



# ***Air Lift Performance 3H™ Height Upgrade Kit 27705***

P A T E N T E D



***AIR LIFT***  
***PERFORMANCE***™

## **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.*

## Download the App for the Best #lifeonair

The Air Lift Performance 3 mobile app allows for full integration of your new 3H/3P control system on compatible mobile devices. Simply download the FREE app to not only take full control of your system, but to always have the latest system firmware with updates directly from the app.

Visit [air-lift.co/3app](http://air-lift.co/3app) to download.

See 3H/3P User Guide for instructions on pairing your device.





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# Component List

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

## HEIGHT CONTENT

Item	Part #	Description .....	Qty	Item	Part #	Description .....	Qty
A	34977	HPACK- Height Sensor Linkage .....	4	F	26953-021	Harn-20FT FR Height Sensor* .....	1
B	26894	Height Sensor Assembly.....	4	G	11998	Height Sensor Spacer.....	4
C	26953-012	Harn-12FT RL Height Sensor* .....	1	H	10466	Zip Tie 8" Black.....	20
D	26953-013	Harn-12FT RR Height Sensor* .....	1	I	17497	Screw 10-16 x 1 3/4" Self Tapping Zinc ....	8
E	26953-020	Harn-20FT FL Height Sensor* .....	1				



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

\* 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. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN EQUIPMENT DAMAGE, BODILY HARM OR DEATH (SEE USER GUIDE).

## 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.

## CAUTION

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

# Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of Air Lift Performance 3H/3P 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, installation templates and a troubleshooting guide.

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](http://airliftperformance.com).

## 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.*

# Installing Air Lift Performance 3H Height Upgrade Kit

## INSTALL HARNESS

The harness can be routed inside or underneath the vehicle. In either case, ensure all parts of the harness are protected from abrasive edges and heat sources.

### CAUTION

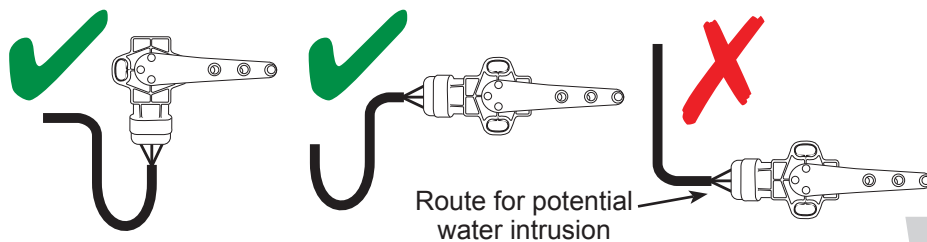
REMOVE ALL FUSES WHEN JUMP-STARTING OR WELDING ON THE VEHICLE. FAILURE TO DO SO COULD DAMAGE THE MANIFOLD.

#### 1. Height sensor harnesses

- Route and attach each height sensor harness to the height sensor locations based on the heat shrink labels for the appropriate corners of the vehicle (FL, FR, RL, RR)\*.
- 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

Keep proper drip loops and use proper bend radius for wire bundles (fig. 1).



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

### CAUTION

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. (SEE USER GUIDE.)

### NOTE

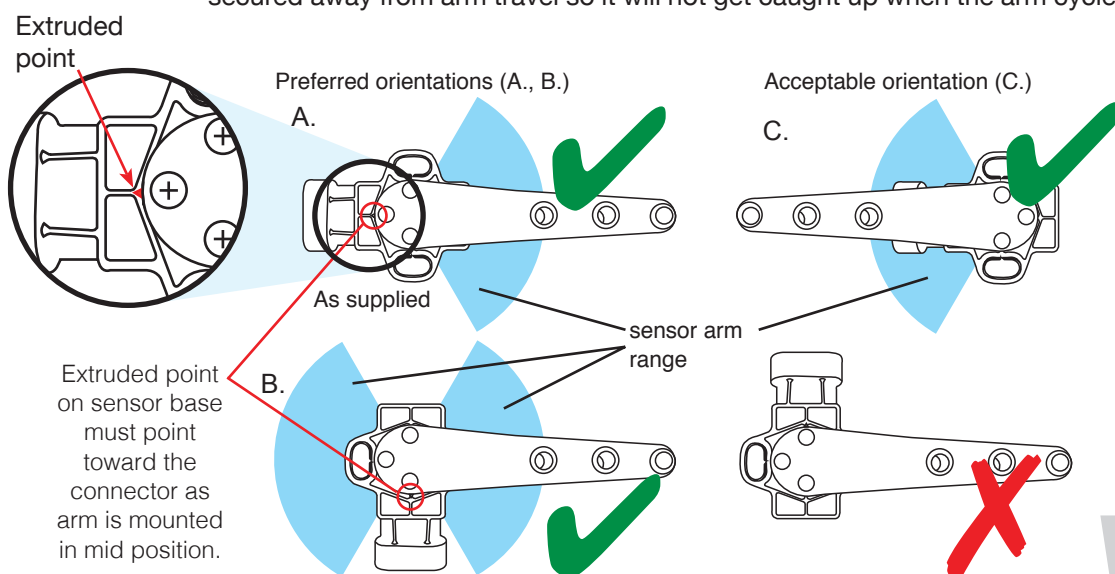
If extending the height sensors is necessary because of the size of the vehicle, order one of two kits: Part number 27700 (2)-4' extension harnesses, 27702 (2)-8' extension harnesses.

