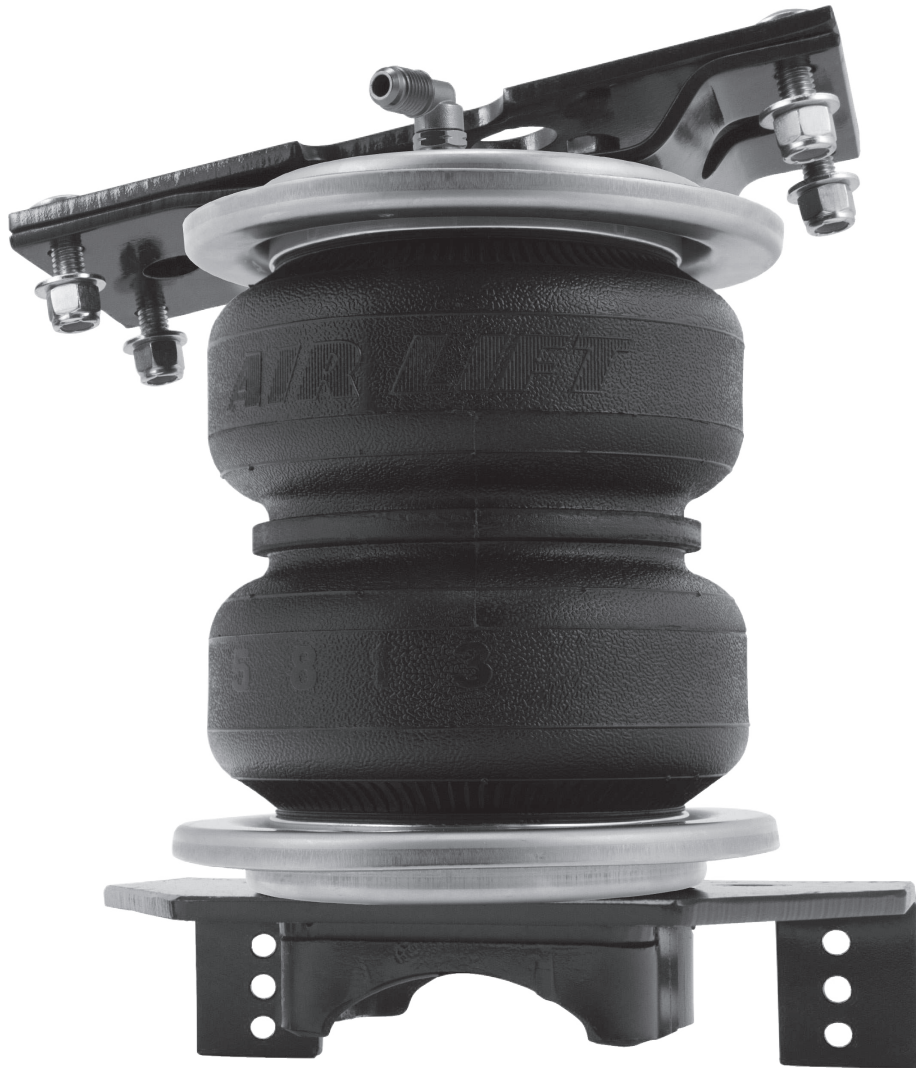




PROSeries

Installation Guide



Ford F250/F350 SRW & DRW

Kits 93350 | 94350

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.

