

Master Owner's Manual

Leveling and Stabilization



LIPPERT
COMPONENTS®

User notice

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Master Owner's Manual

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GROUND CONTROL® 2.0

LEVELING AND STABILIZATION

System and Safety Information



Failure to act in accordance with the following may result in death or serious injury.

The use of the Ground Control® 2.0 to support the unit for any reason other than that which it is intended is prohibited by Lippert's limited warranty. The Lippert Ground Control® 2.0 is designed as a "leveling" system only and should not be used to provide service for any reason under the coach such as changing tires or servicing the leveling system.

Lippert Components Inc. recommends that a trained professional be employed to change the tire on the unit. Any attempts to change tires or perform other service while unit is supported by the Ground Control® 2.0 could result in death, serious injury or damage to the 5th Wheel.

NOTES:

- A.** Be sure to park the unit on solid, level ground.
- B.** Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions.
- C.** When parking the unit on extremely soft surfaces, utilize load distribution pads under each jack.
- D.** People and pets should be clear of unit while operating leveling system.
- E.** Never lift the unit completely off the ground. Lifting the unit so the wheels are not touching the ground will create an unstable and unsafe condition.

Prior to Operation

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

- 1.** The unit is parked on a reasonably level surface.
- 2.** Be sure all persons, pets and property are clear of the coach while Lippert Ground Control® 2.0 is in operation.
- 3.** Make sure battery(ies) are fully charged and load test at 12+VDC.
- 4.** Drop inner leg of both landing gear jacks to within 4-5 inches of the ground.

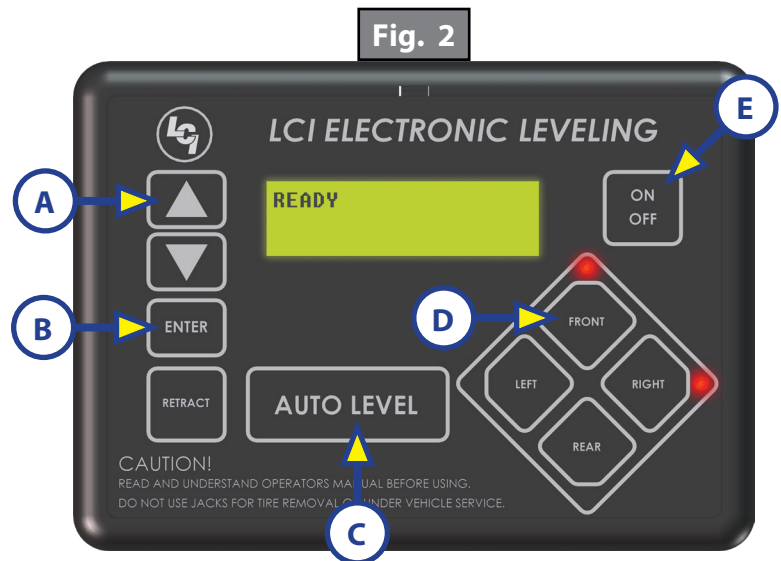
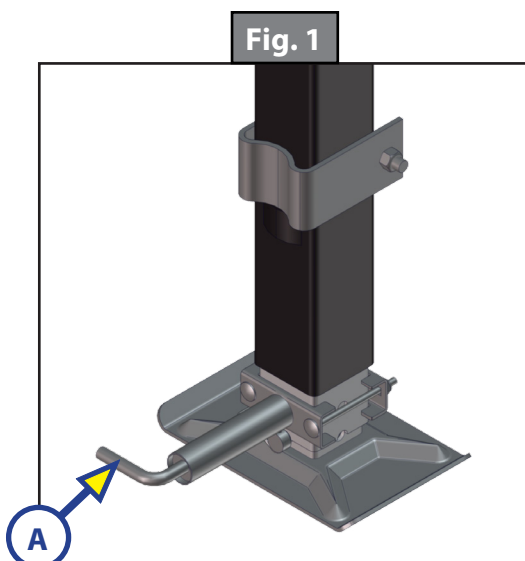
Basic Jack Operation

1. Front Landing gear jacks.
2. Rear leveling jacks.

Landing Gear jacks can be operated any time the system is "ON" but NOT in the "AUTO MODE." By pushing the "FRONT" button, both front or landing gear jacks can be extended. By pushing either the "LEFT" or "RIGHT" button, the individual front jacks can be extended. If the touch panel is put in the "RETRACT" mode, indicated by the orange illuminated LED next to the "RETRACT" button, the front jacks can be retracted together by pushing the "FRONT" button or individually by pressing either the "LEFT" or "RIGHT" button. The rear jacks can only be operated when the touch panel is in the "MANUAL MODE." Once system is in "MANUAL MODE," pressing the "REAR" button will extend both rear jacks at the same time. To operate individual rear jacks, press the "LEFT" or "RIGHT" button first, depending on what is needed at the time, then press the "REAR" button and hold both at the same time.

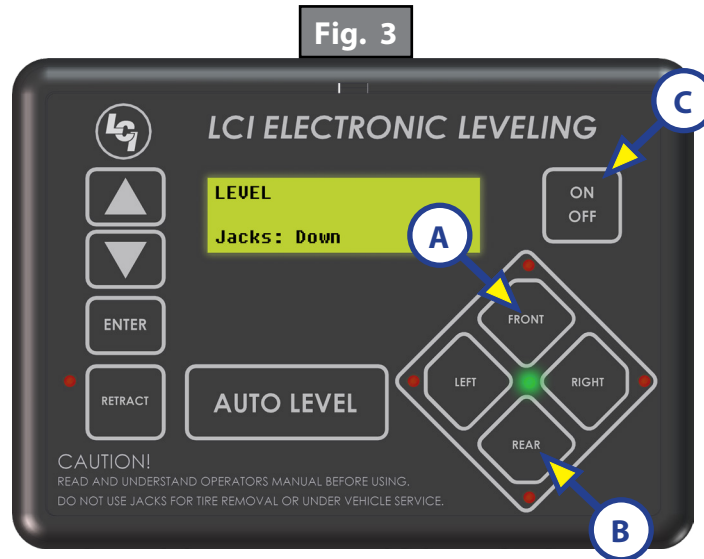
Dropping Off Unit

1. Park coach on level ground.
2. Chock all tires.
3. Make sure battery power is on.
4. Release front jack legs to within 4-5 inches from the ground by pulling out the quick release pin (Fig. 1A).
5. Release inner legs on rear leveling jacks — 2 (4-point) or 4 (6-point) — by pulling the quick release pins.
6. At this point, you may use automatic controls on your Linc™ remote if supplied. If no Linc remote is supplied, continue to step 7. IMPORTANT: For Linc™ automatic leveling and retraction instructions, refer to your owner's packet.
7. Press "ON/OFF" button to turn panel on (Fig. 2E).
8. Push "UP ARROW" button (Fig. 2A) and scroll to "DROP FRONT JACKS" option on LCD screen.
9. Push "ENTER" button (Fig. 2B). Front legs will lower to ground and stop.
10. Disconnect 5th wheel latch.
11. Push "FRONT" button (Fig. 2D) to extend front landing gear jacks manually and lift front of vehicle to clear 5th wheel plate.
12. Pull tow vehicle away and park at a safe distance.
13. Push "AUTO LEVEL" button (Fig. 2C). The unit will commence auto-level feature by setting front landing gear jacks to level, then dropping rear jacks followed by a leveling sequence check. On the 6 point system, the middle jacks will now lower to the ground to stabilize the unit. When auto-level sequence is complete, LCD screen will indicate, "AUTO LEVEL SUCCESS." "Level Jacks: Down" will then appear, along with a green light in the middle of the jack buttons.
14. Press the "ON/OFF" button (Fig. 2E) to turn system off.



Taking Up Strut Pin Slop (If JT Strong Arm Stabilizers Are Installed ONLY)

1. Ensure the leveling process has completed. LCD screen should read "Level Jacks: Down" (Fig. 3).
2. Push "FRONT" button (Fig. 3A) momentarily until front stabilizer pins are tight.
3. Enter manual mode, then push "REAR" button (Fig. 3B) momentarily until rear stabilizer pins are tight.
4. Push "ON/OFF" button (Fig. 3C) to turn system off.

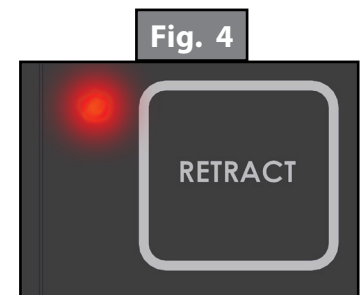


Reconnecting the Unit to A Tow Vehicle

1. Be sure main power switch is "ON."
2. Loosen J.T. Strong Arm Stabilizer "T" handles (if applicable).
3. Push Touch Pad "ON/OFF" button to turn system on.
4. Push "UP ARROW" to scroll to AUTO RETRACT REAR JACKS and push "ENTER." Rear jacks will fully retract and stop.
5. Push "LEFT" & "RIGHT" button together. Front will raise to previous drop off height. Push "FRONT" button if more height is needed.
6. Back tow vehicle to align 5th wheel hitch.
7. Push the scroll arrow to display "AUTO RETRACT ALL."
8. Push "ENTER." Landing Gear jacks will automatically retract and then stop.
9. Raise inner drop legs on all jacks and secure with quick release pull pin.
10. Turn "ON/OFF" button off.

Truck Hauler Operation (Manual ONLY)

1. Loosen J.T. Strong Arm Stabilizer "T" handles (if applicable).
2. Turn the Touch Panel "ON." LED lights up green.
3. Push "FRONT" button to extend FRONT jacks to gain height.
4. To retract jacks:
 - A. Push "RETRACT" button; Orange LED lights up (Fig. 4).
 - B. Push the "FRONT" button to retract jacks and hook up vehicle. Once 5th wheel is coupled, push "FRONT" button and hold until jacks are fully retracted.
 - C. Push "ON/OFF" button to turn system off. Green light will go out.
 - D. Double check 5th wheel latch is secure and that all jacks are retracted.
 - E. Ready to tow.

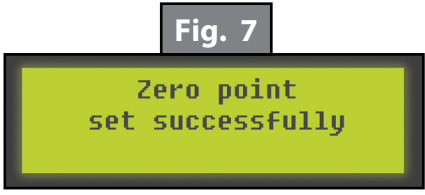
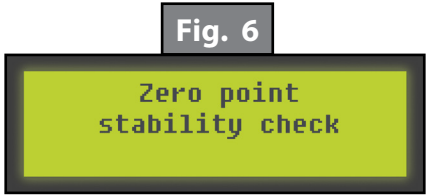
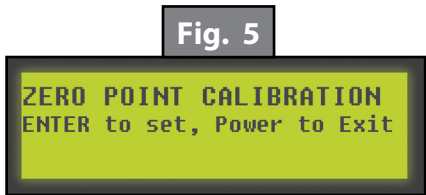


Zero Point Calibration

The “Zero Point” is the programmed point that the unit will return to each time the Auto Level feature is used. The “Zero Point” must be programmed prior to using the Auto Level feature to ensure the proper operation of the system.

NOTE: Prior to starting this procedure, double check all connections on the controller, jacks and touch pad.

- 1. Manually run the jacks to level the unit. This is best achieved by placing a level in the center of the unit and leveling it both front to back and then side to side. (See “Basic Jack Operation” for instructions on how to manually operate the system).
- 2. Once the unit is level, turn off the touch pad.
- 3. With the touch pad off, press and release the “FRONT” button 10 times and then press and release the “REAR” button 10 times.
- 4. The touch pad will flash and beep and the display will read “ZERO POINT CALIBRATION ENTER to set, Power to Exit” (Fig. 5).
- 5. To set the current position as the zero point, press the “ENTER” button.
- 6. LCD display will read “Zero point stability check” (Fig. 6).
- 7. LCD display will read “Zero point set successfully” once process is complete (Fig. 7).
- 8. The system will set this point as its level state and the touch pad will turn off.



Troubleshooting

Special Jack Error Codes

To clear one of these errors:

- 1. Correct or otherwise repair the issue (see the table below).
- 2. Extend all of the jacks at least 6 inches, then press and hold the “RETRACT” button on the touch pad until the jacks begin retracting.
- 3. All of the jacks will retract fully to clear the error.

NOTE: Landing gear will also retract at this time. Ensure the 5th wheel hitch pin is supported by either the tow vehicle or a tripod stand.

LCD Message	What's Happening?	What Should Be Done?
ERROR LF Jack RF Jack LM Jack RM Jack LR Jack RR Jack	Error at a specific jack (left front, right front, left rear, right rear).	Check harness connections at controller and at jack. Check jack for damage. Check harness for damage. Repair or replace as necessary.
	Unexpected high amp current stall.	

Touch Pad Error Codes

NOTE: To clear an error from the touch pad, repair or otherwise correct the issue, then press “ENTER.” If the error is still present, the message will be displayed again.

