Air Lift Performance 3H®/3P®

PATENTED



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.

MN-946 • (102511) • ECR 10411

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. Download the FREE app to take full control of your system and always have the latest system firmware with updates directly from the app.

For iPhone: **air-lift.co/3app**
For Android: **air-lift.co/android**

Users can also search "Air Lift Performance" in either the Apple App Store or Google Play.

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



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Component List

Refer to Installation diagram on pages 16-17 for item illustrations.

NOTE Some kits include parts in addition to or different from what is listed here. Those kits include an Installation Guide insert with a parts list for that kit.

HARDWARE CONTENT

Item	Part #	Description	Qty
A	26498-009	Harn – USB display cable	1
B	26498-006	Harn – Main harness	1
C	27050	3H/3P Display	1
D	24503	Fuse ATM 3A	1
E	24501	Fuse Holder ATM	1
F	24500	Fuse Holder ATO/ATC	1
G	24661	Heat-shrinkable butt splice 14-16GA	1
H	24752	Heat-shrinkable butt splice 10-12GA	3
I	24748	Ring terminal 3/8" 10-12GA	2
J	24524	Ins. Female .187" term. 14-16GA	1
K	24594	Ins. Female .250" term. 14-16GA	1
L	24561	ATM Fuse tap adapter	1
M	24542	ATO/ATC Fuse tap adapter	1
N	10466	Zip Tie, 8" black	20
O	17103	Screw 5/16"-18 x 12" Zinc	2
P	18542	Flat washer 5/16" stainless	2
Q	17263	Screw 1/4"-14 x 1" self-tapping Zinc	1
R	17494	Screw 1/4"-14 x 2" self-tapping Zinc	2
S	10530	Hose cutter kit	1
V	24547	Fuse ATO/ATC 30A	1

MANIFOLD CONTENT

Item	Part #	Description	Qty
1/4" Kits (27680, 27690, 27780, 27790)			
AF	20946	Air Line 1/4"	60ft.
AP	21779	Fitting elbow 1/4" PTC-1/4" MNPT	2
AE	72674-W	Manifold ECU 1/4" NPT	1
AR	21745	Fitting 1/4" PTC-1/4" MNPT	6
3/8" Kits (27685, 27695, 27765, 27775)			
AF	20947	Air line 3/8"	60 ft.
AP	21851	Fitting elbow 3/8" PTC-1/4" MNPT	2
AE	72674-W	Manifold ECU 1/4" NPT	1
AR	21853	Fitting 1/4" PTC-1/4" MNPT	6
G Thread Manifold (27785, 27795)			
AE	72675	Manifold ECU G thread	1

FILTER CONTENT

Item	Part #	Description	Qty
AI	11217	P Clamp, 1 1/2" Cushion	1
AJ	21011	Miniature filter	1
AK	17173	Screw #14-1/4 x 3/4" self-tapping	1
AM**	22677	Tee fitting, 1/4"	1
AN**	21048	Pressure-relief valve	1

** Not included in FLO AIRRIDE™ tank systems

COMPRESSOR (OPTIONAL)

Item	Part #	Description	Qty
AG	16444 or 16444B	Compressor (chrome or black)	1

TANK (OPTIONAL)

Item	Part #	Description	Qty
AH	Varies	Tank	1

HEIGHT CONTENT (OPTIONAL INCLUDED IN 3H SYSTEMS ONLY)

Item	Part #	Description	Qty
W	34977	HPACK- Height sensor linkage	4
X	26894	Height sensor assembly	4
Y	26953-012	Harn-12FT RL height sensor*	1
Z	26953-013	Harn-12FT RR height sensor*	1
AA	26953-020	Harn-20FT FL height sensor*	1
AB	26953-021	Harn-20FT FR height sensor*	1
AC	10466	Zip Tie, 8" black	20
AD	17497	Screw 10-16 x 1 3/4" self-tapping Zinc	8
AO	11998	Height sensor spacer	4

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

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

Introduction

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

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**.

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 MACHINE OR MINOR PERSONAL INJURY.

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

⚠ WARNING

IF THE PRESSURE-BASED SYSTEM IS ALREADY INSTALLED BEFORE HEIGHT SENSOR INSTALLATION, MAKE SURE TO DISABLE RISE ON START AND PRESET MAINTAIN. THIS WILL PLACE THE SYSTEM INTO MANUAL MODE AND PREVENT UNINTENDED ADJUSTMENTS. 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.

Installing Air Lift Performance 3H/3P Kit

LAYOUT OVERVIEW

NOTE

For a complete installation diagram, see pages 16-17. See page 2 for a complete parts list.

Layout

1. Plan component location first. Ideally, the manifold should be located at a level above the compressor and tank to avoid compressor ingested water from gathering in the manifold (fig. 1). This is most important for vehicles operated in below-freezing climates.
2. Prior to mounting components, check to make sure:
   - the electrical harness connections will reach the manifold and compressor.
   - the compressor leader line will reach the tank.
   - the air lines will route cleanly through the vehicle without kinking or bending.

NOTE

Be sure to install all components as far as possible from any heat sources (figs. 2 and 3). Plan and prepare harness and air line routing through the vehicle. Eliminate all sharp edges that could chafe. Use rubber grommets when passing through compartment walls.

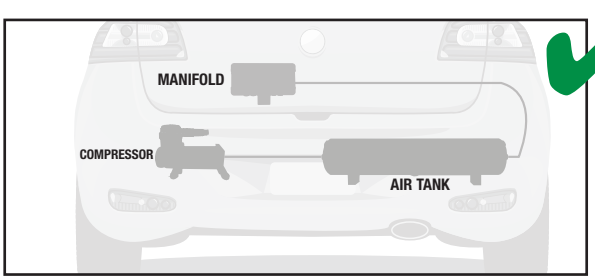


fig. 1

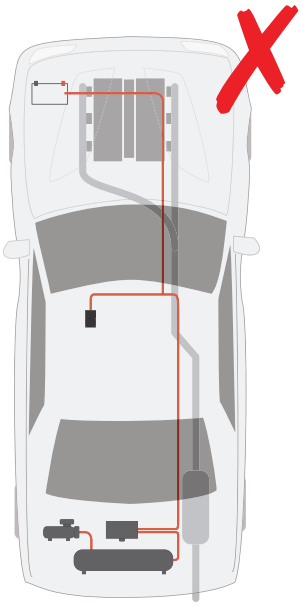


fig. 2

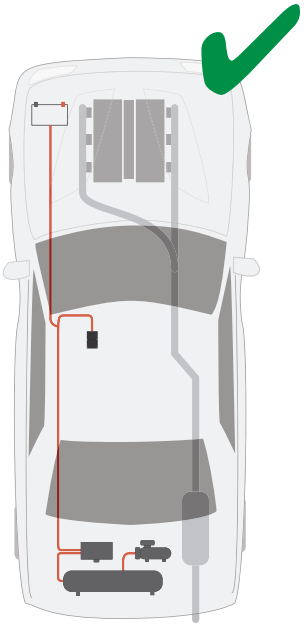


fig. 3

TANK (OPTIONAL)

Tank pre-assembly

1. Determine tank location and orientation prior to installing fittings.
2. Before installing fittings, apply thread sealant around the male threads, leaving the first two threads uncovered.

⚠ CAUTION

NEVER BACK OFF AN INSTALLED PIPE FITTING TO ACHIEVE PROPER ALIGNMENT. LOOSENING INSTALLED PIPE FITTINGS WILL CORRUPT THE SEAL AND CONTRIBUTE TO LEAKAGE AND FAILURE.

3. Install the drain/fill PTC fitting in the tank's lowermost threaded port.
4. Choose a middle tank threaded port for manifold/filter air line.

Tank install

1. Using the tank's feet as a template, drill holes for hardware assembly.
2. Secure the tank using the supplied hardware.
3. Route the drain/fill air line with the Schrader valve (included in the tank hardware pack) preferably outside the vehicle (fig. 4).

NOTE

If your system includes a FLO AIRRIDE™ tank, the pressure-relief valve is pre-installed in the tank. You will only need to route the drain/fill valve to vehicle exterior.

4. Install tee fitting and pressure-relief valve in-line to the drain fill line. Locate the pressure-relief valve inside the vehicle, if possible.

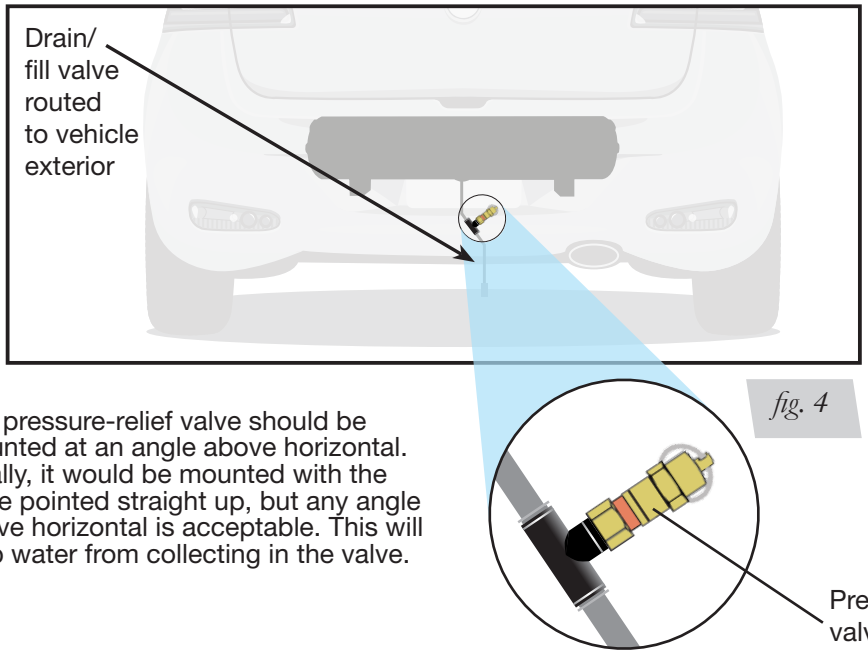


fig. 4

The pressure-relief valve should be mounted at an angle above horizontal. Ideally, it would be mounted with the valve pointed straight up, but any angle above horizontal is acceptable. This will stop water from collecting in the valve.

