INSTALLATION GUIDE

Air Lift Performance Height Upgrade

Kit 27705

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, which could result in damage to the vehicle, minor to severe personal injury or death.

MN-947 • (012505) • ECR 10488

Protect your Air Lift Performance Purchase by Completing your Warranty Registration

Thank you for purchasing an Air Lift Performance product!

Take a photo of your sales receipt and then scan the QR code to complete your online warranty registration.

TABLE OF CONTENTS

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of Air Lift Performance Height Upgrade Kit.

Read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information includes step-by-step installation information and installation template.

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

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information 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.

NOTE

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

TECH TIP

Used to provide helpful tips to ease the installation process.

Component List

Refer to Installation Overview on pages 8-9 for item illustrations.

HARDWARE CONTENT

Item	Part #	Description	Qty
A	34977	Height Sensor Linkage and Hardware Pack	4
B	26894	Height Sensor Assembly	4
C	26953-012	Harn-12FT RL Height Sensor*	1
D	26953-013	Harn-12FT RR Height Sensor*	1
E	26953-020	Harn-20FT FL Height Sensor*	1
F	26953-021	Harn-20FT FR Height Sensor*	1
G	34885	Height Sensor Hardware Pack	1
H	32007	Zip Tie 8" Bundle Black (6)	4

* FL = Front left corner
FR = Front right corner
RL = Rear left corner
RR = Rear right corner

27705 Air Lift Performance Height Upgrade Kit

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

Install the Air Lift Performance Height Upgrade Kit

SECTION 1 INSTALL THE HARNESS

The harness can be routed inside or underneath the vehicle depending on your specific application.

1. Identify each harness by its heat-shrink label (FL, FR, RL, RR)*, then route and secure each harness to the matching height sensor mounting point on the vehicle. Ensure the entire length of the harness is protected from sharp edges and heat sources.
2. Connect the main harness height sensor drops to the appropriate height sensor harness feeding the corresponding corners of the vehicle (match FL, FR, RL, RR)*.

NOTE *Ensure that there is enough harness length available to keep proper drip loops and use proper bend radius for wire bundles (Fig. 1).*

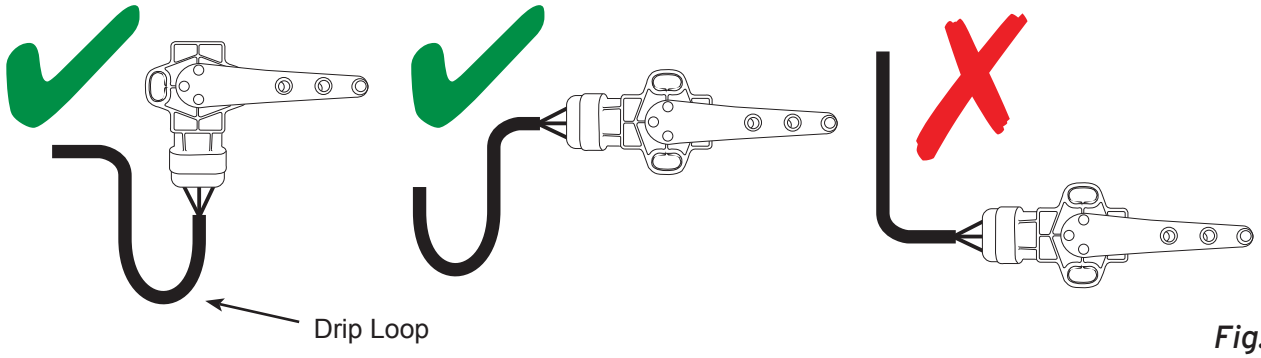


Fig. 1

* FL = Front left corner | FR = Front right corner | RL = Rear left corner | RR = Rear right corner

WARNING IF THE PRESSURE-BASED SYSTEM IS ALREADY INSTALLED BEFORE HEIGHT SENSOR INSTALLATION, MAKE SURE TO TURN OFF RISE ON START TO AVOID UNINTENDED AIRING UP.

NOTE *If your installation requires a longer harness due to routing constraints or vehicle length, order one of two kits: Part number 27700 (2)-4' extension harnesses, 27702 (2)-8' extension harnesses.*

SECTION 2 IDENTIFY SENSOR MOUNTING AND LINKAGE LOCATIONS

NOTE *Installation of height sensors is a trial-and-error process and requires patience. The goal is to use as much of the sensor range as possible. This will optimize height adjustment accuracy of the system.*

Tips to determine a suitable height sensor mounting location

- Select a sturdy mounting point on the body or frame of the vehicle for each height sensor. Mounting a sensor on a surface that deflects or easily bends could damage or break the height sensor assembly.

- The sensor connection point must be angled downward between horizontal and vertical (i.e., facing the ground) (Fig. 2). Failure to do so could allow water into the sensor electrical connection, which may damage your system.