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System Overview

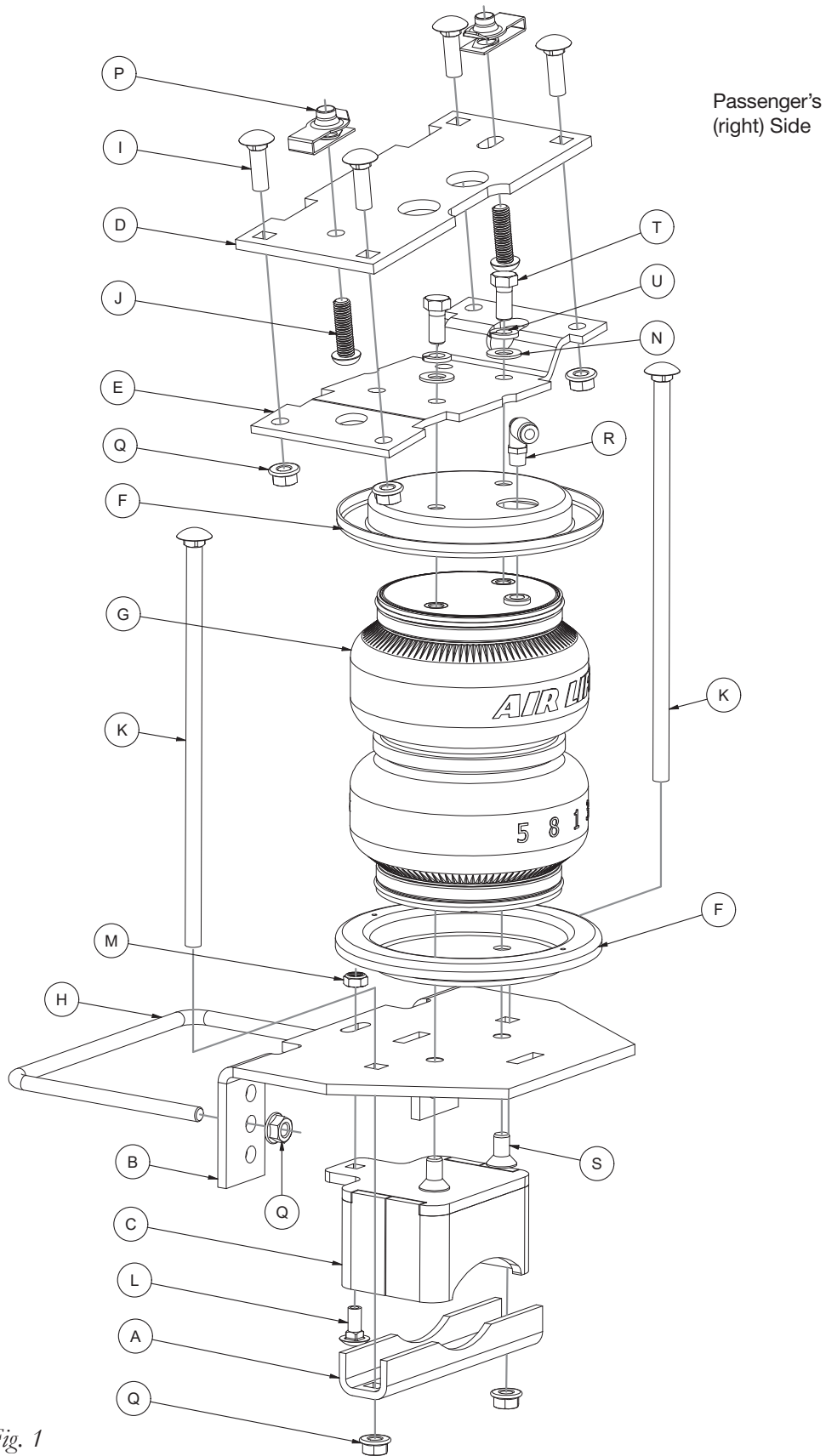


Fig. 1

Hardware and Tools

Common Parts Included in Both Kits

Item	Part#	Description	Qty
A	01531	Clamp bar	2
B	03014	Lower bracket, main plate	2
C	03223	Lower bracket, cup	2
D	07045	Upper bracket, frame	2
E	07220	Upper bracket, air spring	2
H	11770	U-bolt	2
I	17361	3/8"-16 x 1 1/4" Carriage bolt	8
J	17366	M10-1.5 x 35 Button-head cap screw	4
K	17387	3/8"-16 x 10" Carriage bolt	4
L	17500	5/16"-18 x 3/4" Carriage bolt	2
M	18404	5/16"-18 Serrated flange lock nut	2
N	18507	3/8" Stainless steel flat washer	4
O*	18501	M8 Stainless steel flat washer	2
P	18622	M10-1.5 Universal nut	4

Item	Part#	Description	Qty
Q	18422	3/8"-16 Serrated flange lock nut	16
R	21837	Push-to-connect (PTC) fitting	2
S	17363	3/8"-24 x 3/4" Stainless flat-head socket-cap screw	4
T	17284	3/8"-24 x 7/8" Stainless steel hex-cap screw	4
U	18504	3/8" Stainless steel lock washer	4
AA*	20086	Air line assembly	1
BB*	10466	Zip tie	6
CC*	21230	Valve cap	2
DD*	21234	Rubber washer	2
EE*	18411	Stainless steel star washer	2
FF*	21233	5/16" Hex nut	4
JJ*	21838	Tee fitting	1

Unique Parts in Each kit



KIT 93350

Item	Part#	Description	Qty
F	11951	Roll plate (silver zinc plated)	4
G	59496	Air spring	2



KIT 94350

Item	Part#	Description	Qty
F	11967	Roll plate (black powder coat)	4
G	58996	Air spring with jounce bumper	2

The photos in this manual show the LoadLifter 5000 kit.

Tools Needed

Description	Qty
Standard and metric open-end or box wrenches	SET
Ratchet	1
Standard and metric sockets	SET
5/16" drill bit (very sharp)	1
9/16" Crow's foot adapter	1
9/16" Ratchet combo wrench	1
Heavy-duty drill	1
Torque wrench	1
Standard and metric hex-key wrenches	SET
Flat-tip screwdriver	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

Introduction

The purpose of this publication is to assist with the installation and maintenance of the Air Lift® ProSeries and Air Lift® ProSeries Ultimate air spring kits. All Air Lift® ProSeries and Air Lift® ProSeries Ultimate kits utilize sturdy, reinforced, commercial-grade double convolute bellows.