## HEIGHT SENSORS

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 which will maximize height adjustment accuracy.

### Determininig Height Sensor Mounting Point

1. Solid mounting point on the body or frame that will not deflect. Anything that moves is not a good mounting point.
2. The sensor can be mounted in any direction and will still work as long as the sensor arm base's extruded point is pointing toward the connector when the sensor arm is at its mid-position. The height sensor assembly is supplied in position A. Remove the arm to reposition it to B or C but keep the extruded point in the direction of the connector. The orientation of the connector must be either facing down or parallel to the ground to avoid water accumulating on the connector and making its way into the sensor. Also mount the sensor where the arm will be mounted opposite or 90 degrees from the connector wiring if possible. If not possible, ensure the wiring harness is secured away from arm travel so it will not get caught up when the arm cycles (fig. 2).



### NOTE

**Do NOT** position sensor with connector up, or with point on sensor base pointed anywhere but at the sensor connector when arm is in its mid position.

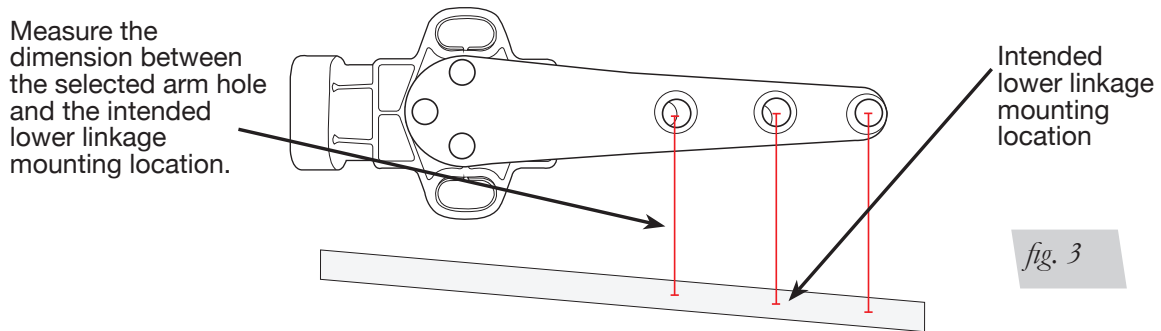
3. Find a point where the sensor will be directly above the lower linkage mounting surface. It may be necessary in some applications to fabricate a bracket to locate sensor in appropriate position.
4. Make sure that the sensor and sensor arm clear the vehicles suspension, wheels, and any other moving 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.
5. Keep the sensor and wires away from heat sources and moving parts that will create wear and may damage these components.
6. 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.
7. 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.