⚠ CAUTION

INSTALLATION OF THE PRESSURE-RELIEF VALVE IS IMPORTANT TO ENSURE THE SYSTEM IS NOT OVER-PRESSURIZED AS A RESULT OF A COMPRESSOR OR RELAY FAILURE.

Torque Specifications

Fitting Size	Turns Past Finger-tight	Torque lb./ft.
1/8" NPT	1.5 - 3.0	12
1/4" NPT	1.5 - 3.0	25
3/8" NPT	1.5 - 3.0	40
1/2" NPT	1.5 - 3.0	54

Table 1

⚠ CAUTION

AIR COMPRESSORS TAKE IN MOISTURE (HUMIDITY) FROM THE OUTSIDE AIR SOURCE, AND WILL DEPOSIT THAT MOISTURE IN THE AIR TANK. THE AIR LIFT PERFORMANCE 3H/3P SYSTEM INCLUDES A FILTER THAT WILL GREATLY REDUCE THE POTENTIAL FOR MOISTURE TO ENTER THE MANIFOLD. HOWEVER, TANKS MUST BE REGULARLY PURGED TO ELIMINATE THE POSSIBILITY OF WATER ENTERING THE MANIFOLD. BE SURE TO PROVIDE EASY ACCESS TO DRAIN/FILL VALVE (PREFERABLY OUTSIDE THE VEHICLE). IF USING AN ENGINE-DRIVEN COMPRESSOR, AN ADDITIONAL COALESCING FILTER MUST BE USED. OTHERWISE, THE LIFE OF THE PROVIDED FILTER MAY BE REDUCED DUE TO THE INCREASED POTENTIAL FOR OIL BEING INTRODUCED INTO THE SYSTEM.

NOTE

Mounting the filter to the tank is not an option with FLO tank kits.

1. Mount the filter to the tank using the appropriate fittings (fig. 5).



fig. 5

2. Ensure the filter is mounted in a vertical position. Do not install filter inverted or angled (fig. 6).

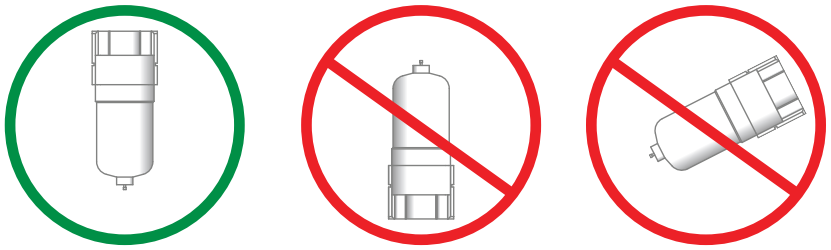


fig. 6

3. The arrow on the filter indicates flow direction and must point toward the manifold (fig. 7).

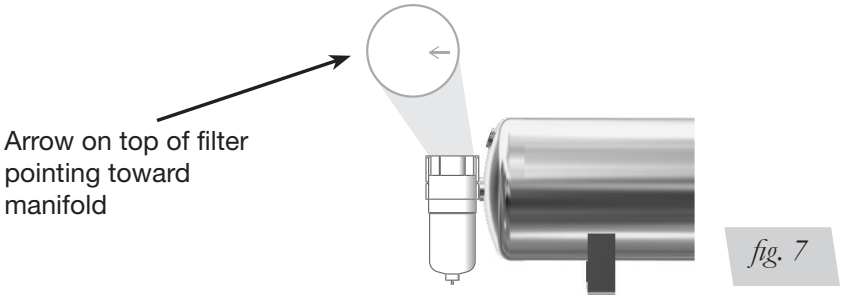


fig. 7

4. If choosing not to mount the filter to the tank, run necessary hose from tank to the filter and filter to the manifold using the appropriate fittings.

⚠ WARNING

THE FILTER USED IN THIS SYSTEM IS A MANUAL FILTER AND MUST BE PURGED ON A REGULAR BASIS TO ENSURE WATER DOESN'T GET INJECTED INTO THE SYSTEM, CAUSING PREMATURE MANIFOLD FAILURES. TO PURGE, USE THE RELIEF BUTTON ON THE BOTTOM OF THE FILTER ASSEMBLY (FIG. 8).

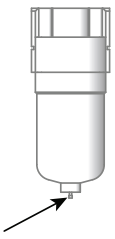


fig. 8

INSTALLING 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 DISCONNECT THE BATTERY GROUND BEFORE INSTALLING THE SYSTEM.

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

1. Manifold/relay/compressor connections
   - Attach the manifold connector; it will "click" into place once fully seated.
   - Mount the compressor relay using supplied hardware.
   - Cut off the spade and eyelet from the compressor power (red) and ground (black) wires.
   - Attach the compressor (red) wire to the main harness compressor power (red/white) wire using the supplied heat-shrinkable butt splice.
   - Attach the compressor (black) wire to the main harness compressor ground (black) wire using the supplied heat-shrinkable butt splice.

2. Battery/ignition connections
   - Route battery power (red) and ground (black) wires of the main harness to the battery.
   - Attach the battery power (red) wire to the red wire of the fuse holder using supplied heat-shrinkable butt splice.
   - Attach supplied ring terminal to the other end of the fuse holder and fasten to the positive battery (+) terminal or stud.
   - Install a 30A fuse into this fuse holder and close the cap.
   - Attach the other ring terminal to the ground (black) wire and fasten to the negative battery (-) terminal or stud.
   - Route the ignition (pink) wire to a key-switched ignition source that remains on during cranking. Examples include: ECU, fuel pump.

NOTE *Do not select an accessory source. With the system fully installed, if the display shuts off while starting the vehicle, this is not a true ignition source.*

   - Attach the ignition (pink) wire to the black wire of the fuse holder.
   - Attach a faston terminal to the other end of the fuse holder and attach it to a selected ignition source using a supplied fuse tap.
   - Install a 3A fuse into this fuse holder and close the cap.

NOTE *The supplied harness is only capable of powering a single compressor. If installing dual compressors, a second dedicated power wire is required. Contact an AIR LIFT PERFORMANCE retailer to purchase the optional second compressor harness kit (part number: 27703).*

3. Display
   - Route the main harness display cable as desired to the preferred operating location.
   - Attach the 4’ display cable to the main harness cable and to the back of the display.
4. Height sensor harness (optional)
   - 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)*.
5. Reconnect the battery once the system is completely installed.

NOTE

Keep proper drip loops and use proper bend radius for wire bundles (fig. 9).

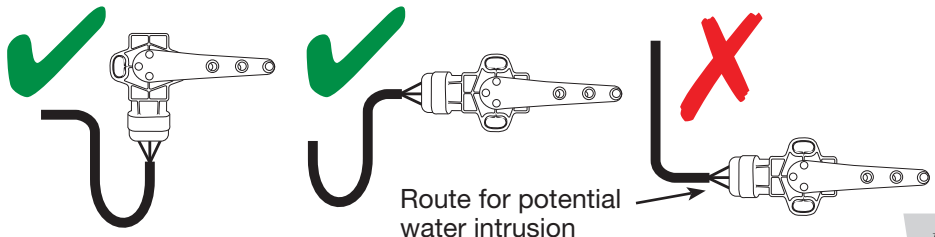
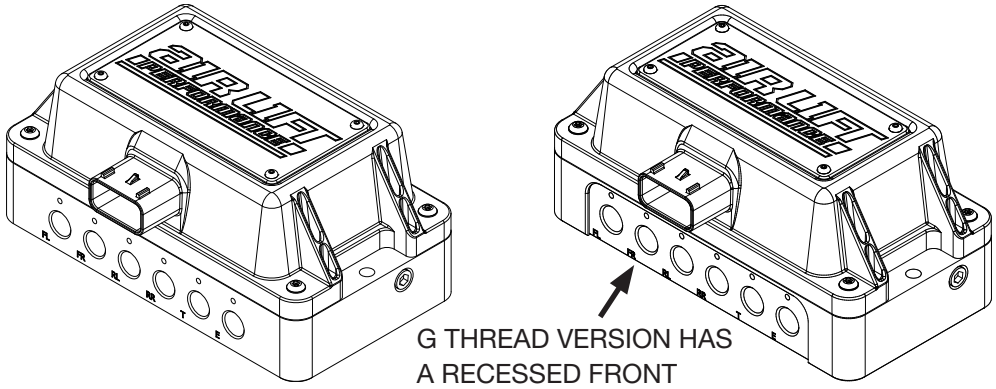


fig. 9

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

INSTALLING FITTINGS

See Table 2 below for information pertaining to kits that require manifold fitting installation.



Kit Numbers:

3H KITS	3P KITS
27690, 27790 (1/4"NPT - 1/4" AIR LINE)	27680 (1/4"NPT - 1/4" AIR LINE)
27795 (G THREAD)	27685 (G THREAD)
27695, 27775 (1/4"NPT - 3/8" AIR LINE)	27765 (1/4"NPT - 3/8" AIR LINE)

Table 2

Fittings: 1/4" MNPT DOT Fittings (AR) provided in manifold kit
G 1/4-19 DOT Fitting required (not supplied)

Torque Specifications: 1/4" MNPT Threads - 1 1/2 to 2 turns past finger-tight
G 1/4-19 Threads - See manufacturer’s recommendation

INSTALLING AIR LINES

1. Route and attach the air lines from the manifold to the air springs, from the manifold to the filter, and from the filter to the tank, if not mounting filter directly to tank.
   - Route air lines free from abrasive edges and heat sources.
2. Attach air lines to the appropriate manifold ports for the air springs, filter/tank and exhaust.

NOTE

Air lines should be pushed in firmly, with a slight back-and-forth rotational twist – check the connection by pulling on each line to verify a robust connection.

3. Exhaust port can be left open or routed to preferred exhaust location. Routing exhaust outside of vehicle will eliminate any possibility of moisture being discharged from the port to surrounding area.

NOTE

Use the included hose cutter (Part number: 10530). Cut all hose ends as squarely and as smooth as possible (fig. 10).



fig. 10

NOTE

To release the air line from the connection (fig. 11), first release all air from the system. Push on the line (step 1), depressing the ring towards the fitting (step 2), and then pull the air line out of the fitting (step 3).