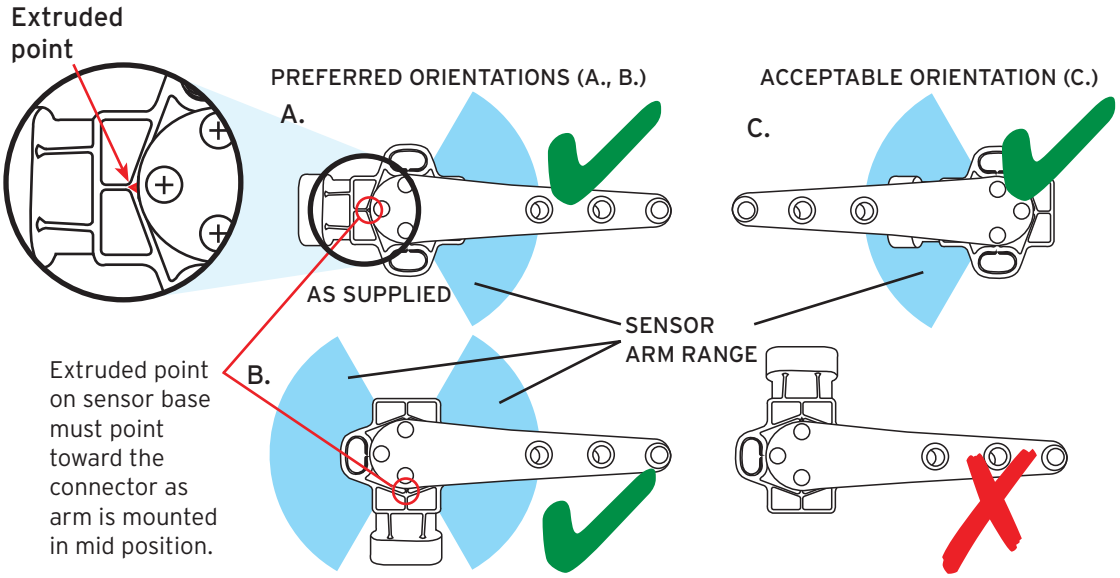


Fig. 2

- With some installations, it may be preferable or even required to adjust the sensor arm relative to the sensor base. The sensor arm can be removed from the sensor base and rotated to any orientation 90-180 degrees relative to the arm's original position. Any chosen orientation must have the extruded notch facing directly towards the sensor connection point at the sensor arm's mid point of rotation.
- Ideally, find a point where the sensor will be directly above the lower linkage mounting location. It may be necessary in some applications to fabricate a bracket to mount the sensor in appropriate position.

CAUTION REMOVE ALL FUSES WHEN JUMP-STARTING OR WELDING ON THE VEHICLE. FAILURE TO DO SO COULD DAMAGE THE MANIFOLD.

- Make sure that the sensor and sensor arm clear the vehicles suspension, wheels, and any other moving parts. This includes steering the wheels all the way to the lock position left and right to ensure proper clearance. Provide enough clearance to compensate for heavy load/movement that can't be seen from manual/physical articulations.
- Keep the sensor and wires away from heat sources and moving parts that will create wear and may damage these components.
- Understand whether the suspension or wheel assembly is the limiting factor when the vehicle is aired out. This will ensure proper accommodation of sensor arm travel.
- If using self-tapping screws into the frame, make sure there are no wires or brake/air/fuel lines on the other side before installing any screw(s).
- For best system performance, choose the same mounting locations and sensor orientations on both the driver and passenger side of the vehicle. This will ensure that the sensor range is equal between the front two sensors and the rear two sensors, respectively.

1. Once you believe you have found a good starting point for your height sensors following the tips above, proceed with the next steps of the installation.

WARNING

FLOOR JACKS CAN BE DANGEROUS. WHENEVER USING A FLOOR JACK, MAKE SURE IT IS RATED FOR THE LOAD IT IS LIFTING. CHECK THE VEHICLE OWNER'S MANUAL FOR INFORMATION ABOUT WHERE TO PLACE THE JACK. BEFORE RAISING THE VEHICLE, PLACE WHEEL CHOCKS IN FRONT AND BEHIND THE WHEELS TO PREVENT THE VEHICLE FROM ROLLING. ALWAYS USE JACK STANDS TO SUPPORT THE VEHICLE. NEVER GET UNDER OR PLACE ANY BODY PARTS UNDER A VEHICLE THAT IS SOLELY SUPPORTED BY THE JACK.

2. Mark the intended sensor mount location on the vehicle to maintain consistency in measuring methods in the next several steps. After finding a potential sensor location, you will need to measure the suspension travel, which will determine the proper arm hole. Exhaust the air springs, disconnect the air lines and jack up the suspension to its lower limit position. Take the measurement between the selected sensor arm hole with the arm at its midpoint and directly below the intended lower linkage location (Fig. 3).

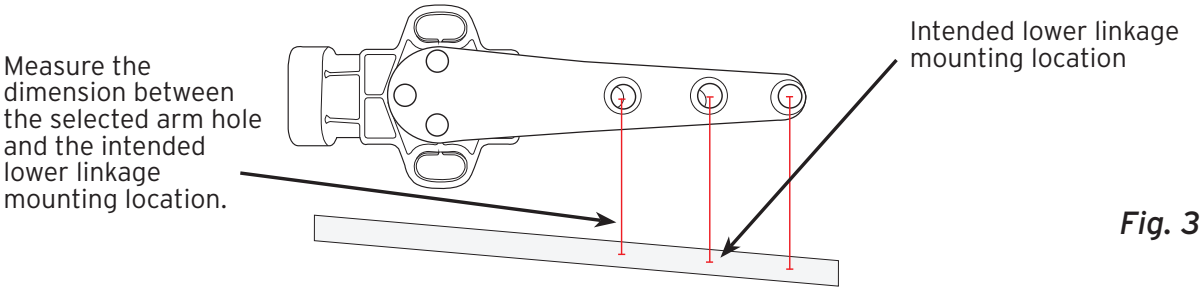


Fig. 3

3. Reinstall air lines and cycle the suspension to get to the upper limit position again, measuring between the sensor arm's middle position and directly below the sensor arm hole mounting to the lower linkage ball joint (Fig. 4). The difference between these two values will be the full suspension travel range.

