



Kits 75559, 75561 & 75562

Universal Air Spring-Over-Strut



INSTALLATION GUIDE

**NOTE: THIS KIT IS SOLD
WITHOUT A WARRANTY.**

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

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance universal air suspension. Read these installation instructions to correctly and safely set up the vehicle for a #lifeonair.

Air Lift assumes that the installer has the mechanical knowledge and ability to work on vehicle suspension systems and has basic tools necessary to complete the project. Special tools needed to complete the installation are noted on the Installation Diagram page.

Air Lift reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Performance at (800) 248-0892 or visit www.airliftperformance.com.

An Air Lift Performance air management system is highly recommended for this product. Learn more at air-lift.co/productlines.

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.

NOTE

Indicates a procedure, practice or hint which is important to highlight.

Important Safety Notices



WARNING

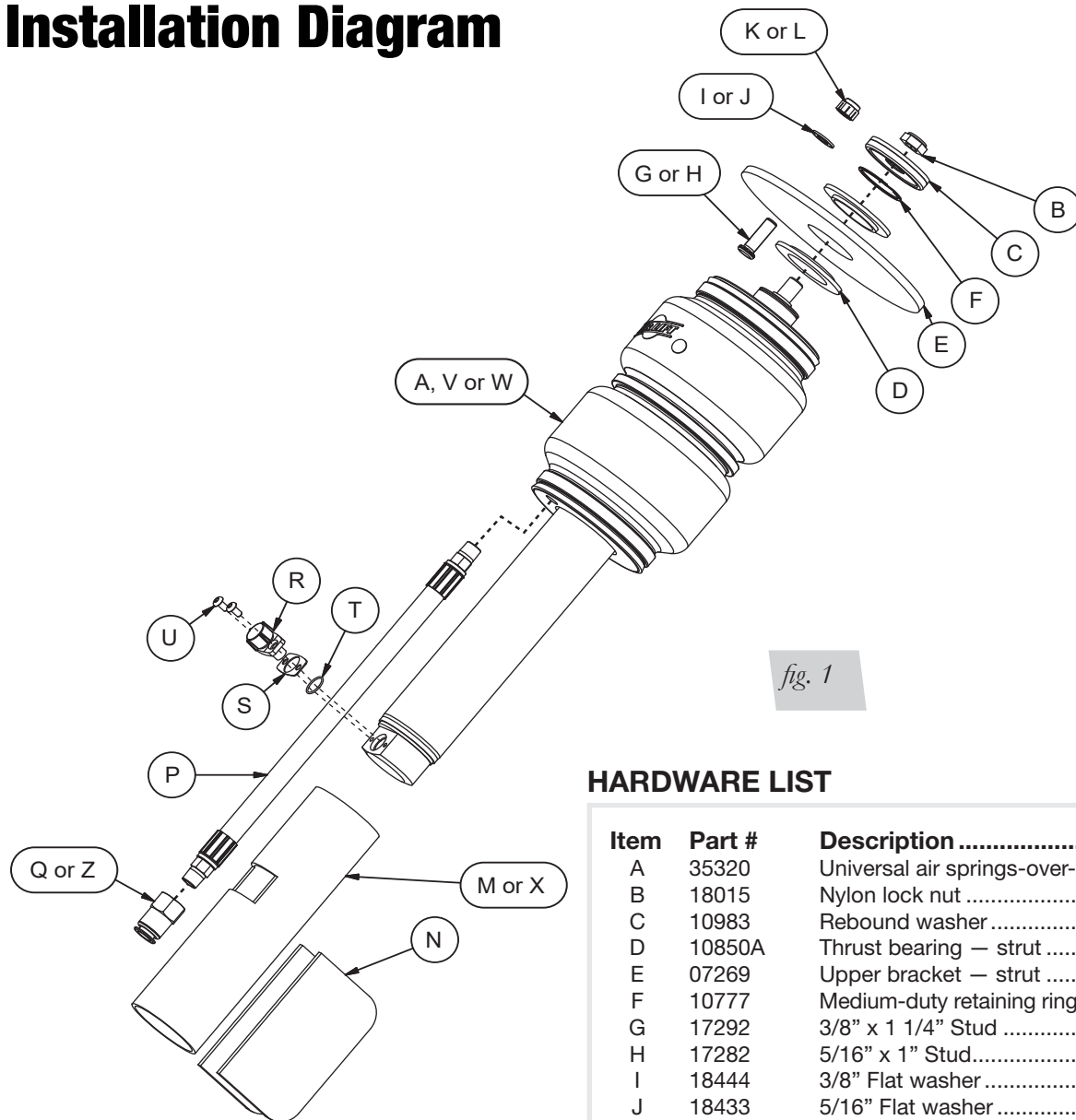
DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.