The air springs are manufactured like a tire with layers of rubber and cords that control growth. Air Lift® ProSeries and Air Lift® ProSeries Ultimate 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 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.

IDENTIFYING THE DIFFERENCE BETWEEN KITS

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

- Standard **Air Lift® ProSeries** — Zinc-plated steel roll plates.
- Air Lift® ProSeries Ultimate** — Black powder-coated roll plates.



Air Lift® ProSeries
silver zinc-plated steel
roll plate



Air Lift® ProSeries Ultimate
black powder-coated roll plate

Installing the System

PREPARING THE VEHICLE

1. Jack up the rear of the vehicle or raise on a hoist. Support the frame with safety stands (Fig. 2). Lower the axle or raise the body of the vehicle until the springs are completely extended.

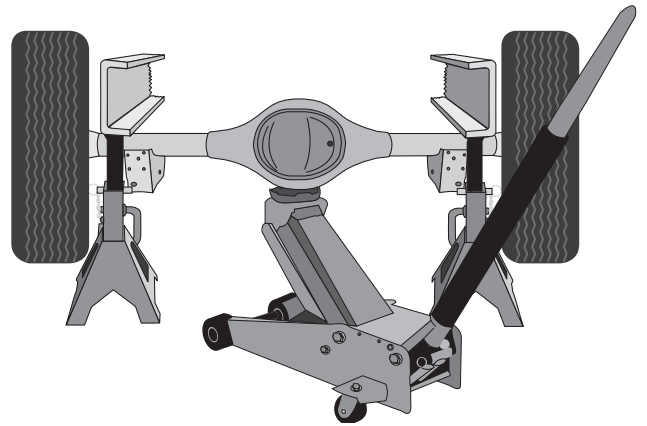


Fig. 2

2. Unbolt and remove the jounce bumper assembly from under the frame on both sides (Fig. 3).



Fig. 3

3. Remove the clip-in studs by prying on the hinged end with a screwdriver. Pull all four (two from each side) out from the frame (Fig. 4).

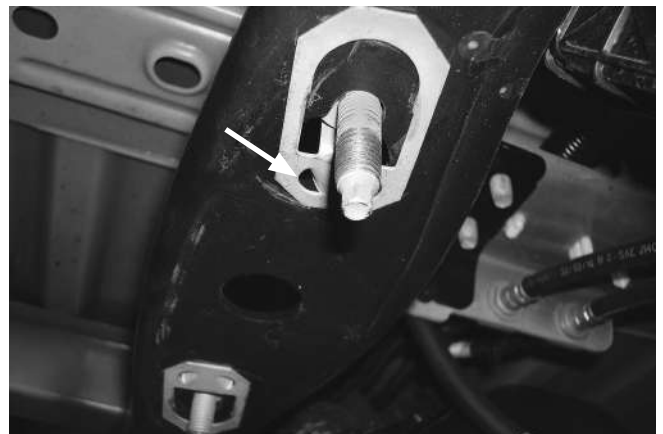


Fig. 4

4. Install the universal nuts (P) 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. 5).

TECH TIP

A flat-tip screwdriver works well in installing the universal nut into position.

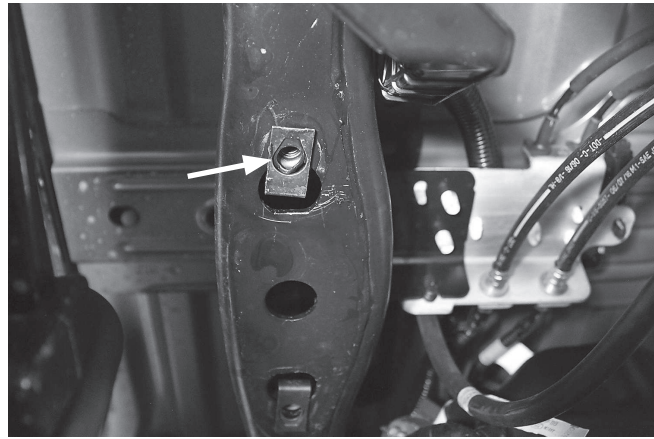


Fig. 5

5. Insert the 3/8"-16 x 1 1/4" carriage bolts (I) into the upper frame brackets (D). Install the upper bracket onto the frame using the M10-1.5 x 35mm button-head cap screws (J). The slot on the side of the bracket should be inboard of the frame rail (Fig. 6). The elongated hole should be toward the front of the truck (Fig. 7). Torque hardware to 38 lb.-ft. (52Nm).