**WARNING**

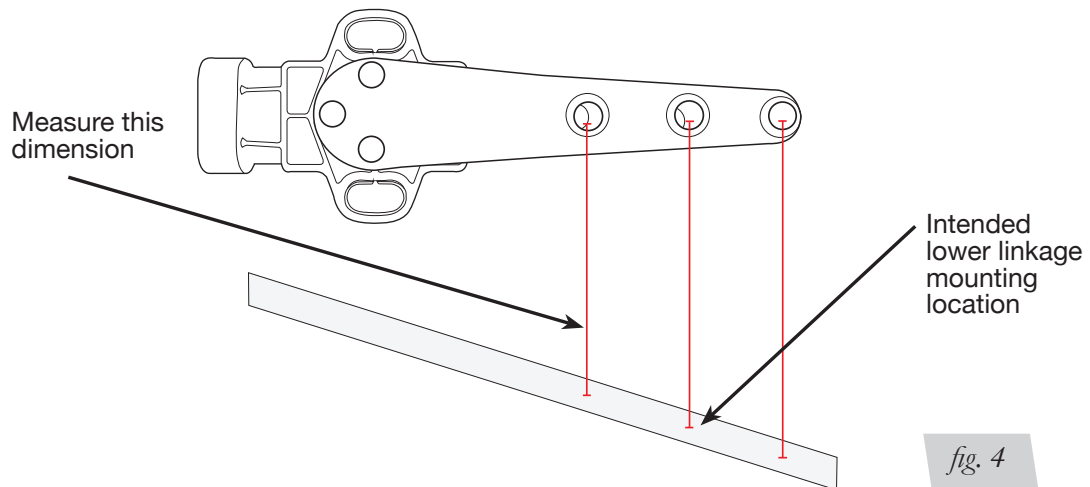
FLOOR JACKS CAN BE DANGEROUS. WHENEVER USING A FLOOR JACK, MAKE SURE IT IS RATED FOR THE LOAD IT IS LIFTING. CHECK THE VEHICLE OWNER'S MANUAL FOR INFORMATION ABOUT WHERE TO PLACE THE JACK. BEFORE RAISING THE VEHICLE, PLACE WHEEL CHOCKS IN FRONT AND BEHIND THE WHEELS TO PREVENT THE VEHICLE FROM ROLLING. 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.

**SELECTING SENSOR LOCATION**

1. Mark on the vehicle the intended sensor mount location 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).



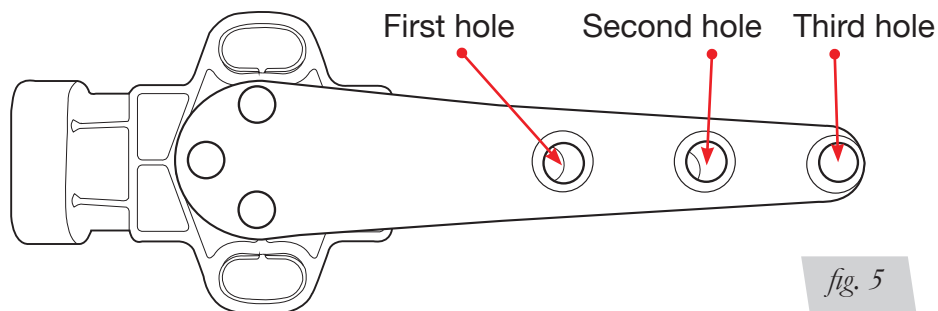
2. Reinstall air lines and cycle the suspension to get to the upper limit position again, measuring between the sensor arm's middle position and directly below the sensor arm hole mounting to the lower linkage ball joint (fig. 4). The difference between these two values will be the full suspension travel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





## SELECTING SENSOR ARM HOLE

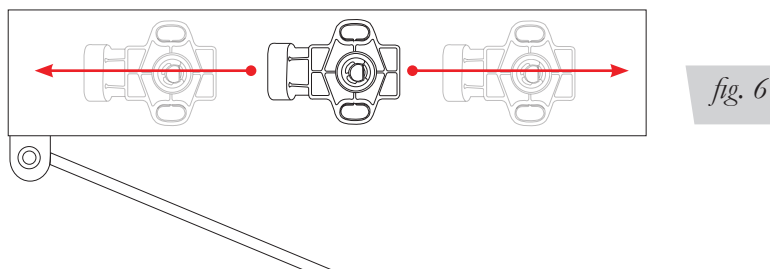
Max angle of travel for this sensor is 120 degrees, which can be correlated to the necessary suspension travel as seen in the table below (table 1). Any significant over-extension or over-compression may damage and possibly destroy the sensor or sensor linkage.



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

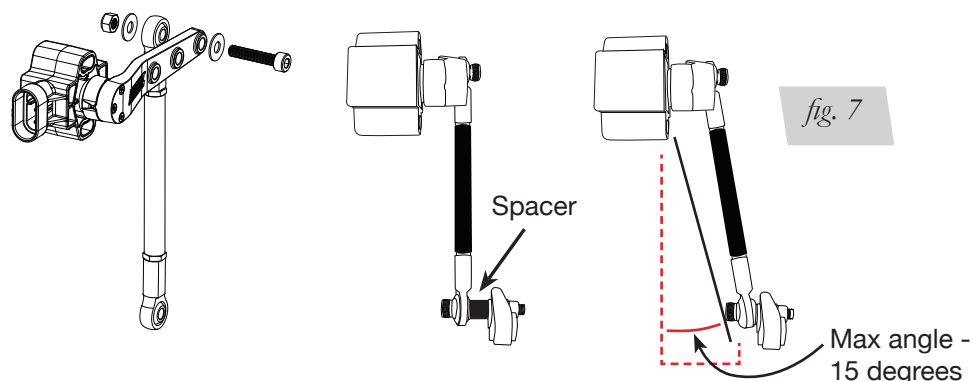
Table 1

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).