WARNING

AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

Installation Diagram



HARDWARE LIST

Item	Part #	Description	Qty
A	35320	Universal air springs-over-strut—long .	2
B	18015	Nylon lock nut	2
C	10983	Rebound washer	2
D	10850A	Thrust bearing — strut	4
E	07269	Upper bracket — strut	2
F	10777	Medium-duty retaining ring (WS-150) ...	2
G	17292	3/8" x 1 1/4" Stud	8
H	17282	5/16" x 1" Stud.....	8
I	18444	3/8" Flat washer	8
J	18433	5/16" Flat washer	8
K	18438	5/16"-18 Nylon lock nut	8
L	18435	3/8"-16 Nylon lock nut	8
M	35026-001	Tube — strut adapter	2
N	35368-002	Tab — spindle mounting	4
O**	11023	Air spring collar	1
P	20997	Braided air line	2
Q	21810	Union, 1/4"FNPT x 1/4"PTC DOT	2
R	N/A	Adjuster knob	2
S	N/A	Gasket	2
T	N/A	O-ring	2
U	N/A	Bolt	4
V	35325	Universal air springs-over-strut—short	2
W	35219*	Univ. air springs-over-strut—high-damp.	2
X	35262-001	Tube, adapter	2
Y	35262-004	Tube, inner adapter	2
Z	21987	Union, 1/4"FNPT x 3/8"PTC "DOT"	2

* Kit 75559 does not have adjustable damping

**Not shown in installation diagram

STOP!

Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

Installing the Air Suspension

PREPARING THE VEHICLE

1. Elevate the vehicle and support the body with a hoist or jack stands.
2. Remove the wheels.

STRUT REMOVAL

1. Support the lower control arm, brake, and axle/spindle assembly.
2. Detach brake hoses, wheel speed sensors, and the stabilizer link from the strut assembly (Fig. 2).