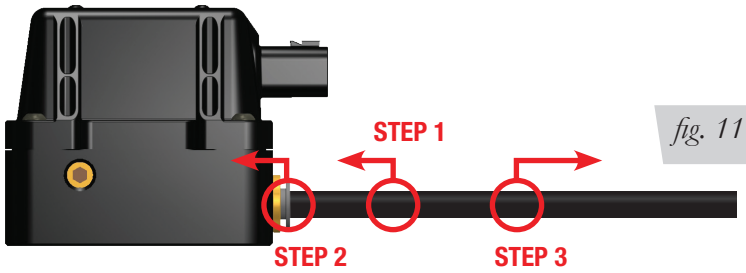


fig. 11

HELPFUL AIR LINE TIPS

4. Minimum air line bend radius
   - 3/8" air line = 1 1/2" air line bend radius.
   - 1/4" air line = 1" air line bend radius.
5. Air line to fitting
   - No side loading on fitting from air line.
   - Air line straight for 1" before bending.
6. Air line cutting
   - Cut air line perpendicular to air line length.
   - Inspect air line for scratches that run lengthwise on air line prior to insertion.
   - Use the included air line cutter.

MANIFOLD

⚠ CAUTION

BEST PRACTICE IS TO LOCATE THE MANIFOLD UNIT INSIDE THE VEHICLE. IF EXTERNAL MOUNTING IS DESIRED, THE MANIFOLD SHOULD BE LOCATED IN AN AREA SHIELDED FROM DIRECT WATER SPRAY FROM TIRES OR CAR WASHES.

1. Position the manifold in desired location. Make sure the manifold mounting surface is flat.

NOTE

When mounting the manifold, do so either horizontally or vertically, with ports and connector facing toward the ground. Do not mount the manifold upside down. Proper manifold mounting will help prevent water from settling in areas sensitive to freezing (fig. 12).

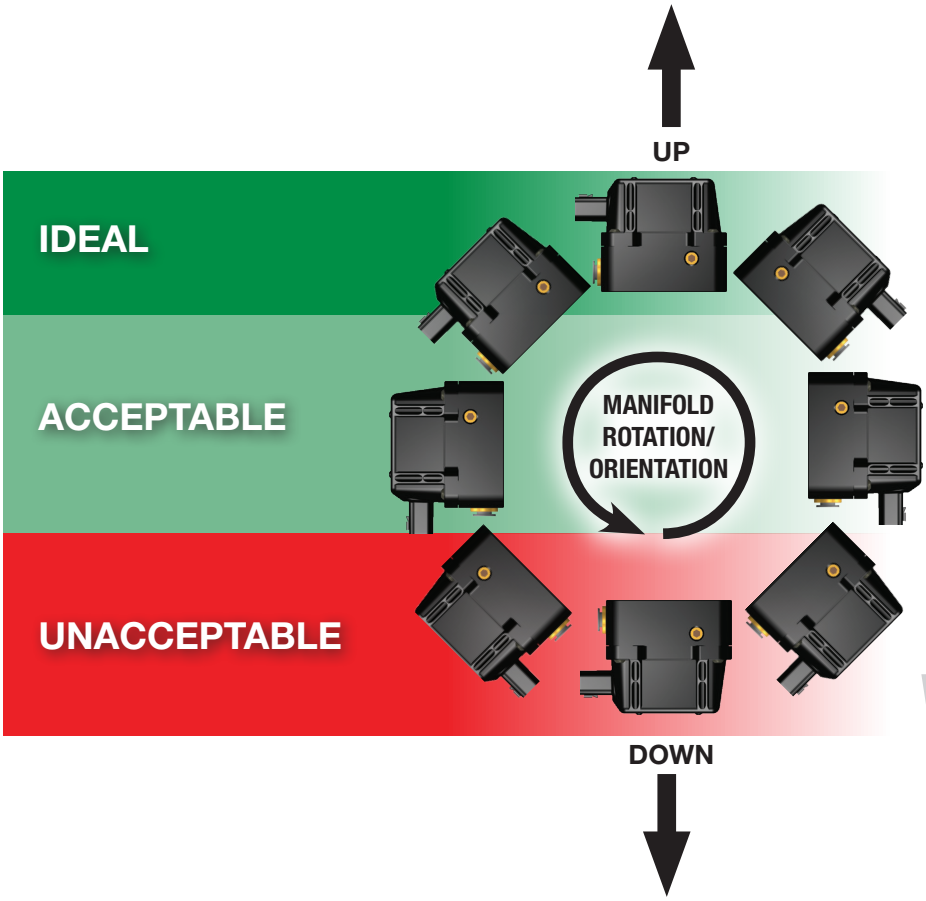


fig. 12

2. Fasten the manifold using the supplied hardware. If the mounting surface is not flat, add washers or a spacer to lift the manifold up over surface irregularities (fig. 13). In addition to the provided self-tapping screws, the manifold mounting holes are threaded and can be secured with 5/16"-18 bolts (also supplied).

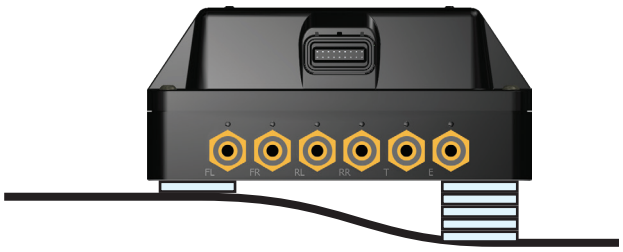


fig. 13

3. A manifold mounting template can be found on page 27.

COMPRESSOR (OPTIONAL)

1. Prepare the compressor intake. If it is mounted inside the vehicle, attach the filter to port on end of compressor (fig. 14). If the compressor is located outside the vehicle, snorkel the inlet filter to dry location inside vehicle using components supplied with compressor (fig. 15).
2. Center-punch and drill four holes using the compressor or the template on page 29.
3. Secure the compressor using the supplied hardware (see installation diagram).

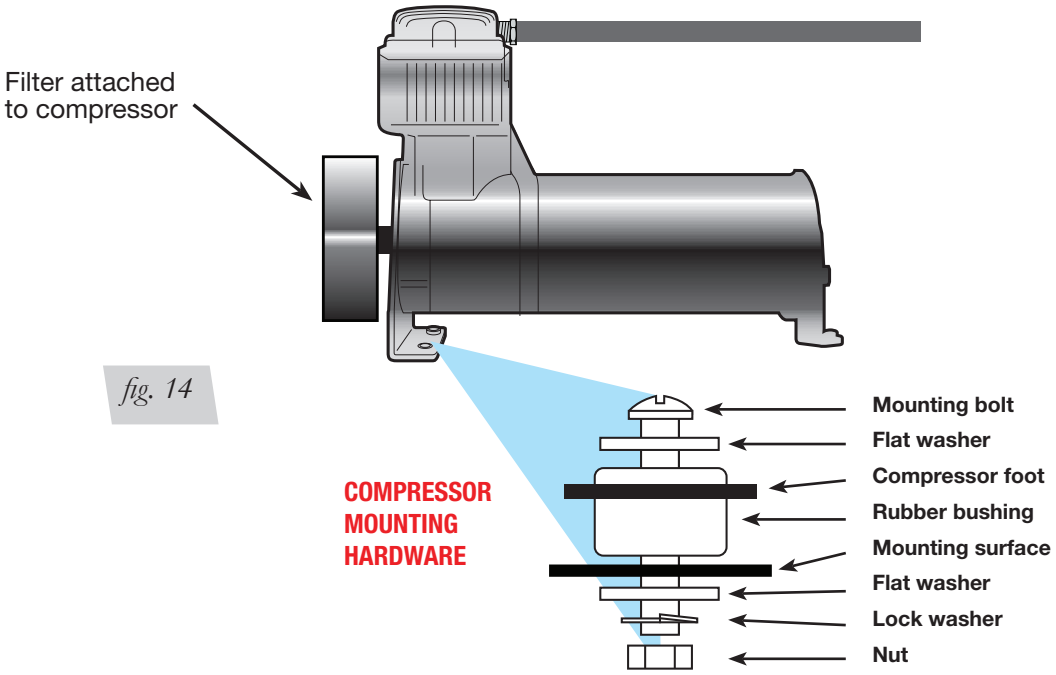


fig. 14

NOTE *If using an Air-Zenith compressor see Figure 33 on page 22.*

FILTER

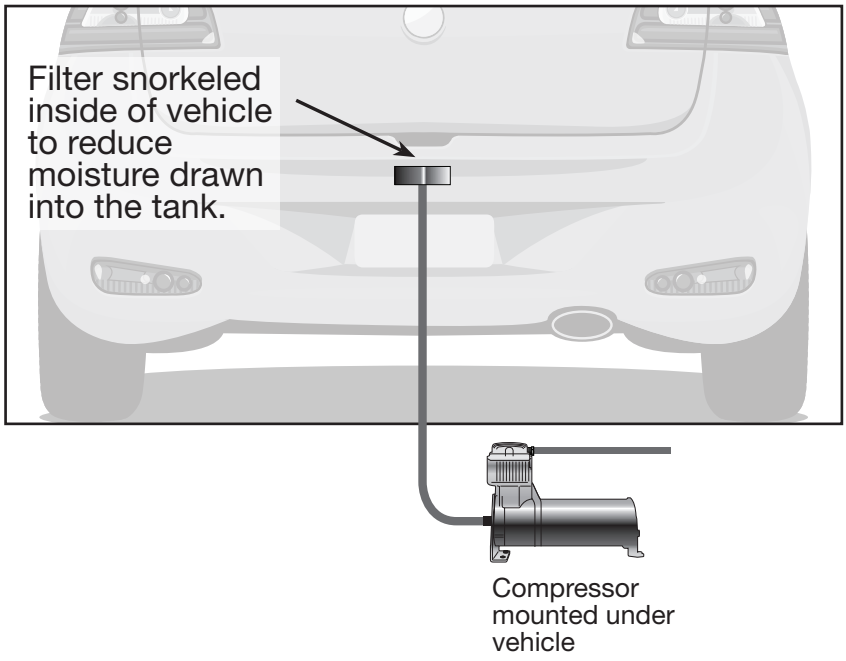


fig. 15

⚠ 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. (SEE USER GUIDE.)

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.

Determining Height Sensor Mounting Point

1. Choose a solid mounting point on the body or frame that will not deflect. Anything that moves is not a good mounting point.

