

Air Lift 1000™



Installation Guide



Toyota 4Runner



Watch the video

Info on Table of Contents page

Kit 60804

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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Hardware and Tools Lists

HARDWARE LIST

Item	Part#	Description	Qty
A	46128	Air Spring	2
B	20937	Air line	15'
C	10466	Zip tie	6
D	20230	Valve cap	2
E	21233	5/16" Hex nut	4
F	21234	Rubber washer	2
G	18411	Star washer	2
H	18501	M8 Flat washer	2
I	21236	Tee fitting	1
J	21455	Schrader valve	2
K	10638	Air line clamp	6

TOOLS LIST

Description.....	Qty
Ratchet	1
Pliers	1
Standard and metric, regular and deep-well sockets	Set
Torque wrench	1
Hack saw	1
5/16 and 1/2" Drill bits	1
Drill	1
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
China marker, tire marker or white crayon	1

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 MACHINE OR MINOR PERSONAL INJURY.

Installing the System

PREPARING THE VEHICLE

The coil springs will need to be removed to modify the internal hollow spring which will make room to install the air springs into the coils.

Always keep safety in mind when working on your vehicle.

1. Mark the upper spring, spring isolator and spring seat on both sides to position spring back into their proper location when re-installing (Fig. 1).
2. Jack up the rear of the vehicle or raise on hoist. Support the frame with safety stands forward or behind the rear axle.



Fig. 1

NOTE

Leave enough room to drop the rear axle down far enough to remove the coil springs.

3. Support the axle and remove the lower shock bolts on both sides (Fig. 2). Remove the Panhard rod bolt on the driver's (left) side (Fig. 3). Remove the brake line bracket bolt on the rear of the axle, then pull the bracket away from its mounting location on the axle (Fig. 4). Remove the ABS bracket bolt on the rear of the axle, then pull the bracket away from its mounting location on the axle (Fig. 5). Then disconnect one end of the sway bar links that are attached to the frame or the sway bar (Fig. 6). Save all hardware for re-use.