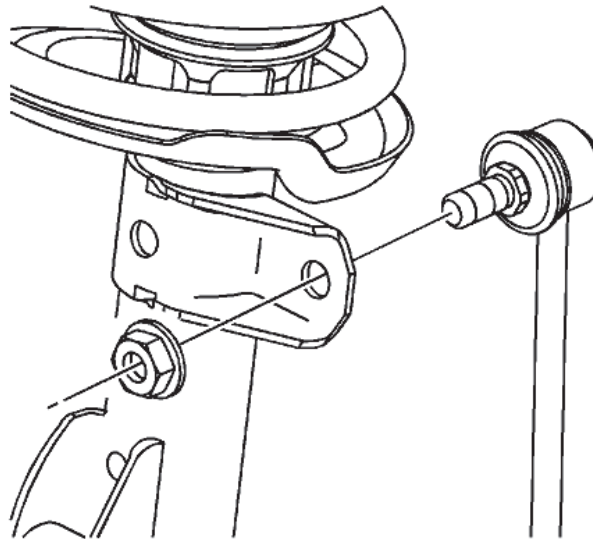


fig. 2

3. Remove the lower nuts and bolts from the lower spindle clevis (Fig. 3).

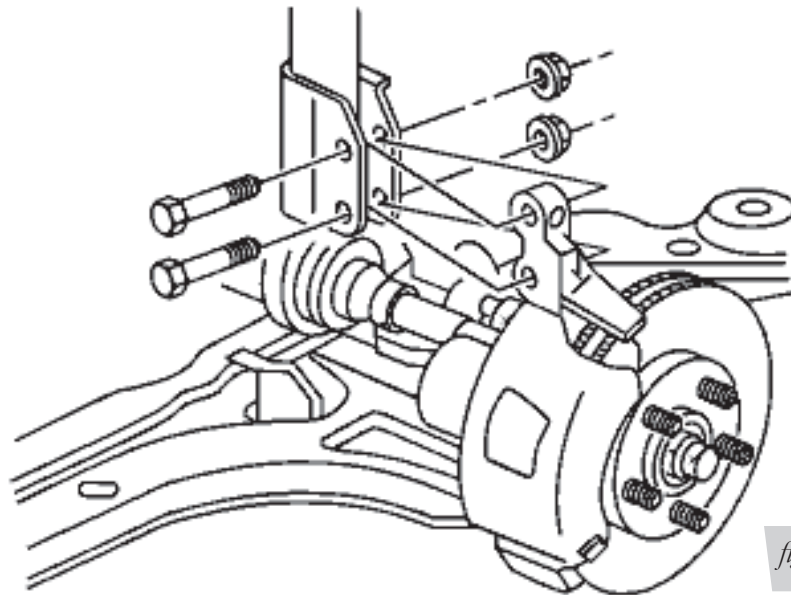
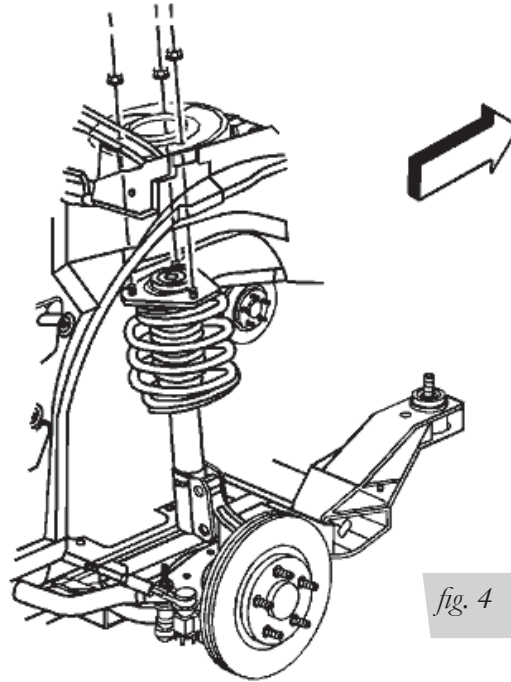


fig. 3

4. Lower the control arm, brake and axle/spindle assembly being careful not to pull against brake hoses or sensor wires.

5. Remove the upper strut mounting bolts from vehicle body. Remove strut from the vehicle (Fig. 4).



6. Using a spring compressor, (caution and attention to safety is required, spring will be under tension) securely mount the spring in the compressor and remove the nut from the top of the strut rod. Slowly release the compressor with attention to safety. Once the spring and strut are free from tension, remove the stock upper mount. Pay attention to the order in which parts remove from the strut.

DETERMINING MOUNTING HEIGHT

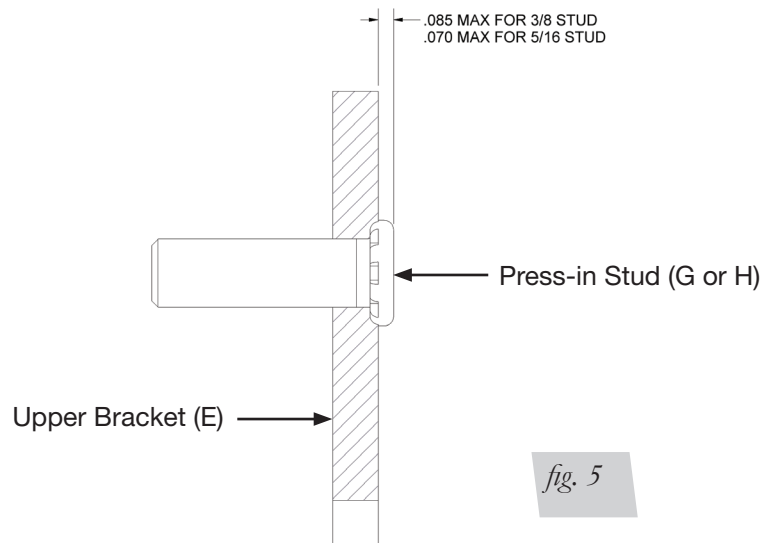
1. To determine the correct height of the new air spring-over-strut assembly, reassemble the previously removed strut without the coil spring. Reinstall the strut into its mounting location and fasten in place with the nuts and bolts. Reattach the brake hoses, sensor wires and stabilizer links.
2. Reinstall the wheels.
3. While looking for possible interference, slowly lower the vehicle down until the suspension rests on the bump stops. Determine if this height provides adequate clearance for things such as brake lines, ABS wires, control arms, stabilizer bar/link, tire/wheel clearances, camber, as well as bushing rotation, and ball joint articulation. Make height adjustments as necessary to your application.
4. Measure the desired drop height at the mounting points (top spindle bolt center and top of upper mounting bracket). Depending on the kit (75561 long stroke or 75562 short stroke) add 5 7/8" (150mm) or 4 3/8" (112mm) to this height (5 7/8" or 4 3/8" is the stroke of the air spring-over-strut that will be measured later). Record this height for later use in either figure 8a, 8b or 8c on the corresponding kit drawing.