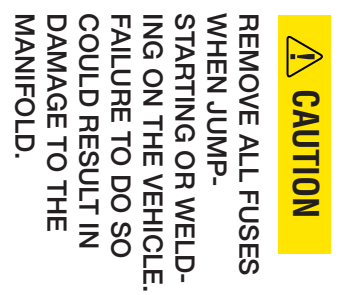


## MODIFYING LINKAGE ANGLE

After selecting the location of the sensor and the arm hole to be used, determine the lower mounting point. Ensure the angle between the mounting point and the sensor arm is less than 15 degrees. Any more angle than that, 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. 7).





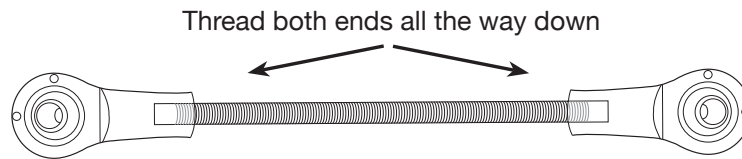


**FRONT  
OF VEHICLE**

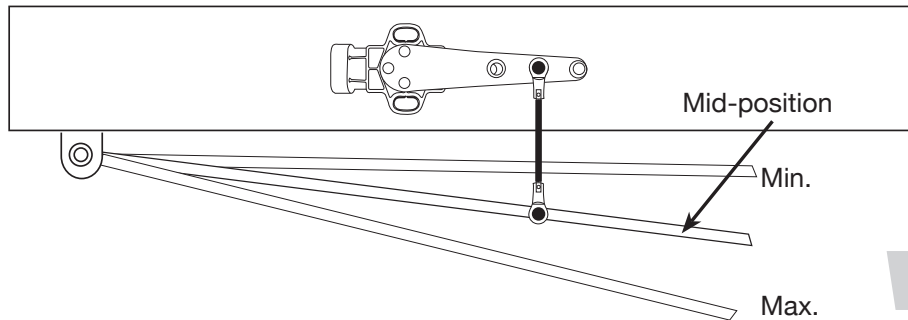
**⚠ WARNING** IF THE PRESSURE-BASED SYSTEM IS ALREADY INSTALLED BEFORE HEIGHT SENSOR INSTALLATION, MAKE SURE TO TURN OFF RISE ON START TO AVOID UNINTENDED SUSPENSION CYCLING. (SEE USER GUIDE.)

**LINKAGE ASSEMBLY/MODIFICATION**

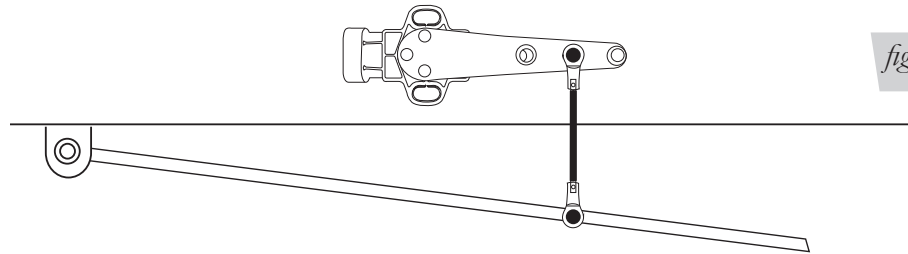
1. Locate the linkage and ensure the rod is threaded all the way on (fig. 8).

*fig. 8*

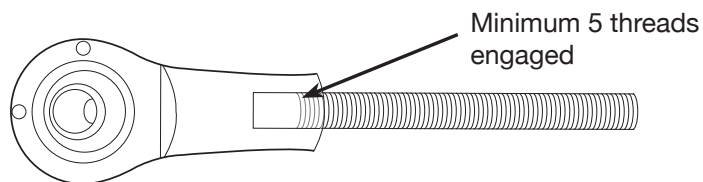
2. Next put the suspension in the mid-position with respect to full suspension travel (fig. 9).