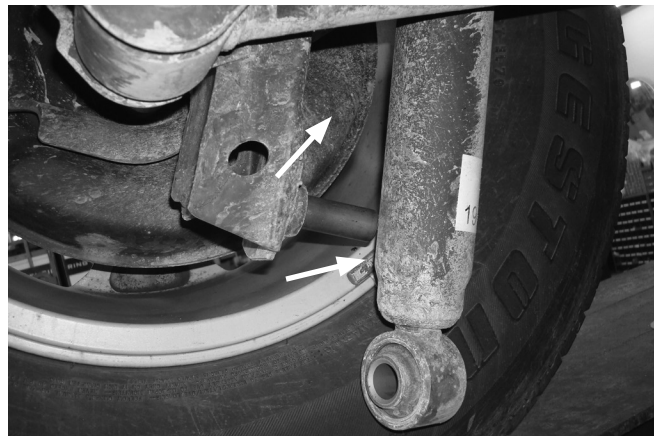


Fig. 2

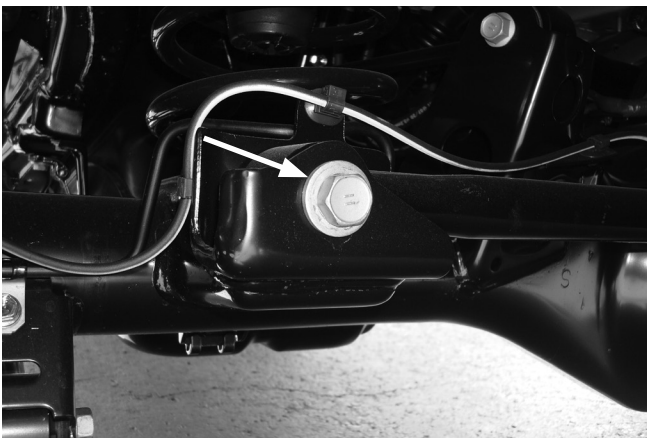


Fig. 3

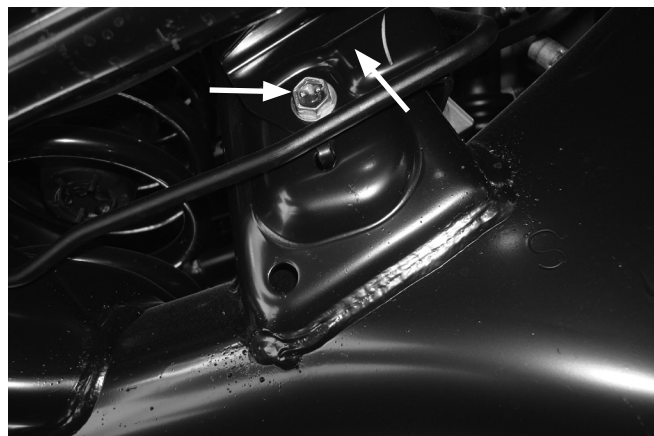


Fig. 4



Fig. 5

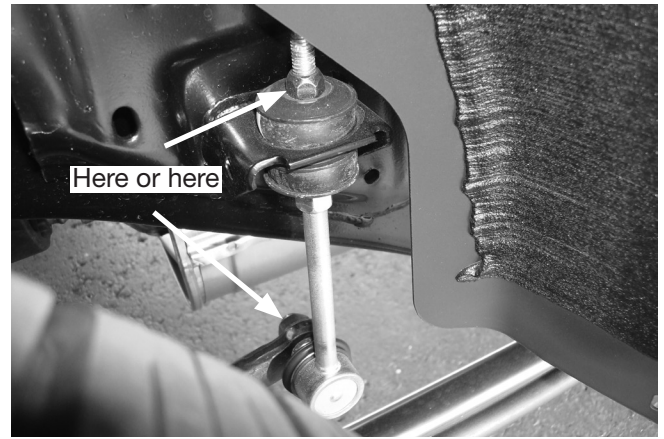


Fig. 6

4. Drop the axle far enough to remove the coil spring making sure there is no strain on any of the brake or ABS lines. Remove coil spring/hollow spring assembly on one side at a time.

5. Remove the hollow spring from the inside of the steel coil spring. Using a hack saw, cut the four convolutes off the spring as noted in Fig. 7 & Fig. 8.

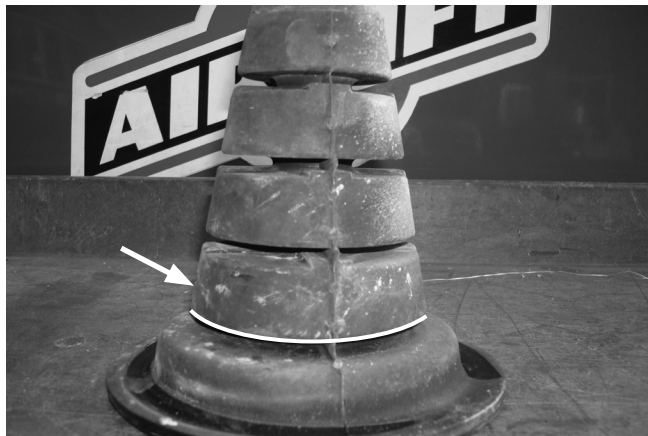


Fig. 7



Fig. 8

6. Using a drill with a 1/2" drill bit, enlarge the hole that is in the center of the modified hollow spring (Fig. 9).



Fig. 9

7. Cut the air line (B) in half using a hose cutter, razor blade or sharp knife (see page 8 for air line cutting instructions). Insert the air line through the top of the modified hollow spring (Fig. 10). Insert the cylinder (A) into the spring with the stem pointing up. Install an air line clamp (K) onto the end of the air line and insert the air line over the barbed fitting, covering the barbs completely. Using a pair of pliers, move the clamp over the barbs so that it covers the barbed stem.

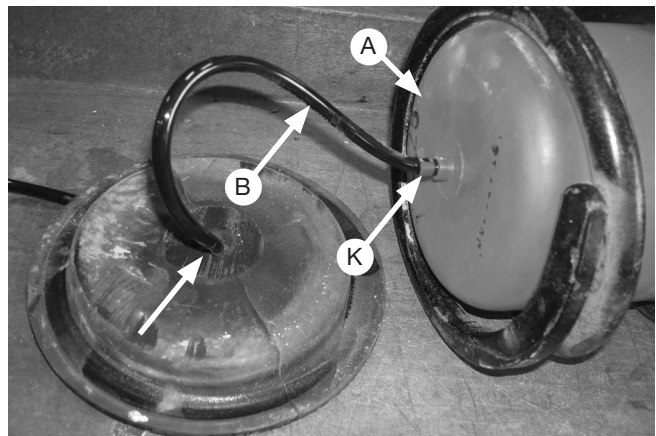


Fig. 10

8. While setting the new assembly back onto the axle, feed the air line up through the center existing hole in the upper spring seat (Fig. 11). Repeat steps 5 through 8 on the opposite side.



