



**PATRIOT JACK
SYSTEMS™ LEVELING
OEM INSTALLATION
MANUAL**

**L I P P E R T
C O M P O N E N T S®**

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System Information

The Patriot Jack Systems™ Leveling includes six points of contact utilizing jacks and a multi-valve system. A 12V DC electric motor drives a hydraulic pump that moves fluid through a system of hoses, fittings and jacks to level and stabilize the trailer. Mechanical portions of the leveling system are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Component Description

1. Jacks
 - A. 8K capacity aluminum leveling jacks, 14K capacity landing gear
 - B. Standard 9-inch diameter (63.5 square inch) footpads on a ball swivel for maximum surface contact on all surfaces
2. Motor/Pump Assembly
 - A. 12V DC motor
 - B. Hydraulic fluid reservoir, 1.75 gallon capacity
 - C. Solenoid
3. Control valve manifold
4. System Controls
 - A. Touchpad can be operated in manual mode or fully automatic mode
 - B. Pendant switch to independently operate landing gear
 - C. Sensors to detect when trailer is level
5. Fittings and Hoses
 - A. Fittings - High pressure O-Ring Face or JIC - Size 4
 - B. Hose - 1/4" I.D., 3000 psi - W.P. Rated

Safety

Please read and study the operating manual before operating the leveling system. Adhere to all safety labels.

The use of the Lippert Components, Inc. Patriot Jack Systems Leveling to support the trailer for any reason other than which it is intended is prohibited by the Lippert Limited Warranty. The system is designed as a leveling system only and should not be used for any reason to provide service under the trailer, e.g. changing tires or servicing the leveling system.

Lippert Components, Inc. recommends that a trained professional be employed to change the tires on the trailer. Any attempts to change tires or perform other service while the trailer is supported by the leveling system could result in damage to the trailer and/or cause serious injury or death.

WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury if not performed safely and within the parameters set forth in this manual.

WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

WARNING

**Trailer MUST be supported per manufacturer's recommendations before working underneath.
Failure to do so may result in death or serious personal injury.**

CAUTION

Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

Resources Required

- Electric or cordless drill or screw gun
- Appropriate sockets
- Appropriate drive bits
- Torque wrench
- Open end wrenches
- Phillips head screwdriver
- Hand saw or reciprocating saw
- #12 x 1" hex head self-tapping screws
- #8 x 1" fasteners (appropriate for the structure)
- Tape measure

Preparation

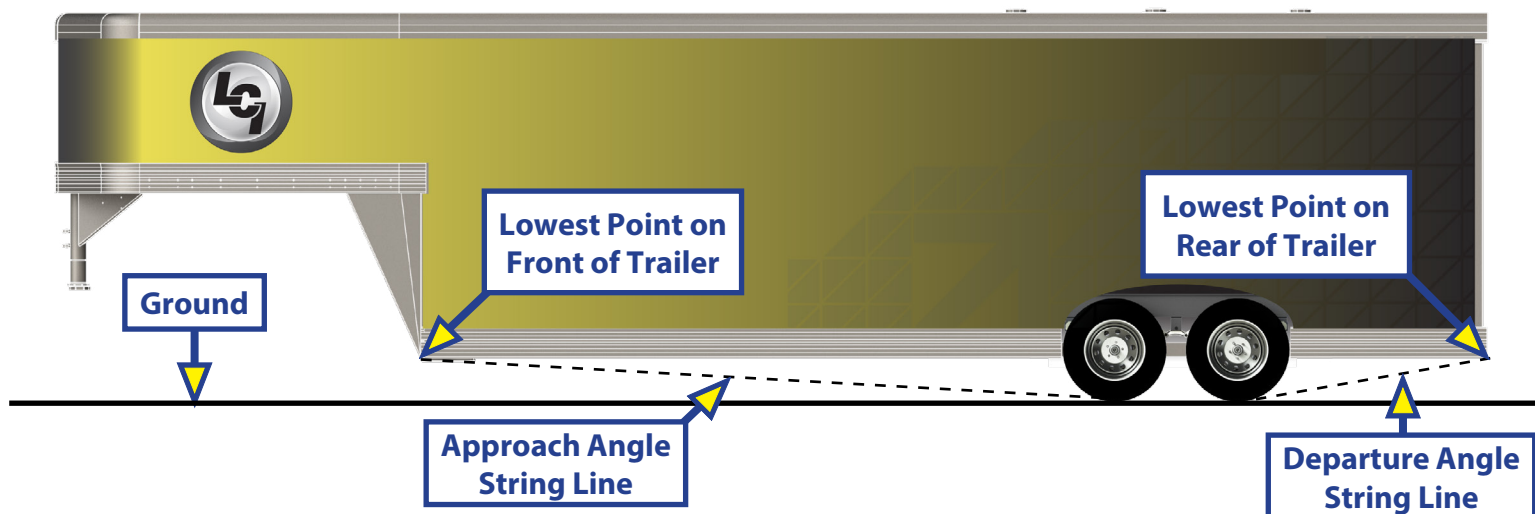
Determine how and where the leveling jack brackets will be welded to the frame of the trailer.

NOTE: The rear jacks should be mounted approximately 12-18" behind the rear tires on a tandem axle trailer, or as close to the rear tire as allowed on a tri-axle trailer, and within the plane of the departure angle (Fig. 1). Leveling jacks shall be aligned with each other.

NOTE: When installing the system, the mid-jacks should be mounted approximately one foot in front of the front tires. Mid-jacks can be offset up to 24" to clear obstructions, e.g. entry steps.

6. Determine the location for the hydraulic power unit and valve manifolds.

Fig. 1



Installation

Rear Jacks, Mid-Jacks

1. When fully retracted, the rear jacks MUST be mounted to achieve a minimum ground clearance equal to the departure angle (Fig. 1) or no less than 8" to the ground to enable maximum level correction. Any additional ground clearance added to the jack location will decrease the amount of level correction available to the system.
2. Using $\frac{1}{2}$ " - 20 bolts and nuts (Grade 5 minimum), bolt the leveling jacks (Fig. 2) to the mounting brackets (Fig. 3) to achieve proper ground clearance. Upper and lowermost bolts are vertically spaced a minimum two-hole patterns (4.5") (Fig. 4) and tightened to 52-64 ft-lbs. A minimum spacing of three-hole patterns (6.75") is recommended where possible.

NOTE: When installing the system, the rear jacks must be mounted within the departure angle, should be aligned with each other from side-to-side and mounted 12"-18" behind the rear tires on a tandem axle trailer or, on a tri-axle trailer, as close to the rear tire as allowed. The mid-jacks should be mounted approximately one foot in front of the front tires. The mid-jacks can be offset from each other side-to-side by up to 24" to fit the jacks around steps or other obstructions. The universal mounting brackets are designed to fit a 12" I-beam with no modifications. However, the frame on the trailer may not be 12" or there may be obstructions where the jacks are to be mounted. If that is the case, measure for the modifications needed on the jack brackets.

Fig. 2

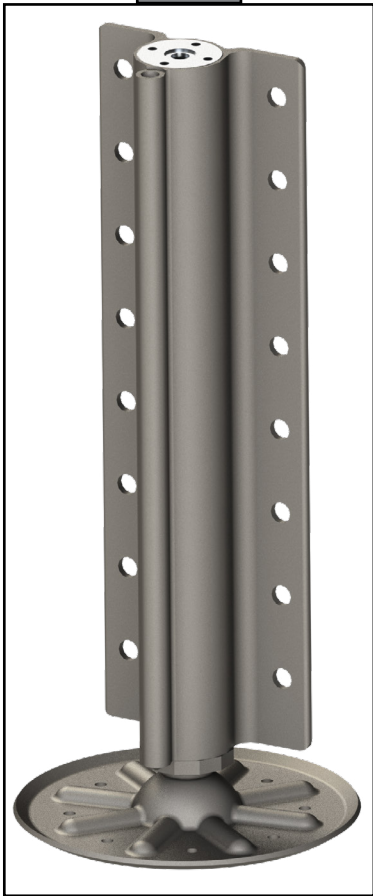


Fig. 3

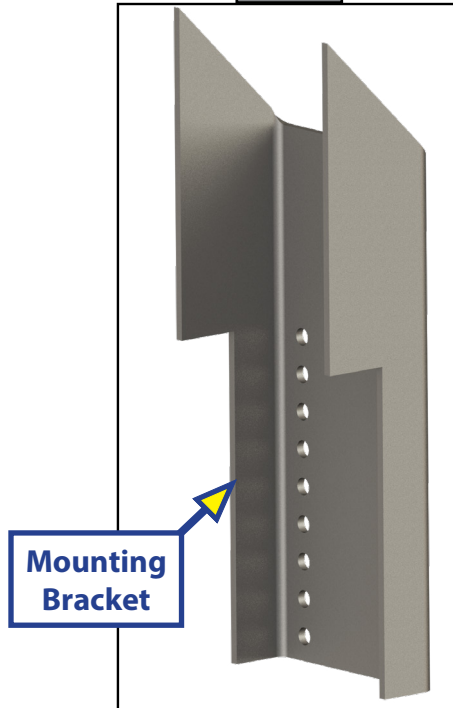
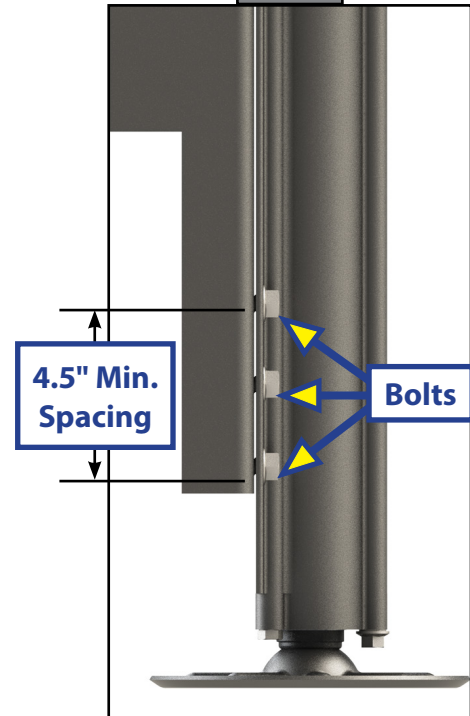
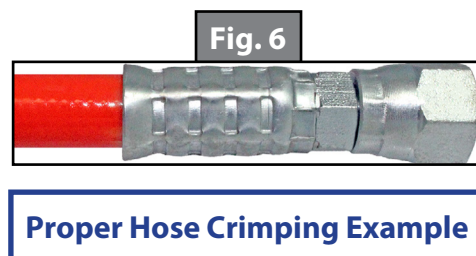
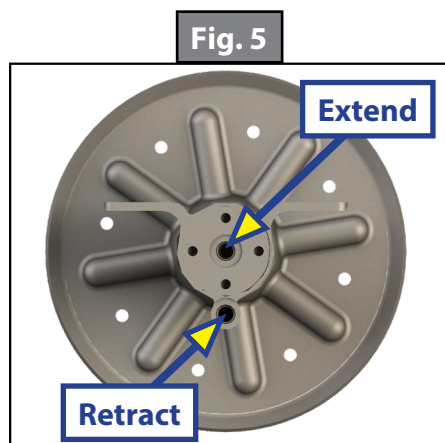


Fig. 4



3. Identify hydraulic power unit mounting location.
4. Install hydraulic fittings onto leveling jacks. See Fig. 5 for details of fitting placement.
5. Measure and make the hydraulic hoses — orange for extend, black for retract (Fig. 6).
 - A. Measure the distance between the rear leveling jack to the mid-jack.
 - I. Add three feet to this measurement to make sure that there will be enough hose material to run between jacks and prevent kinking.
 - II. This is the measurement for the extend and retract hoses between the mid- and rear jacks.
 - NOTE:** For example, if the measurement is nine feet, two 12-foot orange hoses and two 12-foot black hoses would be made.
 - B. Measure the distance between the mid-jacks to the hydraulic power unit on each side of the trailer.
 - I. Add three feet to these measurements to make sure that there will be enough hose material to run between jacks and prevent kinking.
 - II. These will be the lengths of the extend and retract hoses between the mid-jacks and the hydraulic power unit.
- NOTE:** All hoses must be run on top of the foil insulation inside the underbelly and over the top of any frame crossmembers.
6. Secure all hoses to the proper fittings on each jack. See Hydraulic Hoses section and the Plumbing Diagram for color-coded illustrations of the hose installation.