*fig. 9*

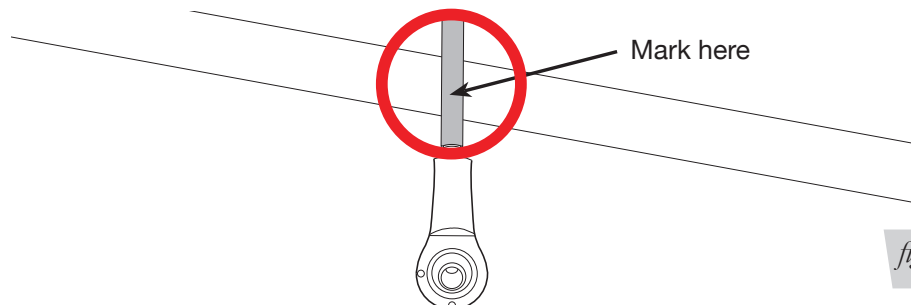
3. Fasten by finger tightening the linkage to the sensor arm and ensure the sensor arm is at mid-position with respect to the sensor (fig. 10).

*fig. 10*

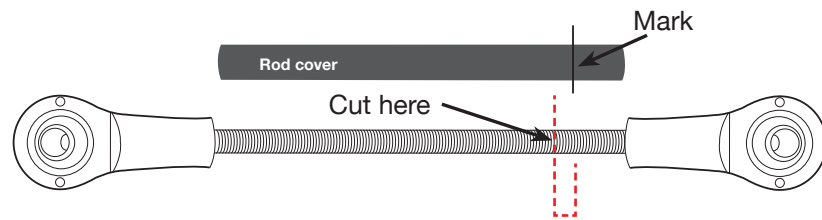
4. Loosen if needed in order to extend to reach the lower mounting point. If loosening the linkage to extend it is required, make sure to have at least 5 threads of engagement on both ends (fig. 11).

*fig. 11*

5. If shortening the rod linkage is necessary, mark the rod cover where the mounting location intersects with the intended mounting location (fig. 12).

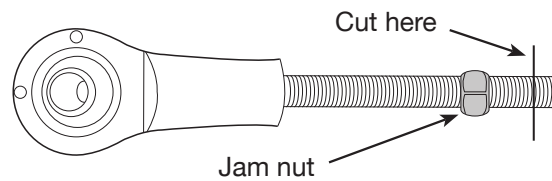
*fig. 12*

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. 13).



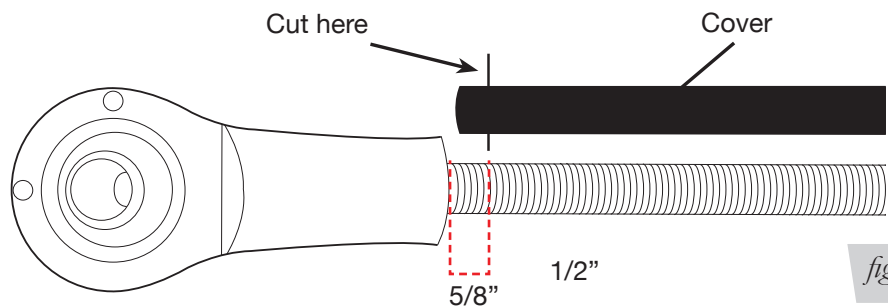
*fig. 13*

7. Before cutting the rod, thread the jam nut back on the rod. Use the nut to debur the rod end. (fig. 14).



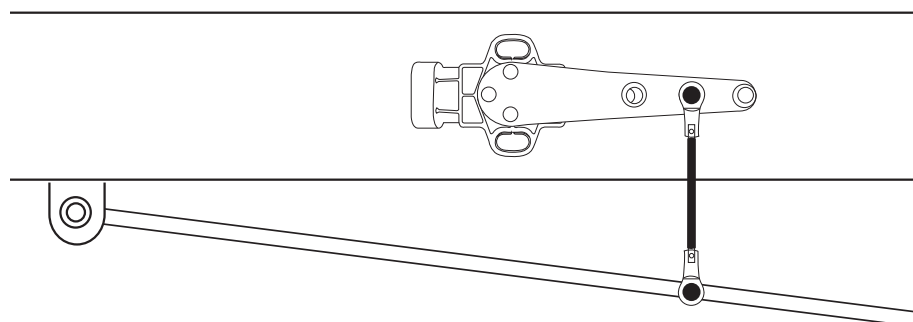
*fig. 14*

8. Cut the rod cover 5/8" shorter than the rod length with the rod assembled on one end after cutting (fig. 15).



*fig. 15*

9. Assemble linkage back together, and fasten it to the sensor arm and lower mounting location with supplied hardware (fig. 16). Temporarily secure the sensor in its intended location including using the height sensor spacer that is provided.



*fig. 16*

### DISPLAY SETTINGS

Once the height sensor is installed, go into the main menu screen on the ALP3 display, go to operations 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.