NOTE

For best system performance, mount the sensors in the same location on the driver's and passenger's sides of the vehicle. This will ensure that the sensor range is equal side to side.

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. 16).

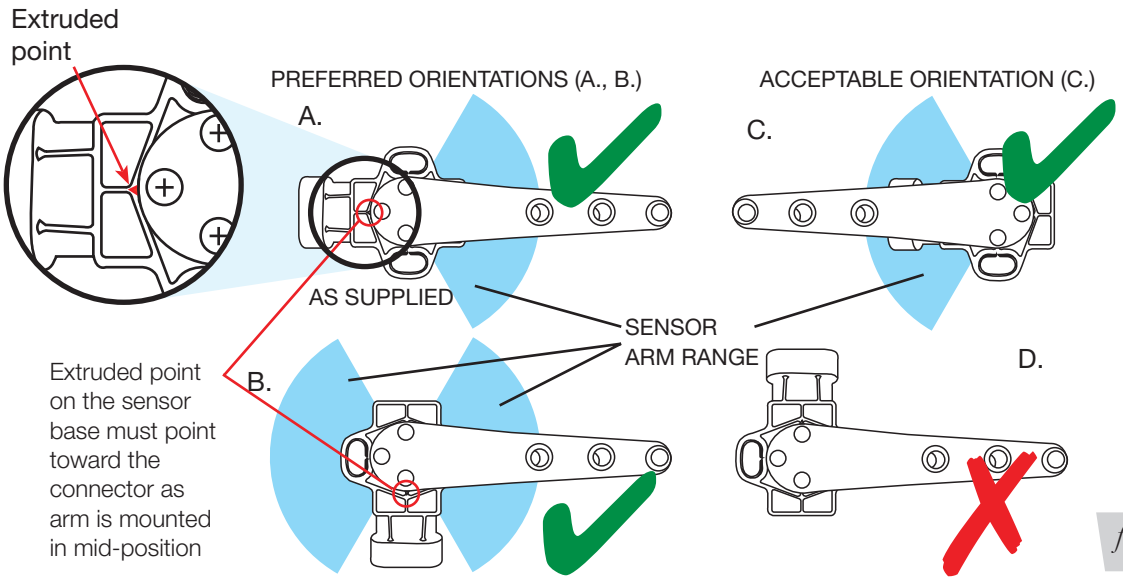


fig. 16

NOTE

*Do **NOT** position the sensor with connector up, or with the point on the 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 vehicle's 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, measure the suspension travel to 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. 17).

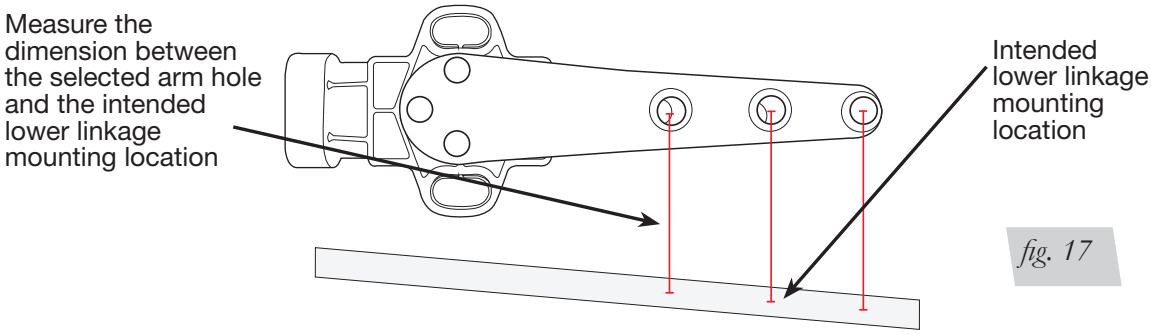


fig. 17

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. 18). The difference between these two values will be the full suspension travel range.

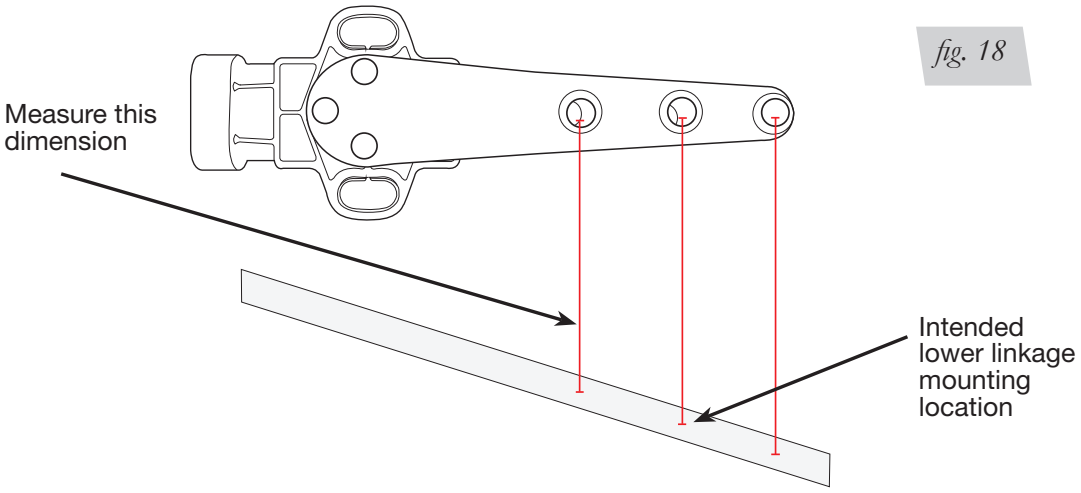


fig. 18

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 3). Any significant over-extension or over-compression may damage and possibly destroy the sensor or sensor linkage (fig. 19).

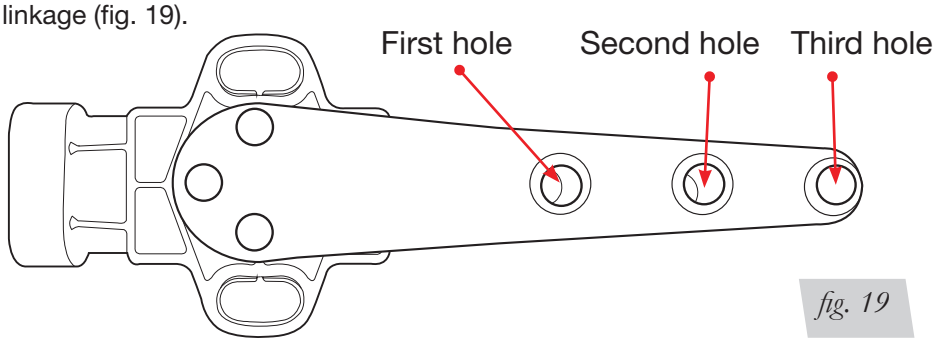


fig. 19

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 3

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. 20).

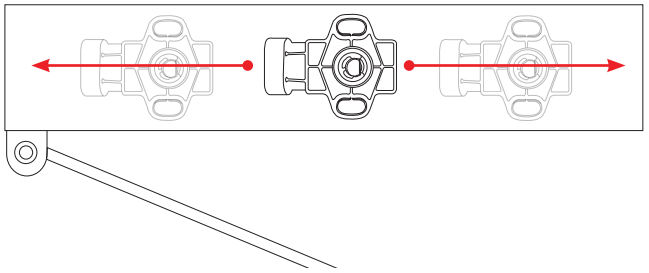


fig. 20

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. 21).

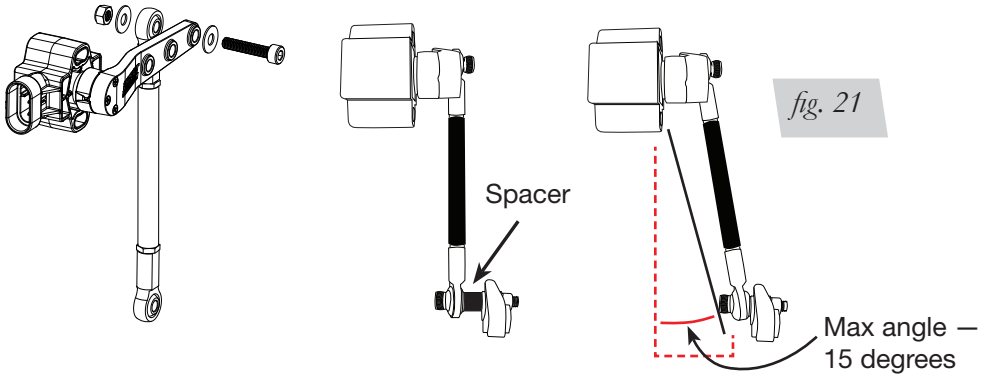


fig. 21

LINKAGE ASSEMBLY/MODIFICATION

1. Locate the linkage and ensure the rod is threaded all the way on (fig. 22).

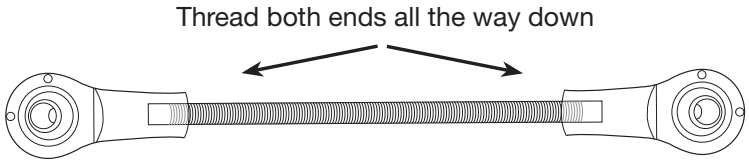


fig. 22

2. Next, put the suspension in the mid-position with respect to full suspension travel (fig. 23).

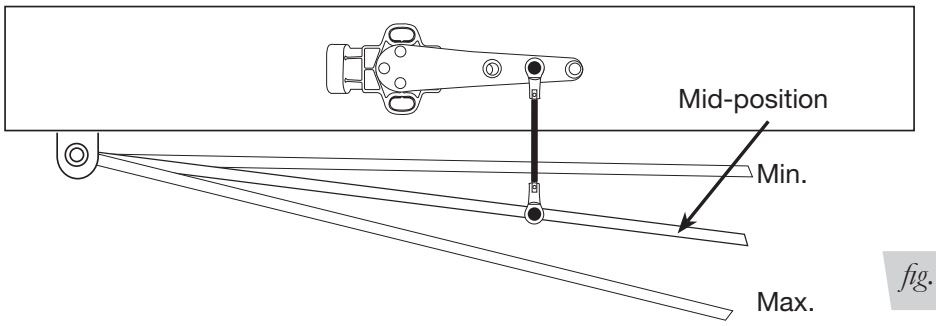


fig. 23

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. 24).