LCD Message	What's Happening?	What Should Be Done?
****ERROR**** Excess Angle	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during auto operation.	Relocate the coach.
****ERROR**** Bad Calibration	Sensor calibration values are out of range.	Reset zero point.
****ERROR**** Feature Disabled	Front of coach below level when starting Auto Level process (only when trying to initiate Hitch Recognition).	Raise front of coach above level and restart Auto Level process.
	Touch pad power not cycled between consecutive leveling operations.	Turn touch pad off and then back on to reset the system.
	Zero point not set.	Set zero point.
****ERROR**** Low Voltage	Battery voltage dropped below 10.8V.	Check wiring for loose connection.
		Test battery voltage under load - charge or replace.
****ERROR**** Out Of Stroke	Jack has reached maximum stroke length and is unable to lift.	Check disposition of jacks. Relocate the coach.
****ERROR**** External Sensor	Bad connection or wiring from the controller to the rear sensor.	Replace or repair connection to rear remote sensor.
****ERROR**** Jack Time Out	Time limit exceeded for the requested auto operation.	Check disposition of jacks.
****ERROR**** Auto Level Fail	Unable to auto level due to uneven ground.	Check disposition of jacks. Relocate the coach.
	Unable to auto level due to zero point being set incorrectly.	Reset zero point.
PANIC STOP Function Aborted	The user pressed a button on the touch pad during an automatic operation.	Restart automatic operation and then refrain from pressing any buttons on the touch pad.

Preventative Maintenance Procedures

1. Remove dirt and road debris from jacks (and stabilizer struts if equipped) as needed.
2. If jacks are down for extended periods, it is recommended to spray exposed leveling jack tubes with a spray lubricant every 3 months for protection. If your coach is located in a salty environment, it is recommended to spray the rods every month.

WARNING

Ensure the unit is supported at both the front and rear with jack stands before performing any troubleshooting or service to the unit. Failure to do so may result in death or personal injury.

GROUND CONTROL® 3.0 (5TH WHEEL) 4 POINT TO 6 POINT

LEVELING AND STABILIZATION

System and Safety Information

WARNING

Failure to act in accordance with the following may result in death or serious personal injury. The use of the Ground Control® 3.0 leveling system to support the trailer for any reason other than which it is intended is prohibited by Lippert's limited warranty. The Lippert leveling system is designed as a "leveling" system only and should not be used to provide service for any reason under the trailer such as changing tires or servicing the leveling system. Any attempts to change tires or perform other service while trailer is supported by the Ground Control 3.0 leveling system could result in damage to the 5th wheel and/or cause death or serious injury.

CAUTION

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

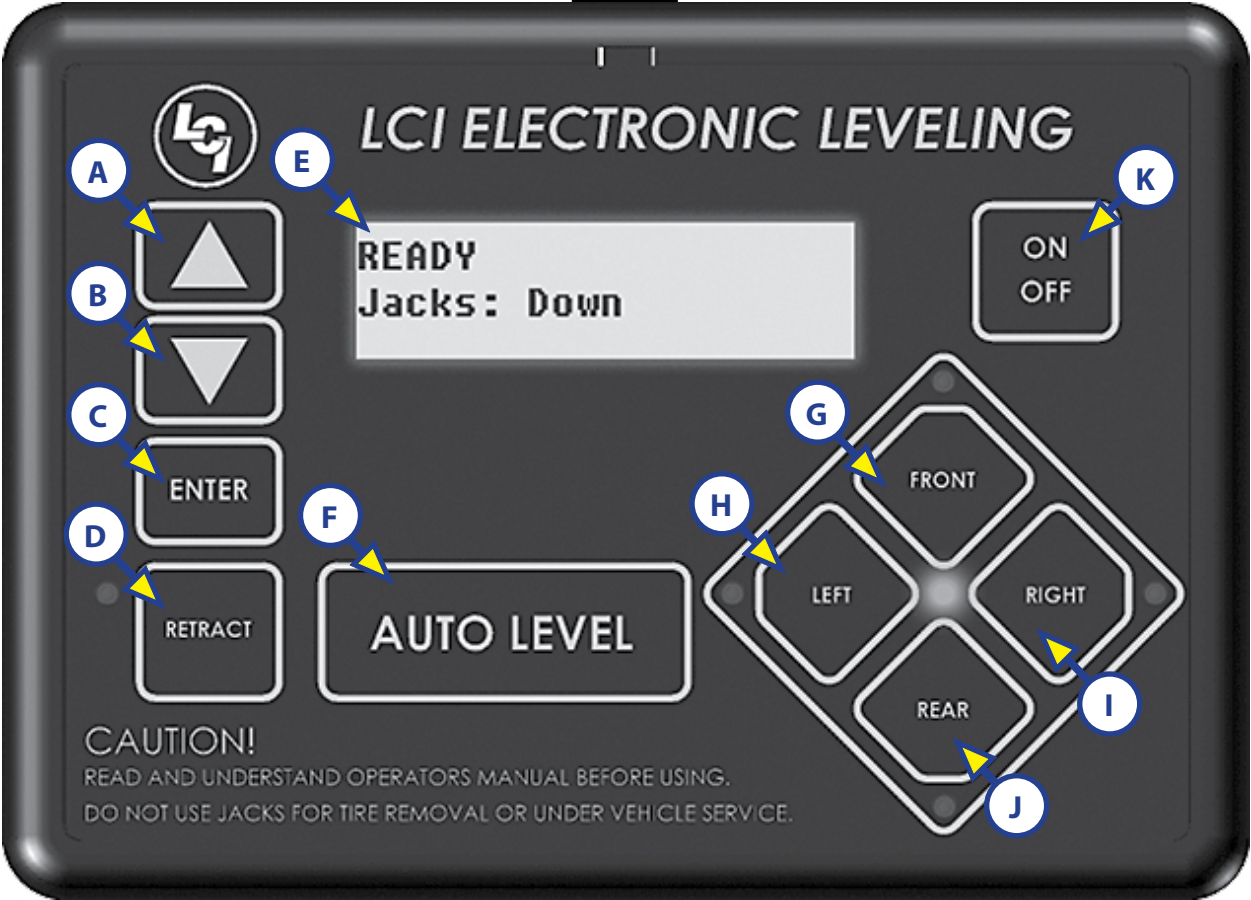
NOTE: The Ground Control 3.0 system is for 5th wheel applications only.

Prior to Operation

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

1. The trailer is parked on a reasonably level surface.
2. Be sure all persons, pets, and property are clear of the trailer while the leveling system is in operation.
3. Make sure battery(ies) are fully charged and test at 12+V DC under load.

Fig. 1



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. - Press and hold down for 1 second to initiate Auto Retract.
E	LCD Display - Displays procedures and results.
F	Auto Level - Places leveling system into auto level mode.
G	Front Jack Button - Activates front jacks in manual mode.
H	Left Jack Button - Activates left jacks in manual mode.
I	Right Jack Button - Activates right jacks in manual mode.
J	Rear Jack Button - Activates rear jacks in manual mode.
K	Power Button - Turns leveling system on and off.

Operation

⚠ WARNING

Be sure to park the trailer on solid, level ground. Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions. When parking the trailer on extremely soft surfaces, utilize load distribution pads under each jack. People and pets should be clear of trailer while operating leveling system. Never lift the trailer completely off the ground. Lifting the trailer so the wheels are not touching the ground will create an unstable and unsafe condition.

Basic Jack Operation

Landing gear (front jacks) can be operated any time the system is "ON". By pushing the "FRONT" button (Fig. 1G), both front jacks can be extended. By pushing either the "FRONT" and "LEFT" (Fig. 1H) or "FRONT" and "RIGHT" (Fig. 1I) buttons, the individual front jacks can be extended. If the touch pad is put in the retract mode, indicated by the orange illuminated LED next to the "RETRACT" button (Fig. 1D), the front jacks can be retracted together by pushing the "FRONT" button (Fig. 1G) or individually by pressing "LEFT" (Fig. 1H) or "RIGHT" (Fig. 1I) buttons, while simultaneously pressing the "FRONT" button (Fig. 1G).

Middle jacks, if equipped, can not be extended or retracted in standard mode or manual mode. Middle jacks can only be operated in the special jack code error mode. In order to operate the middle jacks press "LEFT" (Fig. 1H) and "RIGHT" (Fig. 1I) buttons simultaneously.

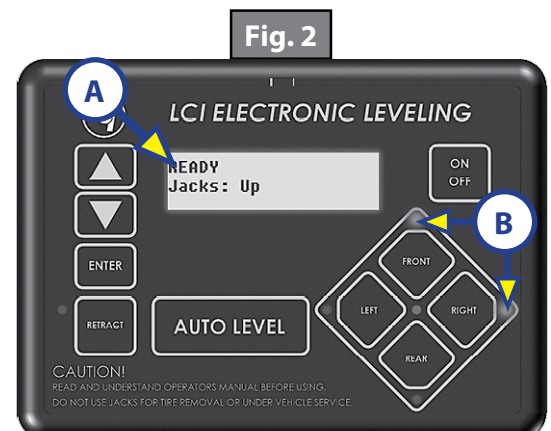
The rear jacks can only be extended when the touch pad is in the manual mode. Once system is in manual mode, pressing the "REAR" button (Fig. 1J) will extend both rear jacks at the same time. To extend individual rear jacks, press the "LEFT" (Fig. 1H) or "RIGHT" (Fig. 1I) buttons while simultaneously pressing the "REAR" button (Fig. 1J), depending on which jack needs to be operated. If the touch pad is put in the retract mode, indicated by the orange illuminated LED next to the "RETRACT" button (Fig. 1D), the rear jacks can be retracted together by pushing the "REAR" button (Fig. 1J) or individually by pressing either the "LEFT" (Fig. 1H) or "RIGHT" (Fig. 1I) buttons, while simultaneously pressing the "REAR" button (Fig. 1J).

NOTE: If the rear jacks will not operate individually using the method described above, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the trailer.

Unhitching From A Tow Vehicle

NOTE: Prior to unhitching from the tow vehicle, ensure the trailer is parked on a level surface and be sure to chock the tires of the trailer.

1. Extend the inner legs of both landing gear (front jacks) to within 4-5" of the ground by pulling on the quick-release pins.
2. Push "ON/OFF" (Fig. 1K). LCD Screen will light up and display "READY JACKS: UP" (Fig. 2A).
3. Push the "UP" arrow (Fig. 1A) to scroll to "Drop Front Jacks" option on LCD screen.
4. Red indicator lights (Fig. 2B) may come on, indicating the current disposition of the trailer. In this case, the front and right sides of the trailer are low.
5. Push "ENTER" (Fig. 1C). Both front jacks will go to ground and stop.
6. Push the "FRONT" button (Fig. 1G) extending the front jacks to a sufficient height, which raises the front of the trailer off of the tow vehicle's 5th wheel hitch plate.
7. Pull tow vehicle away and park at a safe distance.



Auto Level

1. After unhitching from tow vehicle and parking the vehicle at a safe distance away from the trailer, press the "ON/OFF" button (Fig. 1K) and then press "AUTO LEVEL" (Fig. 1F).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

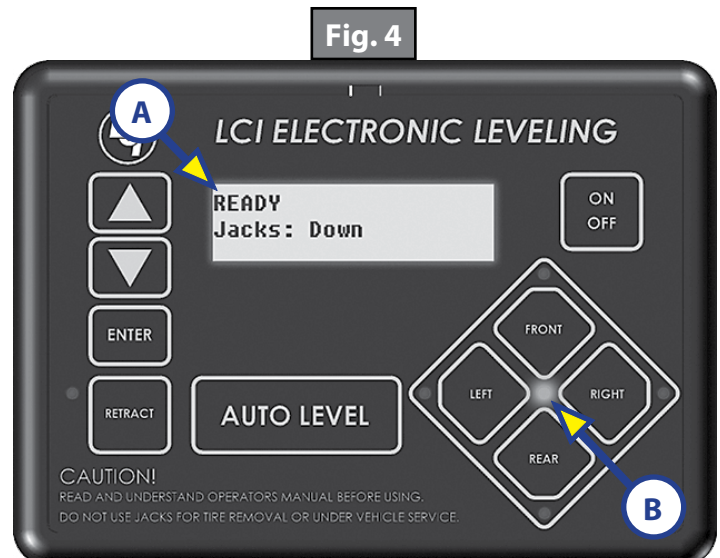
NOTE: In order for hitch recognition feature to function, the auto level sequence must be started with the front of the trailer above level.

Auto Level Sequence

1. When Auto Level Sequence begins, the front of the trailer will lower slightly to a point below level.
2. Rear jacks will be grounded.
3. A side to side leveling sequence occurs.

NOTE: At this point on the 6 point system, the 2 middle jacks are grounded to stabilize the trailer. These 2 jacks do not level the trailer.

4. Each jack will perform a final grounding touch.
5. LCD will read "AUTO LEVEL SUCCESS" (Fig. 3).
6. LCD will then read "READY Jacks: Down" (Fig. 4A), and the green LED at the center of the 4 jack buttons will be illuminated (Fig. 4B).

