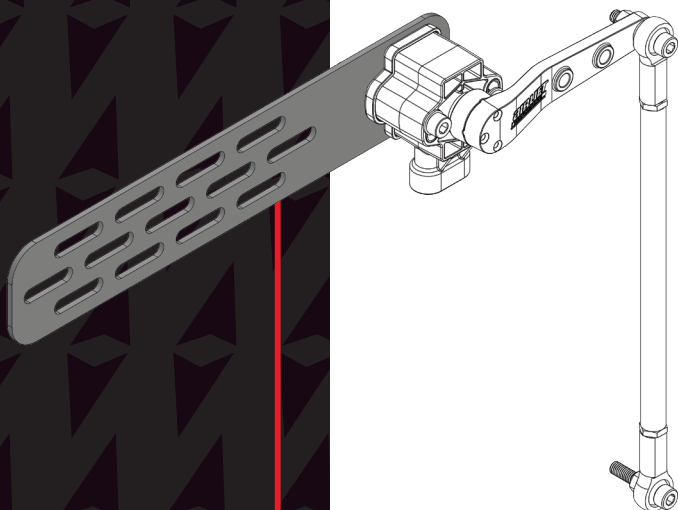




# **Kits 14550 & 14660**

Universal application  
Height sensor  
brackets



**AIR LIFT**  
**PERFORMANCE**

## **INSTALLATION GUIDE**

For maximum effectiveness and safety,  
please read these instructions completely  
before operating.

*Failure to read these instructions can result in  
an incorrect installation.*

# Introduction

The purpose of this publication is to assist with the installation of the universal height sensor bracket kit for Air Lift Performance 3H. The height sensors, sensor arms, linkages and all hardware are included with the 3H kit.

Read the entire installation guide before beginning the installation. The information includes step-by-step instructions for the installation of the brackets. This kit is designed to work in conjunction with the 3H control system. See the 3H installation guide and user's guide for additional information about setting up the 3H system.

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 **[www.airliftperformance.com](http://www.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.

## IMPORTANT SAFETY NOTICE



### CAUTION

BEFORE SERVICING THE VEHICLE, MAKE SURE TO TURN OFF "RISE ON START" AND "PRESET MAINTAIN." THIS WILL ELIMINATE ANY UNINTENDED SUSPENSION CYCLING IF YOU NEED TO TURN THE KEY ON IN THE VEHICLE FOR ANY REASON.



### CAUTION

THIS KIT MAY REQUIRE THE REMOVAL OF FACTORY TORQUE-TO-YIELD BOLTS. THESE BOLTS ARE DESIGNED TO BE REPLACED AFTER ONE USE. THESE BOLTS ARE NOT INCLUDED WITH THIS KIT.

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# Installation Diagram

Fig. 1 shows the height sensor mounted through the hub.

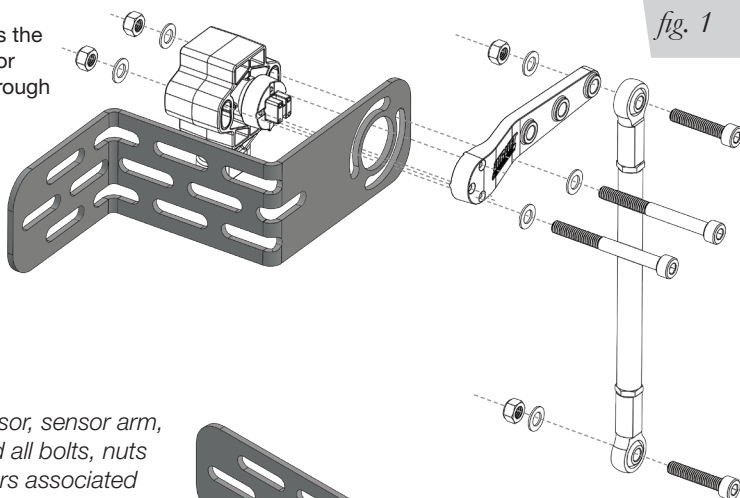


fig. 1

## NOTES

Height sensor, sensor arm, linkage and all bolts, nuts and washers associated with the height sensors are included with the 3H kit.

If not using the hardware supplied with the 3H height sensors, it is important to use non-magnetic hardware so as not to interfere with the height sensor values. Also, use nylon lock nuts so the hardware doesn't loosen and allow the sensor to go out of range.

Bends in the brackets are shown to illustrate how the brackets can be modified.

See torque specifications on page 6.

Fig. 2 shows the height sensor mounted to the surface of the bracket.