NOTE

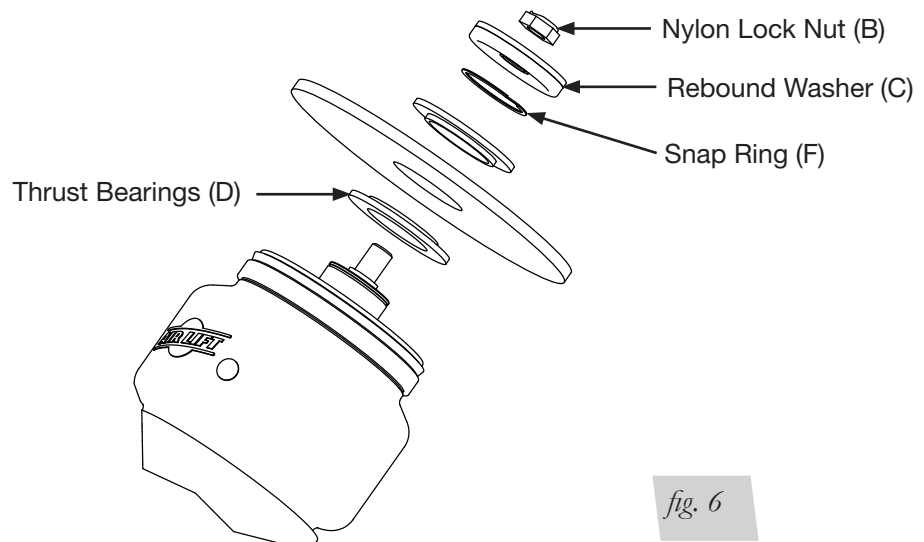
Orient the air spring collar so that the air port is located inboard of the wheel.

5. Plan where the air port, adjuster knob, and collar of the air spring-over-strut would be best located at this point. Reference this to the orientation of the spindle tabs.
6. Repeat "Strut Removal" steps.

7. Using the stock upper mount as a bolt template, apply this pattern to the flat round upper bracket provided (E). Measure the bolt diameter needed. This kit provides either 5/16" or 3/8" press-in studs. These studs (G or H) are required because of "head clearance" to the air spring. Other bolts may cause rubbing of the bracket to the air spring, causing noise and reducing product life. Depending on the bolt size, drill either 5/16" or 3/8" holes on the bolt pattern. Using a press, support closely around the hole to prevent deflecting of the bracket surface during the press operation. To install the studs, press against the stud head until the "teeth" are flush with the bracket (Fig. 5).

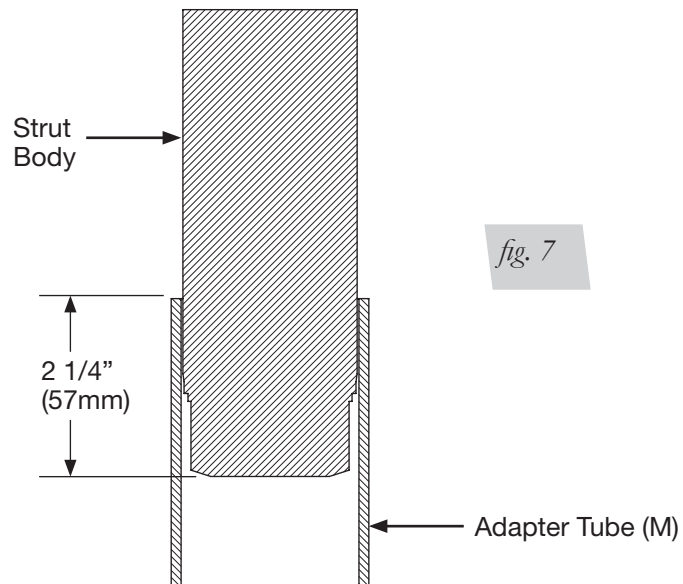


8. Assemble this bracket to the strut by removing the nylon lock nut (B) and rebound washer (C) then install the thrust bearings (D) onto the mount as shown in the figure below. Install the snap ring (F) into the groove. Reinstall the rebound washer (C), rubber side down and nylon lock nut (B) (Fig. 6).



