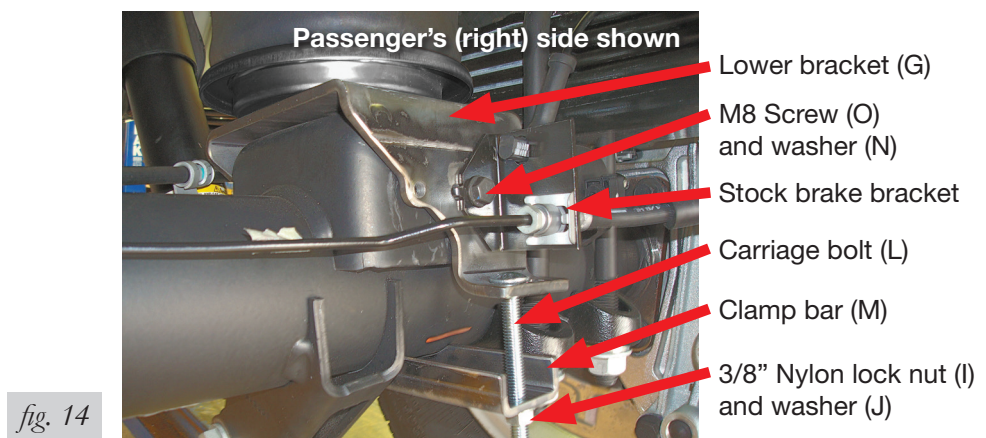
NOTE

It may be necessary to pinch the clamp together with pliers to align the two holes closely enough to get over the U-bolts.



ATTACHING THE LOWER BRACKETS

1. Position the lower bracket in/out to best align the air spring. Insert two 3/8" carriage bolts (L) through lower bracket mounting legs (Fig. 14).

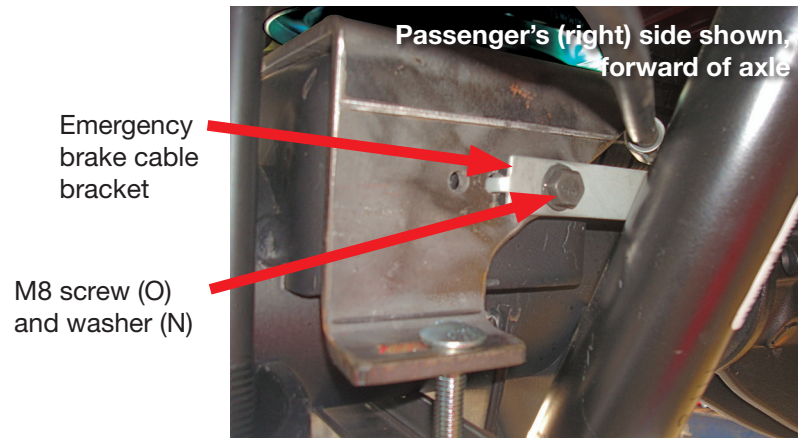


2. Insert the lower clamp bar (M) over the two carriage bolts previously installed and cap with two 3/8" nylon lock nuts (I) and flat washers (J). Torque evenly to 16 lb.-ft. (22Nm).

3. Attach the brake lines and emergency brake cable that were un-bolted from the rear of the axle in the *Getting Started* section by attaching them to the lower bracket with the new M8 screws (O) and flat washers (N) provided (Fig. 14). Tighten securely.
4. Attach the emergency brake cable on the passenger's (right) side, forward of the axle with the new M8 screw (O) and flat washer (N). Tighten securely.

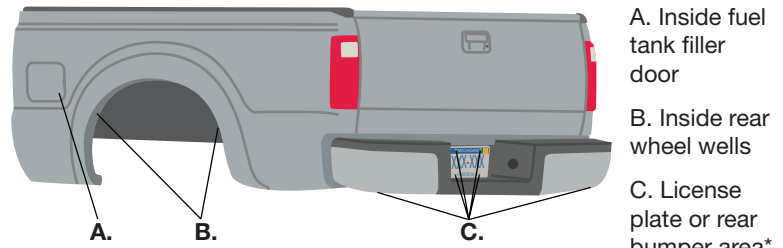
NOTE

It may be necessary to slightly bend this bracket to clear the edge of the lower bracket (Fig. 15).



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. 16).



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

fig. 16

CAUTION

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

INSTALLING NYLON AIR LINES

1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. 17). Do not use scissors or wire cutters.

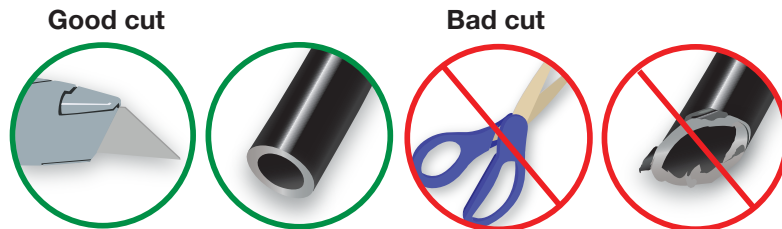


fig. 17

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.
3. Install the Schrader valve in the chosen location (Fig. 18).

