

Air Lift 1000™



Installation Guide



Ford F-150 Raptor



Watch the video

Info on Table of Contents page

Kit 60865

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.

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.

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Video-enhanced installation guides

Visit airliftcompany.com/workshop/category/install-videos to access our installation video archive*.

Hardware and Tools

HARDWARE LIST

Item	Part#	Description	Qty
A	46132	Air spring.....	2
B	09106	Lower protector.....	2
C	09447	Upper protector	2
D	20937	Air line	15'
E	10466	Zip tie	6
F	10638	Air line clamp	6
G	18501	M8 Flat washer.....	2
H	18411	Star washer	2
I	21230	Valve cap.....	2
J	21233	5/16" Hex nut.....	4
K	21234	5/16" Flat rubber washer	2
L	21236	Tee fitting.....	1
M	21455	Schrader valve	2

TOOLS NEEDED

Description.....	Qty
Hoist or floor jack	1
Safety stands.....	2
Safety glasses	1
Torque wrench and metric sockets	set
Metric wrenches	set
Paint pen, marker or crayon.....	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.

Introduction

The purpose of this publication is to assist with the installation and maintenance of the Air Lift 1000 air spring kit.

Air Lift 1000 kits utilize a cylinder-style air bag that provides up to 1,000 pounds (454kg) of load-leveling support when installed into the vehicles coil springs. Each cylinder is rated at a maximum of 35 PSI (2.4BAR).

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 VEHICLE OR MINOR PERSONAL INJURY.



Used to help emphasize areas of procedural importance and provide helpful suggestions.

Installing the System

PREPARE THE VEHICLE

In order to install the lower protectors and air springs into the stock coil springs, it will be necessary to remove the coil springs from the vehicle. To gain access to the items listed in steps 1 and 2, it may be helpful to lift the vehicle or raise it on a hoist.

1. Although the springs are indexed in the lower and the upper spring mounts, it may be good to mark their locations for re-installation (Figs. 1 & 2). Using a paint pen, marker, or crayon, mark the upper and lower spring seats, isolators, and springs.
2. Remove the bolts holding the two height sensor arms (if equipped) that are attached to the side of the upper control arm and let them hang (Fig. 3). Remove the rear brake line bracket bolt on top of the center differential, along with pulling the brake lines out of both holders on the back side of the axle (Figs. 4 & 5). Pull the bracket free from the rear differential and let hang.



Fig. 1



Fig. 2



Fig. 3

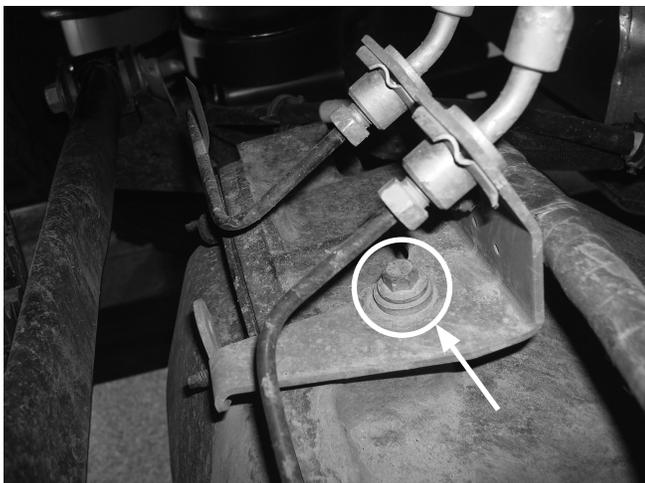
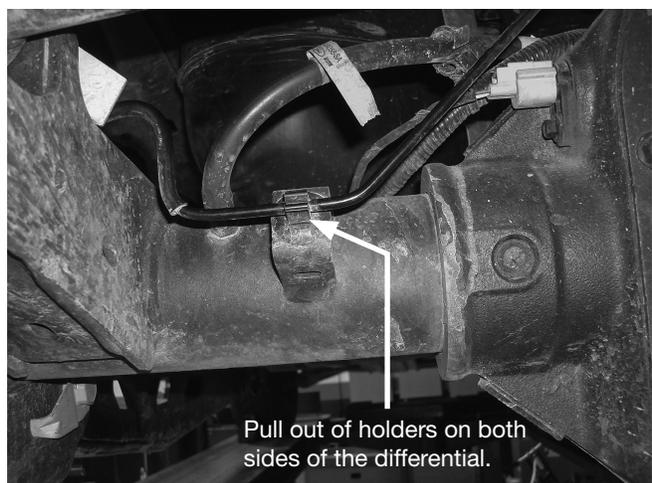