Front Landing Gear

NOTE: There must be a minimum of 10" of clearance from the bottom of the footpads to the ground.

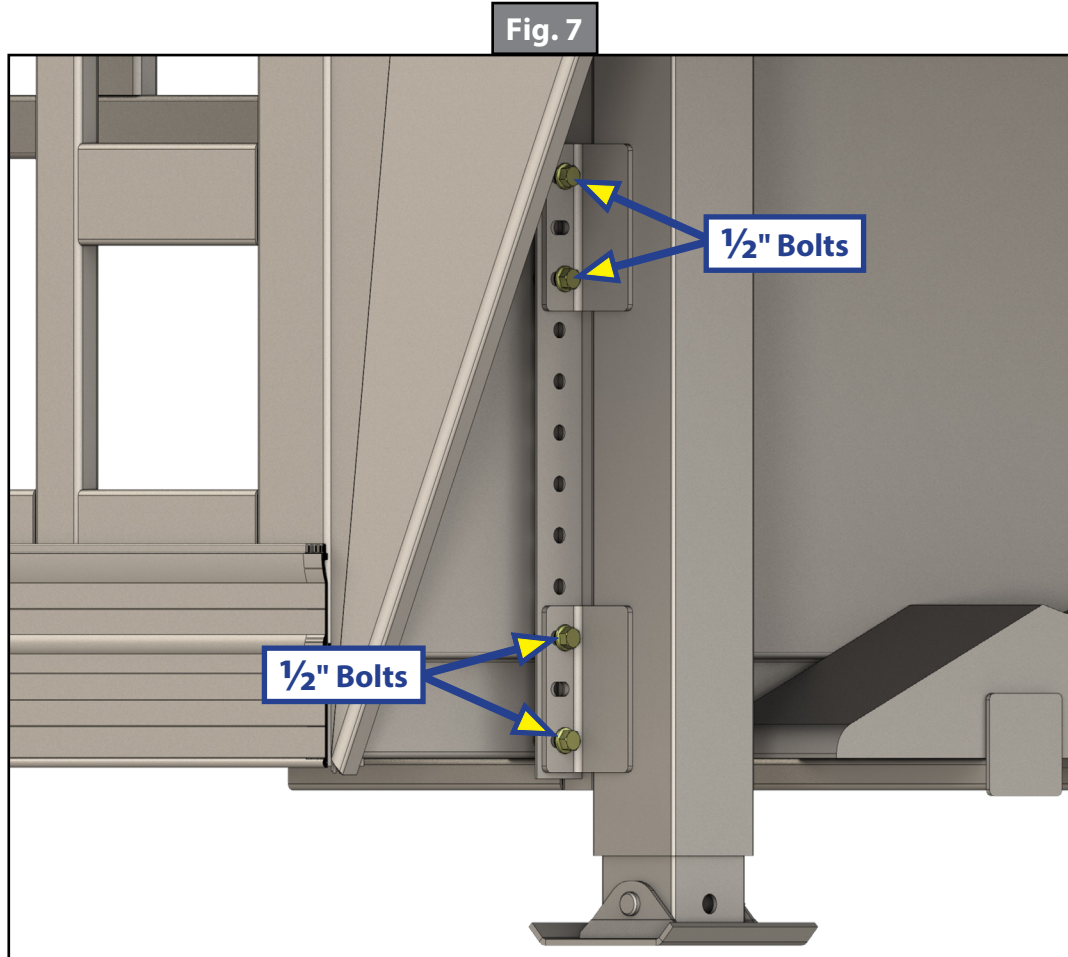
1. Using $\frac{1}{2}$ " - 20 bolts and nuts, attach jacks to mounting brackets on the trailer (Fig. 7).

NOTE: LCI recommends a minimum of eight bolts to secure each jack. Four bolts must be used to attach the top brackets, including two on each side of the jack, and a minimum of four bolts are to be used to attach the bottom brackets, including two on each side of the jack. Bolts should be no less than Grade 5 per SAE J429.

2. Torque the bolts to 52-64 ft-lbs if using Grade 5 bolts or 80-90 ft-lbs if using Grade 8 bolts.

NOTE: Make sure to not cross-thread the bolts and nuts.

3. Install the JIC hydraulic fittings on the landing gear. See Hydraulic Hoses section for orientation.



Hydraulic Power Unit

1. Using six self-tapping screws, mount the hydraulic power unit to the wall of the front compartment in a previously-determined position.
2. Install hose fittings onto the power unit. See Fig. 9.

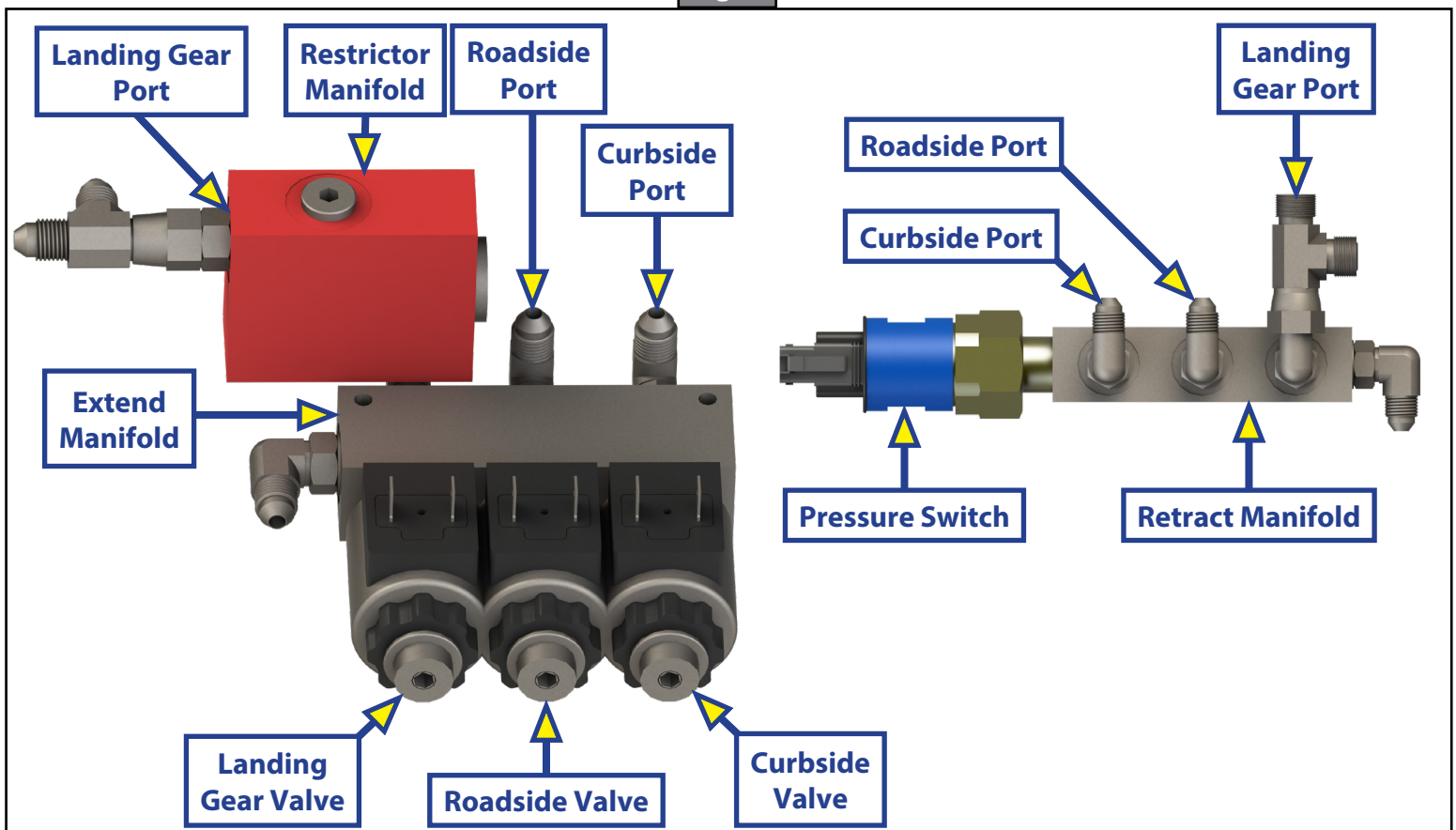
Assemble and Mount Manifolds

Refer to Fig. 8 for the following procedures.

1. Install three valve and coil assemblies in the extend manifold. These are for the landing gear, curbside rear and mid-jacks and roadside rear and mid-jacks.
2. Install 90-degree elbows in the extend manifold ports across from the previously-installed valve and coil assemblies.
3. Attach the red restrictor manifold for the landing gear to the 90-degree fitting on the end of the extend manifold.
4. Attach a T-fitting on the end of the red restrictor manifold.
5. Install the pressure switch in the side port of the retract manifold.
6. Install JIC fittings into the retract ports on the retract manifold, including a T-fitting on the landing gear port.
7. Cut suitable OEM-supplied mounting material into a rectangle large enough to mount both extend and retract manifolds and the restrictor manifold.
8. Mount the manifolds to the material using OEM-supplied fasteners long enough to securely hold the manifolds to the backer material.
9. Mount the manifolds to the back or side wall of the front compartment next to the pump assembly.

NOTE: Do **NOT** overtighten mounting screws. Overtightening may deform or damage the manifolds and cause them to malfunction or leak.