9. Replicate the hole pattern of the spindle mount to the supplied spindle tabs (N) while paying attention to hole diameter, hole center distance. If camber adjustment was necessary in step 3 of "Determining Mounting Height," plan this within the design of the spindle tabs. The width between the spindle tabs needs to be measured on the factory strut.

10. Depending on the recorded mounted height taken in step 4 of “Determining Mounting Height,” loosely assembly the adapter tube (M) and spindle tabs (N) to the strut for mock-up. Measure the distance (with the strut at max extension) from the top of the upper bracket to the spindle mounting holes. This should help you determine the correct length the adapter tube needs to be. Cut the adapter tube if necessary. Make sure the adjuster knob window gives adequate access to the adjuster. Modify the window if necessary.
11. Strut adapter tube (M) may need to be cut down to accept the spindle tab design and support the strut. The strut body needs to be within the tube by at least 2 1/4” (57mm) (Fig. 7).



12. Remove air spring from the strut for welding/painting as follows:
 - a. Remove nylon lock nut and rebound washer from the top of the strut.
 - b. Remove the two bolts that fasten the bottom of the air spring to the collar.
13. Tack weld the modified spindle tabs (N) to the adapter tube (M). Tack weld the adapter tube and air spring collar (O) to the strut, ensuring the holes line up with the air spring mounting holes. Quench welds in water immediately.
14. Create any other tabs that may be necessary including stabilizer bar tabs, brake line tabs, sensor wire tabs, etc.
15. Insert the assembly into the vehicles mounting points and trial fit. Verify that your design is correct before finish welding (see Figs. 8a-8c for welding requirements). Check for air spring clearance by measuring at the spring's maximum diameter (make sure to check clearances at intended ride height and full steering lock in both directions). Any rub or contact will cause premature wear of the assembly. If applicable, check stabilizer tab location, brake line location etc. Remove the strut assembly from vehicle when the design is verified.

**CAUTION**

WHEN WELDING THE ADAPTER TUBE TO THE STRUT BODY, DO NOT WELD CONTINUOUSLY AROUND THE STRUT BODY! THIS ACTION WILL OVERHEAT THE INTERNALS OF THE STRUT AND POTENTIALLY RENDER THE STRUT INEFFECTIVE.

16. Weld the adapter tube to the strut in three equally spaced 3/4” (19mm) sections and quench in water immediately after. Fully weld the spindle tabs and immediately quench in water after each tab. Weld the collar to the strut in the center with a 1/2” weld section and immediately quench in water.