### VERIFYING SUSPENSION RANGE

Use the paper height sensor tool on page 24 or electronic sensor tool in the display to make sure the range is sufficient to provide accurate measurements (fig. 17). (See User's Guide).

Next, 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.

After confirming that the range is correct and adequate, permanently secure the position of the sensor using the supplied hardware.

Complete this for all four sensors. 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 visual indicators will not move with pressure adjustments. See User's Guide for more information.

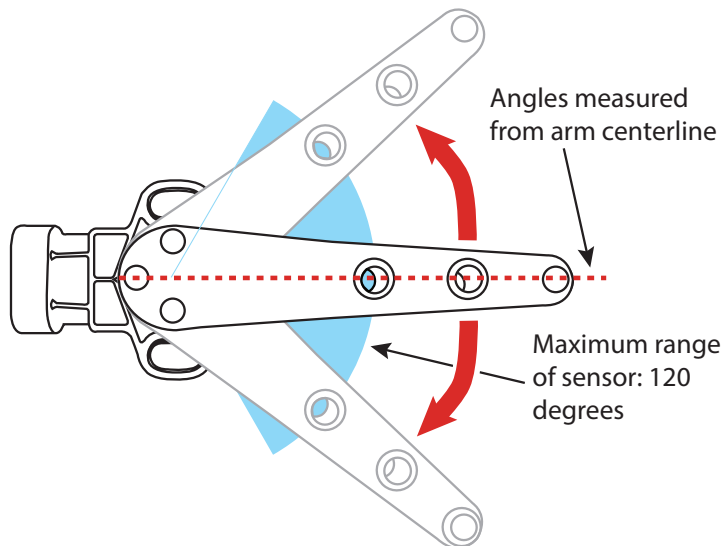


fig. 17

### MODIFYING SENSOR ARM

Follow the arcs around the appropriate holes to make the arms shorter. Keep the smooth, rounded contour of the end of the arm (fig. 18).