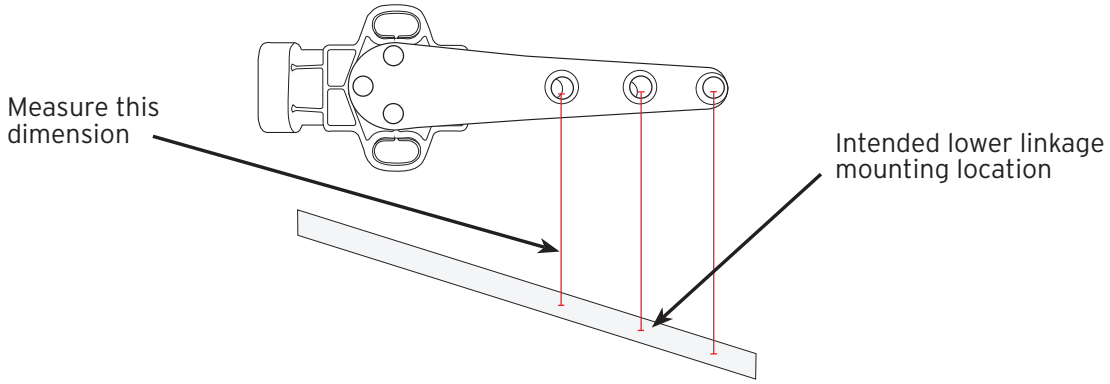


Fig. 4

Select the sensor arm hole

4. Max angle of travel for this sensor is 120 degrees, which can be correlated to the necessary suspension travel as seen on the next page in Table 1. Any significant over-extension or over-compression may damage and possibly destroy the sensor or sensor linkage.

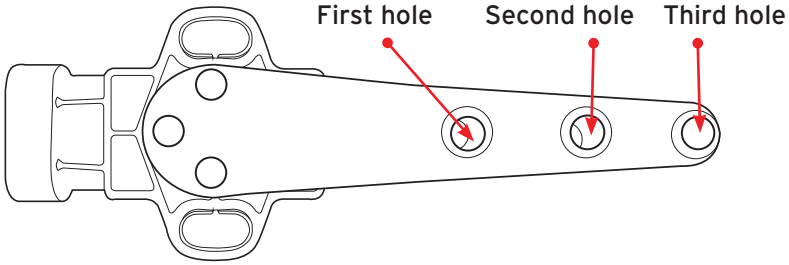


Fig. 5

Table 1

Hole	Maximum Suspension Range	Minimum Suspenson Range
First	2 3/4"	1 13/16"
Second	4 3/16"	2 7/8"
Third	5 5/8"	4 3/16"

5. The sensor should be mounted so the measured travel falls near one of the maximum suspension range dimensions. Move the sensor closer or farther from the suspension pivot point to achieve this measurement. (Fig. 6).

   - If using self-tapping screws into the frame, make sure there are no wires or brake/air/fuel lines on the other side before installing screw.

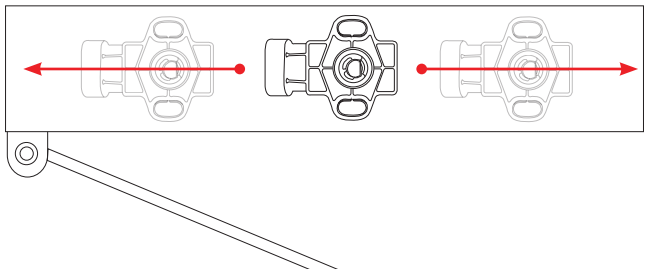


Fig. 6

6. If desired, the sensor arm may be trimmed shorter. Follow the arcs around the appropriate hole when trimming. Be sure to not cut into the smooth, rounded contour at the end of the chosen hole (Fig. 7).

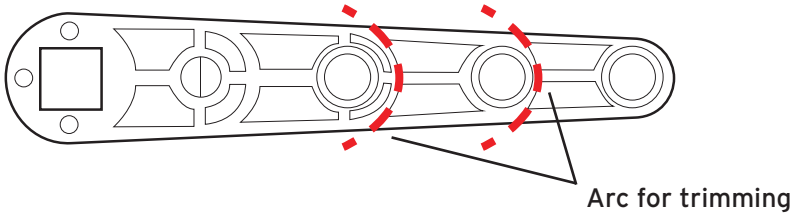


Fig. 7

SECTION 3 MOUNT THE HEIGHT SENSOR

After selecting the location of the sensor and the arm hole to be used, along with determining a lower mounting point for the linkage arm, secure the sensor to the vehicle using the included self-trapping screws (G) or your chosen method to install.

1. Ensure the angle between the mounting point and the sensor arm is less than 15 degress. An angle greater than 15 degress will put unwanted stress on the components. Use the supplied spacer on the lower mounting point to get the angle closer to vertical with respect to the sensor arm (Fig. 8).