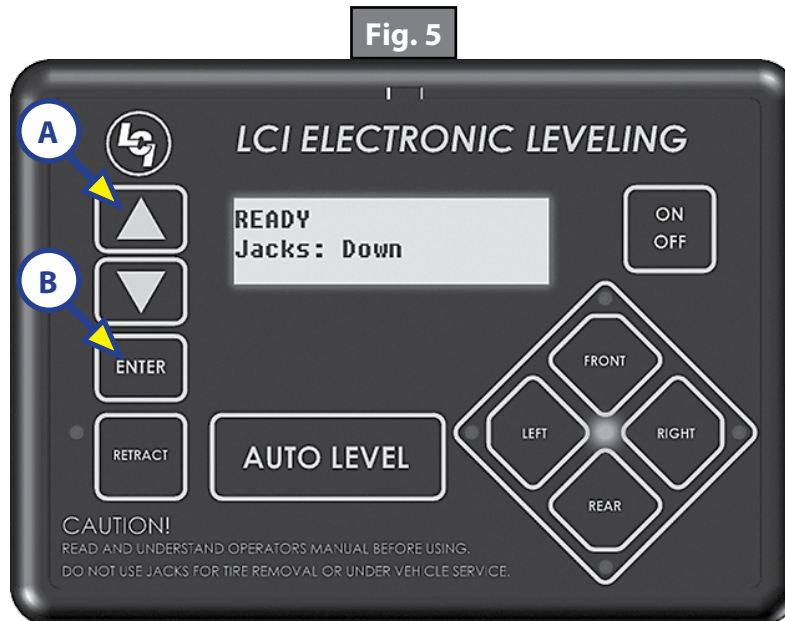


NOTE: If the AUTO LEVEL sequence does not perform as described, place the system in manual mode and test that the jacks operate correctly by pushing their coordinating buttons on the touch pad; i.e. "FRONT" button operates only the front jacks, etc.

Hitch Recognition

1. Turn on the touch pad.
2. Push the "UP" arrow (Fig. 5A) to scroll to "Auto Reconnect" option on LCD screen.
3. Push "ENTER" (Fig. 5B). The rear jacks and middle jacks (if equipped) will retract first, then the front jacks will extend to raise the trailer 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." In order for the Hitch Recognition feature to function, the auto level sequence **MUST** be started with the front of the trailer above level.



Troubleshooting

⚠ WARNING

Ensure the trailer is supported at both the front and rear with jack stands before performing any troubleshooting or service to the trailer. Failure to do so may result in death or personal injury.

Manual Override

NOTE: For ease of manual override it is recommended to unplug the power harness to the motor prior to performing the manual override procedure.

NOTE: Use of a 12-18 volt cordless screw gun or pneumatic screw gun is acceptable to manually override the jacks. Do not use an impact screw gun to perform any of the override procedures, as this may damage the motor. If manual override is necessary there are two options.

Top of Jack Motor Override:

Tools needed: $\frac{3}{8}$ " drive ratchet and extension (no socket)

1. Find the port on the top of the jack motor (Fig. 6A).
2. Remove the rubber plug (Fig. 7A).
3. Insert the $\frac{3}{8}$ " drive into the port (Fig. 8).
4. Turn override until the jack extends or retracts to desired position.

Fig. 6

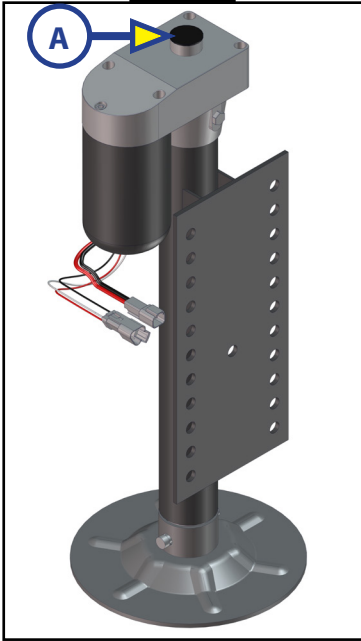


Fig. 7

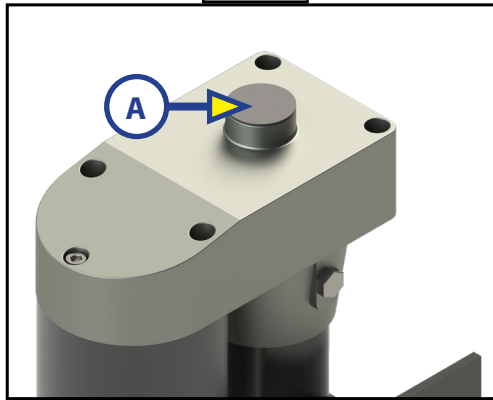
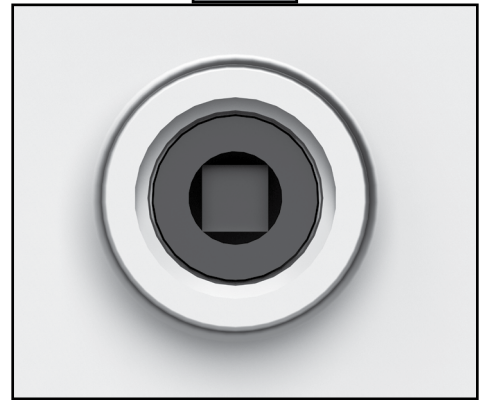


Fig. 8



Bottom of Jack Motor Override:

Tools needed: $\frac{3}{8}$ " drive ratchet and extension, $\frac{5}{16}$ " socket

1. Find the port on the bottom of the jack motor (Fig. 9A).
2. Remove the rubber plug (Fig. 10A).
3. Insert the $\frac{5}{16}$ " socket into the port (Fig. 11).
4. Turn override until the jack extends or retracts to desired position.

Fig. 9

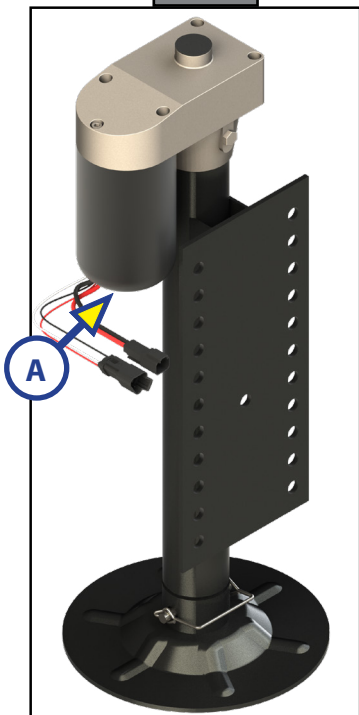


Fig. 10

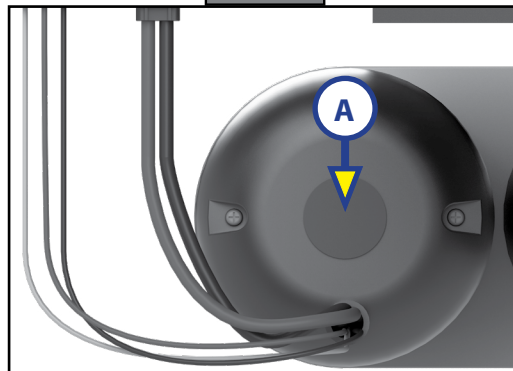


Fig. 11



Touch Pad Error Codes

NOTE: To clear an error code from the touch pad, repair or otherwise correct the issue, then press "ENTER." If the error is still present, the message will be displayed again.

LCD Message	What's Happening?	What Should Be Done?
****ERROR**** Excess Angle	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during auto operation.	Relocate the trailer.
****ERROR**** Excessive Angle	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during auto operation.	Relocate the trailer.
****ERROR**** Feature Disabled	Front of trailer below level when starting Auto Level process (only when trying to initiate Hitch Recognition).	Using manual mode on the touch pad, retract rear (which includes the middle, if equipped) jacks and set landing gear (front jacks) to hitch height.
	Touch pad power not cycled between consecutive leveling operations.	Turn touch pad off and then back on to reset the system.
	Zero point not set.	Set zero point.
****ERROR**** Low Voltage	Battery voltage dropped below 10.8V.	Check wiring - repair or replace.
		Test battery voltage under load - charge or replace.
****ERROR**** Out Of Stroke	Jack has reached maximum stroke length and is unable to lift.	Check disposition of jacks. Relocate the trailer.
	Unexpected high amp current stall.	Check jacks in manual mode or perform manual override procedure. Repair or replace as needed.
		Check for bent or damaged jacks. Repair or replace as needed.
****ERROR**** External Sensor	Bad connection or wiring from the controller to the rear sensor.	Replace or repair connection to rear remote sensor.
****ERROR**** Jack Time Out	Time limit exceeded for the requested auto operation.	Check disposition of jacks.
****ERROR**** Auto Level Fail	Unable to auto level due to uneven ground.	Check disposition of jacks. Relocate the trailer.
	Unable to auto level due to zero point being set incorrectly.	Reset zero point.
****ERROR**** Comm Error	Communication between controller and touch pad has been lost.	Check harness for proper connections or damage. Replace if necessary.
****ERROR**** Bad Calibration	Sensor calibration values are out of range.	Replace controller
****ERROR**** Internal Sensor	Internal sensor problem.	Replace controller
PANIC STOP Function Aborted	The user pressed a button on the touch pad during an automatic operation.	Restart automatic operation and then refrain from pressing any buttons on the touch pad.
****ERROR**** Hall Effect Short	Short circuit detected in one of the hall effect circuits.	Test for short and repair or replace.

Special Jack Error Codes

To clear 1 of the error codes listed below:

1. Correct or otherwise repair the issue (see the table below).

NOTE: In order to clear the special jack error code the jacks need to be "homed." In order to "home" jacks, each jack must be able to retract a minimum of 6".

2. Extend all jacks to reach the 6" of minimum retract needed.

- A. Press "FRONT" (Fig. 1G) to extend the front jacks (if required).
- B. Press "REAR" (Fig. 1J) to extend the rear jacks (if required).
- C. Press "LEFT" and "RIGHT" (Fig. 1H and Fig. 1I) simultaneously to extend the middle jacks (if equipped and required).

3. Press and hold the retract button until all of the jacks begin to retract. The jacks will retract until they reach the hard current limit.

4. The jacks are now "homed" and the special jack error code will be cleared.

NOTE: If the jacks do not retract, an error should display on the touch pad screen. This is typically caused by wiring interruption.

LCD Message	What's Happening?	What Should Be Done?
ERROR LF Jack RF Jack LM Jack RM Jack LR Jack RR Jack	Error at a specific jack (left front, right front, left middle, right middle, left rear, right rear). Hall signal issue (open, short, malfunction or loss of communication); open or short circuit between controller and motor.	Check harness connections at controller and at jack. Check harness for damage. Check fuses at controller. Repair or replace as necessary.

System Settings

Zero Point Calibration

The "Zero Point" is the programmed point that the trailer will return to each time the Auto Level feature is used.

NOTE: Prior to starting this procedure, double check all connections on the controller, jacks, and touch pad.

1. In manual mode, run the jacks to level the trailer. This is best achieved by placing a level in the center of the trailer and leveling it both front to back and then side to side. (See "Basic Jack Operation" for instructions on how to manually operate the system).
2. Once the trailer is level, turn off the touch pad.
3. With the touch pad off, press and release the "FRONT" button (Fig. 1G) 5 times and then press and release the "REAR" button (Fig. 1J) 5 times.
4. The touch pad will flash and beep and the display will read "ZERO POINT CALIBRATION ENTER to set, Power to Exit" (Fig. 12).
5. To set the current position as the zero point, press the "ENTER" button (Fig. 1C).
6. LCD display will read "Zero point stability check" (Fig. 13).
7. LCD display will read "Zero point set successfully" once process is complete (Fig. 14).
8. The system will set this point as its level state and the touch pad will turn off.

Fig. 12



Fig. 13

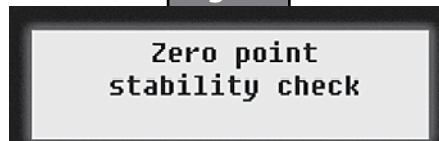
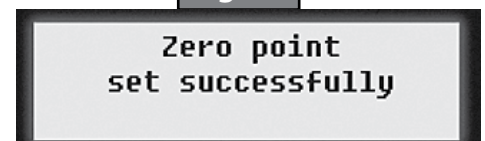


Fig. 14



Preventive Maintenance

- 1.** For optimum performance, the system requires full battery current and voltage. The battery must be maintained at full capacity.
- 2.** Check the terminals and other connections at the battery, the controller, and the jacks for corrosion, and loose or damaged connections.
- 3.** Remove dirt and road debris from jacks as needed.
- 4.** If jacks are down for extended periods, it is recommended to spray exposed leveling jack rods with a silicone lubricant every three months for protection. If the trailer is located in a salty environment, it is recommended to spray the rods every 4-6 weeks.