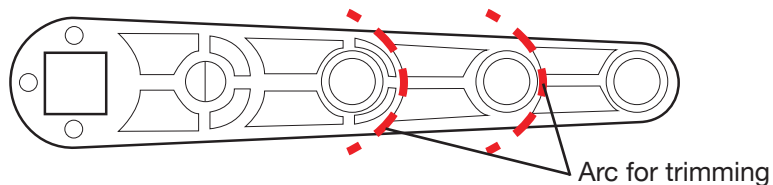
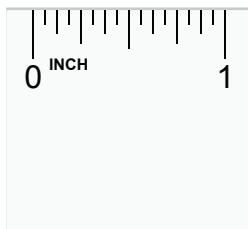
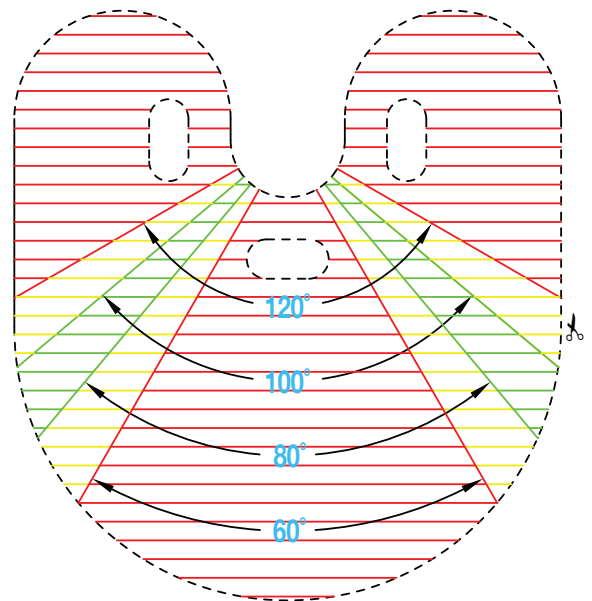
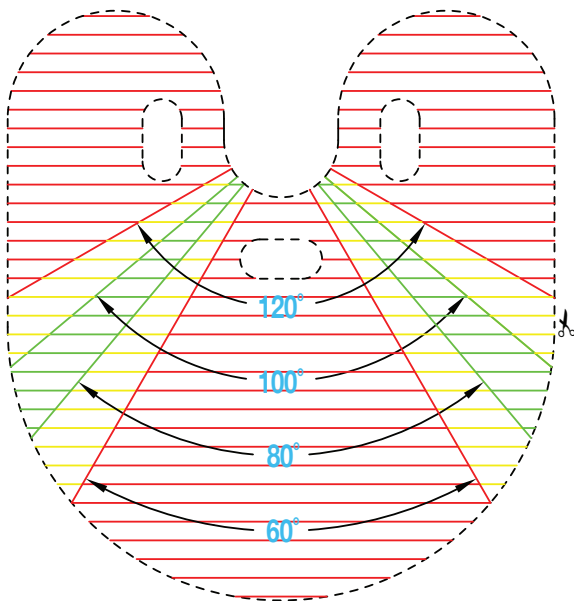
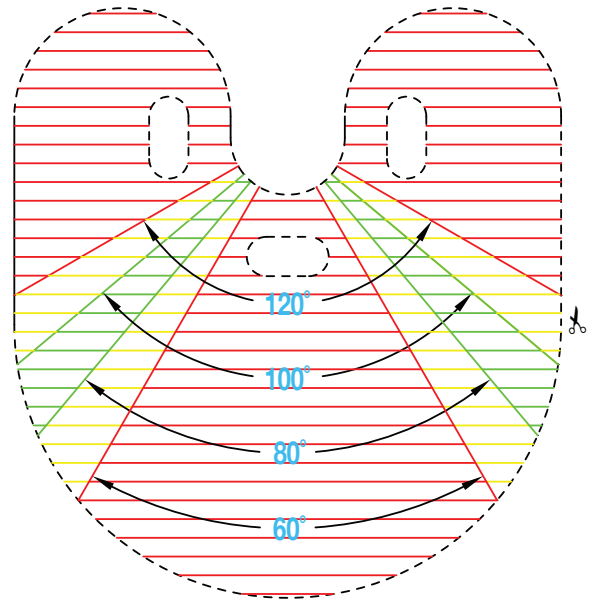
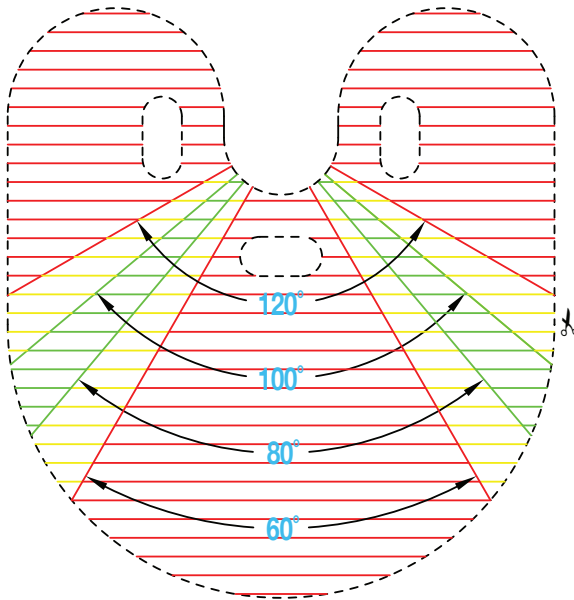


fig. 18

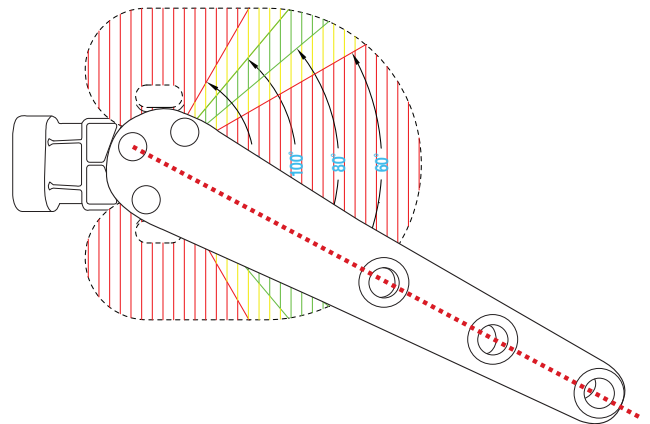
### CALIBRATION

After installation of all the height sensors, run through the calibration setup again and this time select height sensors install when prompted. Details of this step can be found in the 3H User Guide.