Fig. 8

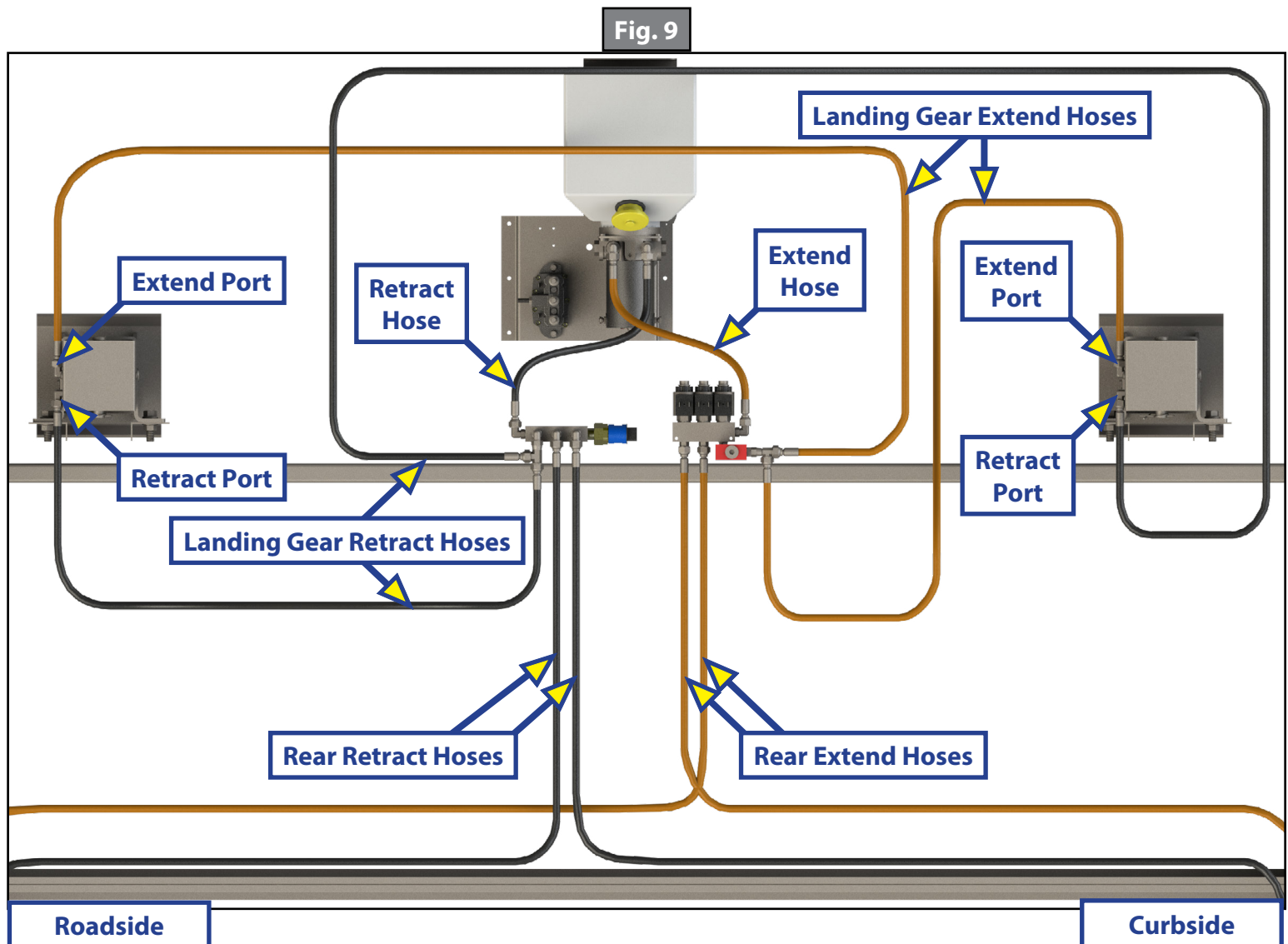


⚠ CAUTION

When installing hydraulic hoses, avoid areas of high heat, e.g. exhaust outlets. Do not use sharp or abrasive materials on or near hydraulic hoses.

Refer to Fig. 9 for the following procedures.

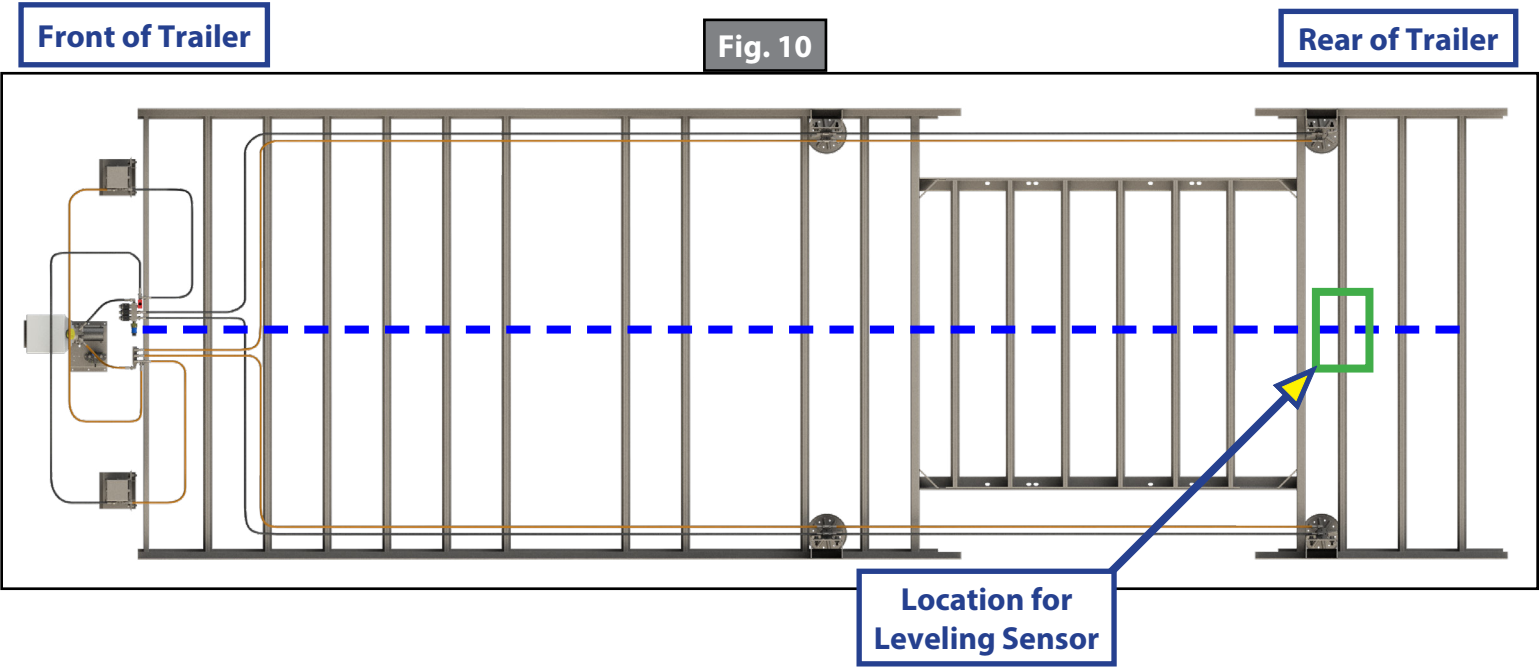
1. Connect the rear jack extend hoses (orange) to the JIC fittings in the extend manifold directly opposite of the two valve-and-coil assemblies.
2. Connect the rear jack retract hoses (black) to the JIC fittings in the retract manifold.
3. Make hoses to connect the hydraulic power unit to the manifolds. Three-foot lengths should be sufficient, including one extend (orange) hose and one retract (black) hose.
4. Connect the extend hose to the roadside valve of the power unit, and then to the JIC fitting on the side of the extend manifold.
5. Connect the retract hose to the curbside valve of the power unit, and then to the JIC fitting on the side of the retract manifold.
6. Make hoses to connect the landing gear to the manifolds. Nine-foot lengths should be sufficient, including two extend (orange) hoses and two retract (black) hoses.
7. Connect the extend hoses to the extend fittings in the side of the landing gear and then to the fittings on the extend ports of the red restrictor manifold.
8. Connect the retract hoses to the retract fittings in the side of the landing gear and then to the fittings on the retract ports of the retract manifold.



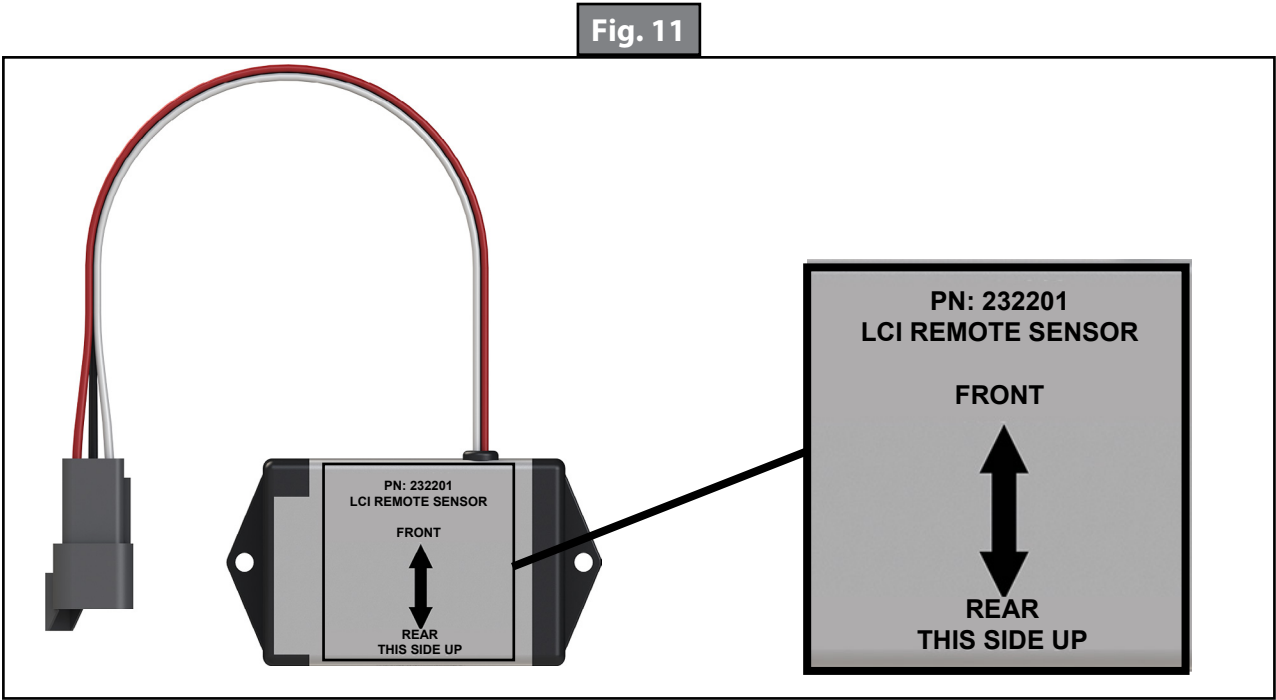
Leveling Sensor

The leveling sensor has a limited mounting area for proper performance. The sensor must be in line with or behind the rear leveling jacks, as signified in figure 10. The sensor must also be mounted in line with the center of the frame, as indicated by the dotted blue line.

NOTE: Dotted blue lines indicate the centerline of the chassis. Green lines indicate a designated area.



The leveling sensor (Fig. 11) must be oriented on the crossmember with the arrows on the top of the sensor pointing in the correct direction.



1. Install leveling sensor on the crossmember to the rear of the back axle, centered from curbside to roadside on the trailer with the arrows on the top of the sensor pointing in the correct direction. Orientation is imperative for the correct operation of the leveling system (Fig. 12).
 - A. Dry fit the mounting plate and the rear sensor to the crossmember. The pre-drilled holes in the plate are for mounting the rear sensor to the plate. Leave space between the sensor and the crossmember so the wire harness will not be pinched.
 - B. Attach the leveling sensor to the mounting plate using two #12 X 1" hex head self-tapping screws (Fig. 13).
 - C. Attach the mounting plate and rear sensor assembly to the crossmember using two #12 x 1" hex head self-tapping screws. Make sure the plate is centered side-to-side on the frame and that the sensor is properly oriented (Fig. 14).
 - D. Connect the sensor harness to the connector on the sensor and run the harness through the frame and up to the compartment where the controller will be mounted.