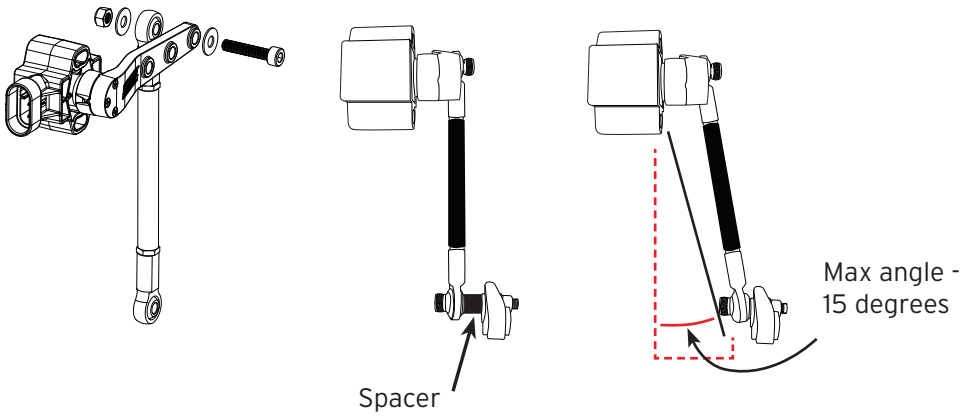
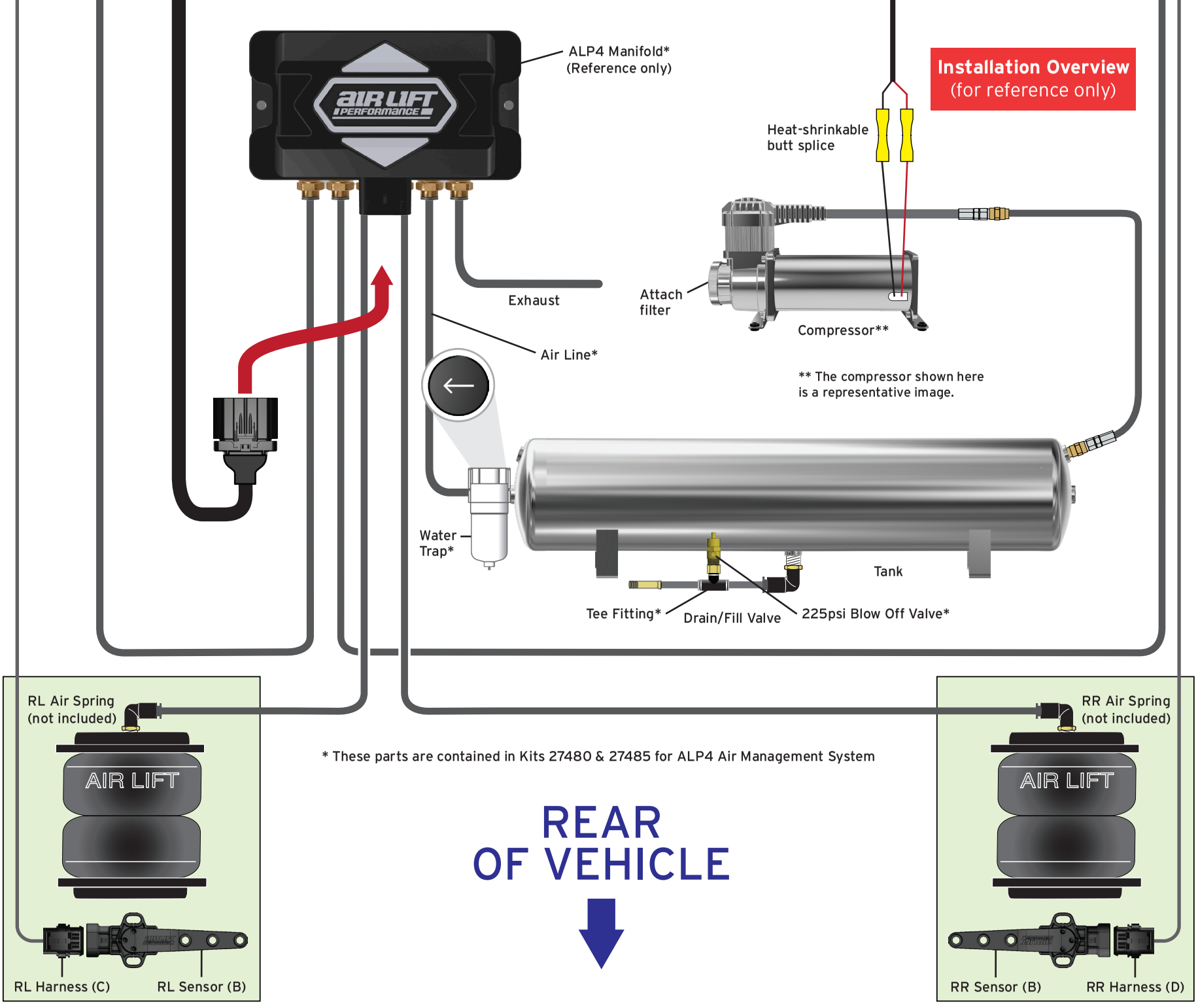