Fig. 4



Pull out of holders on both sides of the differential.

Fig. 5

3. Remove both lower shock bolts and pull the shocks away from the mount (Fig. 6).



Fig. 6

INSTALL THE AIR SUSPENSION

1. If not already done, jack up the rear of the vehicle or raise on a hoist. Support the frame with safety stands (Fig. 7). Lower the axle or raise the body of the vehicle until the springs can be removed from the spring seats.



THE SPRINGS ARE VERY LONG, AND THE AXLE WILL TRAVEL A LONG DISTANCE BEFORE THE SPRINGS COME AWAY FROM THE MOUNTS. PLEASE KEEP SAFETY IN MIND WHEN DOING THIS TASK.



Fig. 7

2. Remove the springs one at a time and pull the upper rubber spring mount off the spring. Insert the lower protector (B) and air spring (A) into the coil spring (Fig. 8). The barbed fitting at the top of the air spring must face the top of the spring.

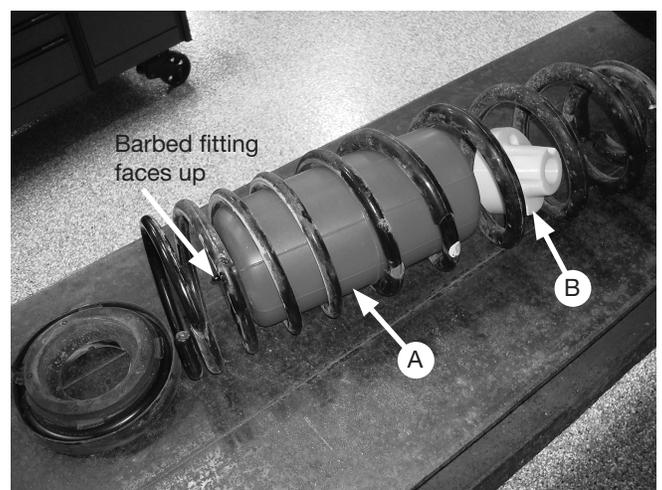
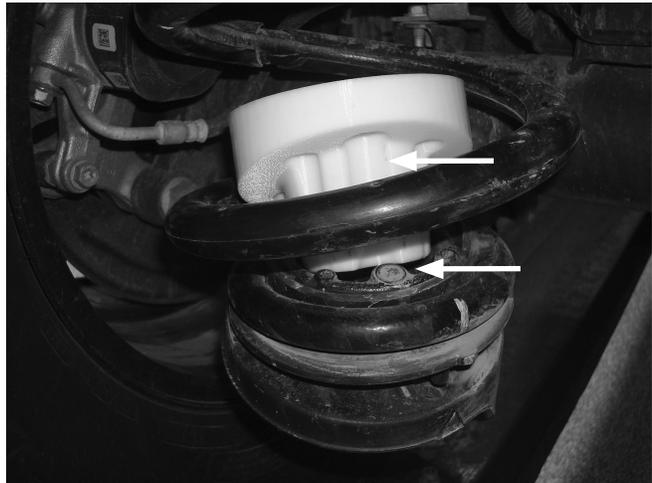


Fig. 8

3. Snap the upper rubber spring mount back onto the coil spring making sure it indexes over the coil spring properly (Fig. 9). Repeat for the other side.