Fig. 12

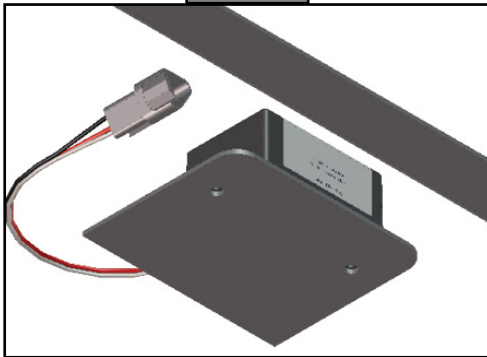


Fig. 13

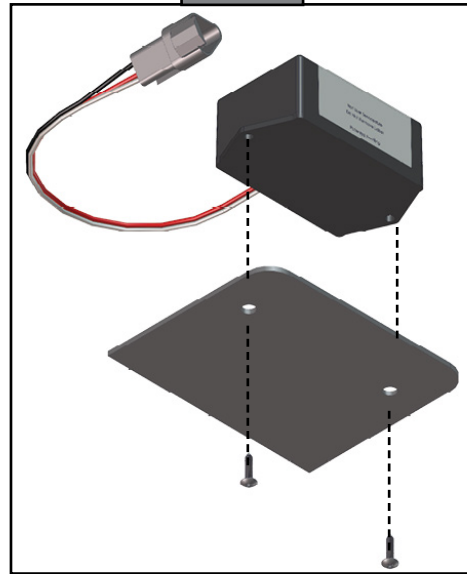
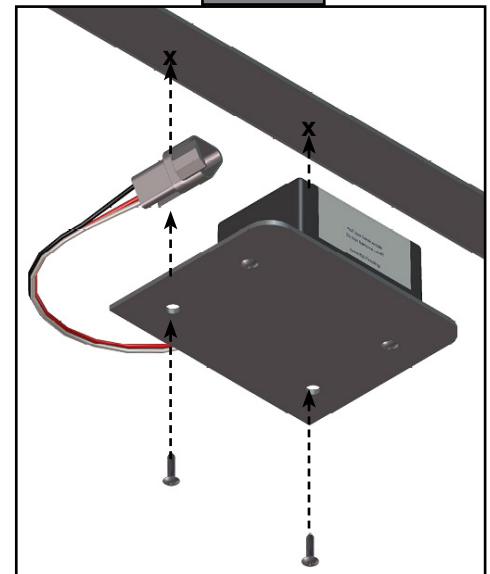


Fig. 14

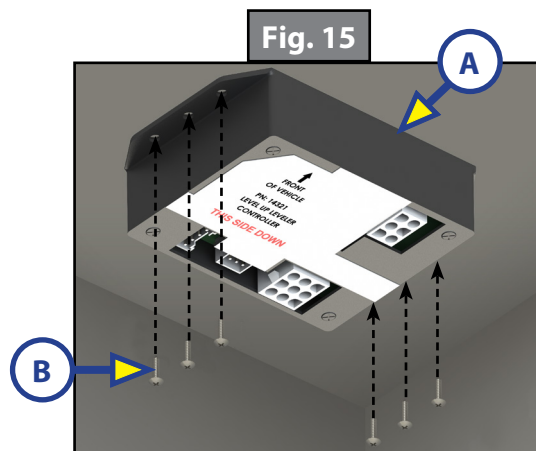


Controller

NOTE: The system wiring is basically a "plug-and-play" system. The kit should include harnesses for the entire system. If it does not, contact Lippert Components.

NOTE: The compartment where the controller will be installed must be protected from the elements and the controller must be installed in compliance with RVIA Gas Codes, as the controller connections are not spark-proof.

1. Using six #8 x 1" fasteners (Fig. 15B), attach the controller (Fig. 15A) to the compartment ceiling.



Touchpad

1. Determine where to mount the touchpad. The touchpad should be mounted in a compartment inside the trailer so the operator will have a view of the hitch while using the touchpad.
2. Remove the faceplate of the touchpad from the mounting bezel (Fig. 16).
3. Cut a hole in the wall of the compartment $3\frac{3}{8}$ " wide by $2\frac{3}{4}$ " high so the top and bottom horizontal cuts are parallel to the floor of the compartment (Fig. 17).
4. Feed the touchpad harness through this hole (Fig. 17) and then run the harness to the compartment where the controller is mounted. Plug the harness into the appropriate connector on the controller.

Fig. 16

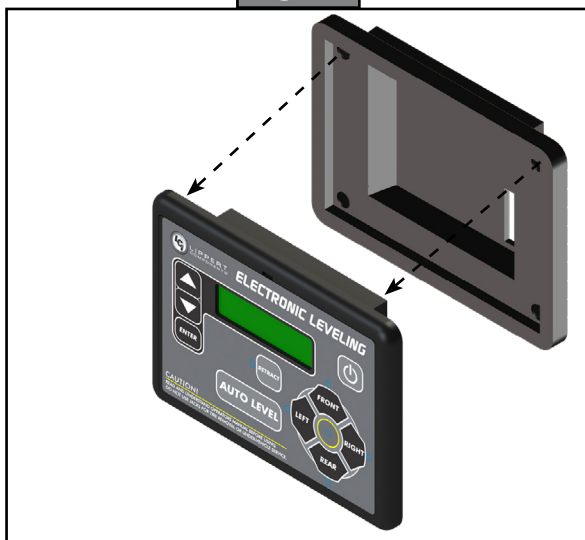
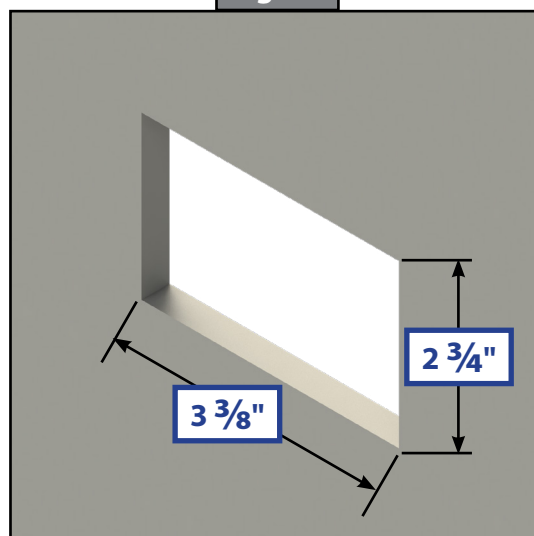


Fig. 17



5. Insert the touchpad bezel into the cutout and attach it with four #8 x 1" fasteners with sufficient length to thread into the compartment wall (Fig. 18).
6. Plug the touchpad harness into the connector on the back of the touchpad faceplate and snap the faceplate into the bezel (Figs. 19 and Fig. 20).

Fig. 18

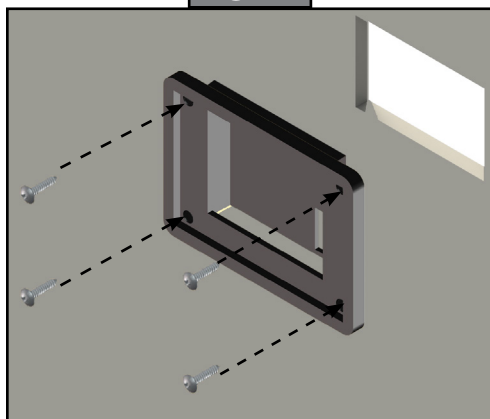


Fig. 19

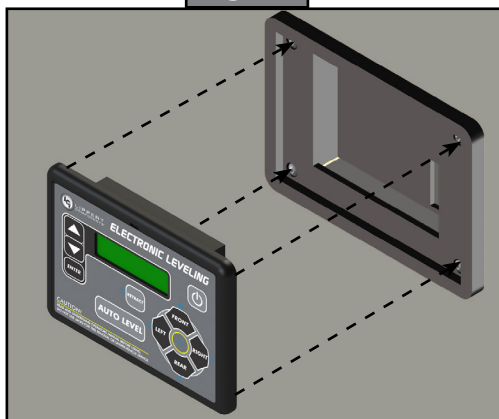


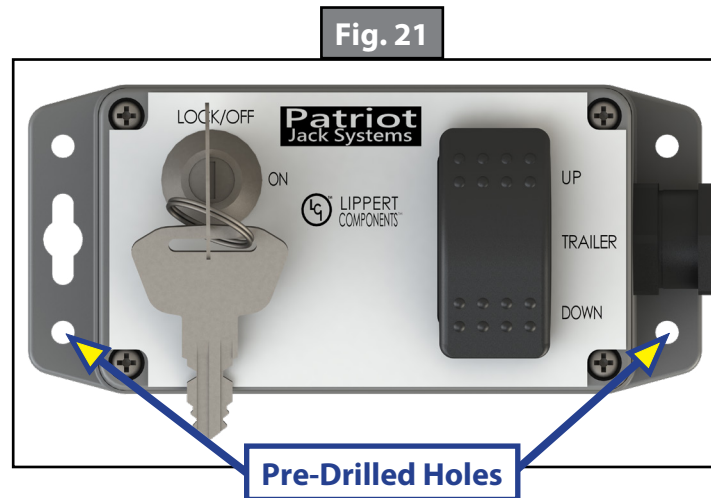
Fig. 20



7. See Wiring Diagrams for the other wiring connections.

Pendant Switch

1. Determine location at the front of the trailer for attaching the pendant switch. The switch will independently operate the landing gear.
- NOTE:** Switch location should be separate from heat sources but remain convenient for the user.
2. Using #8 x 1" fasteners, attach switch to trailer via the pre-drilled holes (Fig. 21).
 3. Refer to Wiring Diagrams to wire the switch.



Wiring

1. Connect a ground wire from each of the valve coils to the ground post on the dual polarity solenoid.
- NOTE:** These ground wires are supplied by the OEM.
2. Connect the ground cable, which is included in the kit, from the ground post of the dual polarity solenoid to the chassis.
 3. Mount an OEM-supplied 50A to 100A circuit protection to be used for supplying voltage to the power unit. OEM to determine capacity within this range, as capacity need can vary by application. All wiring is to conform to RVIA standards..
 4. Connect a power wire to the center post of the dual polarity solenoid.
 5. Connect the power wire from the dual polarity solenoid to the AUX end of the circuit protection.
 6. Connect another power wire to the BAT side of the circuit protection and run that to the battery.
- Refer to Wiring Diagrams to complete wiring installation.

NOTE: Shore power (plugged in) does not operate the leveling system because shore power is alternating current (AC). The trailer must be connected to a 12V DC battery, the correct source of direct current (DC) for the hydraulic power unit.

Purging Hydraulic System

WARNING

Do not attempt to purge this system without the front end of the trailer safely supported. Purging the system without supporting the trailer could result in death or serious bodily injury.

Fluid Recommendation

Automatic transmission fluid (ATF) with Dexron®III or Mercon®V or a blend of both is recommended by Lippert Components, Inc. For a list of approved fluid specifications, see [TI-188](#). To obtain this Technical Information sheet online, go to <https://www.lci1.com/towable-br-level-up/support-towable-level-up-br-touch-pad>. Then click on the Technical Information Sheets tab. Look for *TI-188: Hydraulic Operation Fluid Recommendation* within the listing.