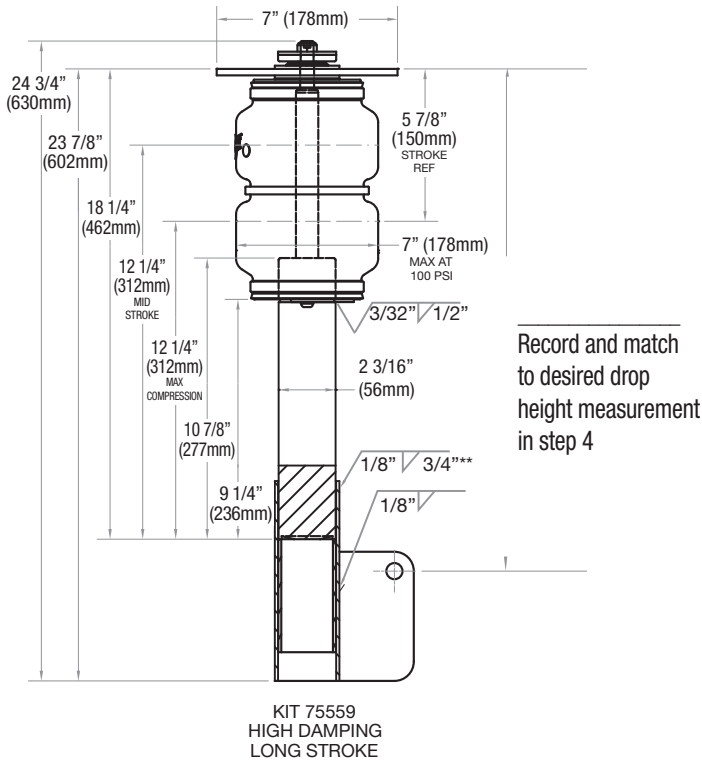


fig. 8a

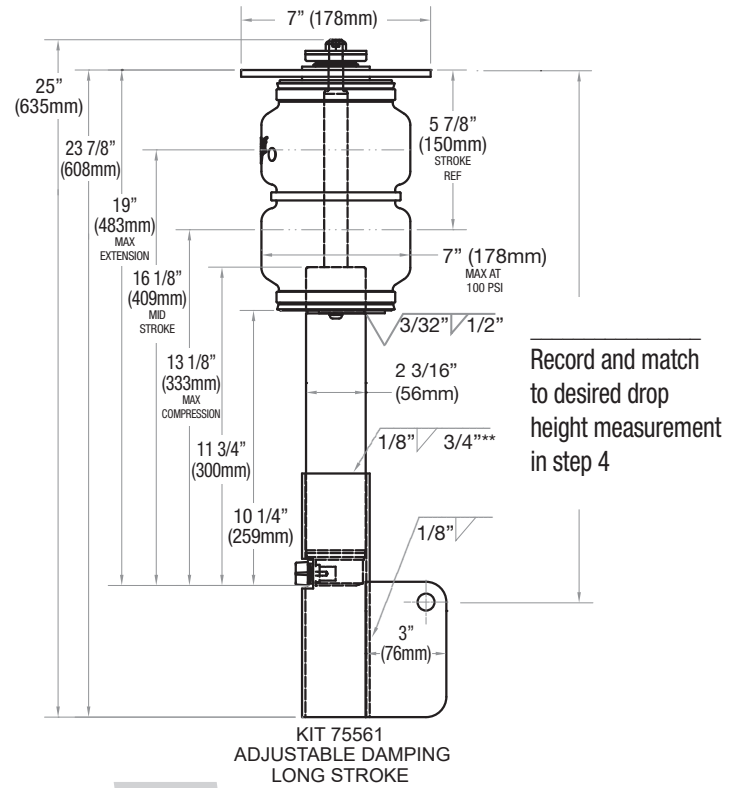


fig. 8b

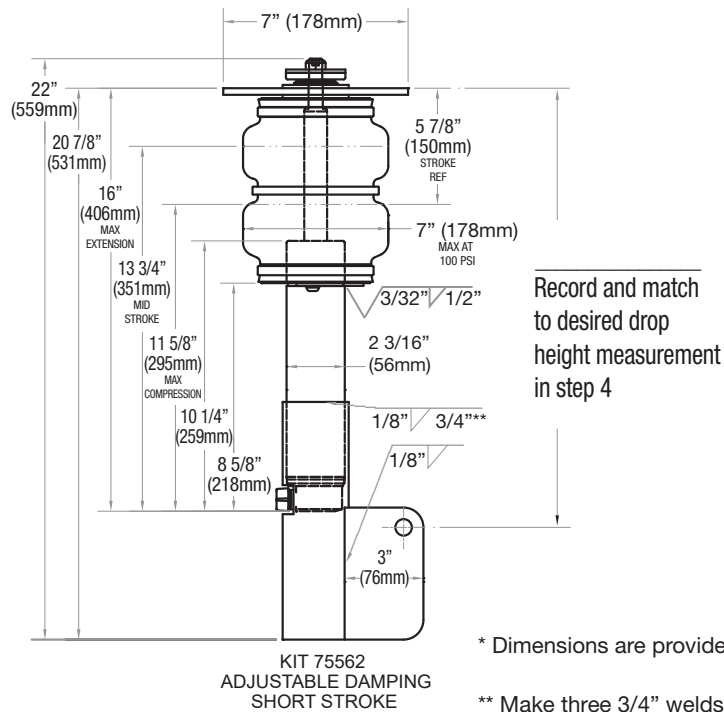


fig. 8c

* Dimensions are provided for reference only

** Make three 3/4" welds, evenly spaced around the circumference of the damper body

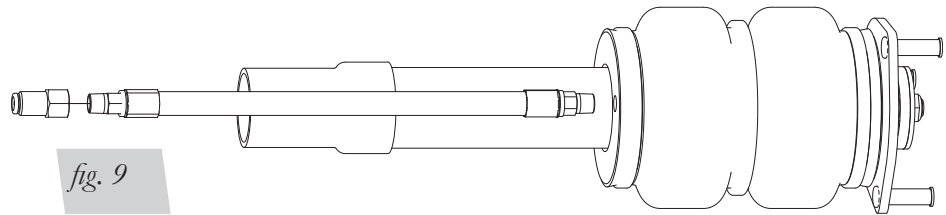
✓ Weld symbol

PAINTING

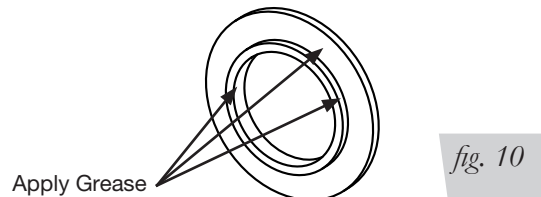
1. Remove any sharp edges or weld spatter from the strut assembly.
2. Wipe assembly down with clean, oil-free rags to remove any possible contaminants.
3. Paint the strut and upper bracket. Do not get paint on the threads of the bracket or inside the adjuster valve. Allow adequate drying time before handling.

AIR SPRING-OVER-STRUT INSTALL

1. Install the adjuster knob (R) by applying the gasket (S) on the mating surface of the knob, and then apply the O-ring (T) around the adjuster plunger. Align the holes of the knob to the threads and bolt down with the two bolts (U).
2. Begin by installing the leader line into the air spring. Tighten the appropriate fitting to the air line (1 3/4 turns beyond hand-tight). Tighten the leader line into the air spring 1 3/4 turns beyond hand-tight (Fig. 9).
3. Apply a thin layer of grease to the mating surfaces of the thrust bearings (D) (Fig. 10). Attach the upper bracket to the air spring.
4. Reinstall the air spring, ensuring the collar is aligned with the air spring mounting holes. Install bolts and torque to 10 lb.-ft. (13.6Nm).



5. Install into the vehicle using the supplied washers (I or J) and nuts (K or L). The 5/16" nuts are to be torqued to 22Nm (16 lb.-ft.). The 3/8" nuts are to be torqued to 37Nm (27 lb.-ft.).



6. Reinstall the lower spindle clevis using the factory removed bolts. Torque to manufacturers specification.

ROUTING THE AIR LINES

1. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the leader hose that is clear of all suspension and steering components.
2. Routing should allow for the suspension to extend and steer without kinking, pulling the line tight or rubbing on other components. Following the brake line routing is often a good place to start. Check clearances to all other components.