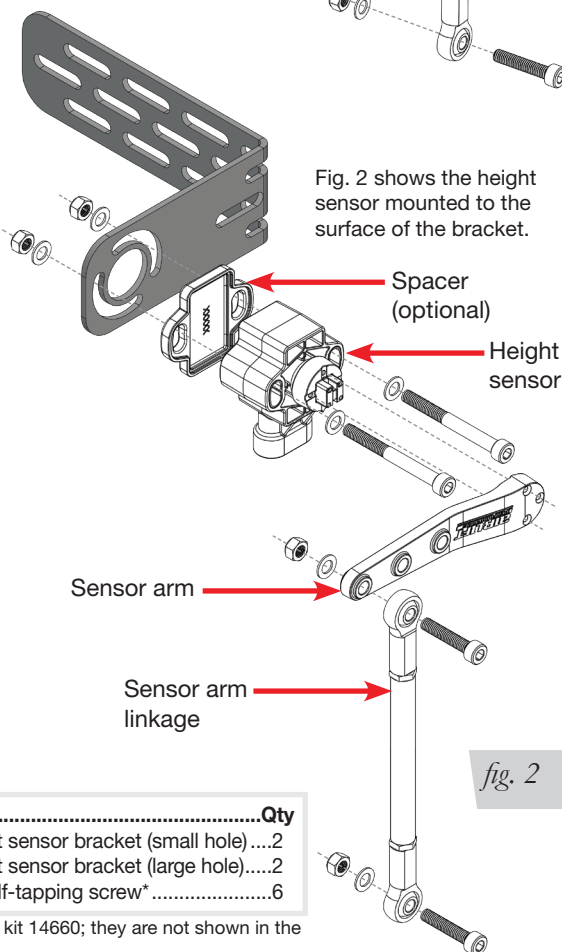


fig. 2

## HARDWARE LIST

| Item | Part # | Description.....                                  | Qty |
|------|--------|---------------------------------------------------|-----|
| A1   | 11500  | Universal height sensor bracket (small hole)..... | 2   |
| A2   | 11600  | Universal height sensor bracket (large hole)..... | 2   |
| B    | 17263  | 1/4"-14 x 1" Self-tapping screw* .....            | 6   |

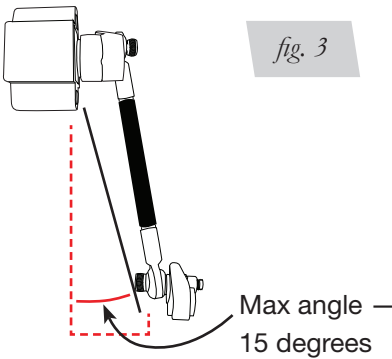
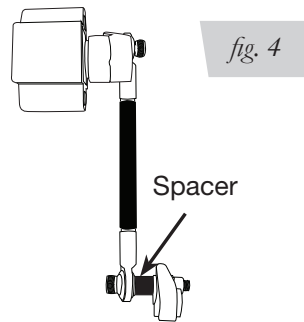
\* These screws are not included in kit 14660; they are not shown in the drawing

# Universal Height Sensor Bracket Installation

**NOTE** *This is a general guide. Refer to the 3H Installation Guide, MN-946, for a more in-depth guide for setting up the height sensors.*

## BEFORE GETTING STARTED

1. The height sensor can be mounted through the hub or to the back, as shown in Fig. 1 and Fig. 2.
2. Best practice is to choose two points to fasten the bracket to the chassis so it does not rotate.
3. The lower mounting bracket for the linkage is not supplied.
4. Keep the lower bracket within 15 degrees from vertical to avoid causing unwanted stress on the sensor arm (Fig. 3). The 3H kit comes with spacers that can be used to reduce the angle of the sensor arm (Fig. 4).



## LOCATION

1. Find a solid location for the sensor, clear of vehicle components, such as brake lines and steering linkage. This surface should be as flat as possible if using self-tapping screws.
2. If attaching to existing chassis hardware, make sure that component is stationary.
3. Make certain that nothing (control arms, sway bars, sway bar end links, brake line brackets, etc.) moves through the area where the sensor/bracket and sensor linkage are to be mounted.
4. Determine how the lower height sensor linkage will attach to a suspension component that moves through the range of suspension motions.
5. Do not rush while planning how the height sensor will work in its chosen location. Make a cardboard template to make sure the plan will work before bending the bracket. Doing so will reduce the need to straighten and rebend the bracket.
6. Locate a spot below the height sensor arm for the lower linkage to attach to. This can be an existing feature or a fabricated bracket.

## FABRICATION

1. Shape the bracket to position the sensor where it needs to be to take full advantage of the maximum range of the height sensor (Fig. 5).