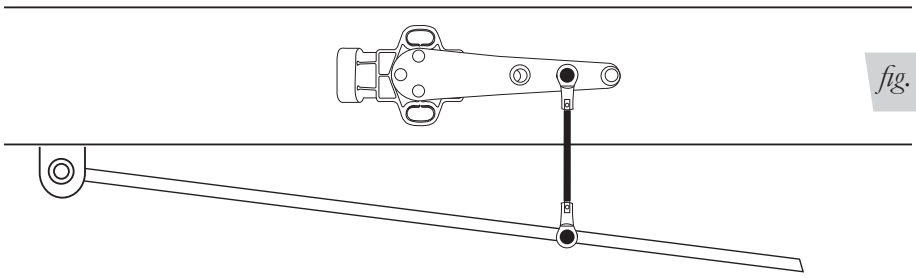


fig. 24

4. Loosen if needed in order to extend to reach the lower mounting point. If loosening the linkage to extend, it is required to make sure to have at least 5 threads of engagement on both ends (fig. 25).

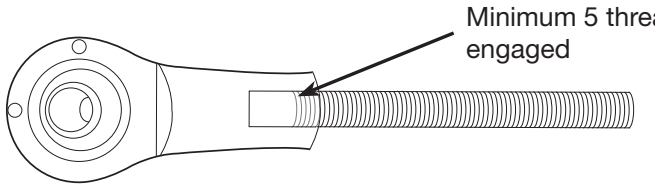


fig. 25

5. If shortening the rod linkage is necessary, mark the rod cover where the mounting location intersects with the intended mounting location (fig. 26).

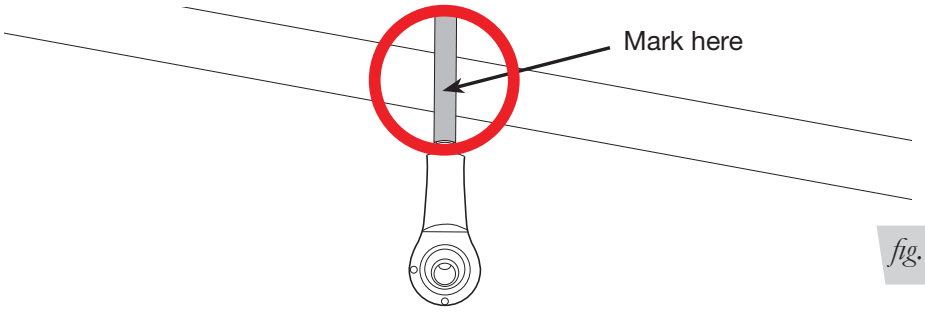
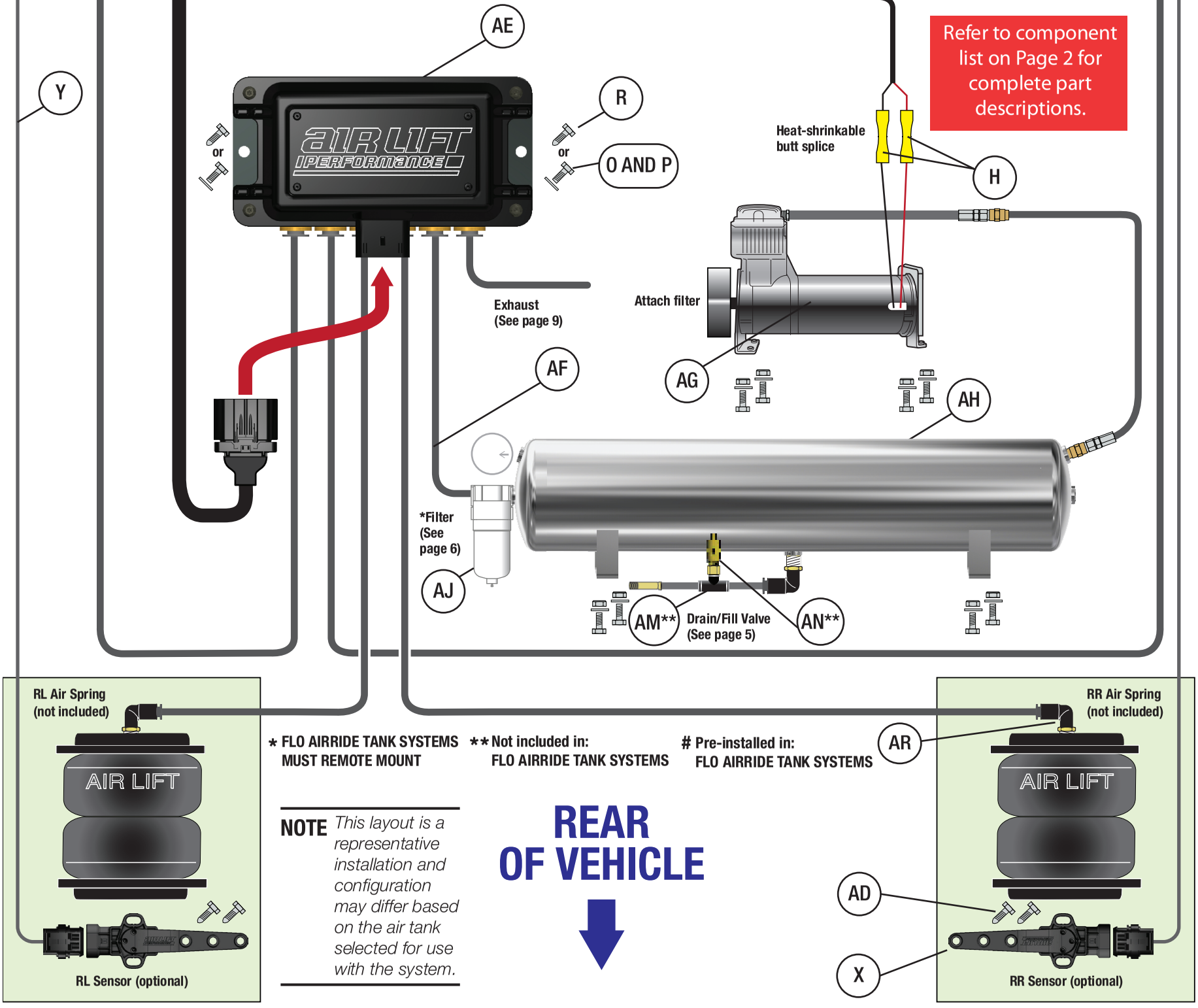
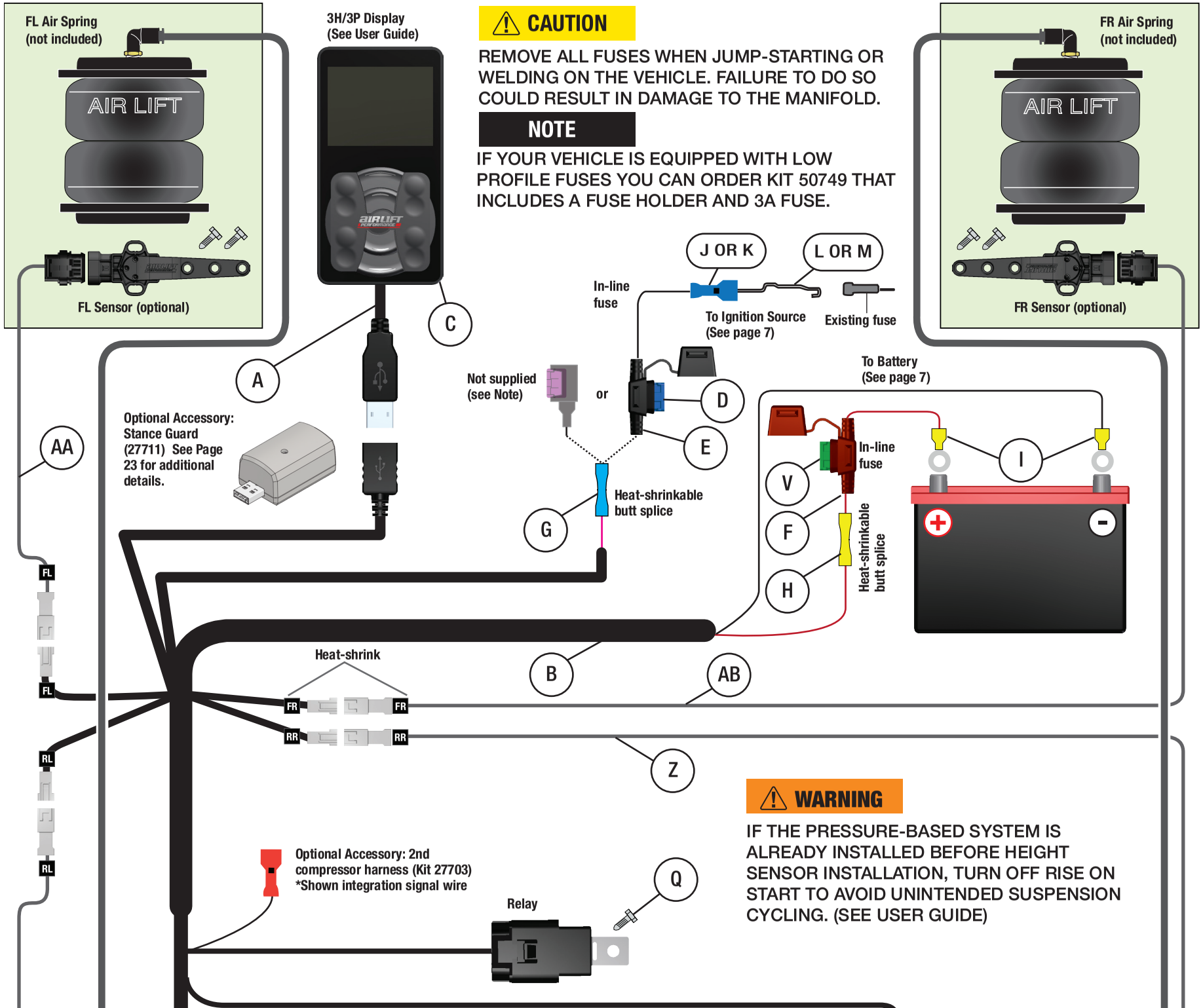


fig. 26


Refer to component list on Page 2 for complete part descriptions.
AE
Y
R
or
or
O AND P
AIR LIFT PERFORMANCE
Heat-shrinkable butt splice
H
Exhaust (See page 9)
Attach filter
AG
AF
AH
*Filter (See page 6)
AJ
AM**
Drain/Fill Valve (See page 5)
AN**
RL Air Spring (not included)
AIR LIFT
RL Sensor (optional)
* FLO AIRRIDE TANK SYSTEMS MUST REMOTE MOUNT
** Not included in: FLO AIRRIDE TANK SYSTEMS
# Pre-installed in: FLO AIRRIDE TANK SYSTEMS
AR
RR Air Spring (not included)
AIR LIFT
AD
X
RR Sensor (optional)
NOTE This layout is a representative installation and configuration may differ based on the air tank selected for use with the system.
REAR OF VEHICLE



⚠ 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 3A FUSE.