GROUND CONTROL® 3.0 ONECONTROL™ TOUCH PANEL

LEVELING AND STABILIZATION

System Information

Ground Control 3.0 is an automatic leveling system for 5th wheel applications. The system utilizes one main control board and a separate waterproof remote level sensor to measure and manage level point, and can be operated from several user interface devices, including:

Auto Leveling Control Touch Pad - Mounted outside the trailer within view of the hitch.

MyRV® OneControl™ Touch Panel (OCTP) - Mounted on a wall inside the living space of the trailer.

MyRV® OneControl™ Leveling App - The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users. iTunes®, iPhone® and iPad® are registered trademarks of Apple Inc. Google Play™ and Android™ are trademarks of Google Inc.

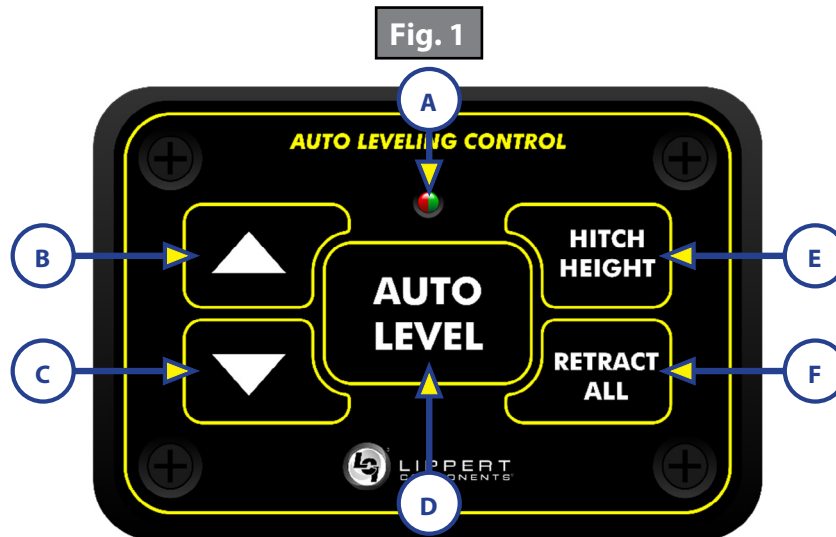
Linc® Remote Control - Optional.

NOTE: Ground Control 3.0 **IS FOR 5TH WHEEL APPLICATIONS ONLY.**

⚠ WARNING

Lippert Components Inc. recommends that a trained professional be employed to change the tires on the trailer. Ensure that the trailer is properly supported with jack stands or other adequate devices under the frame of the trailer prior to commencing any service or repair procedure. Any attempts to change the tires or perform other service while trailer is supported solely by the Ground Control 3.0 jacks could result in death, serious injury, trailer or property damage.

Touch Pad Diagram - Auto Leveling Control Touch Pad



Callout	Description	
A	Red/Green LED - Indicates the status of the system.	
B	Up Arrow - Extends front jacks (landing gear).	To turn on the touch pad, press the Up and Down arrow buttons at the same time.
C	Down Arrow - Retracts front jacks (landing gear).	
D	Auto Level Button - Places leveling system into auto level mode.	
E	Hitch Height Button - Initiates the Hitch Recognition feature.	
F	Retract All Button - Places leveling system into full retract mode.	

Safety Information

Be sure to park the trailer on solid, level ground. Ensure all jack landing locations are cleared of debris and obstructions and also free of depressions. People and pets should be clear of trailer while operating the leveling system. Ensure the battery of the trailer is fully charged or that the trailer is plugged into shore power prior to attempting to operate the system. Ground Control 3.0 requires a minimum of 12.75V DC from the battery for proper operation.

Operation - Auto Leveling Control Touch Pad

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure the trailer is parked on a level surface and chock the tires of the trailer.

1. Extend the inner legs of both front jacks (landing gear) to within 4-5" of the ground by pulling on the quick-release pins.
2. To turn on the touch pad, press both "UP" and "DOWN" arrows (Fig. 1B and Fig. 1C) at the same time. The green indicator LED (Fig. 1A) will turn on.

NOTE: The touch pad will remain on as long as the user is pressing buttons. It will time out after approximately 7 minutes without use.

Press the "UP" arrow (Fig. 1B) to extend the front jacks and lift the front of the trailer to take the weight of the trailer off of the hitch.

Uncouple the trailer connection on the tow vehicle.

Pull the tow vehicle away and park at a safe distance.

Auto Level

1. After unhitching from the tow vehicle and parking the vehicle at a safe distance away from the trailer. Press both "UP" and "DOWN" arrows (Fig. 1B and Fig. 1C) at the same time if the green indicator LED is not on. Press "AUTO LEVEL" (Fig. 1D).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the leveling process is complete. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Auto Level Sequence

1. When Auto Level Sequence begins, the front of the trailer will seek a position near a level state.
2. Rear jacks will be grounded.
3. A side-to-side leveling sequence will occur.

NOTE: At this point on the 6 point system, the 2 middle jacks will be grounded to stabilize the trailer. These 2 jacks do not level the trailer.

4. Each jack will perform a final grounding touch.

NOTE: If the AUTO LEVEL sequence does not perform as described above, locate the OneControl Touch Panel inside the trailer or use the OneControl App to place the system in manual mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or app; e.g., "FRONT" button operates only the front jacks, etc. (See "Operation - OneControl Touch Panel" or "Operation - OneControl App" in this manual).

Hitch Recognition

1. To turn on the touch pad, press both "UP" and "DOWN" arrows (Fig. 1B and Fig. 1C) at the same time. The green indicator LED (Fig. 1A) will turn on.
2. Press "HITCH HEIGHT" (Fig. 1E). The rear jacks will retract.
3. The front of the trailer will raise to the height where the auto level sequence was started.

NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks but will not retract the front jacks to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

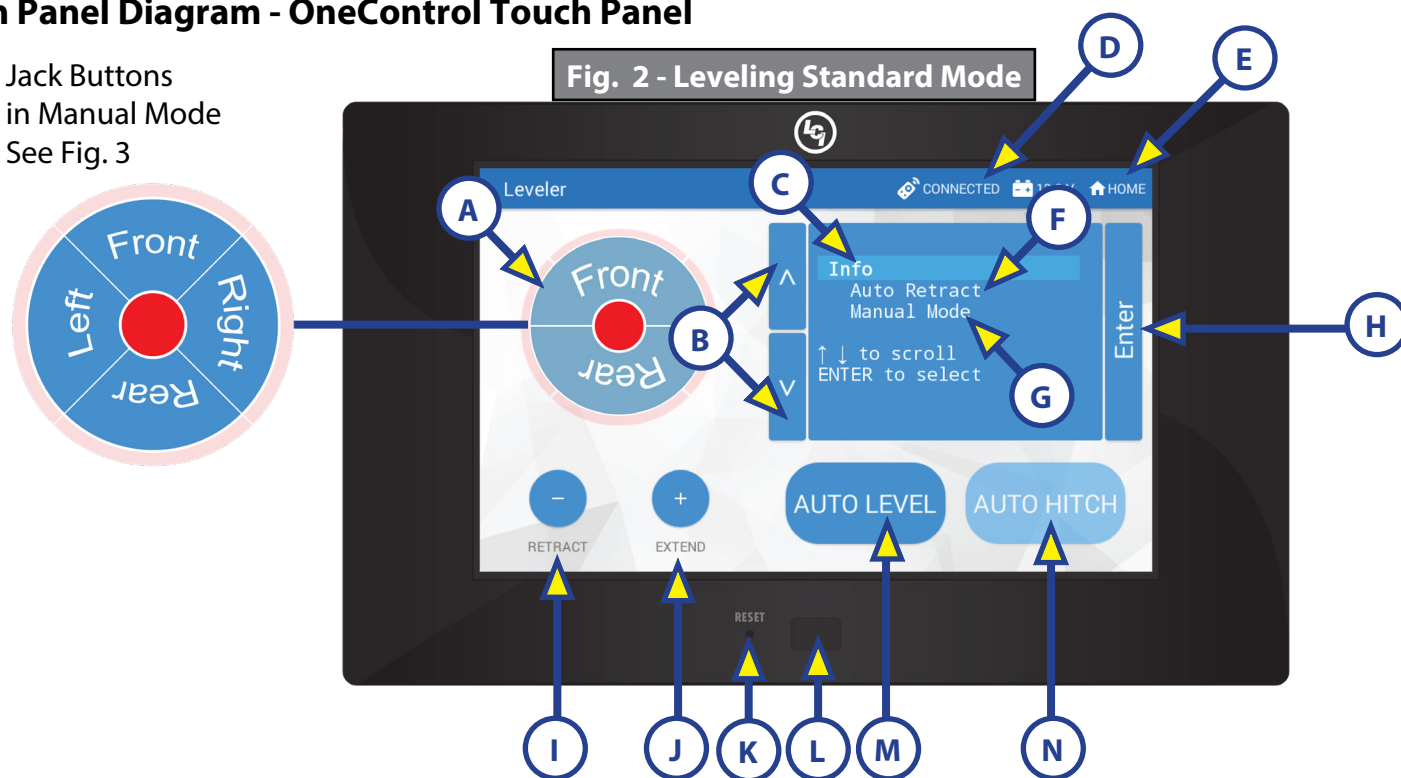
Connect tow vehicle and make sure trailer and hitch are connected and locked.

Press "RETRACT ALL." (Fig. 1F). System will immediately retract all jacks.

Use the quick release pins on the landing gear to manually return the inner jack leg to fully retracted position.

Touch Panel Diagram - OneControl Touch Panel

Jack Buttons
in Manual Mode
See Fig. 3



Callout	Description
A	Jack Buttons - Select front, rear, right and left jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. The front jacks can be extended/retracted in Standard Mode. Rear jacks can only be retracted from this mode. In Manual Mode (Fig. 3), all jacks are available to be operated.
B	Up and Down Arrows - Scrolls through options on screen.
C	Info - Displays system information, e.g. angle, jack stroke or software version.
D	Connected Icon - Press 6 times to program zero point/ wireless configurations.
E	Home Icon - Returns screen to home page.
F	Auto Retract - Enters Auto Retract mode. Choose to retract "All Jacks" or "Rear Jacks."
G	Manual Mode - Enters Manual Mode to manually operate jacks.
H	Enter - Push to select various modes.
I	Retract - Retracts jacks in several modes. Jacks available will be highlighted in blue.
J	Extend - Extends jacks in several modes. Jacks available will be highlighted in blue.
K	Reset - Resets to factory default.
L	Power Button - Turns touch panel on and off.
M	Auto Level - Starts the Auto Level sequence.
N	Auto Hitch - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - OneControl Touch Panel

Standard Mode and Menu

To reach Standard Mode (Fig. 2) for leveling:

1. Power on the OneControl Touch Panel (Fig. 2L).
2. Press "MyRV Control Panel" on the main screen.
3. Press the "Leveler" icon.
4. The screen will show the system menu (Fig. 2) for Standard Mode. The front jacks can be extended/retracted in Standard Mode. Rear jacks can only be retracted from this mode.

Basic Jack Operation

While in Standard Mode:

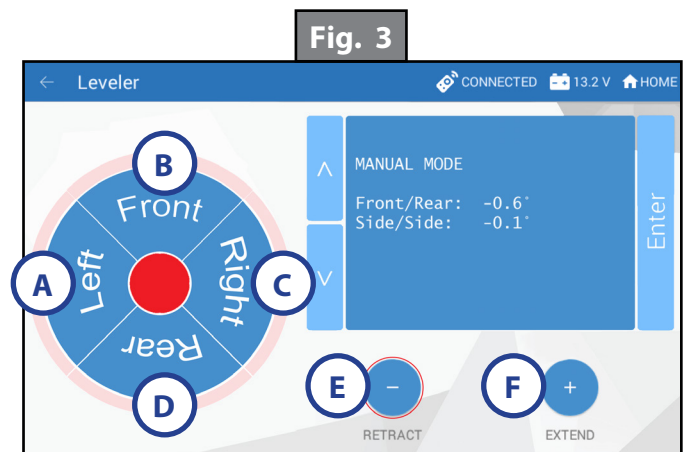
1. Press "RETRACT" (Fig. 2I) or "EXTEND" (Fig. 2J) and "FRONT" (Fig. 2A) to retract or extend front jacks.
2. Press "RETRACT" and "REAR" to retract rear jacks.
3. Press the "AUTO LEVEL" (Fig. 2M) button to start the auto leveling sequence.
4. Press the "AUTO HITCH" (Fig. 2N) button to start the hitch recognition sequence when reconnecting to the tow vehicle.
5. Use the "UP" or "DOWN" arrow (Fig. 2B) buttons to cycle through the menu screen options:
 - A. Info:** Scroll to "INFO" (Fig. 2C) and press "ENTER" (Fig. 2H) button to display system information, e.g., angle, jack stroke or software version.
 - B. Auto Retract:** Scroll to "AUTO RETRACT" (Fig. 2F) and press the "ENTER" button. Choose either "ALL JACKS" or "REAR JACKS." Press the "ENTER" button again to start the "Auto Retract" sequence.
 - C. Manual Mode:** Scroll to "MANUAL MODE" (Fig. 2G) and press "ENTER" button to start Manual Level operation.