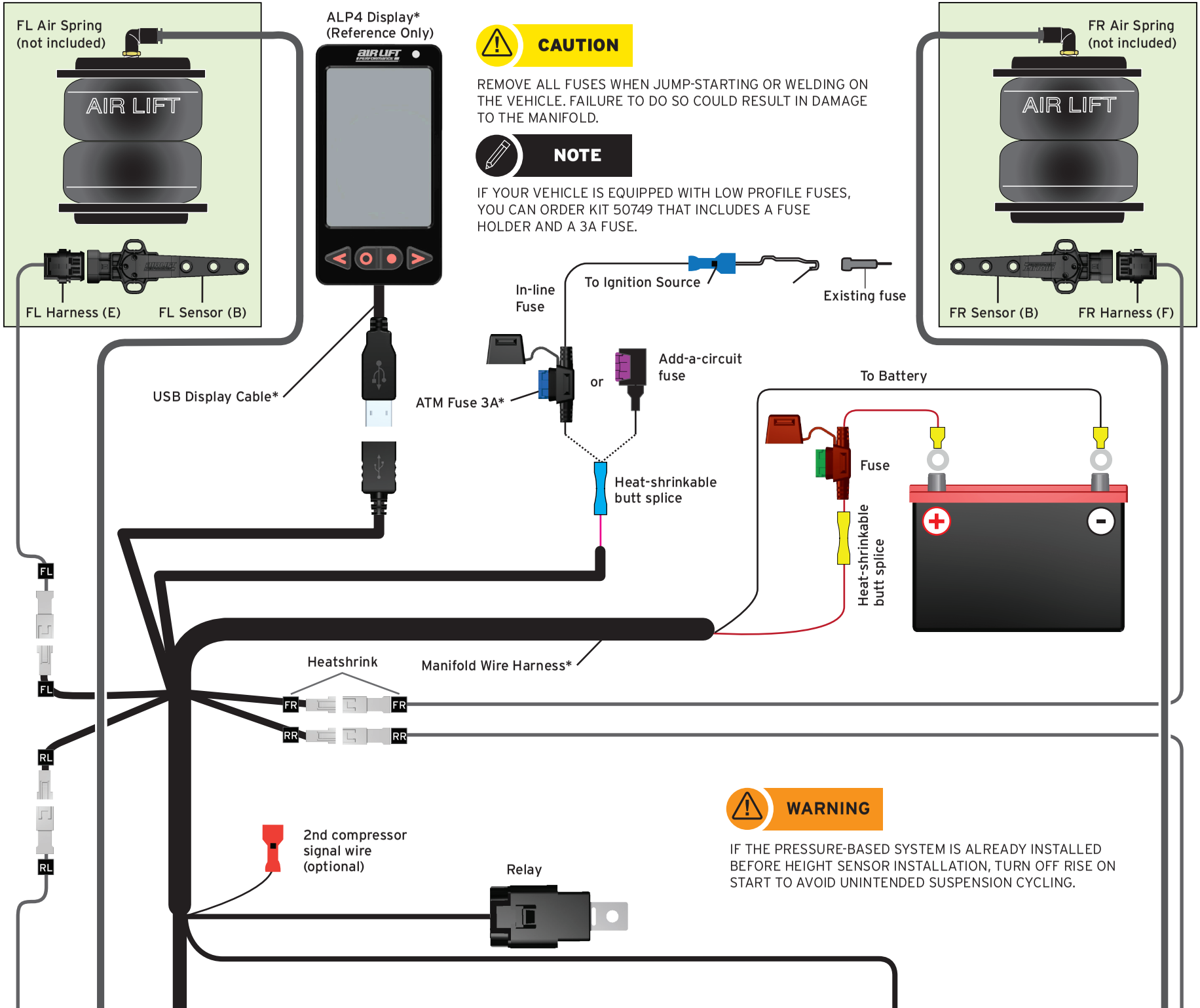
Fig. 8

Installation Overview
(for reference only)



* These parts are contained in Kits 27480 & 27485 for ALP4 Air Management System

REAR OF VEHICLE


FL Air Spring
(not included)
AIR LIFT
FL Harness (E)
FL Sensor (B)
ALP4 Display*
(Reference Only)
USB Display Cable*
CAUTION
REMOVE ALL FUSES WHEN JUMP-STARTING OR WELDING ON THE VEHICLE. FAILURE TO DO SO COULD RESULT IN DAMAGE TO THE MANIFOLD.
NOTE
IF YOUR VEHICLE IS EQUIPPED WITH LOW PROFILE FUSES, YOU CAN ORDER KIT 50749 THAT INCLUDES A FUSE HOLDER AND A 3A FUSE.
In-line
Fuse
To Ignition Source
Existing fuse
ATM Fuse 3A*
or
Add-a-circuit
fuse
Heat-shrinkable
butt splice
To Battery
Fuse
Heat-shrinkable
butt splice
FR Air Spring
(not included)
AIR LIFT
FR Sensor (B)
FR Harness (F)
FL
RL
Heatshrink
Manifold Wire Harness*
FR
RR
2nd compressor
signal wire
(optional)
Relay
WARNING
IF THE PRESSURE-BASED SYSTEM IS ALREADY INSTALLED BEFORE HEIGHT SENSOR INSTALLATION, TURN OFF RISE ON START TO AVOID UNINTENDED SUSPENSION CYCLING.