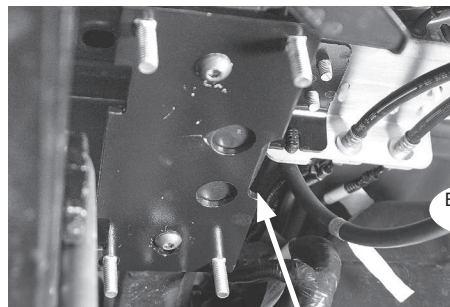


Fig. 6

This slot in the bracket goes inboard, away from leaf spring and tire

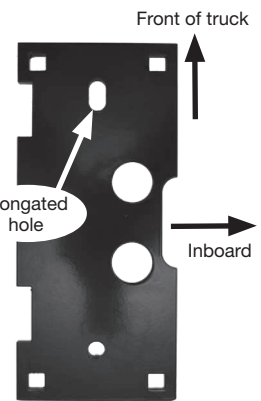


Fig. 7

ASSEMBLING THE AIR SPRINGS

1. Set a roll plate (F) on top of the air spring (G). The radiused, or rounded, edge of the roll plate should be toward the air spring so that it is seated inside the roll plate (Fig. 8). Install the 90 degree swivel fitting (R) into the port on top of the air spring, finger-tight plus 1 1/2 turns.

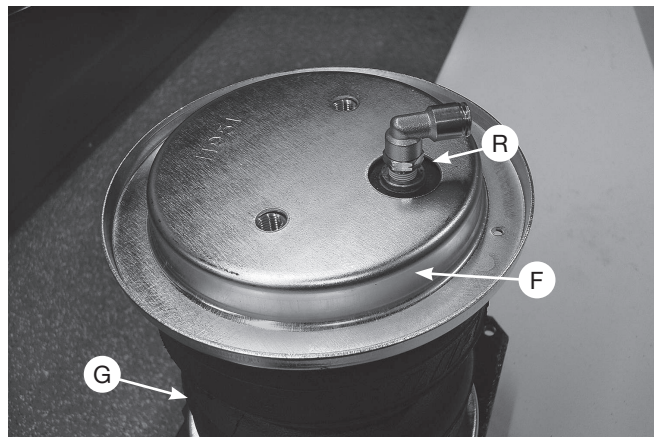


Fig. 8

- Set the upper air spring bracket (E) onto the top of the air spring using one set of holes with the 3/8"-24 x 7/8" hex-cap screw (T), 3/8" lock washer (U) and 3/8" flat washer (N) (Fig. 9). Install the remaining air spring bracket onto the remaining air spring, using the opposite holes from those that were previously used. This makes the air spring assemblies into left- and right-hand units. Torque the hardware to no more than 20 lb.-ft. (27Nm).

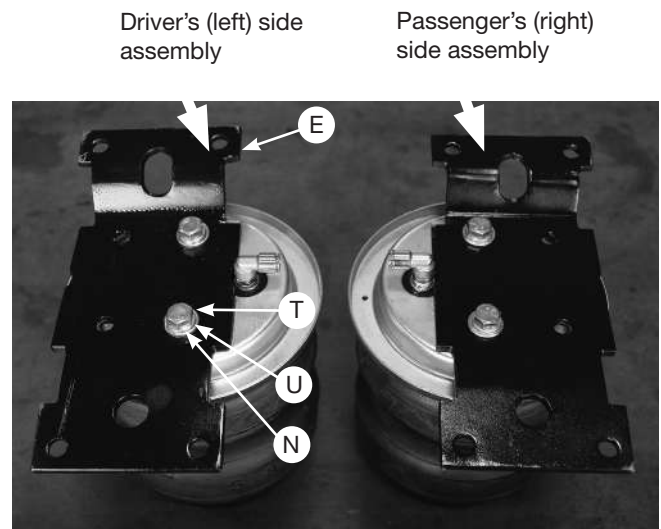


Fig. 9

- Flip the assemblies over and set a roll plate (F) onto the bottom of the air springs (Fig. 10).