NOTE: Upon entering Manual Mode, a tutorial on operating the jacks will appear on the screen. Press "OK" to clear the tutorial. To delete the tutorial, click the "Don't show this again" box in the bottom right of the screen.

- I. Press "EXTEND" (Fig. 3F) or "RETRACT" (Fig. 3E) and "FRONT" (Fig. 3B) to operate front jacks.
- II. Press "EXTEND" or "RETRACT" and "REAR" (Fig. 3D) to operate rear jacks.
- III. Press "EXTEND" or "RETRACT" and "RIGHT" (Fig. 3C) to operate right jacks.
- IV. Press "EXTEND" or "RETRACT" and "LEFT" (Fig. 3A) to operate left jacks.

NOTE: To operate jacks individually, press "EXTEND" or "RETRACT" then press the "LEFT" (Fig. 3A) or "RIGHT" (Fig. 3C) button while simultaneously pressing the "FRONT" (Fig. 3B) or "REAR" button (Fig. 3D), depending on which jack needs to be operated.

NOTE: If the rear jacks will not operate individually using the method described above, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the trailer.



Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure the trailer is parked on a level surface and chock the tires of the trailer.

1. Extend the inner legs of both front jacks (landing gear) to within 4-5" of the ground by pulling on the quick-release pins.
2. Push touch panel "ON/OFF" (Fig. 2L) to turn system on.
3. Press "MyRV Control Panel" on the main screen.
4. Press the "Leveler" icon.
5. The screen will show the system menu (Fig. 2) for Standard Mode. Push "EXTEND" (Fig. 2J) and "FRONT" button (Fig. 2A) to extend front jacks and lift front of the trailer to take the weight of the trailer off of the hitch.
6. Uncouple the trailer connection on the tow vehicle.
7. Pull the tow vehicle away and park at a safe distance.

Auto Level

1. After unhitching from the tow vehicle and parking the vehicle a safe distance away from the trailer, press the "ON/OFF" button (Fig. 2L) if the OneControl Touch Panel is not on and then press "AUTO LEVEL" (Fig. 2M).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the leveling process is complete. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Auto Level Sequence

1. When Auto Level Sequence begins, the front of the trailer will seek a position near a level state.
2. Rear jacks will be grounded.
3. A side-to-side leveling sequence will occur.

NOTE: At this point on the 6 point system, the 2 middle jacks will be grounded to stabilize the trailer. These 2 jacks do not level the trailer.

4. Each jack will perform a final grounding touch.

NOTE: If the AUTO LEVEL sequence does not perform as described above, locate the OneControl Touch Panel inside the trailer or use the OneControl App to place the system in manual mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or App; e.g., "FRONT" button operates only the front jacks, etc. (See "Operation - OneControl Touch Panel" or "Operation - OneControl App" in this manual).

Hitch Recognition

1. Push touch panel "ON/OFF" (Fig. 2L) to turn system on.
2. Press "MyRV Control Panel" on the main screen.
3. Press the "Leveler" icon.
4. The screen will show the system menu (Fig. 2) for Standard Mode.
5. Press "AUTO HITCH" (Fig. 2N). Rear jacks will retract.
6. The front of the trailer will raise to the height where the auto level sequence was started.

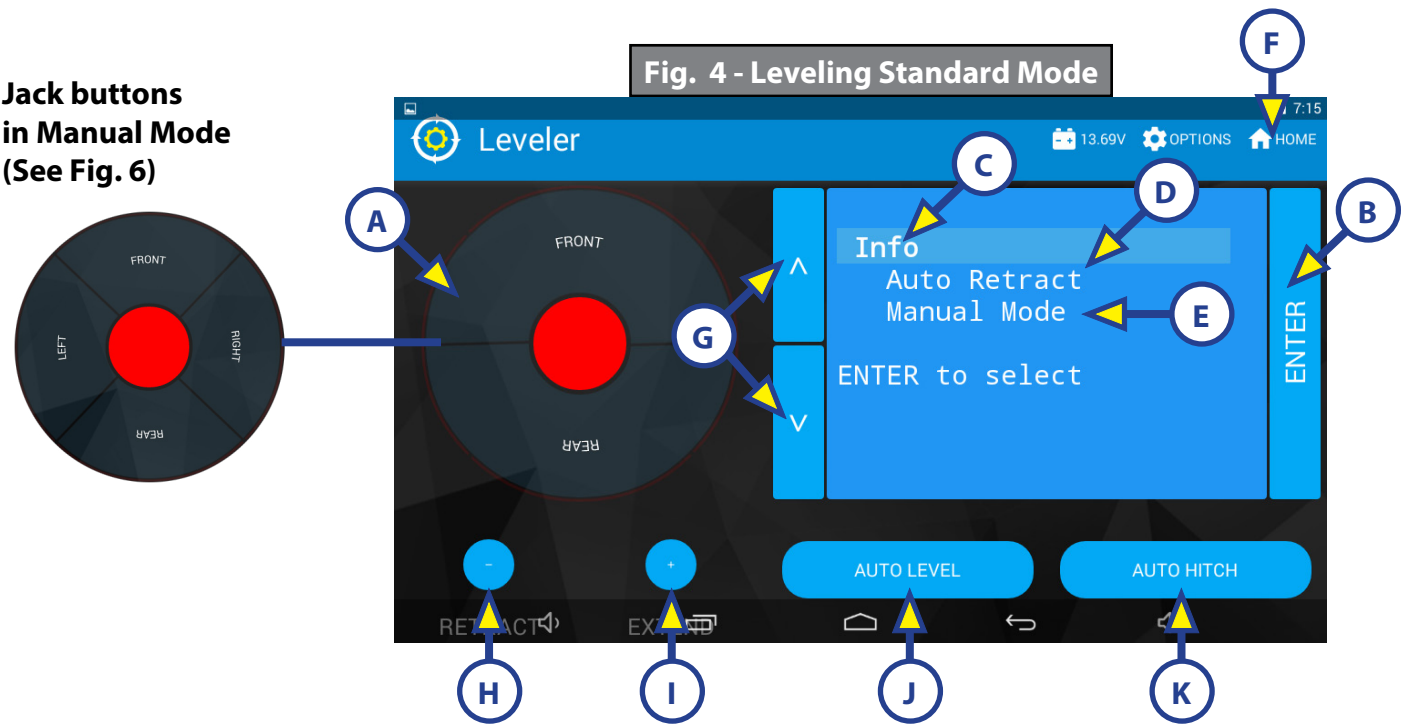
NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks but will not retract the front jacks to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

7. Connect tow vehicle and make sure trailer and hitch are connected and locked.
 8. On the Standard Mode screen (Fig. 2) use the "UP" and "DOWN" arrows (Fig. 2B) to scroll to "AUTO RETRACT" (Fig. 2F). Press "ENTER."
 9. Choose "ALL JACKS." Press "ENTER." System will immediately retract all jacks.
- Use the quick release pins on the landing gear to manually return the inner jack leg to the fully retracted position.

Touch Panel Diagram - OneControl App from MyRV

NOTE: The OneControl Leveling App is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.

Jack buttons
in Manual Mode
(See Fig. 6)



Callout	Description
A	Jack Buttons - Select front, rear, right and left jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. The front jacks can be extended/retracted in Standard Mode. Rear jacks can only be retracted from this mode. In Manual Mode (Fig. 6), all jacks are available to be operated.
B	Enter - Push to activate various modes.
C	Info - Displays system information, e.g., angle, jack stroke, software version.
D	Auto Retract - Enters Auto Retract mode. Choose to retract "All Jacks" or "Rear Jacks."
E	Manual Mode - Enters Manual Mode to manually operate jacks.
F	Home Icon - Returns screen to home page.
G	Up and Down Arrows - Scroll through options on screen.
H	Retract - Retracts jacks in several modes. Jacks available will be highlighted in blue.
I	Extend - Extends jacks in several modes. Jacks available will be highlighted in blue.
J	Auto Level - Starts the Auto Level sequence.
K	Auto Hitch - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - OneControl App

Accessing the OneControl App

1. Ensure there is power to the trailer's wireless network.
2. Navigate to the device's (smart phone, tablet, etc.) wifi settings. Turn wireless feature on and connect to the myRV wireless network.

NOTE: If this is the first time connecting to the myRV wireless network, a password will be required. The password is located on the trailer's wifi hub (Fig. 5).

3. Open the OneControl application on the compatible device.

NOTE: If the device states "Unresolved Network Connection," retry connecting to the myRV wireless network and/or wait for the connection to resolve and display "Connected" under the myRV wireless connection.

4. The application will request the user "Agree" to an end user license agreement, create a PIN and "Re-enter PIN to confirm."
5. The OneControl app will now display all functions. Choose "Leveler."

Fig. 5



Standard Mode and Menu

Standard Mode is the mode launched when the OneControl app "Leveler" function is powered up. The screen will show the system menu (Fig. 4). The front jacks can be extended/retracted in Standard Mode. Rear jacks can only be retracted from this mode.

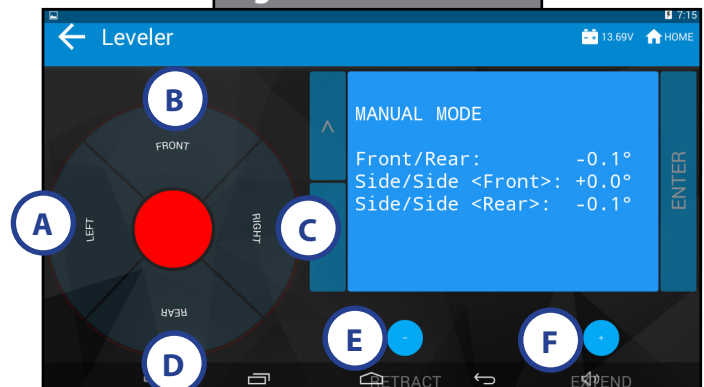
Basic Jack Operation

While in Standard Mode:

1. Press "RETRACT" (Fig. 4H) or "EXTEND" (Fig. 4I) and "FRONT" (Fig. 4A) to extend or retract front jacks.
2. Press "RETRACT" and "REAR" (Fig. 4) to retract rear jacks.
3. Press the "AUTO LEVEL" (Fig. 4J) button to start the leveling sequence.
4. Press the "AUTO HITCH" (Fig. 4K) button to start the hitch recognition sequence when reconnecting to the tow vehicle.
5. Use the "UP" or "DOWN" arrow buttons (Fig. 4G) to cycle through the menu options:
 - A. **Info:** Scroll to "INFO" (Fig. 4C) and press "ENTER" button to display system information, e.g., angle, jack stroke or software version.
 - B. **Auto Retract:** Scroll to "AUTO RETRACT" (Fig. 4D) and press the "ENTER" button. Choose either "ALL JACKS" or "REAR JACKS." Press the "ENTER" button again to start the "Auto Retract" sequence.
 - C. **Manual Mode:** Scroll to "MANUAL MODE" (Fig. 4E) and press "ENTER" button to start Manual Level operation.
 - I. Press "EXTEND" (Fig. 6F) or "RETRACT" (Fig. 6E) and "FRONT" (Fig. 6B) to operate front jacks.
 - II. Press "EXTEND" or "RETRACT" and "REAR" to operate rear jacks.
 - III. Press "EXTEND" or "RETRACT" and "RIGHT" to operate right jacks.
 - IV. Press "EXTEND" or "RETRACT" and "LEFT" to operate left jacks.

NOTE: To operate jacks individually, press "EXTEND" or "RETRACT" then press the "LEFT" (Fig. 6A) or "RIGHT" (Fig. 6C) button while simultaneously pressing the "FRONT" or "REAR" button (Fig. 6B and 6D), depending on which jack needs to be operated.

Fig. 6 - Manual Mode



NOTE: If the rear jacks will not operate individually using the method described above, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the trailer.

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure trailer is parked on a level surface and chock the tires of the trailer.

1. Extend the inner legs of both front jacks (landing gear) to within 4-5" of the ground by pulling on the quick-release pins.
2. Open the OneControl App.
3. Press the "Leveler" icon.
4. The screen will show the system menu (Fig. 4) for Standard Mode.
5. Push "Extend" (Fig. 4I) and "FRONT" buttons (Fig. 4) to extend front jacks and lift front of trailer to take the weight of the trailer off of the hitch.
6. Uncouple the trailer connection on the tow vehicle.
7. Pull tow vehicle away and park at a safe distance.