⚠ WARNING

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

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. 27).

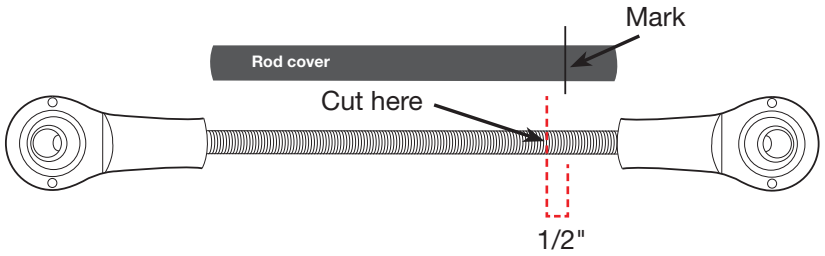


fig. 27

7. Before cutting the rod, thread the jam nut back on the rod. Use the nut to deburr the rod end (fig. 28).

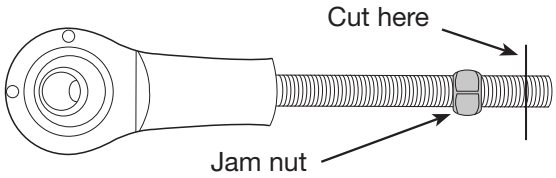


fig. 28

8. Cut the rod cover 5/8" shorter than the rod length with the rod assembled on one end after cutting (fig. 29).

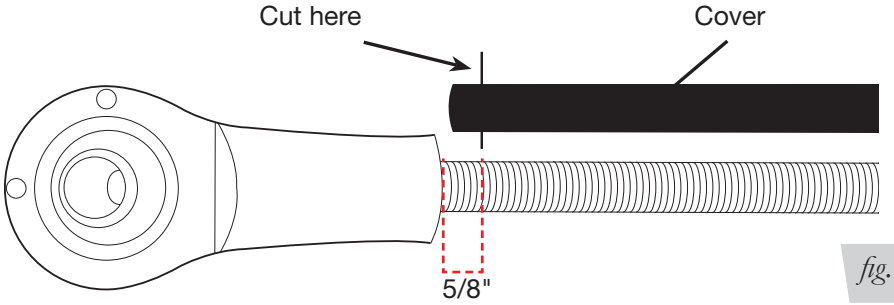


fig. 29

9. Assemble linkage back together and fasten it to the sensor arm and lower mounting location with supplied hardware (fig. 30). Temporarily secure the sensor in its intended location, including using the height sensor spacer that is provided.

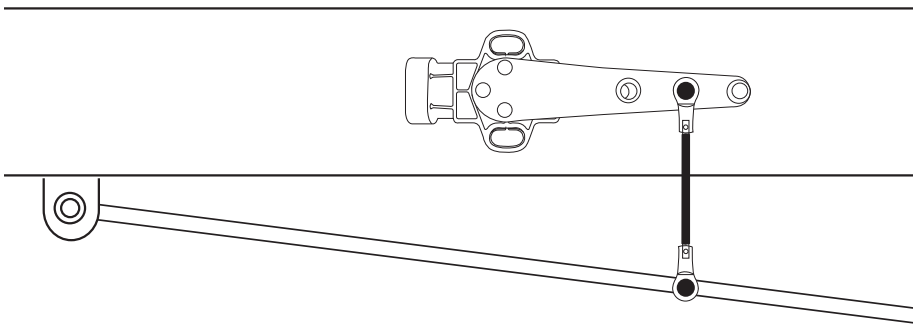


fig. 30

VERIFYING SUSPENSION RANGE

Use the paper height sensor tool on page 25 or electronic sensor tool in the display to make sure the range is sufficient to provide accurate measurements (fig. 31). (See User's Guide)

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.

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. 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. 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."

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).

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.

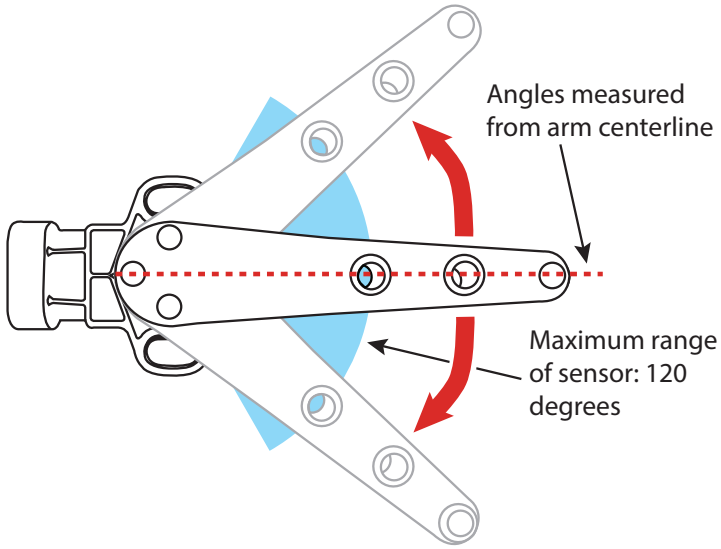


fig. 31

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. 32).

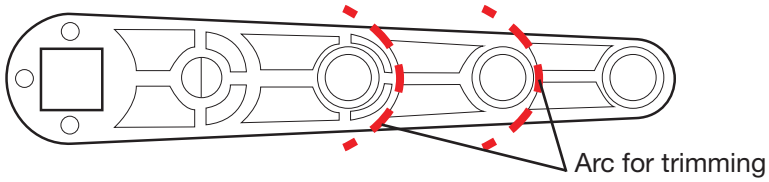


fig. 32

Troubleshooting Guide

For technical assistance, please contact our customer service department by calling **(800) 248-0892**, Monday through Friday.
For calls from outside the USA or Canada, dial **(517) 322-2144** or email **techsupport@airliftcompany.com**.

PROBLEM	CAUSE	SOLUTION
Compressor doesn't run.	Check for a blown fuse, bad relay, poor ground, or poor electrical connections, or the motor overheated.	Replace the 30A or 3A fuse if blown. Check ground wire connection at battery and compressor. Let compressor cool off for about 30 minutes to allow thermal overload switch to reset.
Compressor runs all the time.	The compressor relay is defective or there is a leak.	Replace the relay or locate the leak and repair.
Air spring or tank leak.	Fitting seal or air line is compromised.	Check to make sure air lines are seated in connectors. Inspect fittings with soapy water. Trim hose or re-seal fitting. Ensure lines are cut straight.
Nothing happens when the vehicle is key on, ignition active.	Check for a blown fuse or a poor connection.	Replace the fuses and check the electrical connections.
Compressors runs all the time but doesn't fill the tank.	Compressor in-line check valve fitting has been overtorqued.	Loosen fitting and check again. Replace if needed.
Display does not work.	Check for a blown fuse, compromised cable/ harness.	Replace the 3A fuse if blown. Replace the extension cable.

Leak Testing and Detection

1. A leak can be defined as a loss of pressure of more than 5 PSI over an 8-hour period. Be aware that ambient temperature change affects pressure that may seem like a leak. For example: a change of 10 degrees F up or down from your baseline will have an approximate gain or loss of indicated pressure of 2 PSI. If a leak is suspected after including any temperature change, proceed to step 2.
2. Spray soapy water (1/5 Dawn® brand dish soap to 4/5 water) on suspect fittings and air line connections and look for any bubbling caused by air leakage.
3. Fix leaking connection (review page 9 for help on NPT fittings and air line connections).
4. Wipe down sprayed connections with rag to remove any residual soapy water.

NOTE

Dawn® brand dish soap will not corrode the metals (aluminum, brass, steel) with which it comes into contact.

Permissible Modifications

1. If it is necessary to extend the display cable beyond the 4-foot cable that is supplied, purchase a USB A/M adapter extension of up to 8 feet. Use an off-the-shelf USB 3.0 cable if possible.
2. If using an Air-Zenith OB2 compressor, follow the wiring diagram below (fig. 33). The 70A fuse, relay, etc. are supplied with compressor. Wiring requirements for the compressor should follow manufacturer's recommendation.