# 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.







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# Limited Warranty and Returns Policy

## WHAT THIS WARRANTY COVERS

Air Lift Company provides a Limited Lifetime Warranty to the original purchaser of its Air Lift Performance 3H™ and 3P™ Control/Air Management Systems, that the Air Lift Performance products will be free from defects in workmanship and materials for the normal expected life of the part when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

For all other Air Lift Performance products, Air Lift Company warrants to the original purchaser for a period of one year from the date of original purchase, that the Air Lift Performance products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

## WHAT THIS WARRANTY DOES NOT COVER

The warranty does not apply to products that have been improperly applied, improperly installed, or which have not been maintained in accordance with installation instructions furnished with all products. This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse (including but not limited to racing or off-road activities or commercial use), abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the product outside Air Lift Company's instructions, specifications or guidelines; or service, alteration, maintenance or repairs performed by anyone other than Air Lift Company to the product from its purchased condition. This warranty also does not apply to: Universal Air (Fabricator Kits), consumable parts, such as batteries; cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the product, or if any serial or identification number has been removed or defaced from the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

## LIMITATION OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS OR IMPLIED. AIR LIFT COMPANY DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS TO THE EXTENT PERMITTED BY LAW. TO THE EXTENT SUCH WARRANTIES CANNOT BE DISCLAIMED, SUCH IMPLIED WARRANTIES SHALL APPLY ONLY FOR THE WARRANTY PERIOD SPECIFIED ABOVE. PLEASE NOTE THAT SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY (OR CONDITION) LASTS. SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, AIR LIFT COMPANY SHALL NOT BE LIABLE FOR ANY DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR ARISING IN CONNECTION WITH THE SALE, USE OR REPAIR OF AIR LIFT PERFORMANCE PRODUCTS, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF REVENUE, LOSS OF ACTUAL OR ANTICIPATED PROFITS, LOSS OF THE USE OF MONEY, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, LOSS OF GOODWILL, AND LOSS OF REPUTATION. AIR LIFT COMPANY'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE AIR LIFT PERFORMANCE PRODUCT. PLEASE NOTE THAT SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

# Limited Warranty and Returns Policy, Cont.

## HOW TO GET SERVICE

If a defect in workmanship or materials causes your Air Lift Performance product to become inoperable within the warranty period, before returning any defective product, call Air Lift Company at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) to obtain a Returned Materials Authorization (RMA) number. The consumer shall be responsible for removing (labor charges) the defective product from the vehicle and returning it, shipping costs prepaid, to Air Lift Company for verification. Returns to Air Lift Company must be postage prepaid and sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917. You must prove to the satisfaction of Air Lift Company the date of original purchase of your Air Lift Performance product. You must also enclose the RMA number and a return address. A minimum \$10 shipping and handling charge will apply to all warranty claims. You must also pack the product to minimize the risk of it being damaged in transit. If we receive a product in damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

## WHAT AIR LIFT COMPANY WILL DO

If you submit a valid claim to Air Lift Company during the warranty period, Air Lift Company will, at its option, repair your Air Lift Performance product or furnish you with a new or rebuilt product. Air Lift Company will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement Air Lift Performance product will be returned to you (subject to payment of the required warranty claim shipping and handling charge) and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes property of Air Lift Company. You are responsible for installation/reinstallation (labor charges) of the product.

## HOW THE LAW RELATES TO THIS WARRANTY

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. BY THIS WARRANTY, AIR LIFT COMPANY DOES NOT LIMIT OR EXCLUDE YOUR RIGHTS EXCEPT AS ALLOWED BY LAW. TO FULLY UNDERSTAND YOUR RIGHTS, YOU SHOULD CONSULT THE LAWS OF YOUR STATE.

# Replacement Information

If replacement parts are needed, contact the local dealer or call Air Lift Company customer service at (800) 248-0892. Most parts are immediately available and can be shipped the same day.

**Contact Air Lift Company customer service at (800) 248-0892 or (517) 322-2144 first if:**

- Parts are missing from the kit.
- Broken or defective parts in the kit.
- Technical assistance on installation or operation is needed.
- 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.

# Contact Information

Contact Air Lift Company's customer service department by calling (800) 248-0892, Monday through Friday with questions, comments or for technical assistance. For calls from outside the USA or Canada, call (517) 322-2144. Contact customer service anytime at [techsupport@airliftperformance.com](mailto:techsupport@airliftperformance.com).

For inquiries by mail, our address is P.O. Box 80167, Lansing, MI 48908-0167. The shipping address for returns is 2727 Snow Road, Lansing, MI 48917.

Contact the Air Lift Performance sales team anytime at [sales@airliftperformance.com](mailto:sales@airliftperformance.com) or visit [www.airliftperformance.com](http://www.airliftperformance.com).

## Need Help?

Contact Air Lift customer service department at (800) 248-0892, Monday through Friday. For calls from outside the USA or Canada, call (517) 322-2144.



*Thank you for purchasing Air Lift Performance products!*

Air Lift Company • 2727 Snow Road • Lansing, MI 48917 or P.O. Box 80167 • Lansing, MI 48908-0167  
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