Auto Level

1. After unhitching from the tow vehicle and parking the vehicle at a safe distance away from the trailer, open the OneControl App and then press "AUTO LEVEL" (Fig. 4J).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Auto Level Sequence

1. When Auto Level Sequence begins, the front of the trailer will seek a position near a level state.
2. Rear jacks will be grounded.
3. A side-to-side leveling sequence will occur.

NOTE: At this point on the 6 point system, the 2 middle jacks will be grounded to stabilize the trailer. These 2 jacks do not level the trailer.

4. Each jack will perform a final grounding touch.

NOTE: If the AUTO LEVEL sequence does not perform as described above, locate the OneControl Touch Panel inside the trailer or use the OneControl App to place the system in manual mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or App; e.g., "FRONT" button operates only the front jacks, etc. (See "Operation - OneControl Touch Panel" or "Operation - OneControl App" in this manual).

Hitch Recognition

1. Open the OneControl App.
2. Press the "Leveler" icon.
3. The screen will show the system menu (Fig. 4) for Standard Mode.
4. Press "AUTO HITCH" (Fig. 4K). Rear jacks will retract.
5. The front of the trailer will raise to the height where the auto level sequence was started.

NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks but will not retract the front jacks to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

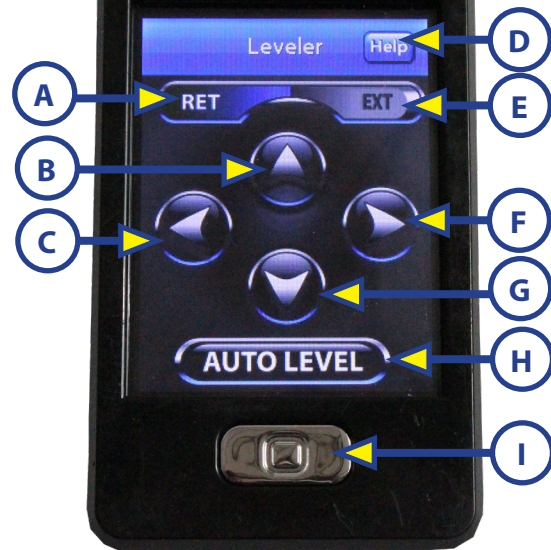
6. Connect tow vehicle and make sure trailer and hitch are connected and locked.
7. On the Standard Mode screen (Fig. 4) use the "UP" and "DOWN" arrows (Fig. 4G) to scroll to "AUTO RETRACT" (Fig. 4D). Press "ENTER."
8. Choose "ALL JACKS." Press "ENTER." System will immediately retract all jacks.
Use the quick release pins on the landing gear to manually return the inner jack leg to the fully retracted position.

Touch Panel Diagram - Linc Remote Control - Optional

Callout	Description
A	Retract - Retracts front jacks and rear jacks.
B	Front Arrow - Operates front jacks.
C	Left Arrow - (See Note below)
D	Help - Provides contact information for LCI.
E	Extend - Extends front jacks. (See Note below)
F	Right Arrow - (See Note below)
G	Rear Arrow - Retracts rear jacks. (See Note below)
H	Auto Level- Initiates Auto Level sequence.
I	Power Button - Turns remote control on and off.

NOTE: When the OneControl Touch Panel inside the trailer is placed in Manual Mode, the Linc remote will operate the jacks in a similar fashion as the OneControl, with the exception of operating individual jacks. (See "Operation - OneControl Touch Panel.")

Fig. 7



Configuring Linc Remote to Sync to The One Control Touch Panel

1. Turn on the Linc™ remote control (Fig. 7I) and enter a PIN.
2. Choose "Leveler" from the menu screen.
3. Turn on the OneControl Touch Panel (Fig. 2L).
4. On the OneControl Touch Panel, press the "CONNECTED" icon at the top of the screen (Fig. 8A) quickly 6 times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig. 9A).
5. Press the gear icon with "OPTIONS" (Fig. 9A).
6. Use the "UP" and "DOWN" arrows (Fig. 9B) to scroll to "WIRELESS CONFIG" (Fig. 10).
7. Press "ENTER" (Fig. 10A). The screen will display "Wireless Configuration Press any Linc button to Sync" (Fig. 11).
8. Press any button in "Leveler" mode on the Linc Remote Control (Fig 7).
9. Pressing "ABORT" on the OneControl Touch Panel (Fig. 11A) will cancel configuration sequence.

Fig. 8

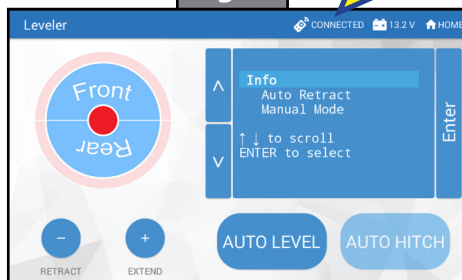


Fig. 9

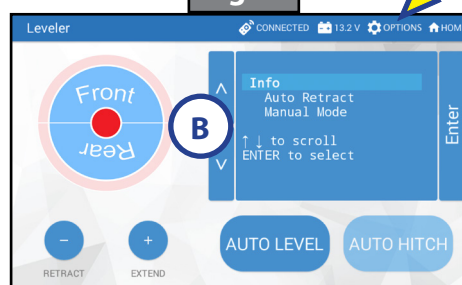


Fig. 10

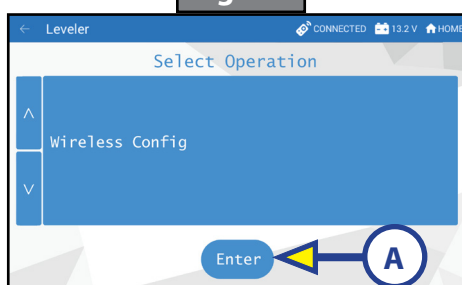
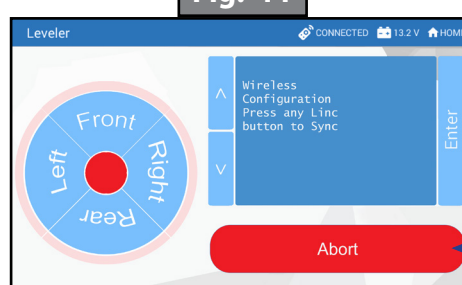


Fig. 11



Basic Jack Operation

Press "EXTEND" (Fig. 7E) or "RETRACT" (Fig. 7A). Press "Front" arrow (Fig. 7B) to operate front jacks.

Press "RETRACT". Press "Rear" arrow (Fig. 7G) to operate rear jacks.

Press "AUTO LEVEL" (Fig. 7H) to start auto level sequence.

If the OneControl Touch Panel is in manual mode press, "EXTEND" (Fig. 7E) or "RETRACT"(Fig. 7A). Press "LEFT" (Fig. 7C), "RIGHT" (Fig. 7F) or "REAR" (Fig. 7G) arrow to operate left, right or rear jacks.

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure the trailer is parked on a level surface and chock the tires of the trailer.

1. Extend the inner legs of both front jacks (landing gear) to within 4-5" of the ground by pulling on the quick-release pins.
2. Turn the Linc remote on (Fig. 7I) and enter a PIN code to turn system on.
3. Press the "LEVELER" button.
4. Press "EXTEND" (Fig. 7E) and "FRONT" arrow (Fig. 7B) to extend front jacks and lift the front of trailer to take the weight of the trailer off of the hitch.
5. Uncouple the trailer connection on the tow vehicle.
6. Pull tow vehicle away and park at a safe distance.

Auto Level

1. After unhitching from the tow vehicle and parking the vehicle a safe distance away from the trailer, press the "ON/OFF" button (Fig. 7I) on the Linc remote if the Linc is not on.
2. Enter a PIN.
3. Choose the "LEVELER" option.
4. Press "AUTO LEVEL" (Fig. 7H).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Auto Level Sequence

1. When Auto Level Sequence begins, the front of the trailer will seek a position near a level state.
2. Rear jacks will be grounded.
3. A side-to-side leveling sequence will occur.

NOTE: At this point on the 6 point system, the 2 middle jacks will be grounded to stabilize the trailer. These 2 jacks do not level the trailer.

4. Each jack will perform a final grounding touch.

NOTE: If the AUTO LEVEL sequence does not perform as described above, locate the OneControl Touch Panel inside the trailer or use the OneControl App to place the system in manual mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or App; e.g., "FRONT" button operates only the front jacks, etc. (See "Operation - OneControl Touch Panel" or "Operation - OneControl App" in this manual).

NOTE: There is no Hitch Recognition sequence programmed for the Linc remote.

Troubleshooting

Red/Green LED Indicator on Auto Leveling Control Touch Pad **(Rev. A)**

What Is Happening?	Why?
Off	Touch pad is locked.
Solid Green	Touch pad is active.
Blinking Green	Jacks are moving.
Solid Red	Low battery.
Blinking Red	Error - Refer to OneControl Touch Panel or the OneControl App for the specific error, then consult the Troubleshooting section of this manual to clear the error.

Red/Green LED Indicator on Auto Leveling Control Touch Pad **(Rev. B)**

What Is Happening?	Why?
Off	Touch pad is locked.
Solid Green	Touch pad is active.
Blinking Green	Jacks are moving.
Solid Red	Low battery.
Blinking Red	Error - Refer to OneControl Touch Panel or the OneControl App for the specific error, then consult the Troubleshooting section of this manual to clear the error.
Slowly Blinking Faded Red (Red and Green Blinking Simultaneously)	Error - Refer to OneControl Touch Panel or the OneControl App for the specific jack error code, then consult the Special Jack Error Code section of this manual to clear the error.

OneControl Touch Panel or OneControl App Error Codes (Rev. A)

NOTE: Faults can only be cleared via the OneControl Touch Panel or OneControl App. The only exception is when the Auto Leveling Control Touch Pad (Fig. 1) was used to abort an auto-sequence. In this case the fault can be cleared by pressing any Auto Leveling Control Touch Pad button.

OneControl Touch Panel or OneControl App Error Codes (Rev. B)

NOTE: Faults can be cleared via the OneControl Touch Panel, OneControl App or Auto Leveling Control Touch Pad. Most standard faults can be cleared from the Auto Leveling Control Touch Pad by pressing "Retract All."

OneControl Touch Panel or OneControl App Error Codes		
Touch Panel Message	What's Happening?	What Should I Do?
"EXCESS ANGLE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the trailer.
"EXCESSIVE ANGLE"	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 "OK."
"BAD CALIBRATION"	Trailer zero point was not set correctly.	Reset zero point.
"FEATURE DISABLED"	Hitch recognition requested but no hitch height set.	Perform "AUTO LEVEL" sequence to establish hitch height.
	Zero point not set.	Set zero point.
"LOW VOLTAGE"	Bad connection or wiring. Discharged or bad battery.	Check wiring - repair or replace. Test battery voltage under load - charge or replace.
"OUT OF STROKE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the trailer.
"EXTERNAL SENSOR"	Bad connection or wiring.	Replace or repair connection to rear remote sensor.
"JACK TIME OUT"	System could not level in expected time.	Check disposition of jacks.
"AUTO LEVEL FAIL"	Unsecured controller. Voltage drop.	Check and secure controller placement. Test battery voltage under load - charge or replace.
"FUNCTION ABORTED"	User has aborted an automatic leveling sequence.	Hit OK. Restart the sequence.
"HALL POWER SHORT"	Short circuit detected on one or more of the jack hall effect power lines.	Check harness and replace or repair.

Special Jack Error Codes		
Touch Panel Message	What's Happening?	What Should I Do?
<p>***ERROR***</p> <p>Left-Front Jack Fault</p> <p>Right-Front Jack Fault</p> <p>Left-Mid Jack Fault</p> <p>Right-Mid Jack Fault</p> <p>Left-Rear Jack Fault</p> <p>Right-Rear Jack Fault</p>	<p>Error at a specific jack (left front, right front, left middle, right middle, left rear, right rear). Hall signal issue (open, short, malfunction or loss of communication); open or short circuit between controller and motor.</p>	<p>Check harness connections at controller and at jack.</p> <p>Check harness for damage.</p> <p>Check fuses at controller.</p> <p>Repair or replace as necessary.</p>

Special Jack Error Codes on OneControl Touch Panel or OneControl App (Rev. A)

To clear the error code:

1. Correct or otherwise repair the issue (see Special Jack Error Codes chart).

NOTE: In order to clear the special jack error code the jacks need to be "homed." In order to "home" jacks, each jack must be able to retract a minimum of 6".
2. Extend all jacks to reach the 6" of minimum retract needed.
 - A. Press "FRONT" (Fig. 3B or Fig. 6B) to extend the front jacks (if required).
 - B. Press "REAR" (Fig. 3D or Fig. 6D) to extend the rear jacks (if required).
 - C. Press "LEFT" and "RIGHT" (Fig. 3A and Fig. 3C or Fig. 6A and Fig. 6C) simultaneously to extend the middle jacks (if equipped and required).
3. Press "ENTER" to AUTO RETRACT. The jacks will retract until they reach the hard current limit.
4. The jacks are now "homed" and the special jack error code will be cleared.