Fig. 9

4. Set the assemblies back into the lower spring mounts making sure the coil springs index properly (align the marks you previously made). Raise the axle or lower the frame, while guiding the upper spring mounts over the upper spring seats, just enough to hold the springs into position. Insert the lower protector (B) into the lower spring seat making sure the large slot in the protector lines up with the large protrusion in the lower spring seat (Fig. 10).


Fig. 10

5. With the protector set into position, push the air spring all the way down to the bottom of the spring (Fig. 11).


Fig. 11

- Cut the air line (D) in half and along with following the air line instructions, using a pair of pliers, install an air line clamp (F) onto one end of the air line. Insert the upper protector (C) through the side of the coil spring and set on top of the air spring. Route the clamp end of the air line through the upper spring seat, then through the upper protector. Push the air line over the barbed stem on the air spring making sure it completely covers all the barbs and install the clamp over the barb stem (Fig. 12).

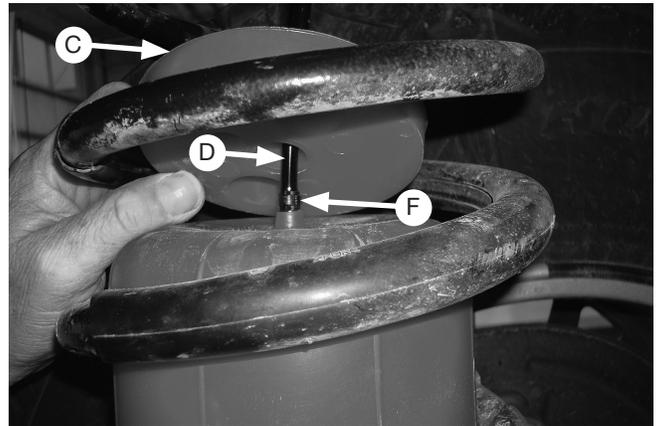


Fig. 12

- Once the air line has been installed set the upper protector on the air spring and push the air spring assembly to the top of the coil spring (Fig. 13).
- While raising the axle or lowering the body, align the shocks back up in their mounts and install the bolt through the shock. Attach the nut and leave it loose at this time.
- With both shocks back into the mounts, raise the axle all the way up. Torque the shock nuts to 76 lb.-ft. (103Nm).
- Re-attach the height sensor arms and the brake line bracket that was disconnected in the “Prepare the Vehicle” section. Torque the brake line bracket bolt to 18 lb.-ft. (25Nm). Make sure to push the brake lines back into the clips on the back side of the axle (Figs. 3, 4 & 5).



Fig. 13

- Because of the long suspension travel of this vehicle, leave sufficient slack above the upper spring seat for the air line and attach the air line to the bed crossmember with a zip tie (E) as shown in Figure 14. Route both air lines to the side or to the back above the frame. Continue with the air line installation instructions.

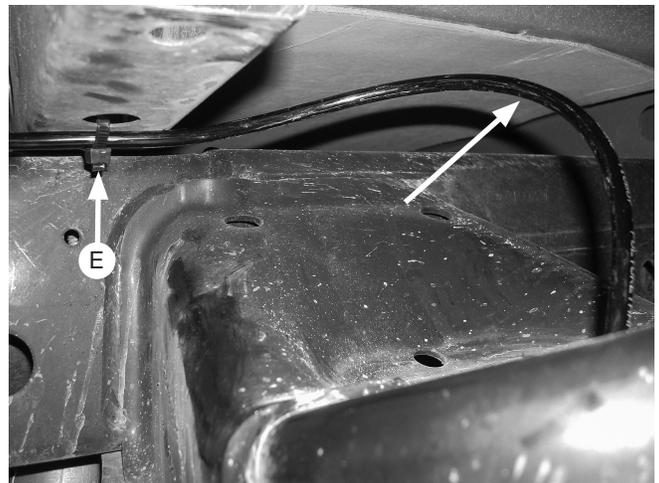


Fig. 14

Installing the Air Lines

1. A single-path air line installation is recommended for vehicles that typically have even weight distribution (Fig. 15). If weight in the vehicle varies from side to side and unequal pressures are needed to level the load, use a dual-path installation. For dual-path air line installations, eliminate the tee fitting (L) and route separate air lines for both air springs (Fig. 16).