NOTE: In colder temperatures (less than 10 ° F) the jacks may extend and retract slowly due to the fluid's molecular nature. For cold weather operation, fluid specially formulated for low temperatures may be desirable.

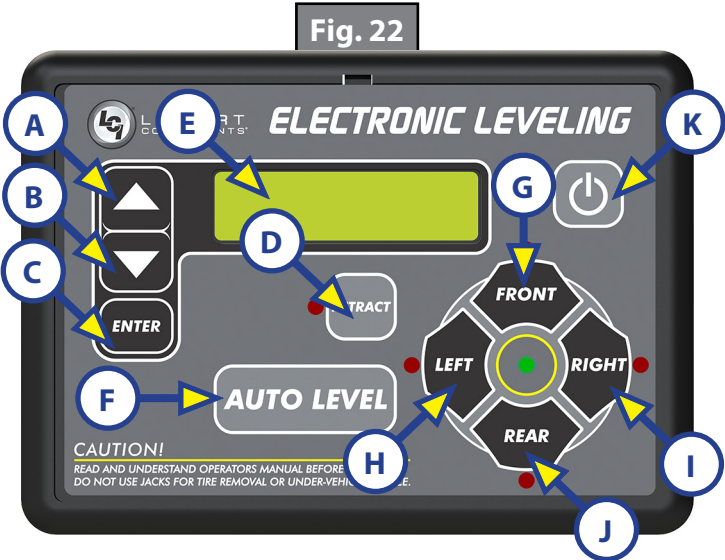
Purging Procedure

Refer to [TI-118](#), Basic Purge Procedure for Hydraulic Pumps.

1. Purging of the hydraulic system should be performed with the trailer coupled to the tow vehicle, a kingpin stand under the pin box or jack stands under the front portion of the frame.
2. Start with all hydraulic components in the fully retracted position, meaning all jacks, landing gear, stabilizers and slide-outs brought back inside the trailer as if it were ready to travel.
3. Find the hydraulic pump location and note the amount of fluid currently in the reservoir. The fluid level should be about 1/4" from the top of the reservoir and no more than 1/2" from the top.

NOTE: When checking the fluid level after ensuring all hydraulic components are retracted, note if there are any bubbles, froth or foam on top of the fluid. This is an indication that air has been pushed back to the reservoir when the hydraulic components were retracted in the last cycle. Wait 15-20 minutes for the foam to dissipate before beginning the purge process.

4. If there is no froth or foam in the reservoir and the fluid is not within 1/2" of the top, fill the reservoir to within the level described in step 3.
5. With the fluid level full and no foam in the reservoir, begin cycling the hydraulic system:
 - A. Extend hydraulic landing gear until footpads contact the ground.
 - B. Extend hydraulic leveling jacks to touch the ground.
 - C. Extend any slide-outs, if applicable.
 - D. Retract any slide-outs, if applicable.
 - E. Retract hydraulic leveling jacks.
 - F. Retract hydraulic landing gear.
6. Check the reservoir for foam. If foam is present, see **NOTE** above and repeat steps 4 and 5.
7. Repeat these steps until no foam is present in the reservoir. If no foam is present, the system is purged of air.



Callout	Description
A	Up Arrow - Scrolls up through the menu on LCD.
B	Down Arrow - Scrolls down through the menu on LCD.
C	ENTER - Activates modes and procedures indicated on LCD.
D	RETRACT - Places leveling system into retract mode.
E	LCD Display - Displays procedures and results.
F	AUTO LEVEL - Places leveling system into auto level mode.
G	FRONT Button - Activates both front jacks.
H	LEFT Button - Activates left leveling jack(s) in manual mode.
I	RIGHT Button - Activates right leveling jack(s) in manual mode.
J	REAR Button - Activates leveling jacks in manual mode.
K	Power Button - Turns leveling system on and off.

Prior to Operation

The leveling system shall only be operated under the following conditions:

1. The trailer is parked on a reasonably level surface.
2. Make sure all persons, pets and property are clear of the trailer while the leveling system is in operation.
3. Make sure the battery of the trailer is fully charged prior to attempting to operate the system. The automatic leveling system requires a minimum of 12V DC for operation.

Operation

Basic Jack Operation

1. **Landing Gear**
 - A. Landing gear can be operated any time the system is on, but **NOT** in AUTO MODE. Press the FRONT button (Fig. 22G), so that both the front jacks or landing gear can be extended.
 - B. If the touchpad is put in the RETRACT mode, indicated by the orange illuminated LED next to the RETRACT button (Fig. 22D), the landing gear can be retracted together by pressing the FRONT button.
 - C. The pendant switch can also be used to independently extend and retract the landing gear. See Pendant Switch section.

2. Leveling Jacks

- A.** The leveling jacks operate when AUTO mode is activated or the touchpad is in MANUAL mode. Once the system is in MANUAL mode, press the REAR button (Fig. 22H) to extend all leveling jacks at the same time.

NOTE: MANUAL and AUTO modes can be selected through the LCD menu by using the Up Arrow (UP) and Down Arrow (DOWN) buttons (Fig. 22A or Fig. 22B), then pressing ENTER to select the desired mode.

- B.** Press the LEFT or RIGHT buttons (Fig. 22H or 22I) to operate leveling jacks on the left (roadside) or right (curbside) of the trailer.

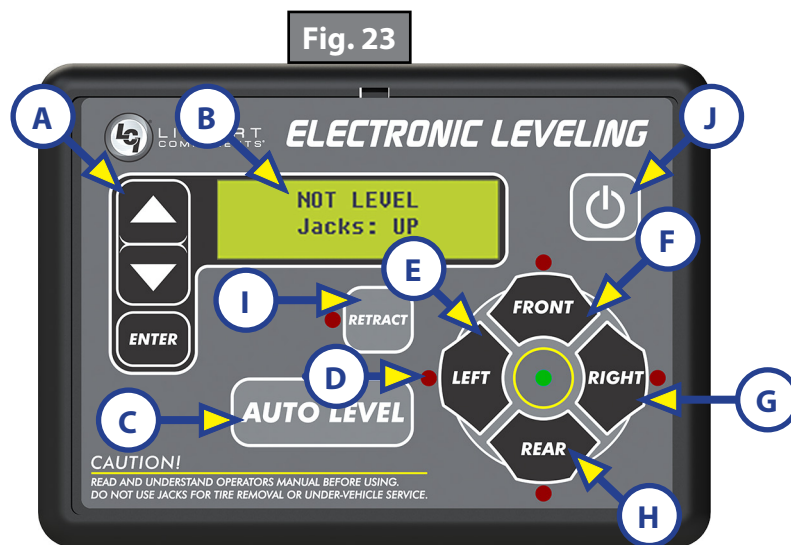
Unhitching Instructions

Prior to unhitching from the tow vehicle, make sure trailer is parked on a level surface and the tires are chocked.

1. Press Power button (Fig. 23J) to turn system on. The LCD screen lights up.
2. The LCD will display NOT LEVEL Jacks: UP (Fig. 23B).

NOTE: Orange arrow lights (Fig. 23D) may come on indicating the current disposition of the trailer.

3. Disconnect any wires or chains that may be equipped between the tow vehicle and the trailer.
4. Press FRONT button (Fig. 23F) to extend landing gear to lift front of the trailer to take the weight of the trailer off the hitch.
5. Uncouple the connection on the tow vehicle.
6. Pull away the tow vehicle and park it at a safe distance.



Auto Level

1. After unhitching from tow vehicle, press AUTO LEVEL (Fig. 23C).

NOTE: Pressing any button during an automatic sequence will stop the sequence and a "Function Aborted" error code will occur. Press ENTER to clear the code and then continue the operation or start a new operation.

NOTE: For the hitch recognition feature to function, the auto-level sequence **MUST** be started with the front of the trailer above level.

2. Front landing gear will retract, lowering the front of the trailer below level, stopping, then lifting the front end to level the trailer front-to-back.
3. The left side leveling jacks extend and raise the roadside of the trailer.
4. The right side leveling jacks extend and raises the curbside of the trailer, beginning side-to-side leveling.
5. The front landing gear extend to complete the leveling cycle.

6. Additional left-to-right or front-to-back leveling may occur, if the controller deems necessary.

NOTE: If the auto-level sequence does not happen as stated above, check to ensure proper manual function in all zones.

Reconnecting to Tow Vehicle (Hitch Recognition)

1. Turn on touchpad.
2. Press the LEFT and RIGHT buttons simultaneously (Fig. 23E and 23G).
3. The front of the trailer will raise to the height where the auto-level sequence was started.

NOTE: If the auto-level sequence was started with the front of the trailer in a below-level condition, the hitch recognition will not function and the LCD will display "Feature Disabled." For hitch recognition to function, the auto-level sequence must be started with the front of the trailer above level.

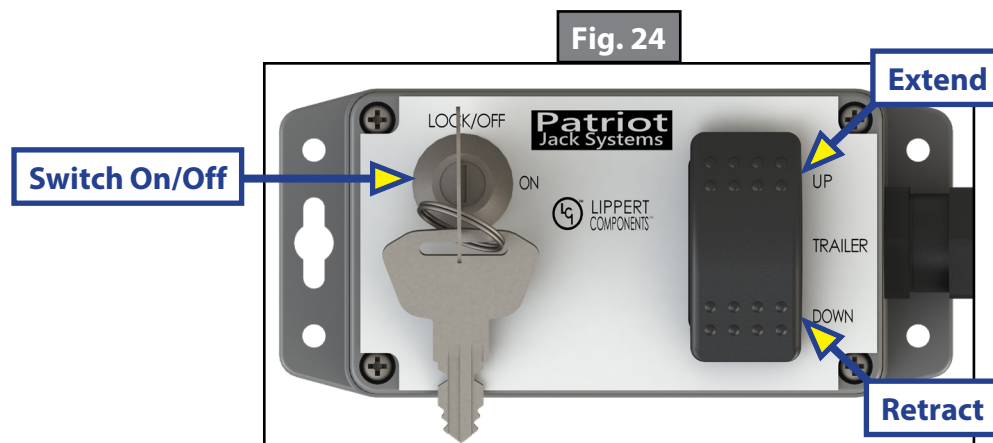
4. Connect tow vehicle and make sure trailer and hitch are connected and locked.
5. Connect any wires or chains that may be equipped between the tow vehicle and the trailer.
6. Press Up Arrow (Fig. 23G) until AUTO RETRACT appears in LCD screen.
7. Press ENTER.
8. System will immediately retract all jacks.

Pendant Switch

The front landing gear can be operated independently by utilizing the pendant switch installed on the front of the trailer. Before operating the landing gear, activate the pendant switch by turning it to the ON position (Fig. 24).

NOTE: The switch key should always be returned to the LOCK/OFF position after operating the landing gear and while towing the trailer.

1. Press the rocker switch to extend the landing gear (TRAILER UP) or retract the landing gear (TRAILER DOWN) (Fig. 24).
2. Release the switch when either the trailer is level or stabilized or the landing gear have been completely retracted.
3. Turn the key to the LOCK/OFF position.



Troubleshooting

Error Codes

WARNING

Make sure the trailer is supported at both front and rear with jack stands and in accordance with the manufacturer's recommendations to properly support the trailer before performing any service to trailer. Failure to do so may result in death, serious personal injury, severe product and/or property damage.