SECTION 4 LINKAGE ASSEMBLY/MODIFICATION

1. Locate the linkage and ensure the rod is threaded all the way on (Fig. 9).

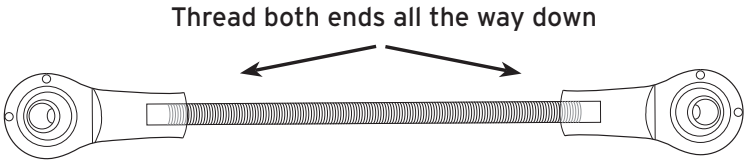


Fig. 9

2. Next, put the suspension in the mid-position with respect to full suspension travel (Fig. 10).

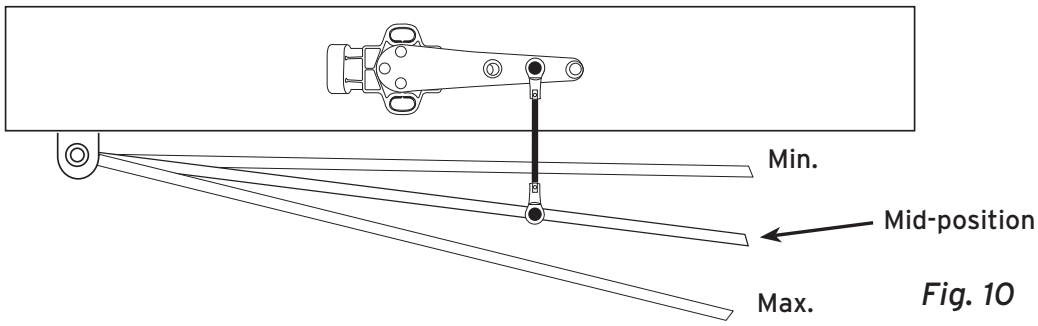


Fig. 10

3. Fasten by finger tightening the linkage to the sensor arm and ensure the sensor arm is at mid-position with respect to the sensor (Fig. 11). Do not fully secure the height sensor.

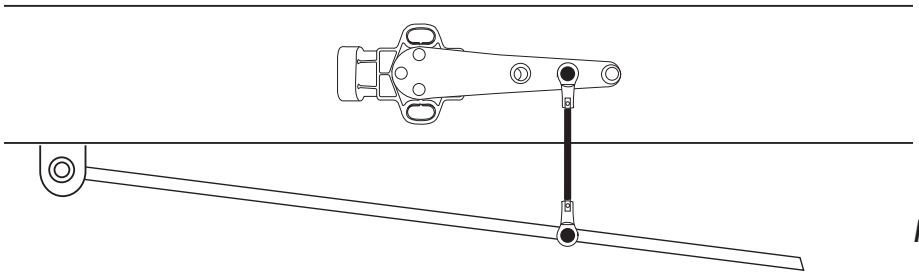


Fig. 11

4. If the linkages do not reach their intended mounting locations, the linkages may be unthreaded from the rod to extend farther. Ensure there are at least 5 threads of engagement on both ends if loosening a linkage to extend the length (Fig. 12).

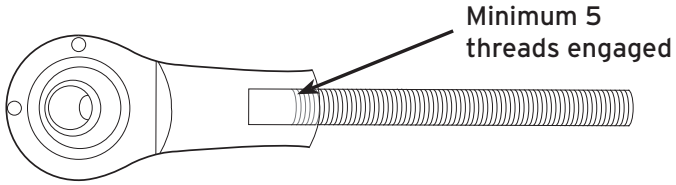


Fig. 12

5. If shortening the rod linkage is necessary, mark the rod cover where the mounting location intersects with the intended mounting location (Fig. 13).

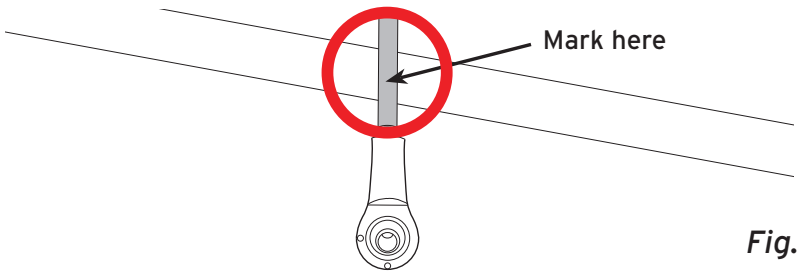


Fig. 13

6. Remove the rod linkage from the sensor arm and measure 1/2" back from the mark. This will show where to cut the rod (Fig. 14).

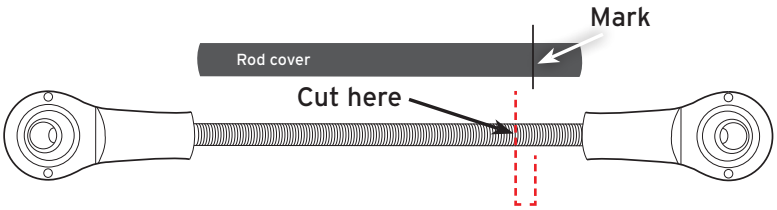


Fig. 14

7. Before cutting the rod, thread the jam nut back on the rod. Use the nut to debur the rod end. (Fig. 15).

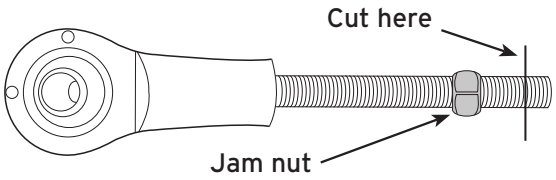


Fig. 15

8. Cut the rod cover 5/8" shorter than the rod length with the rod assembled on one end after cutting (Fig. 16).

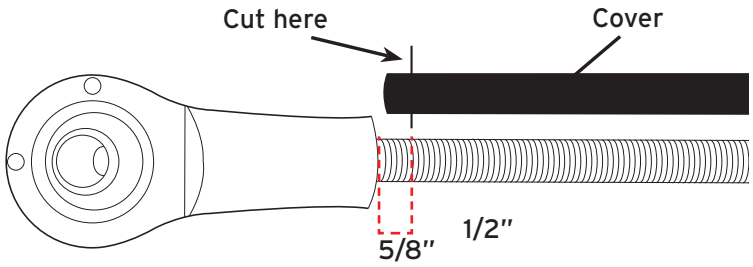


Fig. 16

9. Assemble linkage back together, and fasten it to the sensor arm and lower mounting location with supplied hardware (Fig. 17). Temporarily secure the sensor in its intended location including using the height sensor spacer that is provided.