WARNING

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Tips for Installing Air Lines

CUTTING AIR LINES

When cutting air lines, use a sharp knife or a hose cutter and make clean, square cuts (Fig. 11). Do not use scissors or wire cutters because these tools will deform the air line, causing it to leak around fittings. Do not cut the lines at an angle.

The minimum bend radius for 1/4" air line is 1" (25mm). The minimum bend radius for 3/8" air line is 1 1/2" (38mm). Do not bend the air line less than the minimum bend radius or side load the fitting connections. Air lines are to be installed straight into fittings.

Inspect the air line for scratches that run lengthwise prior to installation. Contact Air Lift customer service at (800) 248-0892 if the air line is damaged.



To watch a video demonstrating proper air line cutting, go to air-lift.co/cuttingairline



fig. 11

Before Operating

CHECK FOR BINDING

1. Inflate and deflate the system (do not exceed 125 PSI [8.6BAR]) to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch brake lines, vent tubes, etc. Clear lines if necessary.
2. Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and check all connections for leaks.



CAUTION

MAKE SURE THE FRONT WHEELS ARE STRAIGHT WHEN DEFLATING AND REINFLATING AIR SPRINGS.

Suggested Driving Air Pressure	Maximum Air Pressure
45-75 PSI (3.1-5.2BAR)	125 PSI (8.6BAR)
FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT.	

Table 1

INSTALLATION CHECKLIST

- ☐ **Clearance** — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against the air spring. This should be checked with the air spring fully inflated and fully deflated.
- ☐ **Leak** — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- ☐ **Heat** — 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** — Recheck all bolts for proper torque.
- ☐ **Road** — 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 paperwork that came with the kit.

Notes

Notes

Need Help?

Contact Air Lift Company customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, dial (517) 322-2144.



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