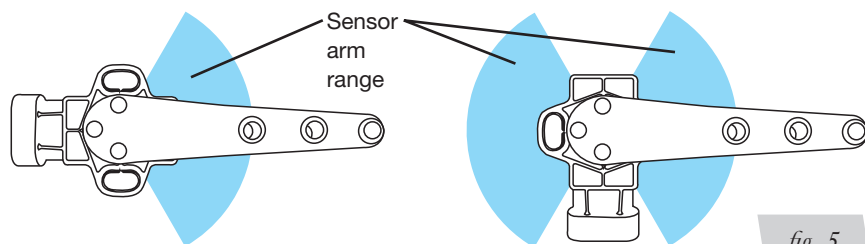


fig. 5

2. Shaping the bracket may include bending, cutting and welding.
3. Fabricate a solution or use existing hardware to mount the lower end of the linkage. In some applications, simple steel or aluminum angle could be used.

## SETTING UP THE HEIGHT SENSOR ARM

The height sensor arm can be placed in a variety of configurations (Fig. 6), but there are two important considerations:

- The extruded point must point toward the electrical connector. Remove the screws on the arm to change its orientation.
- Do not orient the height sensor so that the connector is pointing upward.

See the “Height Sensors” section of the 3H/3P Installation Guide for additional information. See the chart for torque specifications.

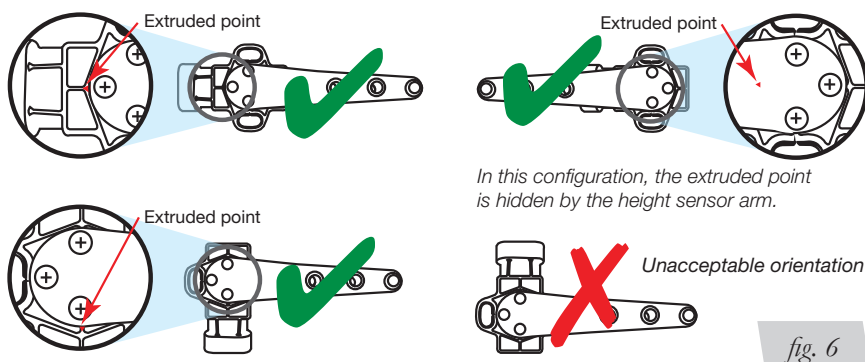


fig. 6

## VERIFICATION

1. Attach the height sensor to the bracket.
2. Use double-sided foam tape to test mount the height sensor bracket — if using self-tapping screws (B) — before securely mounting it to the chassis. This will allow for fine tuning the location of the bracket.
3. Attach the linkage to the lower mount and cycle the suspension to make sure it utilizes as much sensor range as possible.
4. If required, make adjustments to the bracket, sensor and sensor linkage to get it within the optimal range.

## FINAL INSTALLATION

1. If using self-tapping screws, with the bracket still taped to the chassis, scribe marks where it will be attached to the chassis.
2. Remove tape and screw the bracket to chassis. If using existing hardware, mount the bracket and torque hardware to manufacturer specifications.
3. Torque all sensor mounting hardware after range verification has been completed.

| Torque Specifications*         |         |         |         |         |
|--------------------------------|---------|---------|---------|---------|
| Location                       | Nm      | Lb.-ft. | Lb.-in. | Oz.-in. |
| Height sensor to bracket bolts | 2.5     |         | 22      |         |
| Linkage bolts                  | 2.5     |         | 22      |         |
| Height sensor arm screws       | .01-.14 |         |         | 14-20   |

\* Check with the vehicle manufacturer for torque specifications on any chassis fastener that is loosened.

## CHECK FOR BINDING

Inflate and deflate the system to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch the height sensor cable. Clear cables if necessary.

Refer to the 3H/3P Installation Guide for additional information about proper setup of the system.

# Limited Warranty and Return Policy

Air Lift Company provides a 1-year limited warranty to the original purchaser of Air Lift Performance kits from the date of original purchase, that the products will be free from defects in workmanship and materials when used on vehicles as specified by Air Lift Company and under normal operating conditions, 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](http://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 at **(800) 248-0892**. Most parts are immediately available and can be shipped the same day.

### Contact Air Lift Company customer service 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.

## Contact Information

|                                         |                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------|
| <b>Mailing address</b>                  | P.O. Box 80167<br>Lansing, MI 48908-0167                                   |
| <b>Shipping address<br/>for returns</b> | 2727 Snow Road<br>Lansing, MI 48917                                        |
| <b>Phone</b>                            | Toll free: (800) 248-0892<br>International: (517) 322-2144                 |
| <b>Email</b>                            | <a href="mailto:service@airliftcompany.com">service@airliftcompany.com</a> |
| <b>Web address</b>                      | <a href="http://www.airliftcompany.com">www.airliftcompany.com</a>         |

## Need Help?

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



*Thank you for purchasing  
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Printed in the USA  
BGL-0418

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