NOTE: If the jacks do not retract, an error should display on the touch panel screen. This is typically caused by wiring interruption.

Special Jack Error Codes on OneControl Touch Panel or OneControl App (Rev. B)

To clear the error codes:

1. Correct or otherwise repair the issue (see the Special Jack Error Codes chart).

NOTE: In order to clear the special jack error code the jacks need to perform a successful "Auto Retract."
2. Press "ENTER" to AUTO RETRACT. The jacks will retract until they reach the hard current limit.
3. The jacks are now "homed" and the special jack error code will be cleared.

NOTE: If the jacks do not retract, an error should display on the touch panel screen. This is typically caused by wiring interruption.

Clearing Faults From Auto Leveling Control Touch Pad (Rev. B)

NOTE: Landing gear can still be extended/retracted in the "Special Jack Error Code" mode.

1. To clear most standard faults, press "Retract All."
2. To clear jack faults, press and hold "Retract All" until the jacks begin to retract.

NOTE: Three faults cannot be cleared from the Auto Leveling Control Touch Pad and must be addressed from the OneControl Touch Panel or OneControl App: HALL POWER SHORT, BAD CALIBRATION and EXTERNAL SENSOR.

Manual Override

Top of Jack Motor Override:

Tools needed: 3/8" drive ratchet and extension (no socket)

1. Find the port on the top of the jack motor (Fig. 12A).
2. Remove the rubber plug (Fig. 13A).
3. Insert the 3/8" drive ratchet into the port (Fig. 14).
4. Turn the override until the jack extends or retracts to desired position.

Bottom of Jack Motor Override:

Tools needed: 3/8" drive ratchet and extension, 5/16" socket

1. Find the port on the bottom of the jack motor (Fig. 12B).
2. Remove the rubber plug (Fig. 15A).
3. Insert the 5/16" socket into the port (Fig. 16).
4. Turn the override until the jack extends or retracts to desired position.

Fig. 12

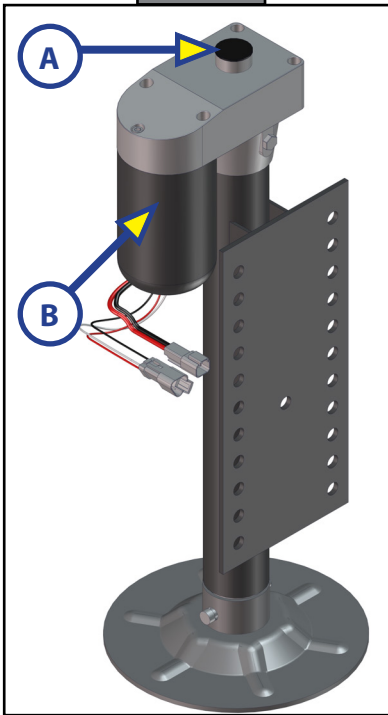


Fig. 13

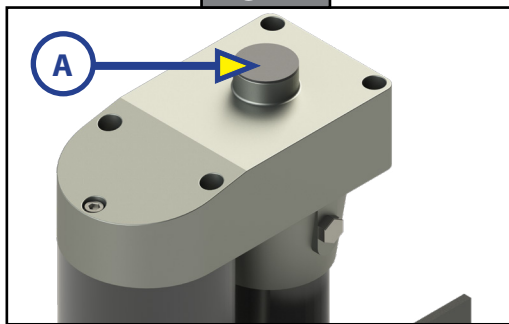


Fig. 14

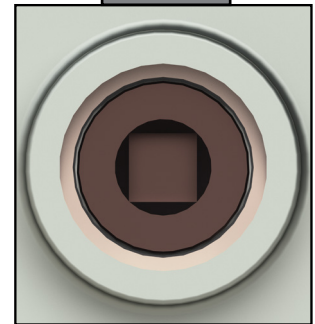


Fig. 15

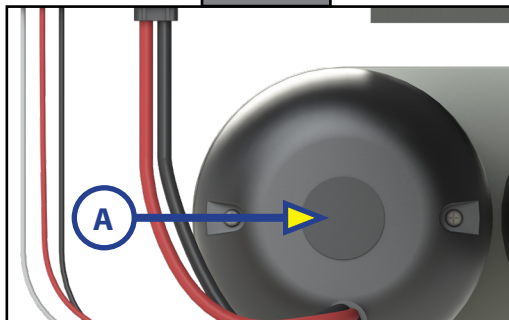


Fig. 16



Zero Point Calibration

The "Zero Point" is the programmed point that the trailer will return to each time the Auto Level feature is used. The "Zero Point" must be programmed prior to using the Auto Level feature to ensure the proper operation of the system. The "Zero Point" feature is only available on the OneControl Touch Panel and OneControl App with this system. (Figs. 17-22 depict OneControl Touch Panel.)

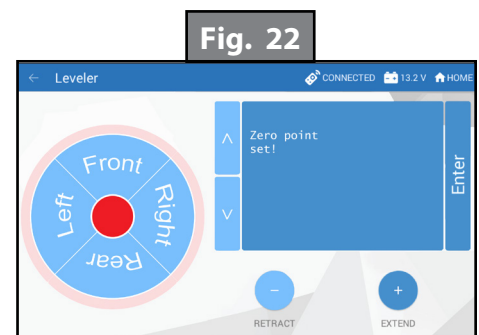
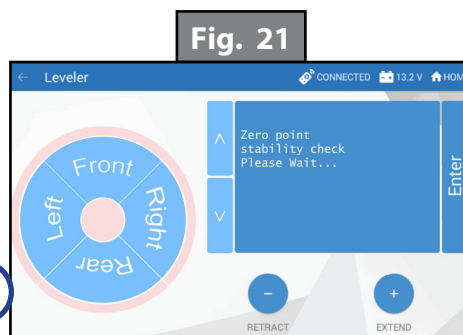
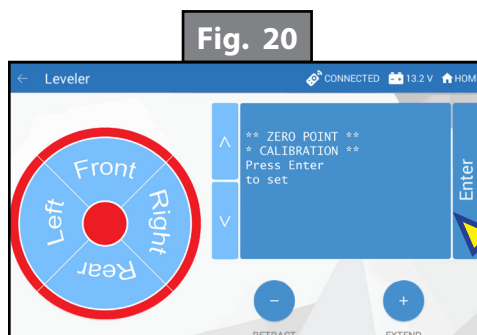
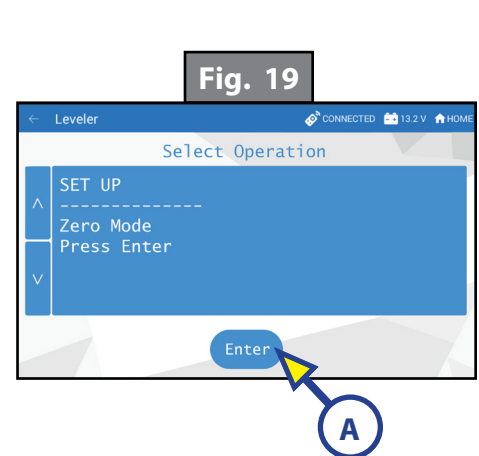
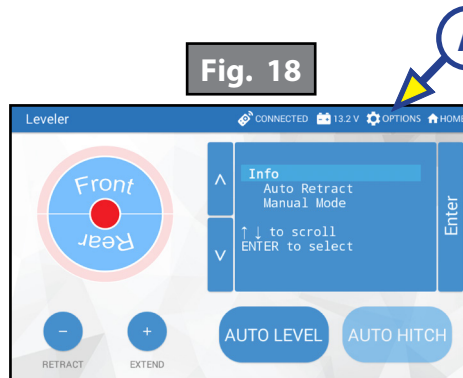
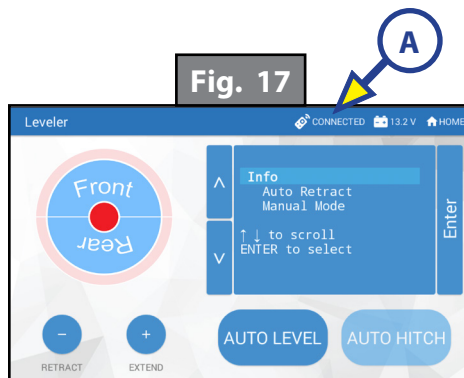
NOTE: Prior to starting this procedure, double check all connections on the controller, jacks, and touch panel.

NOTE: When calibrating Zero Point, the user has full manual control over the jacks. See "Basic Jack Operation - Manual Mode" to adjust to the desired level position. Press the enter button to set.

To Set the Zero Point

NOTE: The following procedure works from Standard Mode only. (See "Standard Mode and Menu" to reach standard mode.)

1. Press the "CONNECTED" icon (Fig. 17A) at the top of the leveling screen quickly 6 times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig.18A).
2. Press the gear icon with "OPTIONS" (Fig. 18A).
3. The screen will show "SET UP: Zero Mode Press Enter" (Fig. 19).
4. Press the "Enter button" (Fig. 19A).
5. The touch panel will present options for further leveling of the trailer if needed. The screen will also state "ZERO POINT CALIBRATION - Press Enter to Set" (Fig. 20).
6. Press "ENTER" (FIG. 20A).
7. Screen will show "Zero Point Stability Check ... Please Wait" (Fig. 21), followed by "Zero Point Set" (Fig. 22).



Preventive Maintenance

1. For optimum performance, the system requires full battery current and voltage. The battery must be maintained at full capacity.
2. Check the terminals and other connections at the battery, the controller, and the jacks for corrosion, and loose or damaged connections.
3. Remove dirt and road debris from jacks as needed.
4. If jacks are down for extended periods, it is recommended to spray exposed leveling jack rods with a silicone lubricant every three months for protection. If the trailer is located in a salty environment, it is recommended to spray the rods every four to six weeks.

GROUND CONTROL® TT LEVELING SYSTEM

LEVELING AND STABILIZATION

System Information

With the push of a button, the Ground Control® TT Leveling System levels and stabilizes your travel trailer quickly and accurately, enhancing your overall camping experience. It can take up to an hour to get a travel trailer level with manual jacks, chocks and wedges. The Ground Control TT Leveling System saves you time by leveling and stabilizing the travel trailer in a matter of minutes, and prevents annoying rocking and swaying at the campsite.

Features:

1. Saves time setting up camp
2. Fast, accurate automatic electric leveling
3. Auto re-hitch memory function
4. Level travel trailers function more efficiently than non-level ones

Safety Information

WARNING

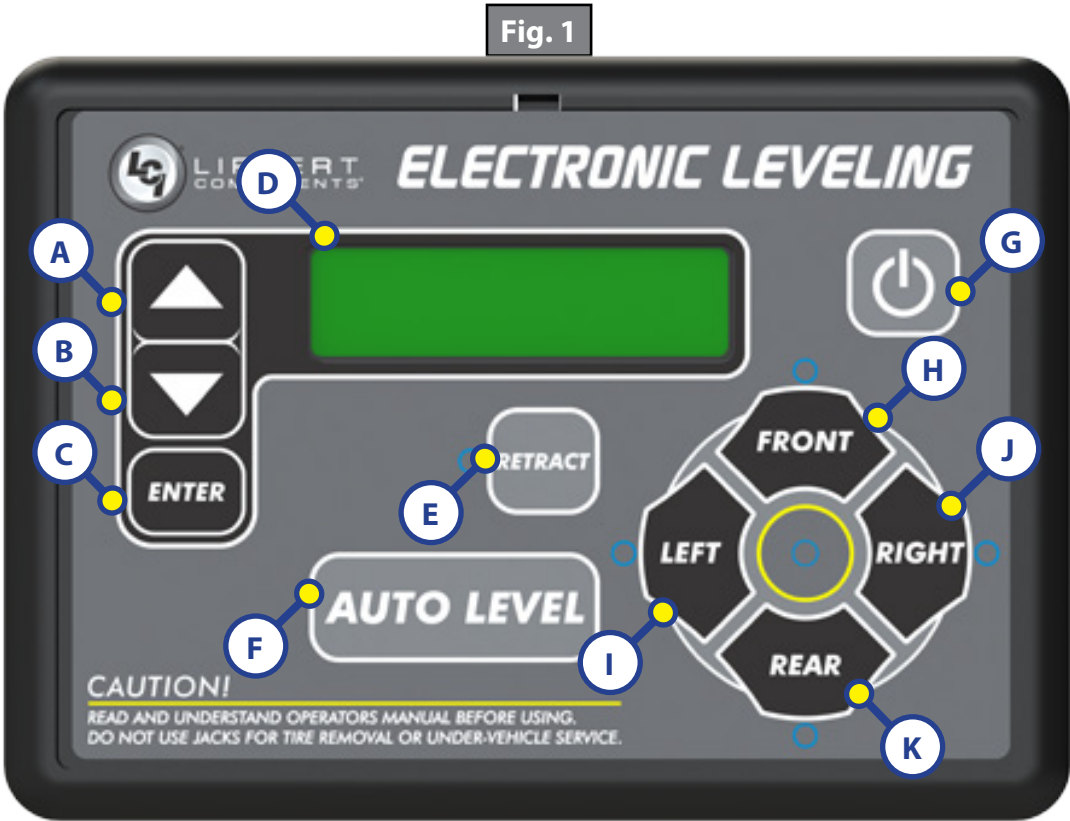
Failure to act in accordance with the following may result in death or serious personal injury.