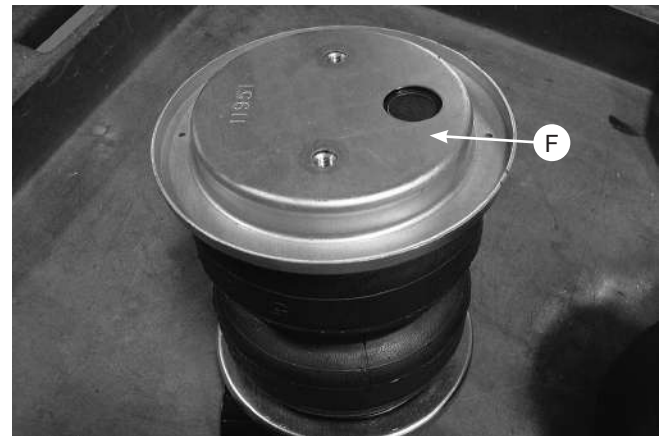


Fig. 10

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

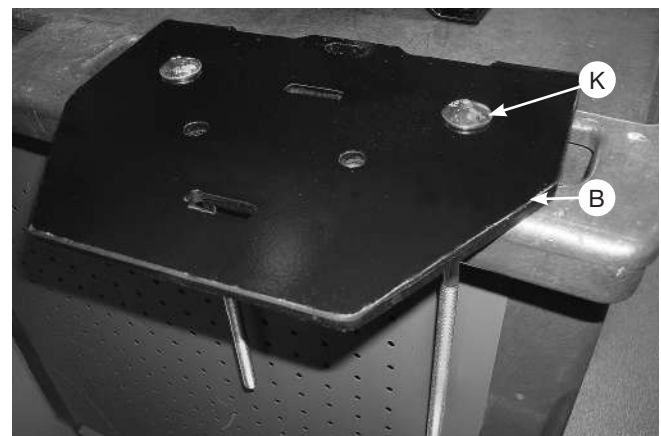


Fig. 11

5. Set the lower bracket main plate assemblies onto the air springs with the roll plates installed. Attach with the 3/8"-24 x 3/4" flat-head socket cap screws (S) (Fig. 12). Torque the hardware to no more than 20 lb.-ft. (27Nm).

NOTE

The flange on the lower bracket must be on the opposite side of the fitting that is located on the top of the air spring.

The flanges on the lower bracket must be installed so they are on the opposite side of the fitting that is on the top of the air spring.

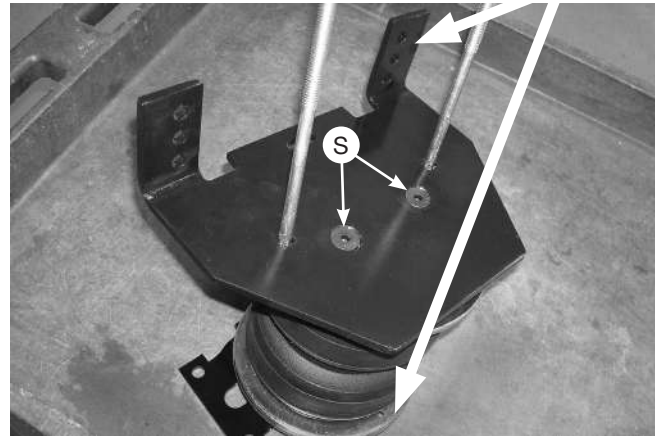


Fig. 12

6. Install the lower bracket cup (C) onto the lower bracket main plate using the 5/16"-18 x 3/4" carriage bolt (L) (Fig. 13). Cap with 5/16"-18 serrated flange lock nut (M) (Fig. 14) Snug bolt down but leave loose enough for bracket to move freely in slot.

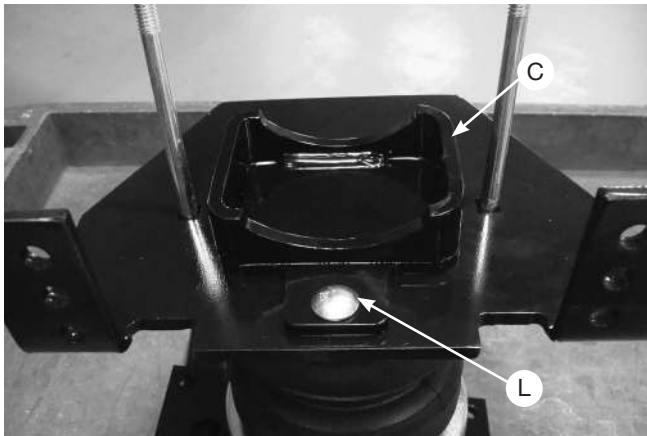


Fig. 13

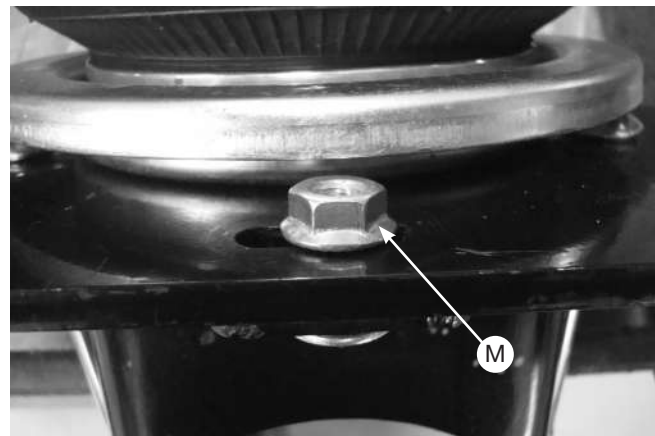


Fig. 14

- Figure 15 shows the driver's (left) side and passenger's (right) side assemblies.