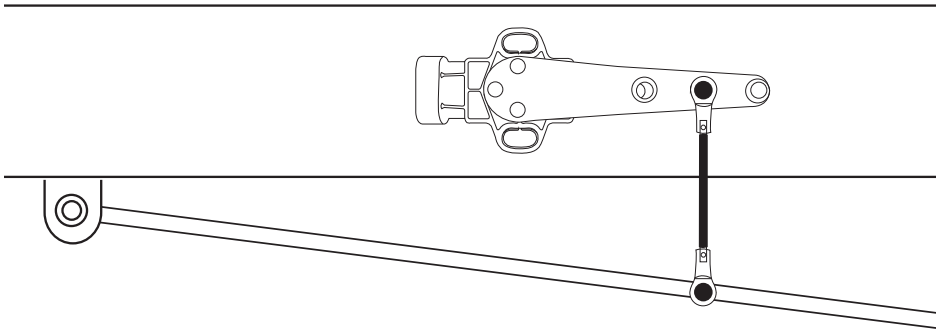


Fig. 17

Display Settings

Once the height sensor is installed, go into the settings menu screen on the display, go to operation and then select Pressure/Height Mode and set to Height. Use the sensor tool as described in the next steps.

WARNING ENSURE RISE ON START IS SHUT OFF PRIOR TO THIS STEP.

SECTION 5 VERIFYING SUSPENSION RANGE

1. Use the paper height sensor tool on page 13 in combination with the sensor tool in the display/app (see the user guide AD-1000 for more info) to make sure the range is sufficient to provide accurate measurements (Fig. 18). The minimum recommended sensor angle range is over 60 degress of total travel and the maximum allowed total travel is 120 degress.

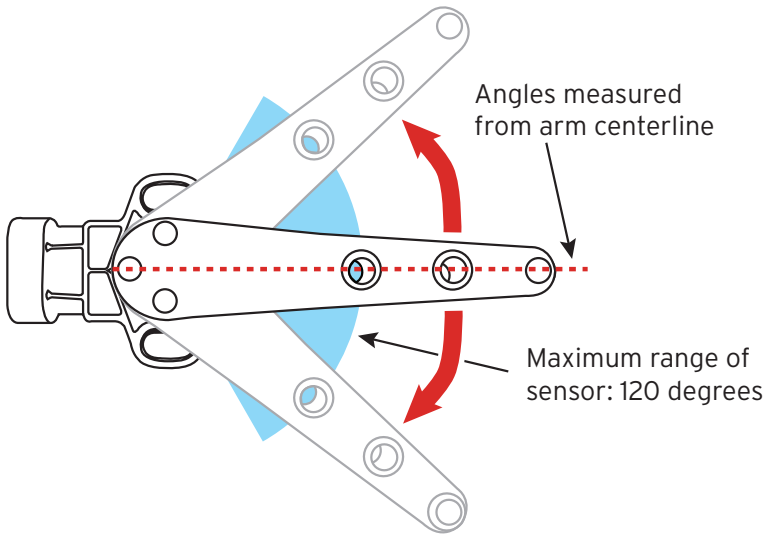
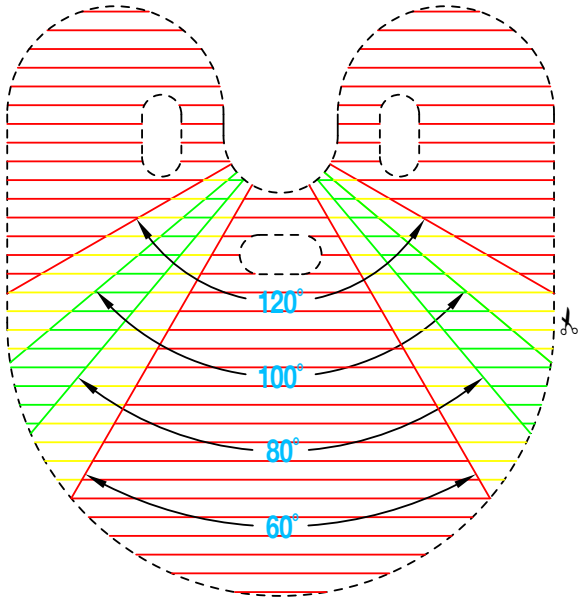