After working to resolve the issue that led to an error code, press ENTER on the touchpad. If the error is still present, the message will be displayed again. If resolved, the error message will clear.

Error Code Chart		
LCD Display	What Is Happening?	What Should Be Done?
Excess Angle	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during auto operation.	Relocate the trailer.
Excessive Angle	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during manual operation.	Stop manual operation and reset jacks to a more level state. The code will self clear; there is no need to hit ENTER.
		Relocate the trailer.
Feature Disabled	Front of trailer below level when starting auto level process but only when initiating Hitch Recognition.	Push the FRONT button to raise the trailer up to hitch height and connect to tow vehicle.
	Hitch recognition not set.	Set hitch angle.
	Zero Point not set.	Set Zero Point.
Low Voltage	Battery dropped below 9.5V.	Check wiring - repair or replace.
		Test battery voltage under load - charge or replace.
Out of Stroke	Jack has reached maximum stroke length and is unable to lift.	Check disposition of jacks or relocate trailer.
External Sensor	Bad connection or wiring from the controller to the rear sensor.	Replace or repair connection to rear remote sensor.
Jack Time Out	Time limit exceeded for the requested auto operation.	Check disposition of jacks.
Auto Level Fail	Unable to auto level due to uneven ground.	Check disposition of jacks and/or relocate the trailer.
	Unable to auto level due to Zero Point being set incorrectly.	Reset Zero Point.
Bad Calibration	Sensor calibration values are out of range.	Replace controller.
Internal Sensor	Internal sensor problem.	Replace controller.
Function Aborted	The user pressed a button on the touchpad during an automatic operation.	Restart automatic operation and then refrain from pressing any buttons on the touchpad.

Manual Override

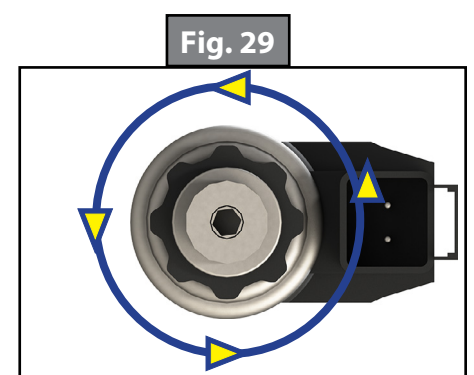
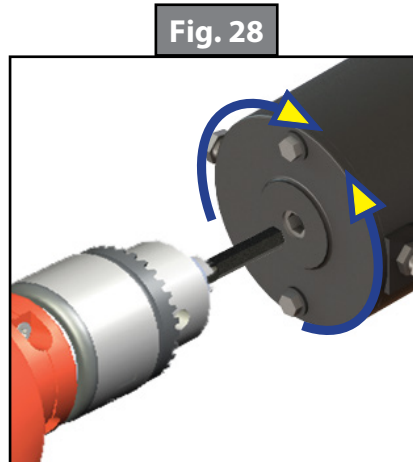
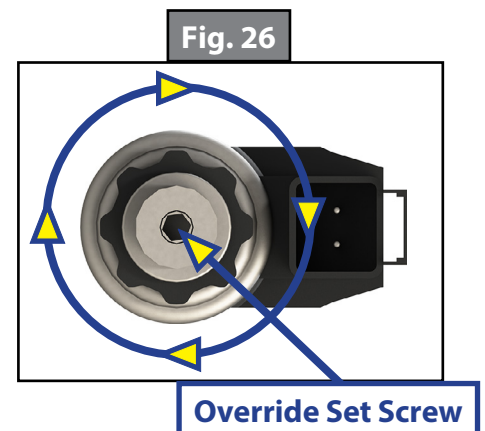
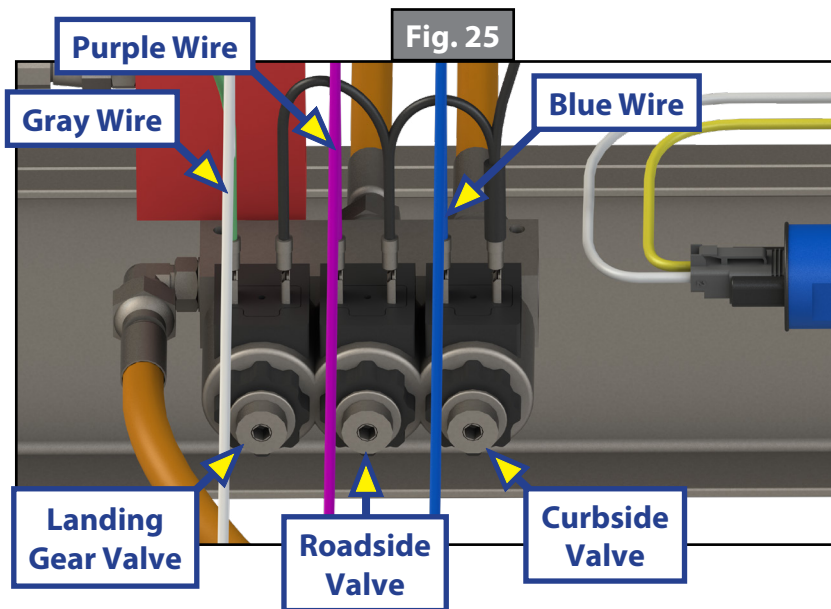
Resources Required

- 5/32" hex wrench
- 1/4" hex bit

The leveling system can be manually operated with an electric drill. In the event of electrical or system failure, this manual override method of extending and retracting the jacks can be used.

NOTE: Unhook the hydraulic power unit motor from the main power source (battery) prior to attempting the manual override procedure.

1. Locate the valves that are paired with the landing gear and roadside and curbside leveling jacks to be manually overridden.
2. Using a 5/32" hex wrench, open the three valves by turning the manual override set screw clockwise (Figs. 25 and 26).
3. Remove protective label (Fig. 27) from power unit motor to reveal the manual override coupler.
4. Using an electric drill with a 1/4" hex bit, insert the hex bit into the manual override coupler (Fig. 28) to manually operate the system.
 - A. Run the drill forward (clockwise) to retract the landing gear and/or leveling jacks.
 - B. Run the drill in reverse (counterclockwise) to extend the landing gear and/or leveling jacks.
5. Make sure to turn the manual override set screw on each valve back to the counterclockwise position (Fig. 29) after extending or retracting the landing gear or leveling jacks.



Zero Point Calibration

Zero Point Calibration is the point the leveling system will return to when an auto-leveling cycle is initiated. The Zero Point Calibration was set by the RV manufacturer and verified by the RV dealer before auto-leveling features were available. To set a new Zero Point, do as follows:

1. Run a manual leveling sequence to set the trailer to the desired level point.
2. Activate the Zero Point configuration mode as follows:
 - A. Turn off touchpad.
 - B. Press FRONT button (Fig. 23G) 10 times.
 - C. Press REAR button (Fig. 23J) 10 times.

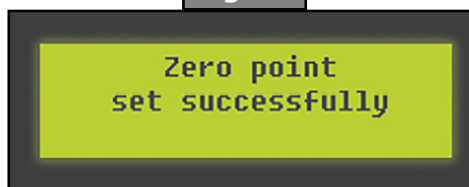
NOTE: An alarm will sound and the display will read ZERO POINT CALIBRATION; ENTER to set, Power to Exit (Fig. 30).

- D. Press ENTER (Fig. 22C) to set the Zero Point.
3. Screen will then display PLEASE WAIT.
4. An alarm will sound and the screen will display "Zero point set successfully" (Fig. 31).
5. The touchpad will then turn off.