Driver's (left)
side assembly

Passenger's (right)
side assembly

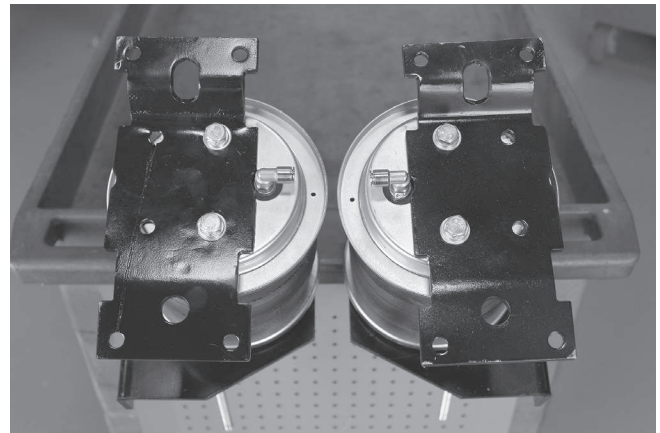


Fig. 15

INSTALLING THE AIR SPRING ASSEMBLIES

- 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 (left) side and passenger's (right) side assemblies into position so that the lower bracket cup rests on the jounce bumper strike plate for single rear wheel (SRW) or the axle for dual rear wheel (DRW) applications.

NOTE

If there is a sway bar, insert the carriage bolts through the Clamp Bar (A) while setting the assemblies into position over the axle (see Fig. 19).

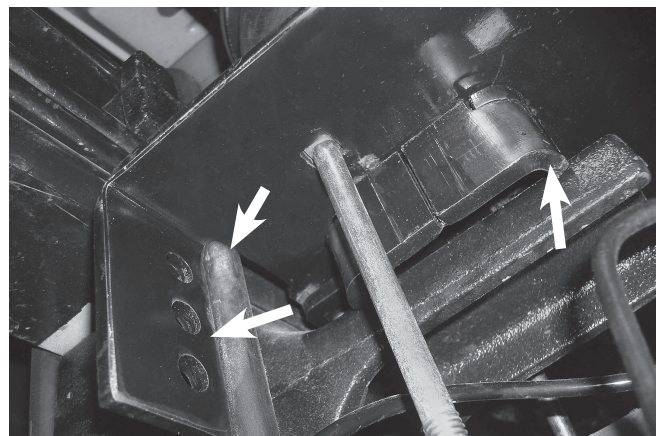


Fig. 16

- Push the lower bracket so that it is flush against the leaf spring stack. The flanges on the lower bracket main plate should lock on the sides of the U-bolt (Fig. 16).

NOTE

On the driver's (left) side, the long carriage bolt in the lower bracket main plate should be located between the hard brake line and axle (Fig. 22). On the passenger's (right) side, the carriage bolt should be located on the backside of the brake line (Fig. 23).

3. Install the U-bolts (H) around the stock U-bolt/leaf spring assembly and insert through the topmost holes in the lower bracket main plates (Fig. 17). Cap with the 3/8" serrated flange lock nut (Q). Snug bolts evenly, just enough to hold the lower bracket main plate flush against the stock U-bolts.

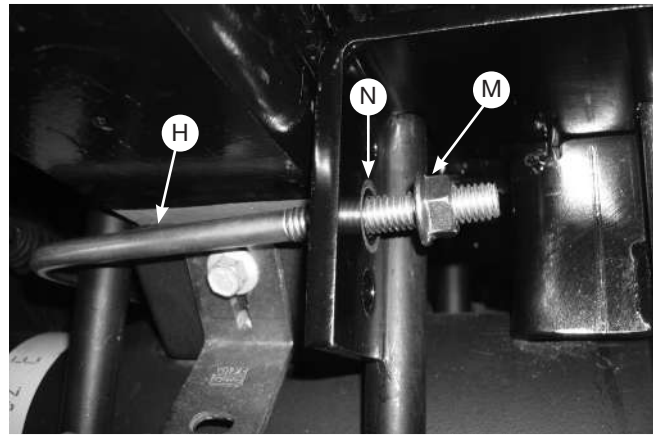


Fig. 17

4. Before proceeding, ensure the 90 degree fittings each point inboard toward the center of the vehicle. While raising the axle or lowering the body of the vehicle, align the previously installed upper frame bracket carriage bolts with the air spring bracket holes so the carriage bolts protrude through the air spring bracket. Cap the carriage bolts with the 3/8" serrated flange lock nuts (Q) (Fig. 18). Snug the bolts down first then torque to 31 lb.-ft. (42 Nm). Finish raising the axle or lowering the body and remove safety stands.