Fig. 11

9. Align the marks for the springs, upper spring isolator (hollow spring) and upper spring mount (made in step 1) (Fig. 12) and raise the axle up far enough to install the shocks, sway bar mounts and the Panhard rod. Attach using the hardware removed, but do not tighten hardware at this time.

NOTE

While raising the axle, align the sway bar links up with the holes in the sway bar or upper frame bracket depending on how it was removed.



Fig. 12

10. Once the stock components have been put back into position, raise the axle all the way up making sure the air line at the top of the springs does not kink, and tighten the hardware to the torque specs recommended by Toyota (Table 1). Install the brake line/ABS brackets back into position on the back side of the axle and tighten hardware securely.

Torque Specifications		
Location	Nm	lb.-ft.
Shocks	98	72
Panhard	130	96
Sway Bar		
Upper	15	11
Lower	20	52

Table 1

11. Route the air line along the top of the frame to the back of the vehicle, leaving sufficient slack in the line above the spring/upper mount, for suspension travel (Fig. 13). Zip tie the line to keep it in position.

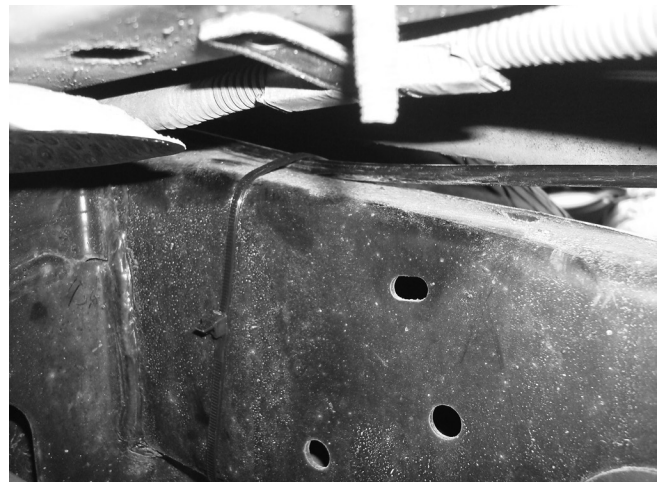


Fig. 13

Installing the Air Lines

1. A single-path air line installation is recommended for vehicles that typically have even weight distribution (Fig. 14). 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 (I) and route separate air lines for both air springs (Fig. 15).

Single-Path Air Line Routing

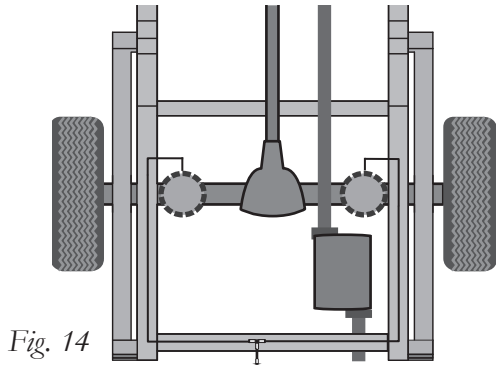


Fig. 14

Dual-Path Air Line Routing

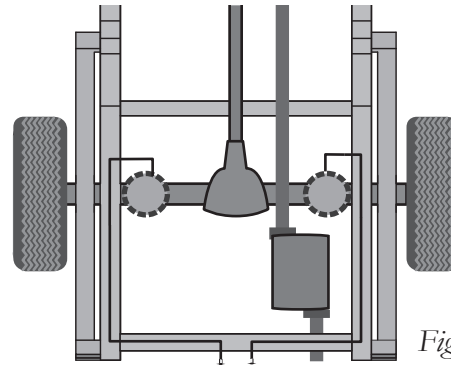


Fig. 15

⚠ CAUTION

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 (I) on the wheel well or rear bumper. Determine and cut adequate length of air line (B) to reach to the tee from left and right side air springs. Make clean, square cuts with a razor blade or hose cutter (Fig. 16). 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. 17) for all air line connections:
 - a. Slide the air line clamp 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 (J), ensuring that the valve will be protected and accessible with an air hose (Fig. 18). Determine and cut adequate length of air line (B) to reach from the tee to the Schrader valve or from the air springs to the valve if using a dual-path installation.