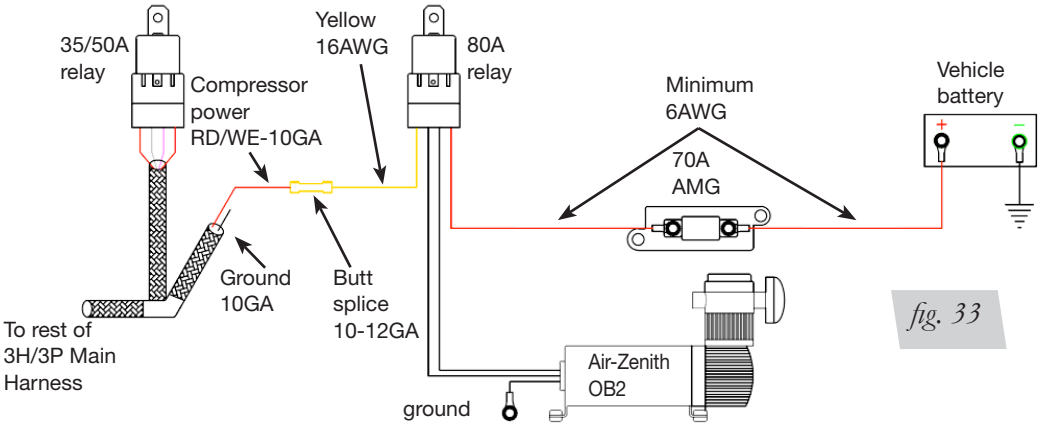
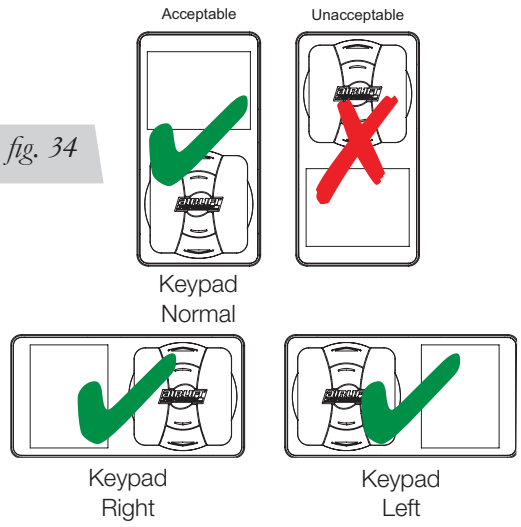


fig. 33

3. The keypad on the 3H/3P display can be rotated for horizontal applications, but it must not be rotated so that the keypad is above the screen (fig. 34). It will not power up in this position.
   a. Rotate the keypad after removing the two screws on the back of the 3H/3P display unit (fig. 35). Once they are removed, the keypad can be pulled out and rotated.
   b. Using light and even pressure, push the keypad into the display until it is flush.
   c. After rotating the keypad, re-fasten the screws to the torque of 14-16 oz.-in. Do not overtighten.
   d. See the User Guide for additional information about display options.

fig. 34



See page 23 for a scale template for the 3H/3P display

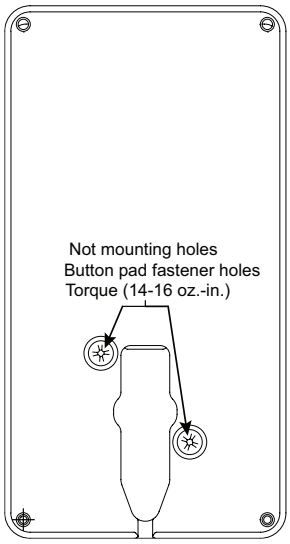


fig. 35

4. Extending the compressor power and ground wires is not recommended. It is permissible to remove a portion of the battery power and ground wires to extend the compressor wiring if necessary, keeping the same overall harness length. This will keep the voltage drop within industry standards. Failing to do so could decrease the life of the compressor.

5. Optional Accessory Stance Guard: When installed in line with the 3P/3H display, the buzzer dongle (Fig. 36) will generate an audible beep when the air spring pressure is too low or too high.

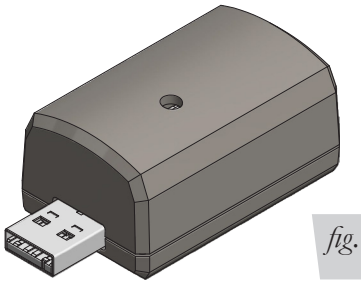


fig. 36

Display Mounting Template

⚠ CAUTION

IMPORTANT: PRINT THIS MANUAL AT 100% SCALE. THIS MANUAL CONTAINS DRILLING TEMPLATES, WHICH WOULD BE RENDERED INCORRECT IN DIMENSION IF PRINTED WITH ANY SCALING. USING AN INCORRECT TEMPLATE TO DRILL HOLES MAY CAUSE DAMAGE TO YOUR VEHICLE.

REFER TO THE ONE-INCH SCALE (FIG. 37) AND USE A MEASURING TOOL TO CONFIRM THAT THE PRINTED SCALE MEASURES ONE INCH TO VERIFY PROPER SCALE. IF THIS IS PRINTED AT ANY SCALE OTHER THAN 100%, THE INSTALLER COULD END UP DRILLING IN THE WRONG LOCATIONS ON THE VEHICLE.

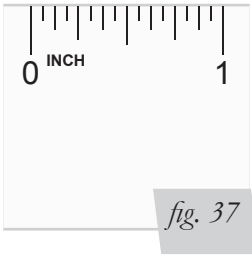
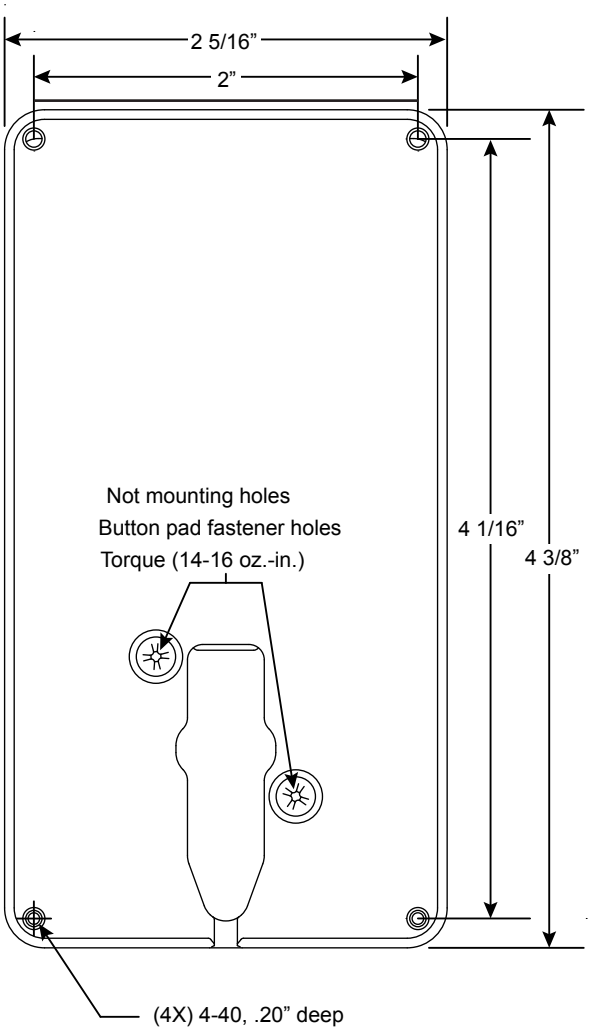
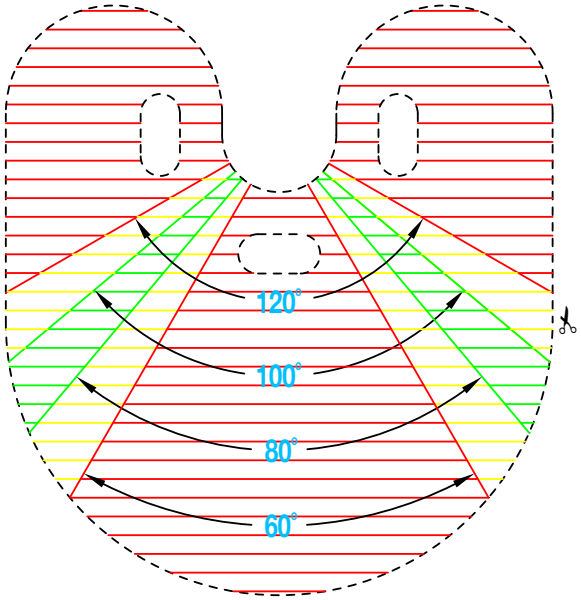
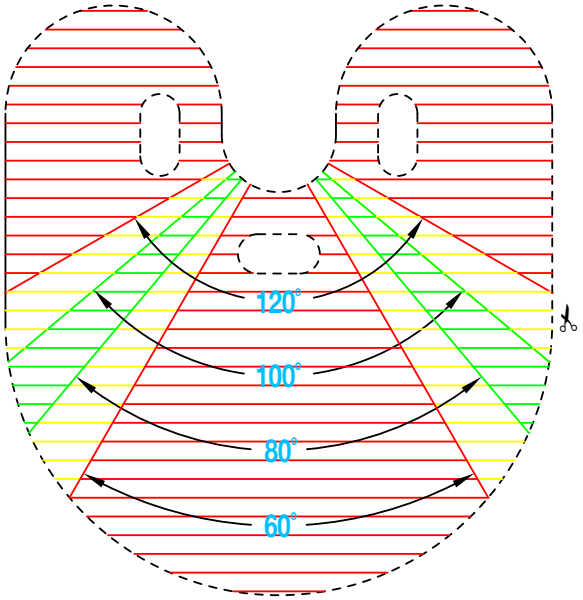