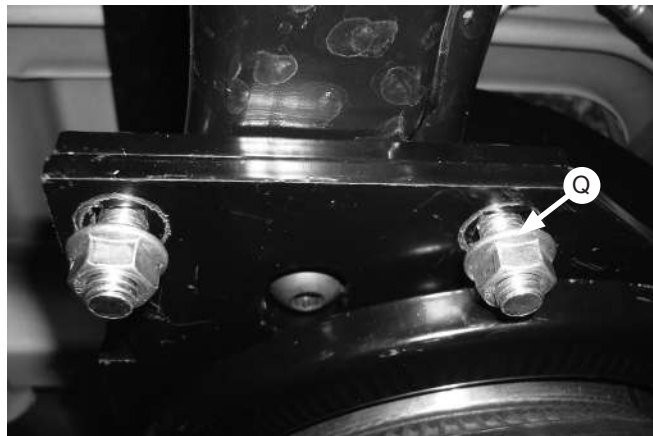


Fig. 18

5. If not already completed, set the lower clamp bars (A) over the carriage bolts located under the axle (Fig. 19). Attach with the 3/8" serrated flange lock nut (Q). 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).

TECH TIP

For sway bar applications it is acceptable to tighten the front carriage bolt hardware down more than the rear to gain more clearance on the sway bar. Also, it may be necessary to use a 9/16" crows foot adapter to properly torque the hardware.

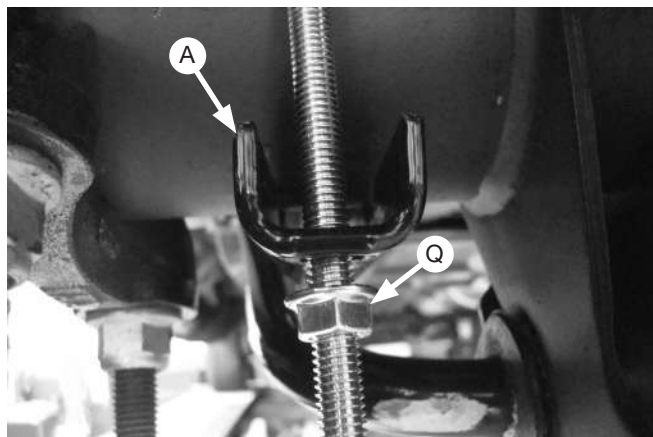


Fig. 19

- On vehicles that have a sway bar, cut the front carriage bolt just below the nut, so it does not contact the sway bar (Fig. 20).



Fig. 20

- Snug the nut holding the lower bracket main plate and lower bracket cup together to finish the lower bracket installation (Fig. 21).

NOTE

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

- Figures 22 and 23 show the lower bracket installed (DRW application shown).

CAUTION

PUSH THE HARD BRAKE LINE AWAY FROM THE LOWER BRACKET CARRIAGE BOLT IF THE LINE IS RESTING ON IT (FIGS. 22 & 23).



Fig. 21

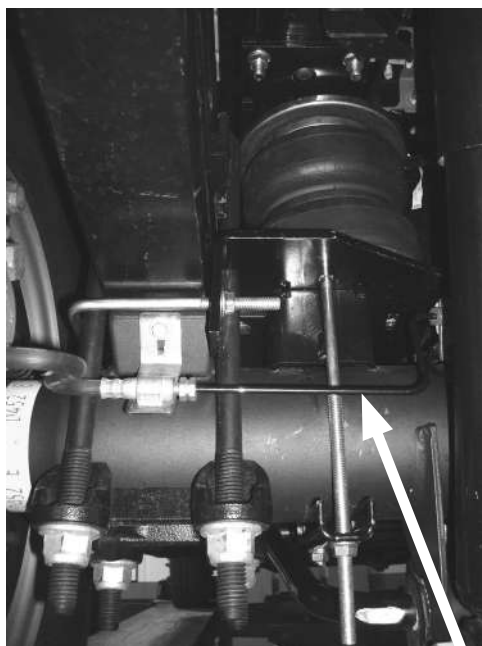


Fig. 22

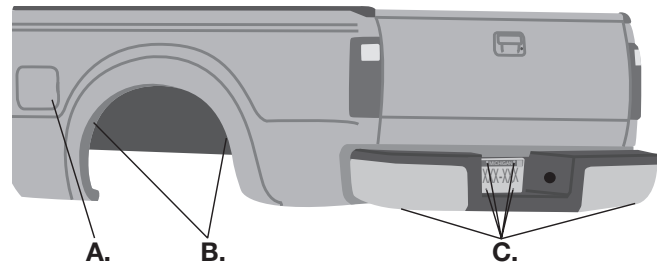


Fig. 23

If the hard brake line is resting on the lower bracket carriage bolts on either side, push or pull the brake line out of the way.

Installing the Air Lines

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



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

Fig. 24

2. 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.



Fig. 25

CAUTION

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

3. 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).
4. Install the Schrader valve in the chosen location (Fig. 26).