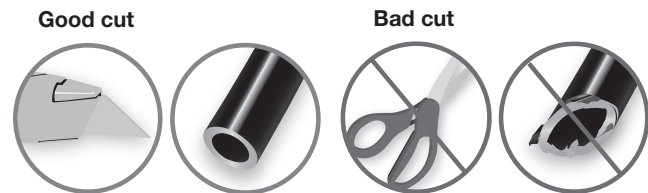


Fig. 16

6. Drill a 5/16" (8mm) hole for the Schrader valve (J) and mount as shown (Fig. 19). Install the air line on the Schrader valve first. The rubber washer (F) serves as an outside weather seal.

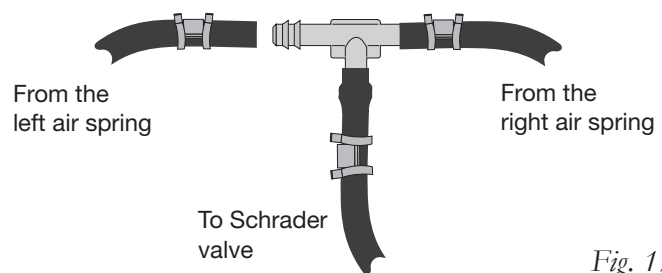


Fig. 17

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

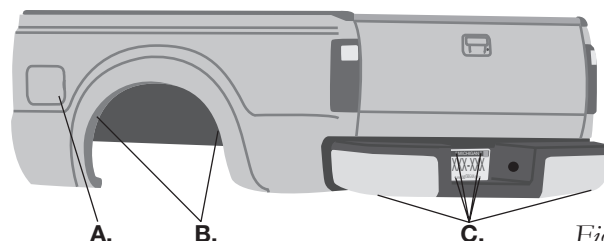
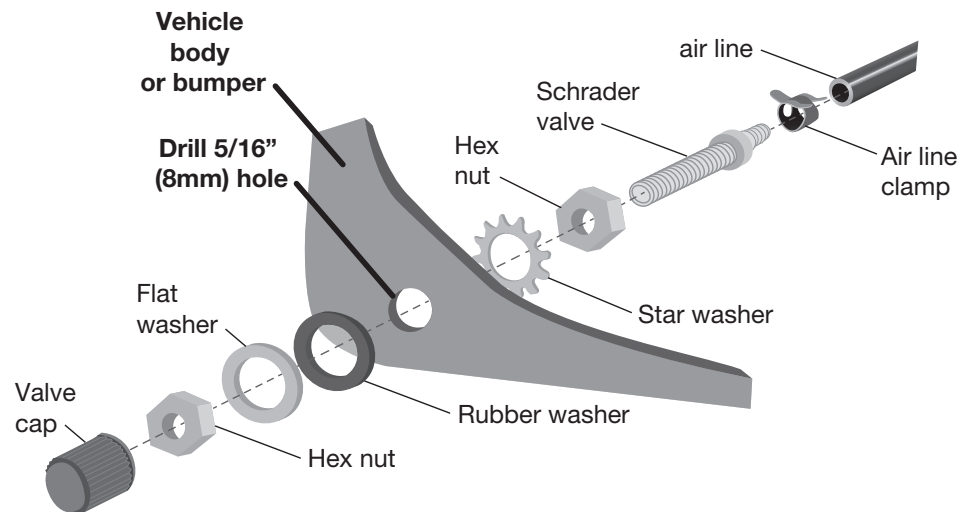


Fig. 18

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.

*Fig. 19***COMPLETE THE INSTALLATION**

1. 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

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, 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.

Minimum Recommended Pressure
5 PSI (.34BAR)

Maximum Air Pressure
35 PSI (2.4BAR)

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.

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.