

Air Lift 1000 HD

Kit 60828HD

RAM 1500



INSTALLATION GUIDE

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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Introduction

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

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, tools list, step-by-step installation information, maintenance guidelines and a checklist for after completing the installation.

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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. 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 Air Lift 1000 HD Kit

HARDWARE LIST

Item	Part #	Description	Qty
A	48178	Air spring.....	2
B	09128	Air spring protector	2
C	20937	Air line	15 ft
D	10466	Zip ties	6
E	21230	Valve cap.....	2
F	21233	5/16" Hex nut.....	4
G	21234	Rubber washer.....	2
H	18411	Star washer.....	2
I	18501	M8 Flat washer	2
J	21236	Tee fitting.....	1
K	21455	Schrader valve	2
L	10638	Air line clamp	6
M	21730	Straight pump connector.....	2

TOOLS LIST

Description.....	Qty
Standard and metric open-end/box wrenches	SET
Adjustable wrench.....	1
China or tire marker (white crayon)	1
Ratchet	1
Pliers.....	1
Standard & metric, regular & deep-well sockets.....	SET
5/16" drill bit (very sharp)	1
Heavy-duty drill	1
Hose cutter, razor blade, or sharp knife	1
Hoist or Jack	1
Safety stands.....	2
Safety glasses	1
Air compressor or compressed air source	1
Spray bottle with dish soap/water solution.....	1

GETTING STARTED

1. Mark the upper and lower springs and spring seats with a china marker, tire marker or white crayon to note its location (Fig. 1).



Mark spring location in reference to upper and lower spring seat. Sample of driver's (left) side shown.

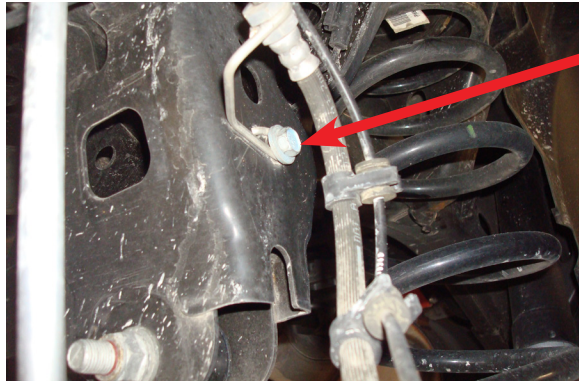
fig. 1

2. Remove the lower shock bolts from both shocks (Fig. 2).



fig. 2

- Remove the brake line holder bolt from the Panhard (lateral bar) bracket behind the passenger's (right) side coil spring and pull line holder away from the bracket (Fig. 3). Save the bolt for re-use.



Remove brake line bolt and pull line holder away from the bracket.

fig. 3

- Lift the vehicle up and support the frame with safety stands. Leave enough room to drop the axle down low enough to remove the coil springs (Fig. 4).

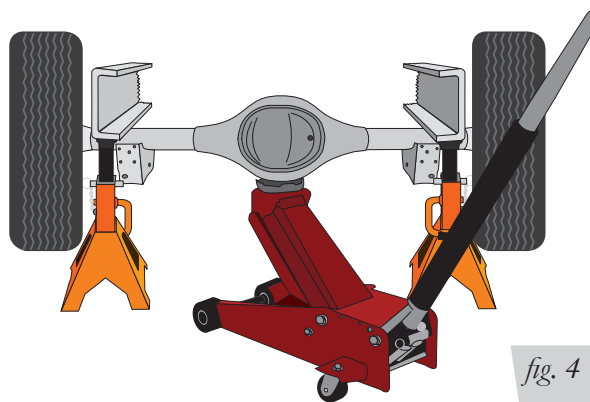
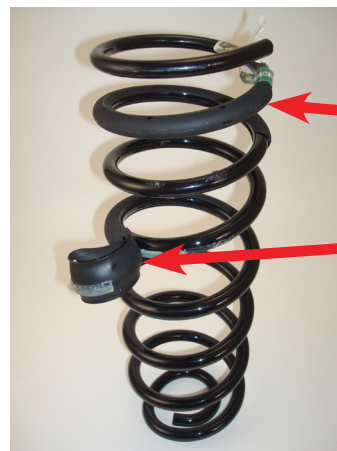


fig. 4

- Drop the axle down low enough so coil springs can be removed (axle hanging). Remove one spring at a time for installing the air springs. If necessary, pull down on the wheel or axle to create enough room for the springs to be removed.
- With the spring removed, remove and discard the spring rubber isolator off the middle of the coil spring (Fig. 5).

NOTE

The rubber isolator at the top does not have to be removed.



Leave top rubber isolator on spring.

Remove lower rubber isolator on the middle of the spring.

fig. 5

Installing the Air Springs

1. Cut the air line (C) in two equal lengths and install the straight pump connector (M) and air line clamp (L) on one end of each air line. Remove the valve cap off the air spring and screw the pump connector on the stem finger tight. Slide an air spring protector (B) over each hose and onto the top of the air spring (A) (Fig. 6).