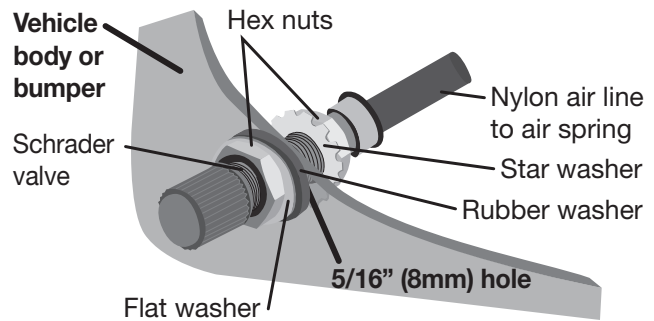


Fig. 26

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 (Fig. 27). Slide the hose heat shield onto the air line on the passenger side and push into position against the fitting (Figs. 29 & 33).

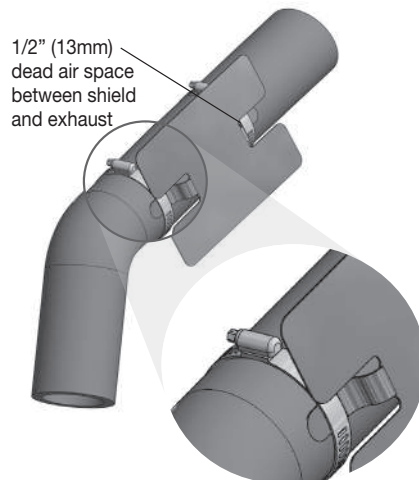


Fig. 27

Finished Installation

These images show the finished installation of both sides for the F-250 and F-350 single rear wheel (SRW) applications (Figs. 28-31).



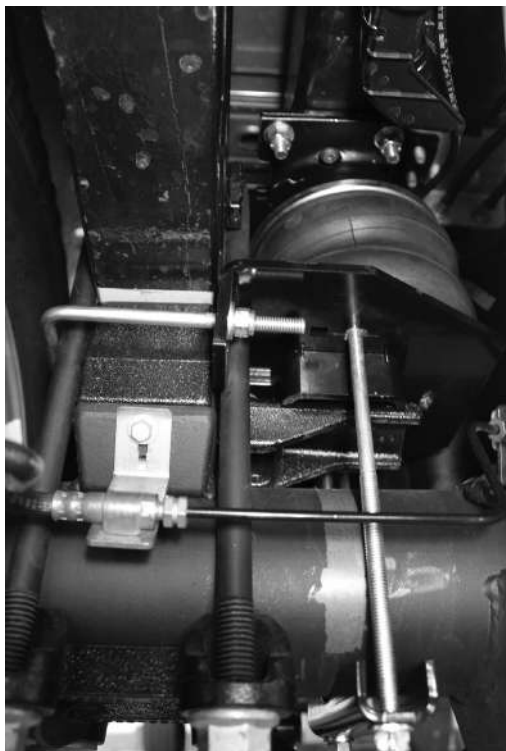
Passenger's (right) side
front view

Fig. 28



Passenger's (right) side
inside frame view

Fig. 29



Driver's (left) rear view

Fig. 30



Driver's (left) side
inside frame view

Fig. 31

These images show the finished installation of both sides for the F-350 dual rear wheel (DRW) applications. (Fig. 32 - Fig. 35).



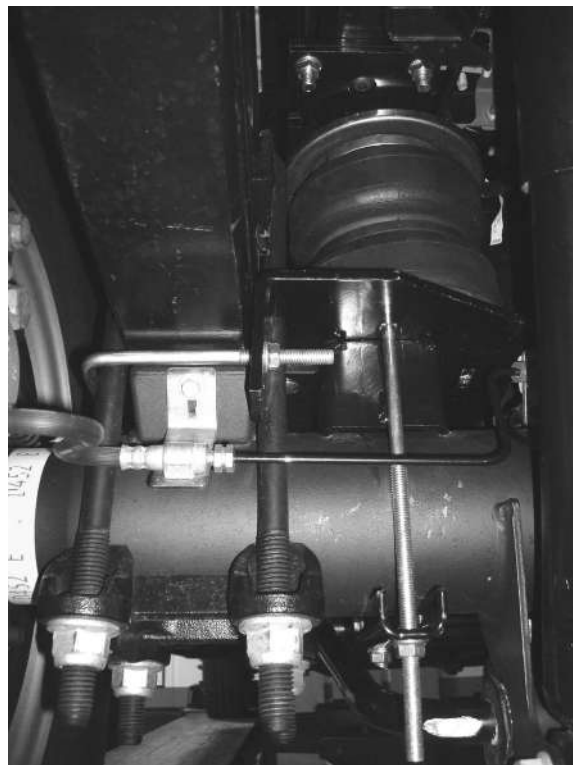
Inside, forward of axle view of driver's (left) side installation.

Fig. 32



Inside, forward of axle view of passenger's (right) side installation.

Fig. 33



Inside, rear of axle view of driver's (left) side installation.

Fig. 34



Inside, over axle view of passenger's (right) side installation.

Fig. 35

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.
- 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 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.
4. Upon successful completion of the installation, follow these pressure requirements for the air springs.