Single-Path Air Line Routing

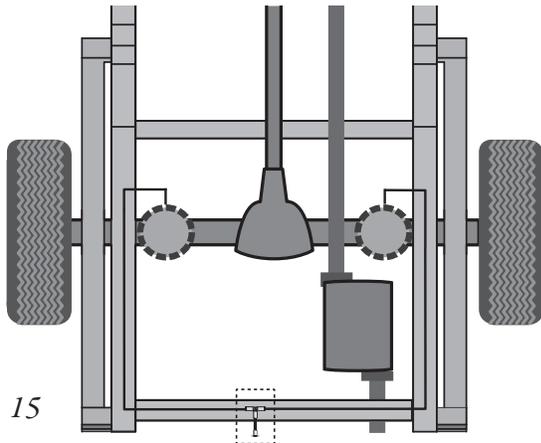


Fig. 15

Dual-Path Air Line Routing

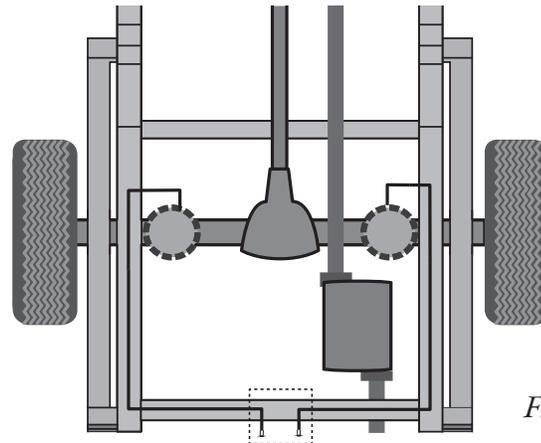


Fig. 16



TO PREVENT THE AIR LINE FROM MELTING, MAINTAIN AT LEAST 6" (152MM) FROM THE EXHAUST SYSTEM TO THE AIR LINE.

2. If installing a single-path air line, choose a location for the tee fitting on the wheel well or rear bumper. Determine and cut adequate length of air line (D) to reach to the tee from left and right side air springs. Make clean, square cuts with a razor blade or hose cutter (Fig. 17). Do not use scissors or wire cutters.
3. Leave sufficient air line slack to prevent any strain on the fitting during axle motions.
4. Use this procedure (Fig. 18) for all air line connections:
 - a. Slide the air line clamp (F) onto the air line.
 - b. Push the air line and air line clamp over the barbed stem so that the air line covers all the barbs.
 - c. Compress the ears on the air line clamp with pliers and slide it forward to fully cover the barbs.
5. Select a location for the Schrader valve (M), ensuring that the valve will be protected and accessible with an air hose (Fig. 19). Drill a 5/16" (8mm) hole, if necessary. Determine and cut adequate length of air line to reach from the tee to the Schrader valve or from the air springs to the valve if using a dual-path installation.