 **CAUTION**

DO NOT USE ANY TOOLS TO TIGHTEN THE PUMP CONNECTOR OR DAMAGE TO STEM WILL OCCUR.

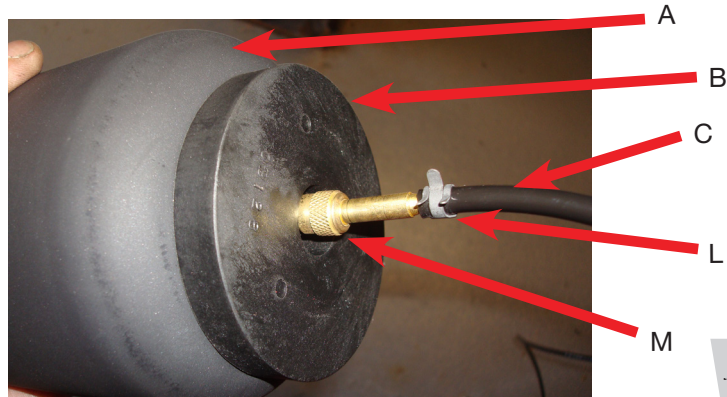


fig. 6

2. Insert the air spring assembly into the top of the stock coil spring and push to the bottom. Set the rubber upper spring seat on top of the spring assembly (if it fell out of the upper spring seat when removing the coil spring) making sure the end of the coil spring is positioned correctly in the mount (the end of the coil spring indexes into the mount only one way).

NOTE

There are small tabs on the rubber upper spring seat mount that go into holes in the upper spring seat (Fig. 7).

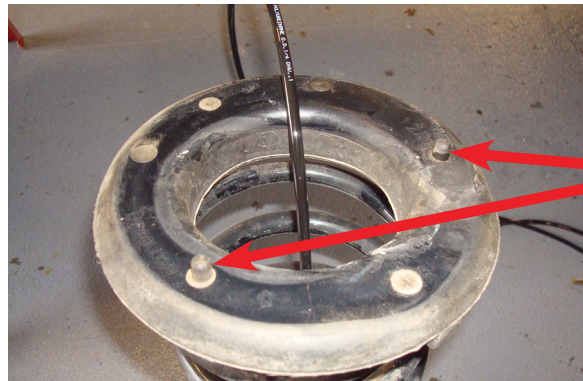
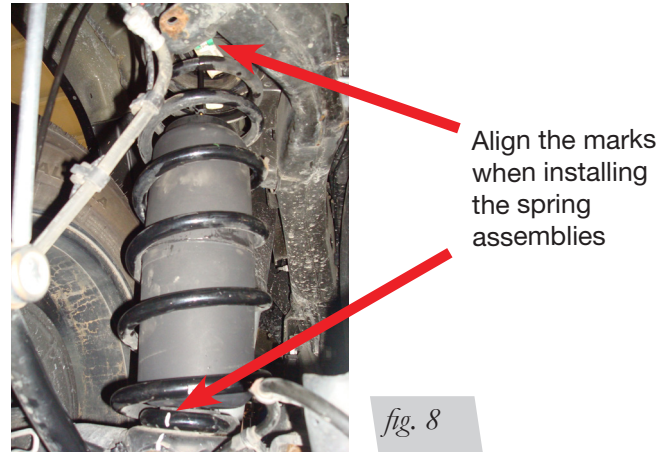


fig. 7

When installing spring assembly, make sure tabs insert back into the upper spring seat holes that align with them.

3. Insert the hose through the hole in the upper spring seat mount and reinstall the coil/air spring assembly, making sure the mark (previously made in step one of getting started) on the upper and lower portion of the coil spring aligns with the mark on the upper and lower spring seats (Fig. 8). Slightly raise the axle up enough to seat the coil spring into the upper and lower mounts and, as stated above, make sure the small tabs go into the upper spring seat (Fig. 7). With the upper and lower spring seated, push the protector up inside the upper rubber spring seat as far as possible. Repeat assembly for the other side.



4. With both springs in position, raise the axle fully and reattach the lower shock bolts (Fig. 2). Torque the lower shock bolts to 100 lb.-ft. (135Nm). Re-attach the passenger's (right) side brake line bracket and bolt previously removed and tighten securely (Fig. 3). Remove the safety stands.
5. Using the zip ties (D) route the air lines above the frame and to the area back behind the rear license plate. Above the coil springs, leave enough slack in the air lines for suspension articulation.

Installing the Air Lines

A single-path air line installation is recommended for vehicles that typically have even weight distribution (Fig. 9). 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 (J) and route separate air lines for both air springs (Fig. 10).