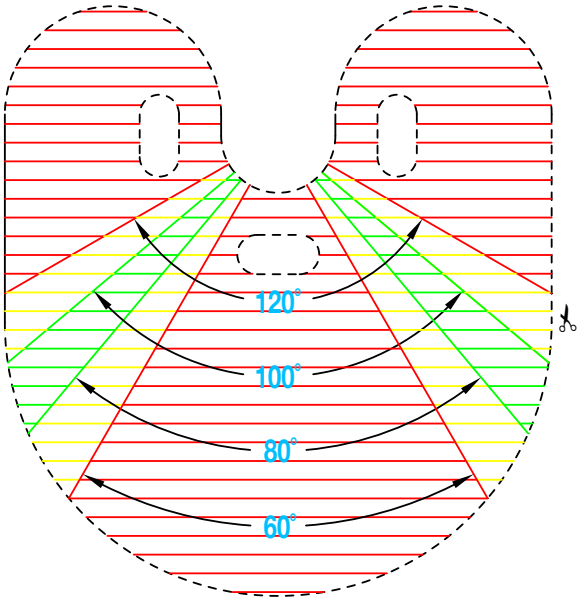
Fig. 18

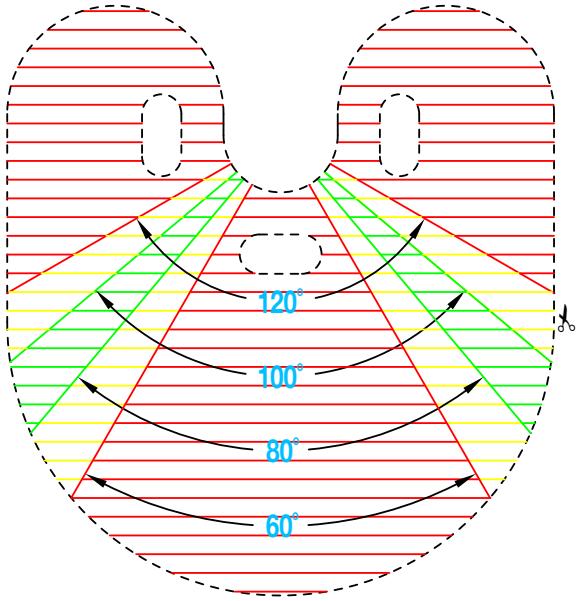
CAUTION MAKE SURE TO CAREFULLY OBSERVE ALL HEIGHT SENSOR CONNECTIONS WHEN CYCLING THE SUSPENSION. AN OVEREXTENSION OF THE SENSOR ARMATURE MAY BREAK THE SENSOR, SENSOR ARM, OR THE ATTACHED LINKAGES.

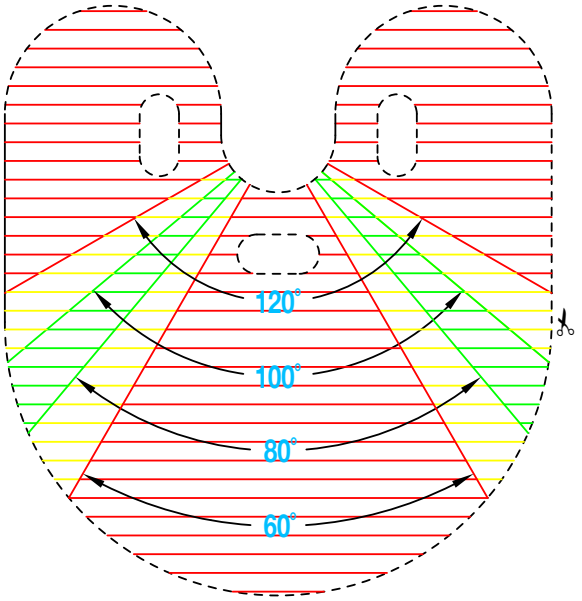
2. Next, manually air the vehicle up and down to see if there is any issue with the travel of the sensor using the height sensor install tool.
3. Complete this for all four sensors. To verify range using the electronic sensor tool, start with the vehicle at its lowest height. The sensor tool should display "range low" below each corner.
4. Manually air up the front corners of the vehicle to their maximum height. Both front corners should then display "OK." Manually air up the rear corners to their maximum height. Both rear corners should then display "OK."
5. It may be necessary to repeat these steps by raising the rear first to see if results vary. For any corners that do not display "OK", sensors will need to be adjusted to be within the acceptable limits, or increase the overall range (stroke).
6. After confirming that the range is correct and adequate, permanently secure the position of the sensor using the supplied hardware.
7. Once the system is completely installed and system calibration is done, if any of the height sensors are out of range, there will be a warning message and the affected corner(s) will be called out. See user guide for more information.

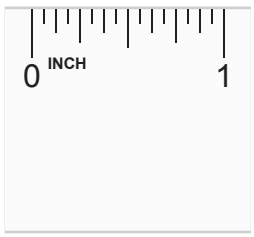
Height Sensor Install Tool



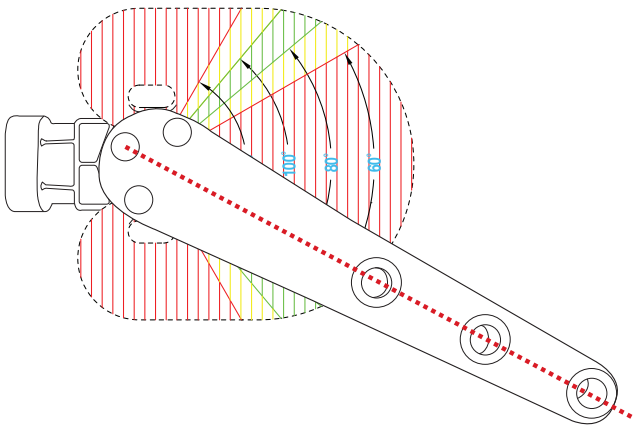








Cut out the height sensor tools and position each one as shown at right depending on the height sensor orientation. It would be a good idea to make copies of this page in case the tools are damaged during installation. Make sure to copy at 100% so the tools are the correct size. The drawing to the right is not to scale.



Notes

Limited Warranty and Return Policy

Air Lift Company provides a Limited Warranty to the original purchaser of its Air Lift Performance products, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available online at www.airliftperformance.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Replacement Part Information

If replacement parts are needed, call Air Lift customer service. Most parts are immediately available and can be shipped the same day.

Contact Air Lift Company customer service at (800) 248-0892 first if:

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

Contact the retailer where the kit was purchased:

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.

Thank you for purchasing Air Lift Performance products!

Need Help?

Contact Air Lift Company Customer Service at (800) 248-0892 or +1 (517) 322-2144 for calls from outside the U.S. and Canada.

Connect by searching for **Air Lift Performance** #LifeonAir

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