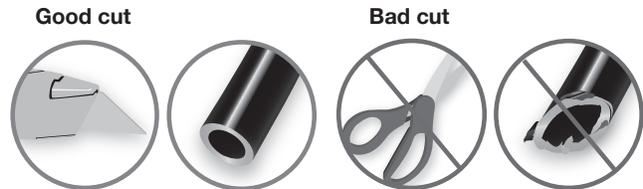


Fig. 17

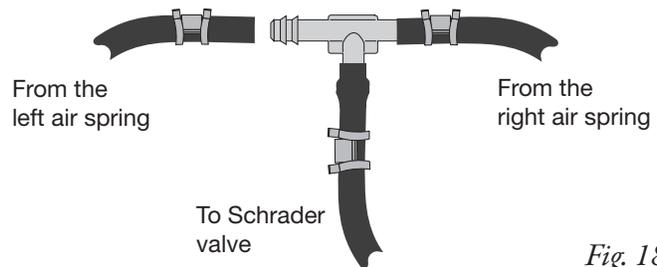


Fig. 18

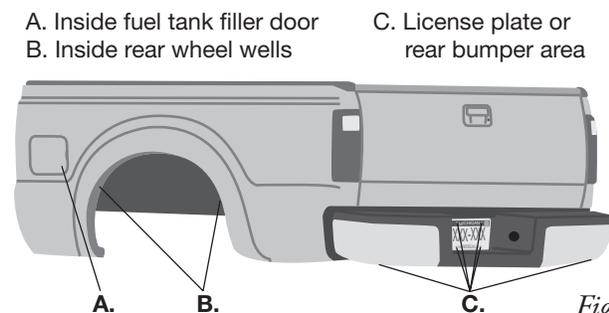


Fig. 19

6. Drill a 5/16" (8mm) hole for the Schrader valve and mount as shown (Fig. 20). Install the air line on the Schrader valve first. The rubber washer (K) serves as an outside weather seal.



DO NOT INFLATE THE AIR SPRINGS BEFORE READING THE MAINTENANCE AND USE GUIDELINES IN THIS INSTALLATION GUIDE AS WELL AS THE USER GUIDE INCLUDED WITH THIS KIT.

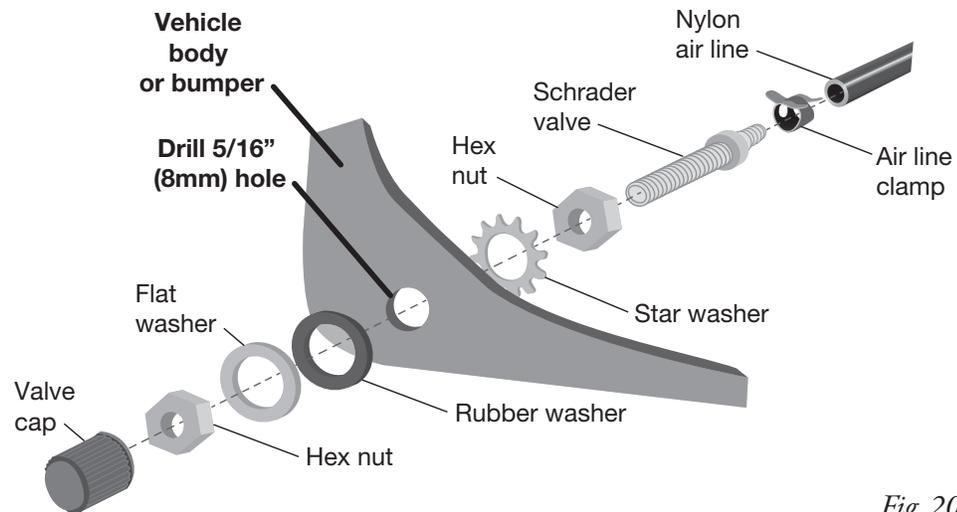


Fig. 20

COMPLETE THE INSTALLATION

2. Once the air lines have been installed, raise the suspension or lower the body completely and remove the safety stands. Inflate the air springs to 5 PSI (.34BAR).

Finished Installation

Figure 21 shows the left (driver's side) installation, Figure 22 shows the right (passenger's side) and Figure 23 shows both.



Fig. 21



Fig. 22



Fig. 23

Congratulations!

You are now the proud owner of an industry leading Air Lift air suspension system. Enjoy!

Before Operating

INSTALLATION CHECKLIST

- ❑ **Clearance test** — Inflate the air springs to 30 PSI (2BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against each air spring. Be sure to check the tire, brakes, frame, shock absorbers and brake cables.
- ❑ **Leak test before road test** — Inflate the air springs to 30 PSI (2BAR) 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** — After 500 miles (800km), 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 35 PSI (2.4BAR).
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.
4. Upon successful completion of the installation, follow these pressure requirements for the air springs.



**Minimum Recommended
Air Pressure**



Maximum Air Pressure



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 35 PSI (2.4BAR), 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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