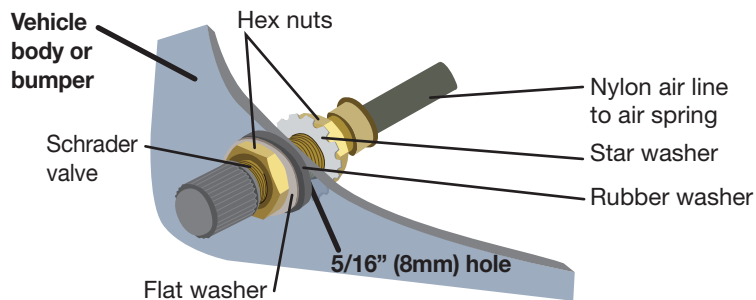


fig. 18

INSTALLING BRAIDED STAINLESS STEEL AIR LINES



KEEP THE AIR LINE AWAY FROM THE FUEL LINE, BRAKE LINES AND ELECTRICAL WIRES.

1. Use zip ties to secure the air line to fixed points along the chassis every 6" to 8" (150-200mm). Leave at least 2" (50mm) of slack to allow for any movement that might pull on the air line.
2. Tighten the air line hex nut finger tight, then use 2 wrenches to turn 1 additional flat (1/6 of one full turn). **Do not overtighten** (Figs. 19 & 20). The easiest way to tighten the fitting is off the vehicle. Install the Schrader valve in the chosen location.
3. Coil and secure any excess air line in an area where it will not be susceptible to damage. The braided stainless steel air line cannot be trimmed.

Air Line Setup Without Compressor System

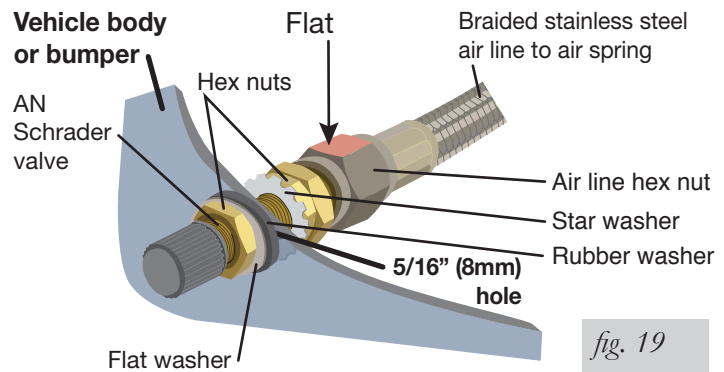


fig. 19

Air Line Setup for Compressor Integration

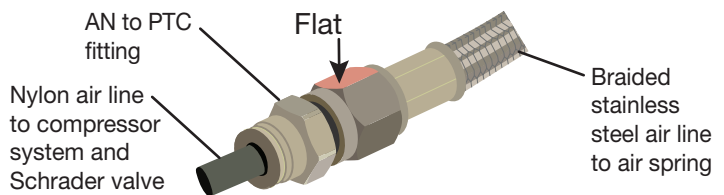


fig. 20

INSTALLING THE HEAT SHIELD

1. Attach the metal heat shield to the exhaust where it is closest to the passenger's (right) side air spring. Slide the air line thermal sleeve over the air line and position it where the air line is closest to the exhaust. (Fig. 21).

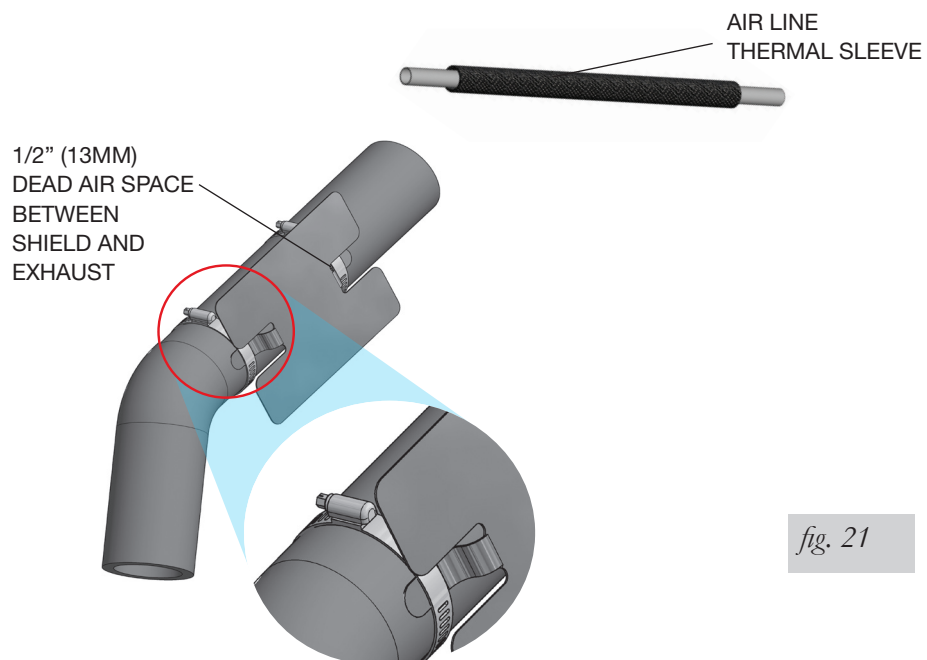


fig. 21

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 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) |



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.