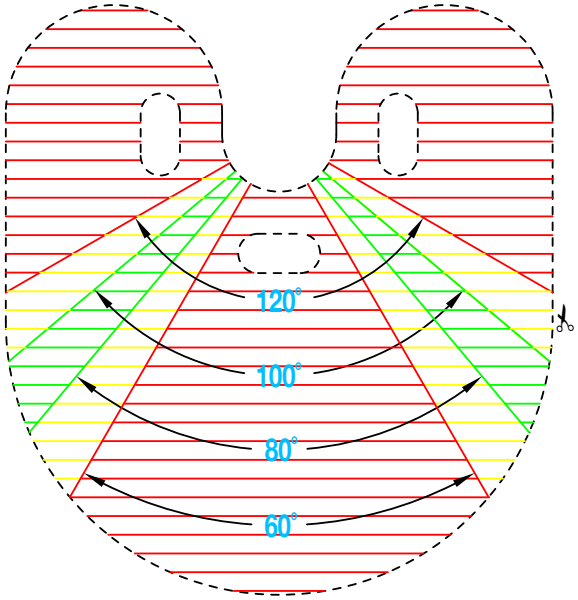
fig. 37

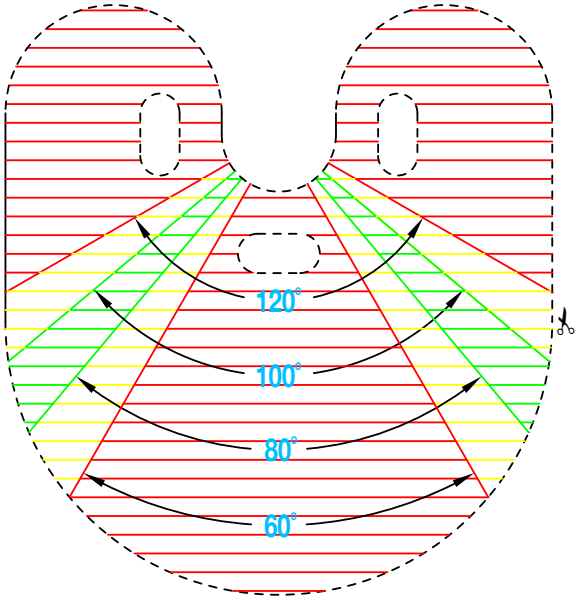


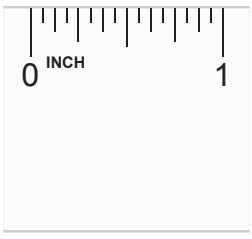
Height Sensor Install Tool



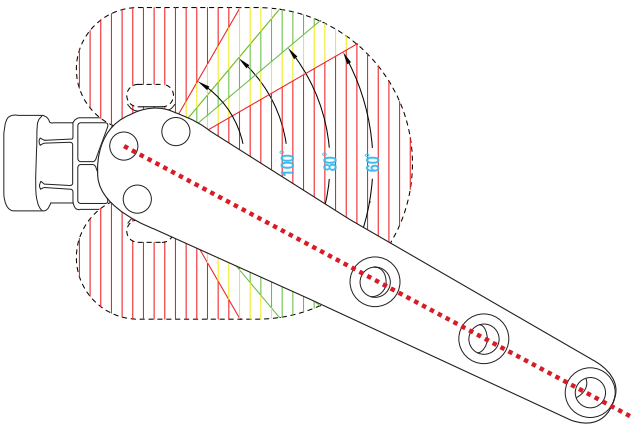




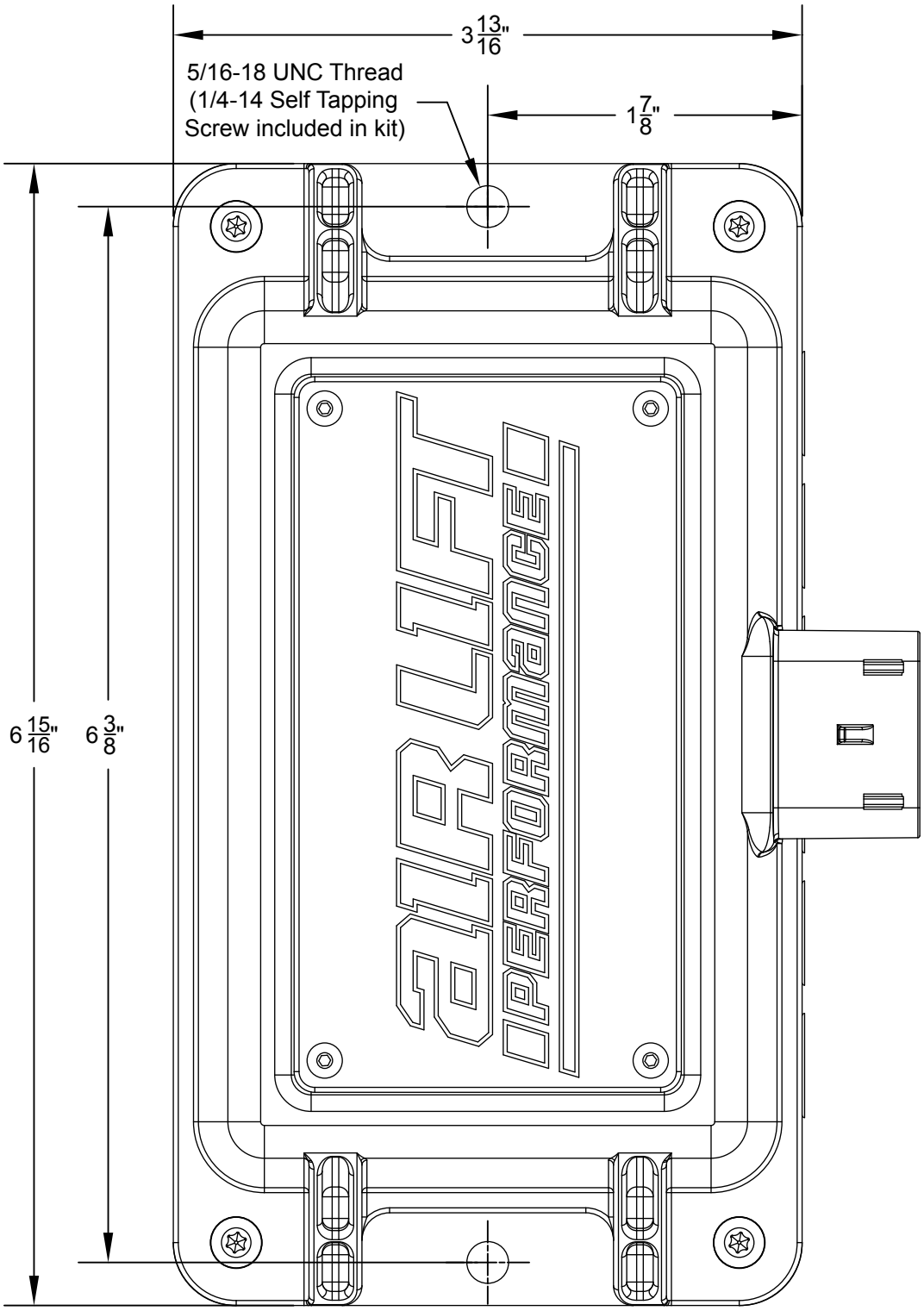




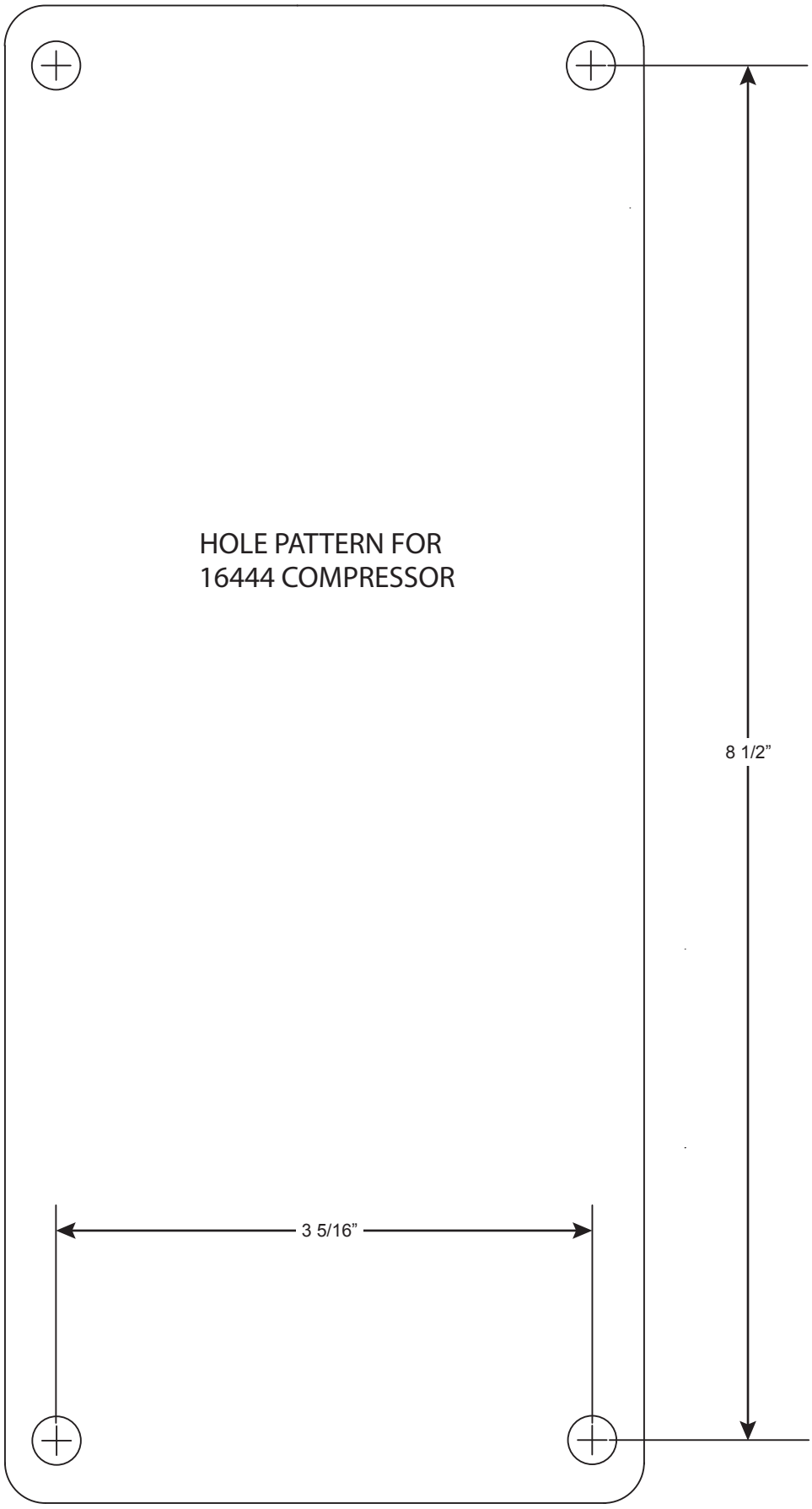
Cut out the height sensor tools and position each one as shown at right depending on the height sensor orientation. It would be a good idea to make copies of this page in case the tools are damaged during installation. Make sure to copy at 100% so the tools are the correct size. The drawing to the right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



Manifold Mounting Template



16444 Compressor Mounting Template



Notes

Limited Warranty and Return Policy

Air Lift Company provides a 1-year limited warranty* to the original purchaser of Air Lift Performance products from the date of original purchase, that the 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 in the full Limited Warranty and Return Policy.

* Full Limited Warranty and Return Policy are available at www.airliftperformance.com/warranty and are subject to change.

WARRANTY REGISTRATION & CLAIMS

- To register your warranty, please visit https://www.airliftperformance.com/support/warranty-registration/
- To submit a warranty claim, please visit https://www.airliftperformance.com/support/submit-warranty-claim/

Need Help?

Contact Air Lift customer service department at (800) 248-0892, Monday through Friday. For calls from outside the USA or Canada, dial +1 (517) 322-2144.

Thank you for purchasing Air Lift Performance products!

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