Single-Path Air Line Routing

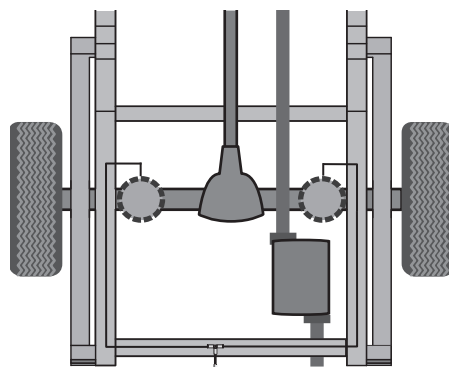


fig. 9

Dual-Path Air Line Routing

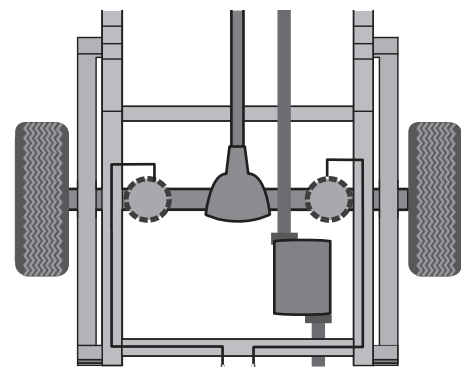


fig. 10

CAUTION

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

1. If installing a single-path air line, choose a location for the tee fitting (J) on the wheel well, license plate, or rear bumper. Determine and cut adequate length of air line (C) to reach to the tee from left and right side air springs.

CAUTION

LEAVE SUFFICIENT AIR LINE SLACK TO PREVENT ANY STRAIN ON THE FITTING DURING AXLE MOTIONS.

2. Use this procedure (Fig. 11) for all air line connections:
 - a. Slide the air line clamp (L) onto the air line (C).
 - 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.
3. Select a location for the Schrader valve (K), ensuring that the valve will be protected and accessible with an air hose (Fig. 12). Determine and cut adequate length of air line (C) to reach from the tee to the Schrader valve or from the air springs to the valve if using a dual-path installation.

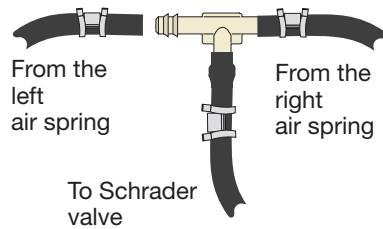


fig. 11

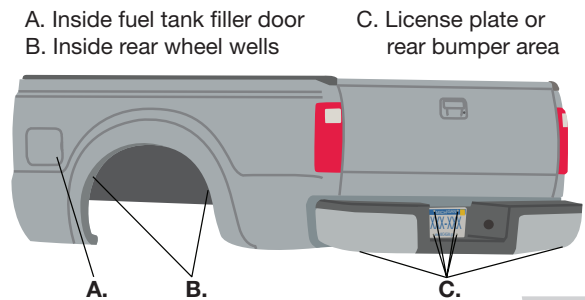


fig. 12

4. Drill a 5/16" (8mm) hole for the Schrader valve (K) and mount as shown (Fig. 13). Install the air line on the Schrader valve first. The rubber washer (G) serves as an outside weather seal.

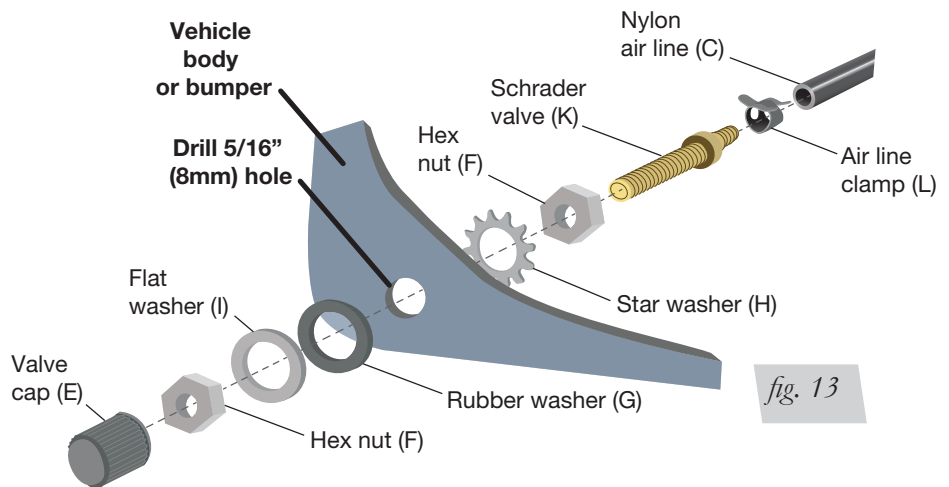


fig. 13

CAUTION

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.

Before Operating

Consult the included User Guide for information about fixing air leaks along with more tips for maintenance and use before using the product.

INSTALLATION CHECKLIST

- Clearance test** — Inflate the air springs to 25-35 PSI (1.7-2.4BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against each air spring.
- Leak test before road test** — Inflate the air springs to 25-35 PSI (1.7-2.4BAR) and use a soapy water solution to 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**.
- Road test** — The vehicle should be road tested after the preceding tests. Inflate the air springs so that the vehicle is level. 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 User Guide 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 50 PSI (3.5BAR).
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)	50 PSI (3.5BAR)

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 50 PSI (3.5BAR), THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON LOAD AND GROSS VEHICLE WEIGHT RATING.