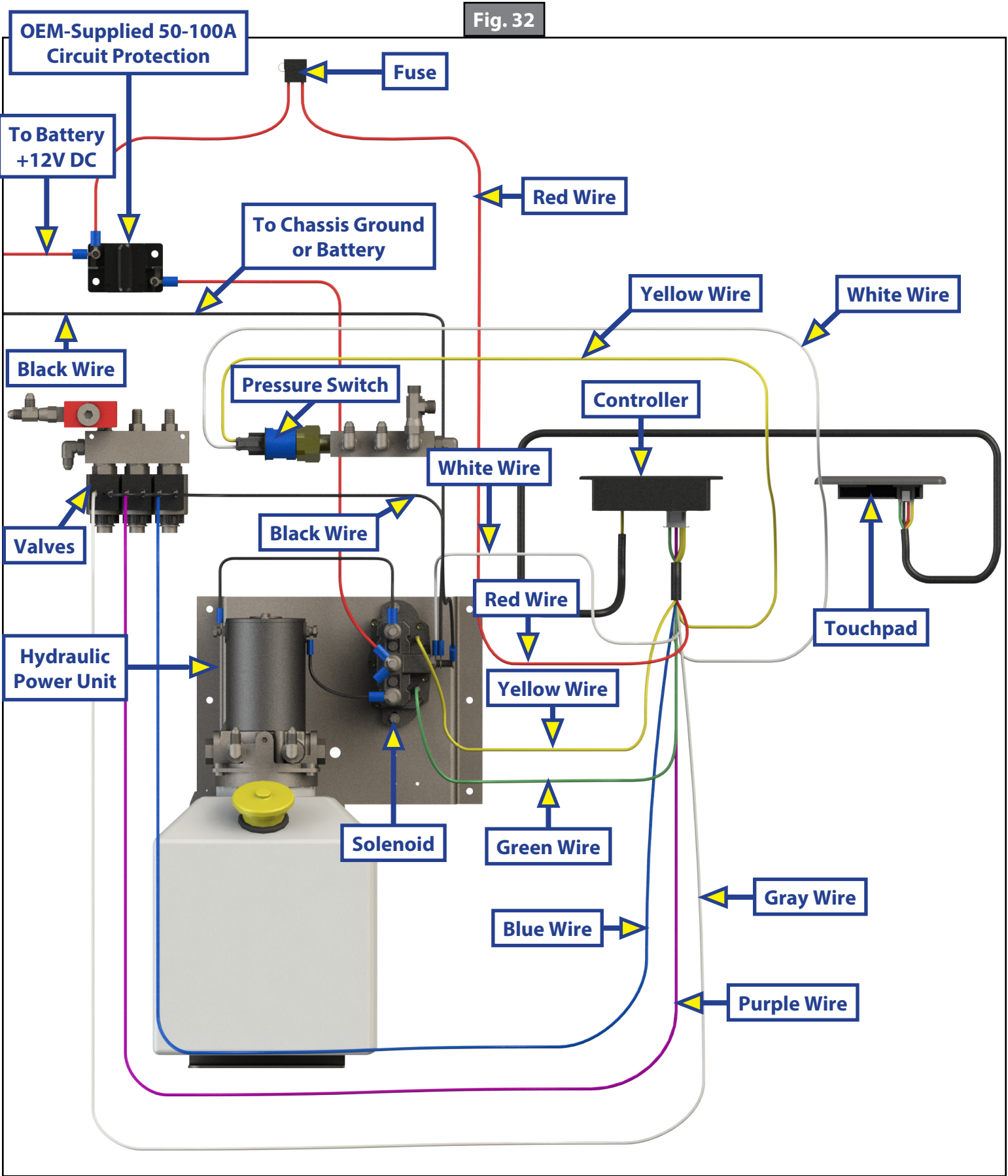
Fig. 30



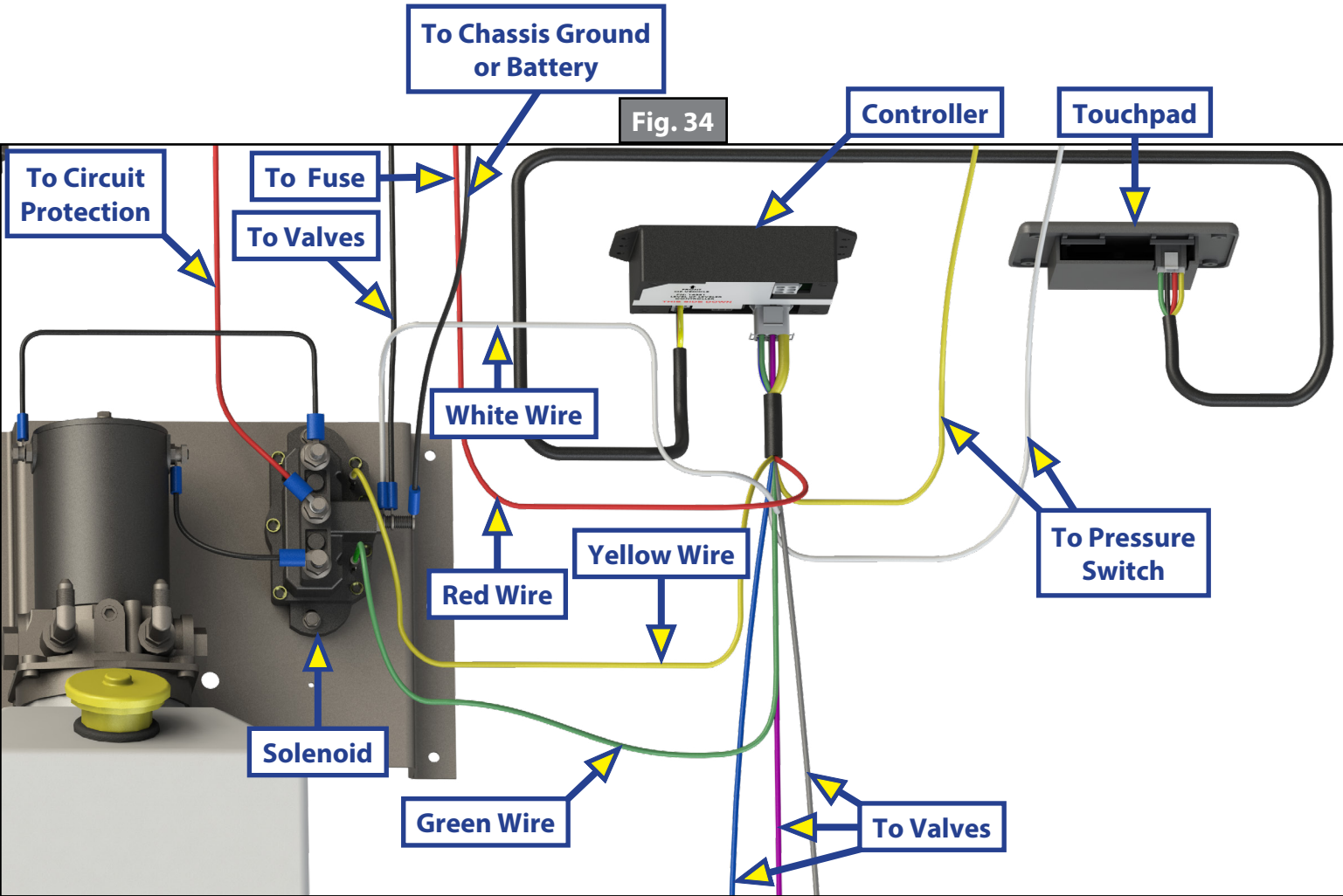
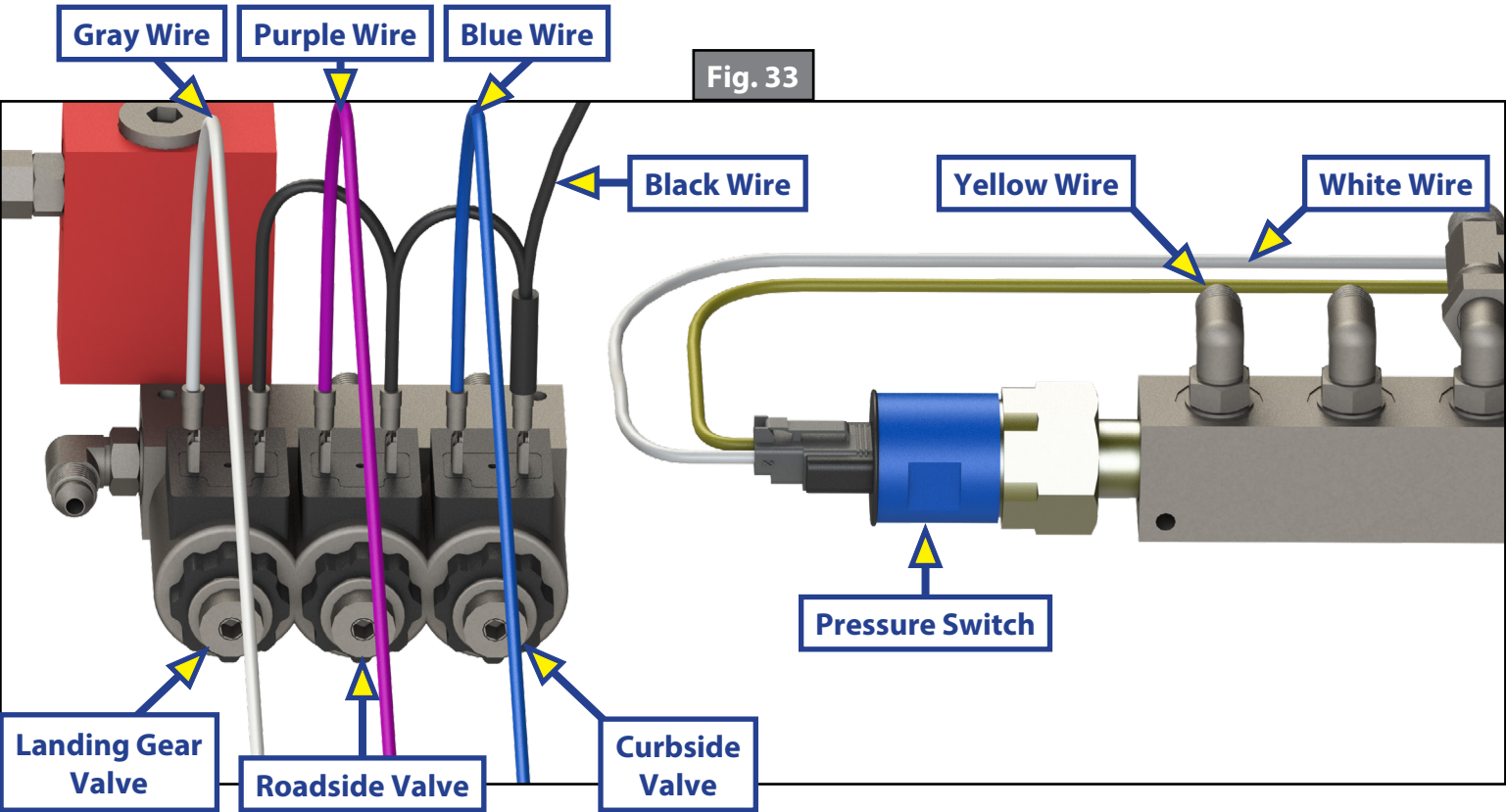
Fig. 31



Wiring Diagram - Controller and Touchpad



Wiring Diagram - Controller and Touchpad



Wiring Diagram - Pendant Switch

Fig. 35

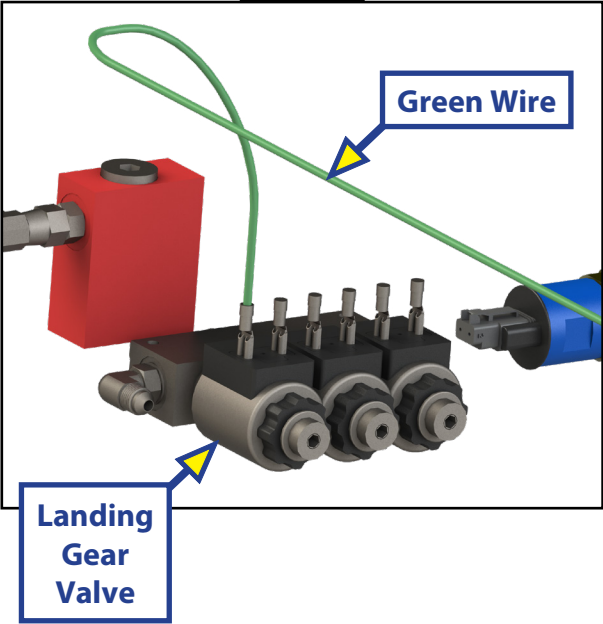


Fig. 36

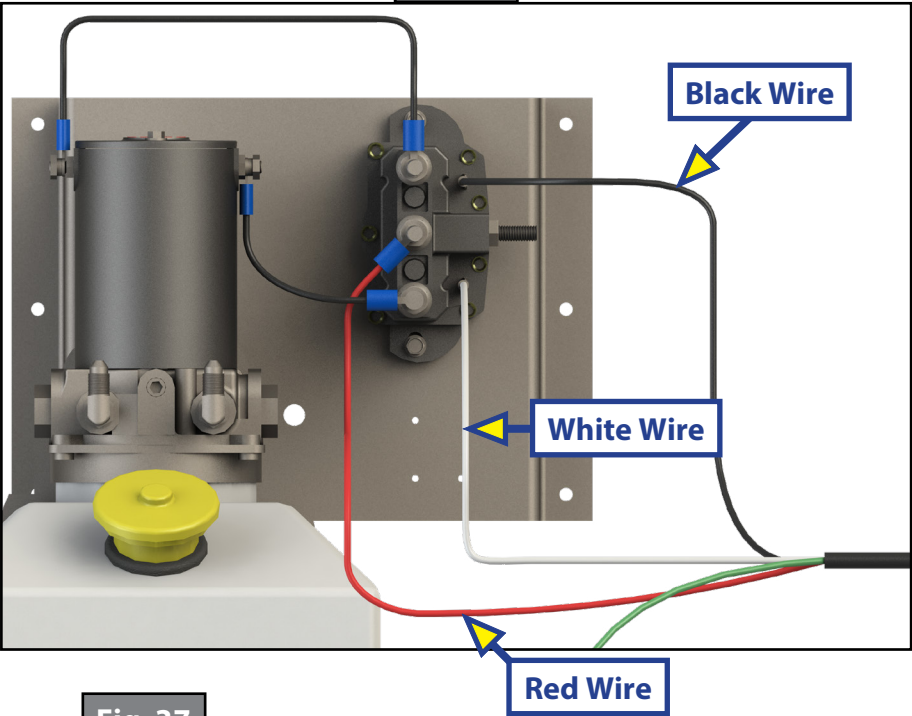


Fig. 37

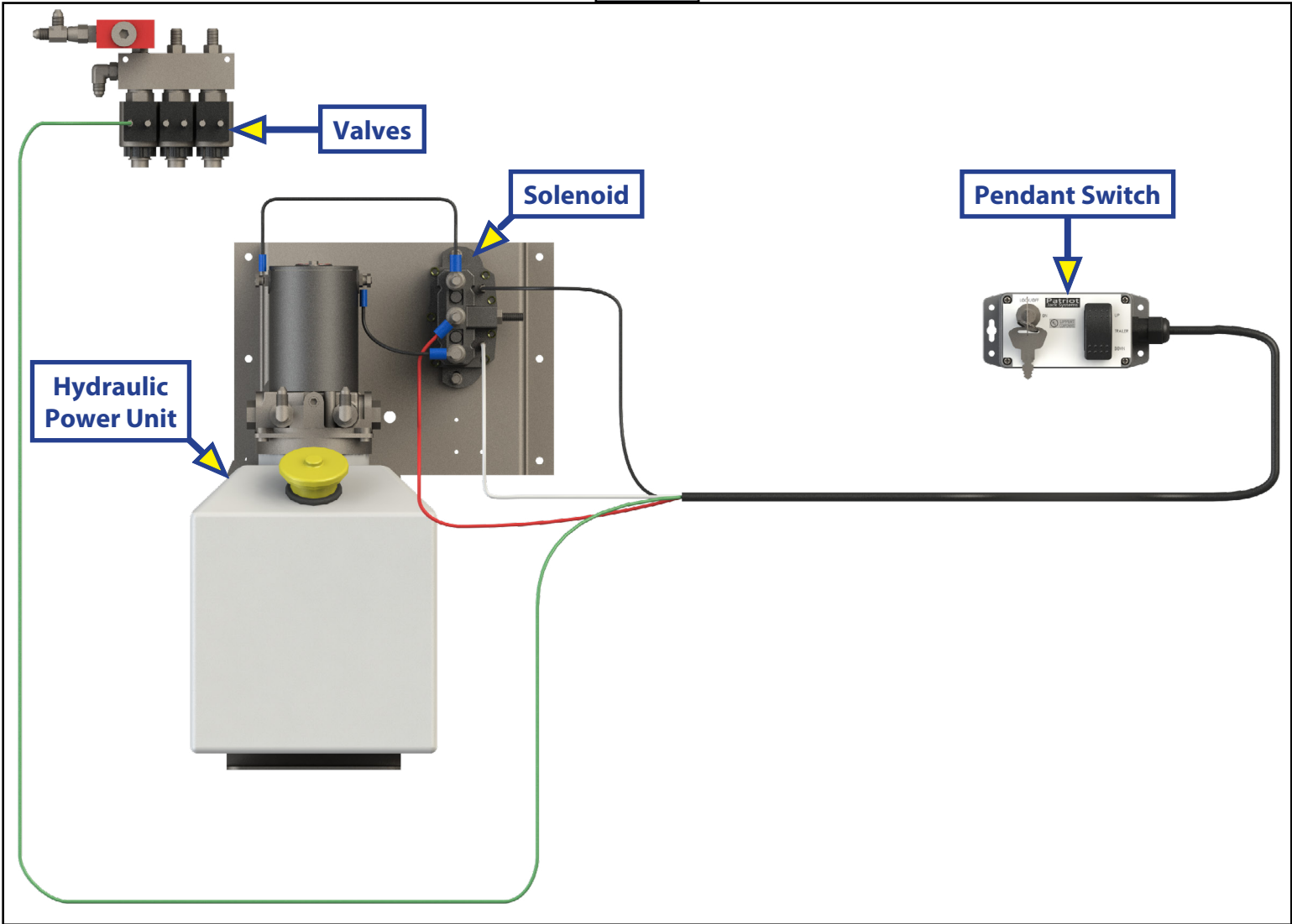


Fig. 38

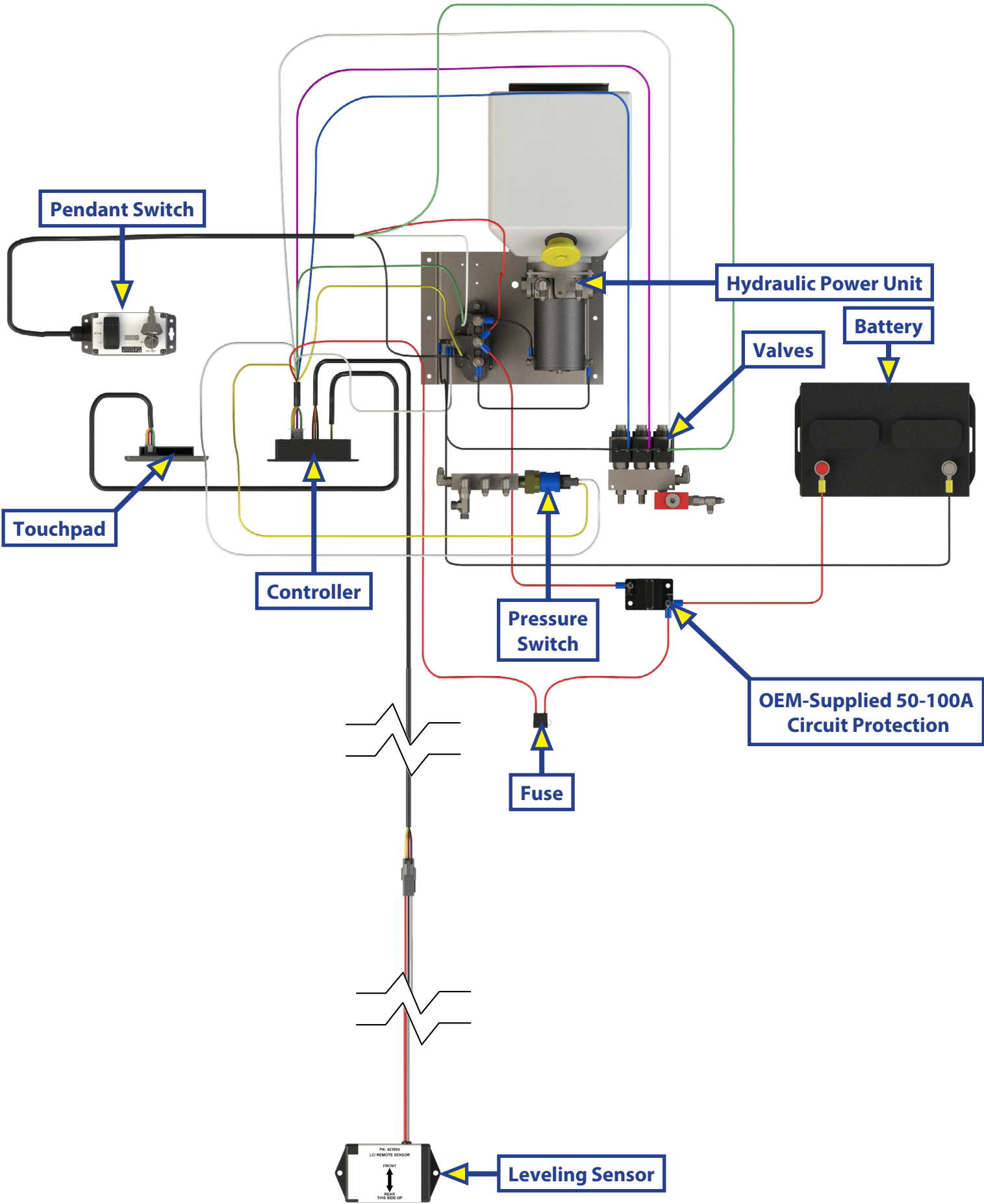
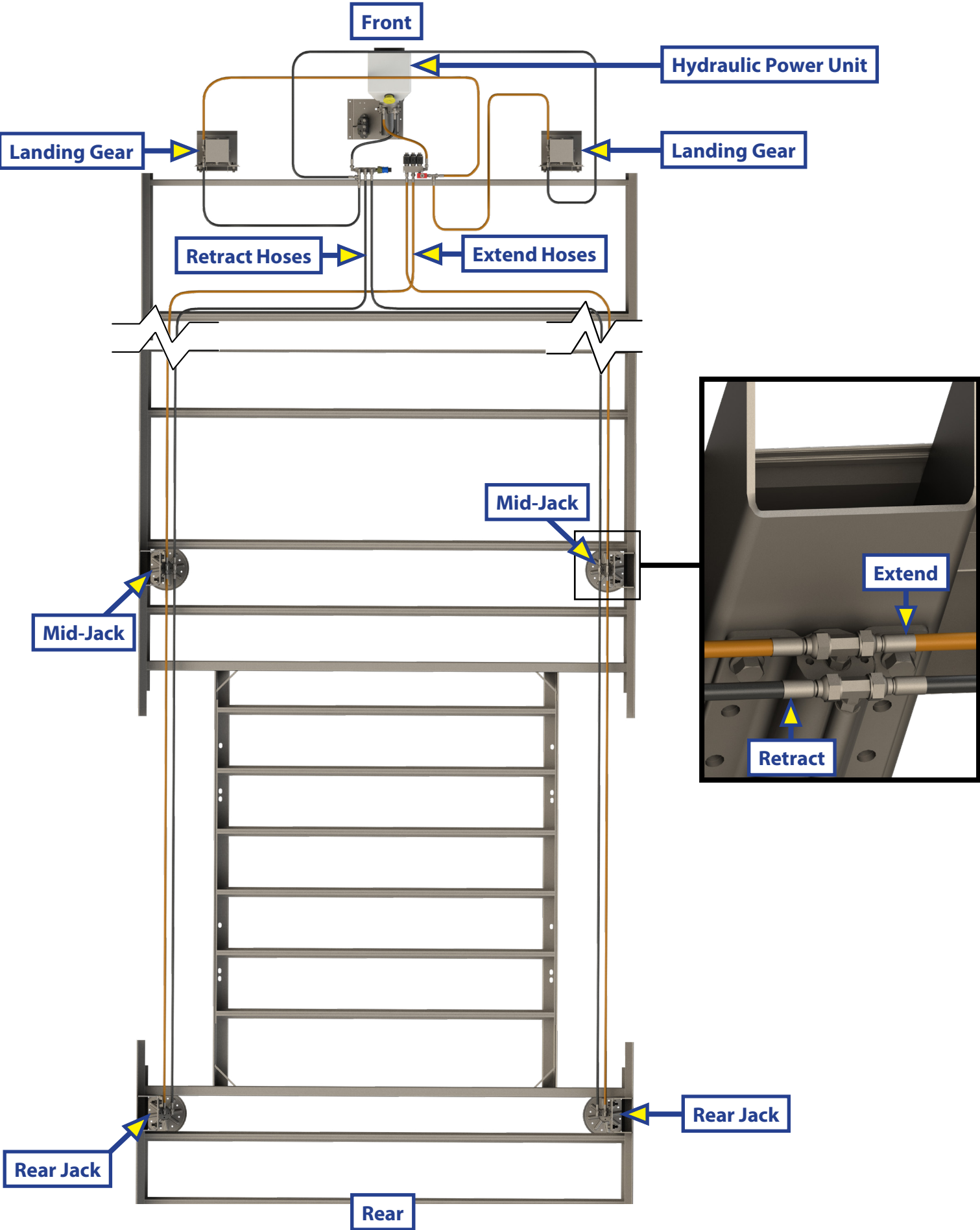


Fig. 39





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