1. The use of the Ground Control TT Leveling System to support the travel trailer for any reason other than which it is intended is prohibited by Lippert's limited warranty.
2. The Ground Control TT Leveling System is designed as a "leveling" system only and should not be used to provide service for any reason under the travel trailer, such as changing tires or servicing the leveling system.
3. Any attempts to change tires or perform other service while travel trailer is supported by the Ground Control TT Leveling System could result in damage to the travel trailer and/or cause death or serious injury.

CAUTION

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

Touch Pad Diagram



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	LCD Display - Displays procedures and results.
E	Retract - Places leveling system into retract mode.
F	Auto Level - Places leveling system into auto level mode.
G	Power Button - Turns leveling system on and off.
H	Front Jack Button - Activates tongue jack in standard mode - Activates front jacks in manual mode.
I	Left Jack Button - Activates left jacks in manual mode.
J	Right Jack Button - Activates right jacks in manual mode.
K	Rear Jack Button - Activates rear jacks in manual mode.

Operation

⚠ WARNING

Be sure to park the travel trailer on solid and level ground. Prior to operation, clear all jack landing locations of debris and obstructions. The locations should also be free of surface depressions and moisture. When parking the travel trailer on extremely soft surfaces, utilize load distribution pads under each jack.

⚠ CAUTION

People and pets should be clear of travel trailer while operating leveling system. Never lift the travel trailer completely off the ground. Lifting the travel trailer so the wheels are not touching the ground will create an unstable and unsafe condition.

Basic Jack Operation

The power tongue jack can be operated at any time using the buttons on the front of the tongue jack motor enclosure or by pressing the "FRONT" button (Fig. 1H) of the touch pad in standard mode.

The leveling jacks can only be extended when the touch pad is in manual mode. Once in manual mode, pressing the "FRONT" button (Fig. 1H) will extend both front jacks at the same time. By pushing the button combination of "FRONT" and "LEFT" (Fig. 1I), or "FRONT" and "RIGHT" (Fig. 1J) buttons, the individual front jacks can be extended. Pressing the "REAR" button (Fig. 1K) will extend both rear jacks at the same time. To extend individual rear jacks, press the button combination of "REAR" and "LEFT" (Fig. 1I), or "REAR" and "RIGHT" (Fig. 1J) buttons, depending on which jack needs to be operated. Pressing the "LEFT" button (Fig. 1I) will extend both the left front jack and the left rear jack. Pressing the "RIGHT" button (Fig. 1J) will extend both the right front jack and the right rear jack.

If the touch pad is put in the retract mode, which is indicated by the orange illuminated LED next to the "RETRACT" button (Fig. 1E), the front jacks can be retracted together by pushing the "FRONT" button (Fig. 1H). Individual front jacks can be retracted by pushing the combination of the "FRONT" and "LEFT" (Fig. 1I), or "FRONT" and "RIGHT" (Fig. 1J) buttons. Similarly, the rear jacks can be retracted together by pushing the "REAR" button (Fig. 1K), or individually by pushing the combination of the "REAR" and "LEFT" (Fig. 1I) or "REAR" and "RIGHT" (Fig. 1J) buttons. Pressing the "LEFT" button (Fig. 1I) will retract both the left front jack and the left rear jack. Pressing the "RIGHT" button (Fig. 1J) will retract both the right front jack and the right rear jack.

NOTE: If the leveling jacks will not operate individually using the method described above, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the travel trailer.

Dropping Off Travel Trailer

1. Park travel trailer on level ground.
2. Chock all tires.
3. Make sure battery power is on.
4. Disconnect any wires, chains, or sway control that may be equipped between the tow vehicle and travel trailer. Unlatch the travel trailer coupler.
5. Press and hold the "EXT" button on the tongue jack or press the "FRONT" button (Fig 1H) on the touch pad in standard mode to extend the tongue jack to the ground (Fig. 2A). Continue extending until the travel trailer coupler releases from the tow vehicle hitch.
6. Once the coupler is clear of the hitch, pull the tow vehicle away and park at a safe distance.

Fig. 2



Auto Leveling

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the travel trailer until the travel trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

1. After unhitching from the tow vehicle and parking the vehicle at a safe distance away from the travel trailer, locate the leveling touch pad on the unit (Fig. 3). It will usually be in a side compartment near the front of the travel trailer.
2. Press the "ON/OFF" button (Fig. 3A) and then press "AUTO LEVEL" (Fig. 3B).



Auto Level Sequence

NOTE: Sequence may vary slightly based on the height of the travel trailer coupler prior to leveling.

1. When the Auto Level Sequence begins, the front of the travel trailer will seek a position near a level state using a combination of the tongue jack and front jacks. During this sequence the tongue jack will partially retract.
2. The rear jacks will then extend and complete a rear leveling sequence.
3. When the rear leveling sequence has been completed, the travel trailer will adjust front to back and side-to-side.
4. Each jack will perform a final grounding touch.
5. Once this has been completed the LCD screen will read "AUTO LEVEL SUCCESS."
6. The LED screen will then read "READY" followed by the current battery voltage. The green LED in the center of the four leveling jack buttons will be illuminated (Fig. 4A).



NOTE: If the AUTO LEVEL sequence does not perform as described above, place the system in manual mode and test that the jacks operate correctly by pushing their coordinating buttons on the touch pad; i.e. "FRONT" button operates only the front jacks, etc. If the jack functions are incorrect, check that the correct jack wiring harnesses are plugged into the correct ports on the controller.

Reconnecting To Tow Vehicle

1. Press the "ON/OFF" button to turn panel on (Fig. 5B).
2. Press the "UP ARROW" (Fig. 5A) button on the touch pad until "AUTO HITCH HGT, ENTER TO BEGIN" is displayed on the LCD. Press the "ENTER" button (Fig. 5C).
3. The rear leveling jacks will retract, followed by the tongue jack extending to the ground, then followed by the front leveling jacks retracting. The tongue jack will then adjust the height of the front of the travel trailer coupler to the point at which the "AUTO LEVEL" button was most recently pressed.
4. Press the "ON/OFF" button to turn system off (Fig. 5B).
5. Back the tow vehicle into position to align the tow vehicle hitch and travel trailer coupler with each other.
6. Press and hold "RET" on the tongue jack to retract the tongue jack (Fig. 6A) until the coupler sets into position on top of the tow vehicle hitch.
7. Latch the tow vehicle hitch and connect any wires, chains, or sway control that may be equipped between the tow vehicle and travel trailer.
8. Press the "RET" button (Fig. 6A) twice and then press and hold the "RET" button for 3-5 seconds to engage the tongue jack's auto retract feature.

NOTE: The "RET" button (Fig. 6A) can also be pressed and held until the jack is fully retracted.



Troubleshooting

Manual Override

⚠ CAUTION

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

NOTE: For ease of manual override it is recommended to unplug the power harness to the motor prior to performing the manual override procedure.

NOTE: Use of a 12-18 volt cordless screw gun or pneumatic screw gun is acceptable to manually override the jacks. Do not use an impact screw gun to perform any of the override procedures, as this may damage the motor. If manual override is necessary there are two options for each style of jack.

Front Jack-Jack Motor Override:

Tools needed: 3/8" drive ratchet and extension (no socket)

1. Find the port on the top of the jack motor (Fig. 7A).
2. Remove the rubber plug (Fig. 8A).
3. Insert the 3/8" drive into the port.
4. Turn the override until the jack extends or retracts to desired position.

Front Jack-Jack Manual Override Nut:

Tools needed: 3/4" socket wrench

1. Locate the manual override nut (Fig 7B).
2. Place 3/4" socket wrench over the manual override nut (Fig. 9A) and turn the override nut until the jack extends or retracts to desired position.

Fig. 7



Fig. 8

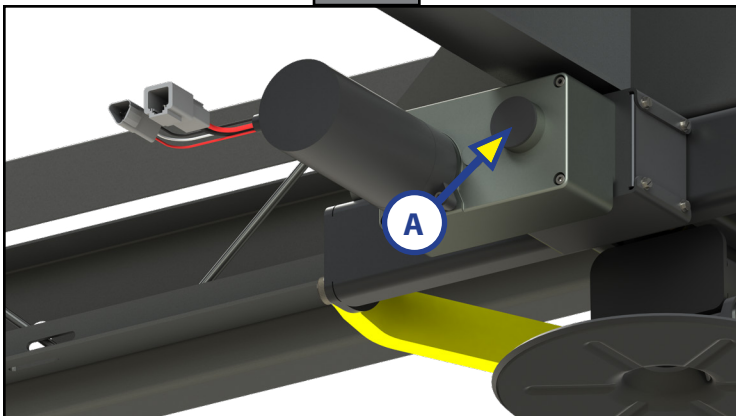
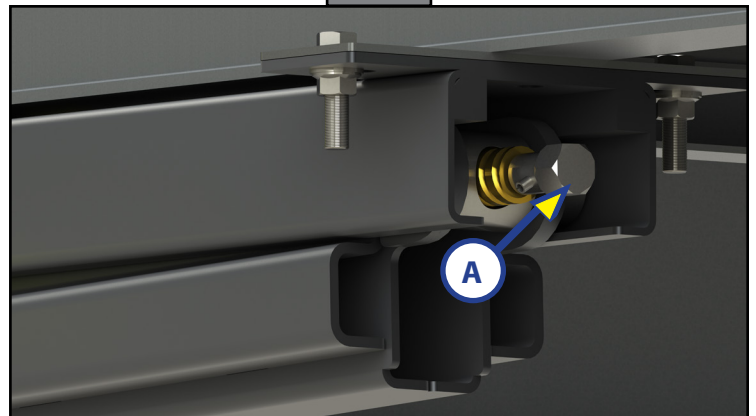


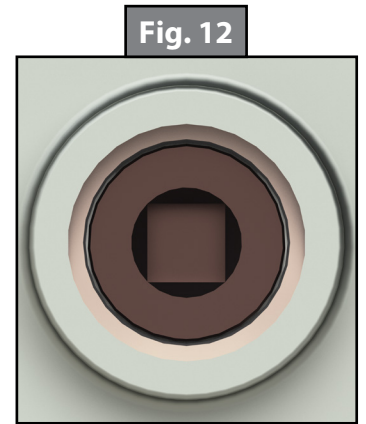
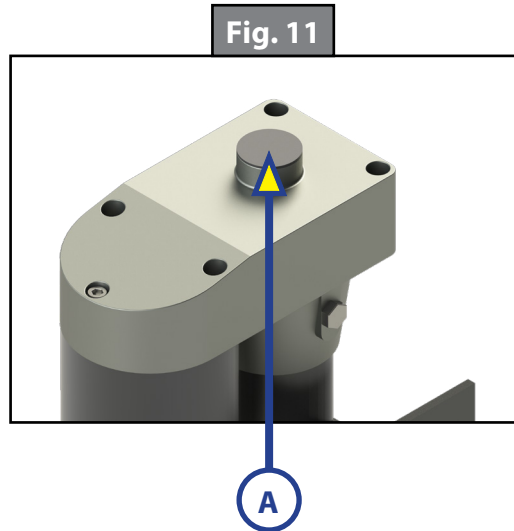
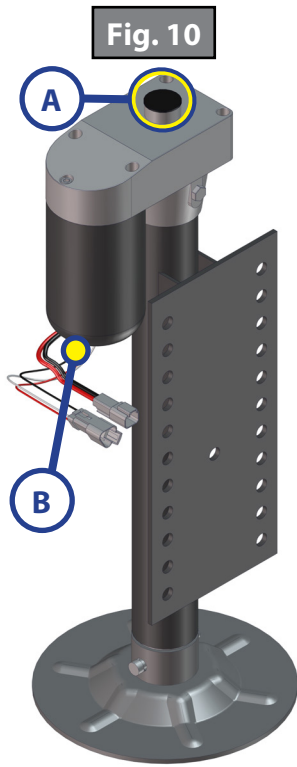
Fig. 9



Rear Jack - Top of Jack Motor Override:

Tools needed: 3/8" drive ratchet and extension (no socket)

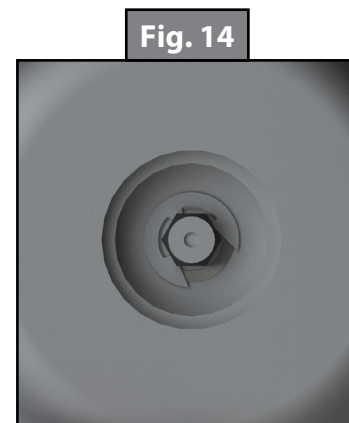
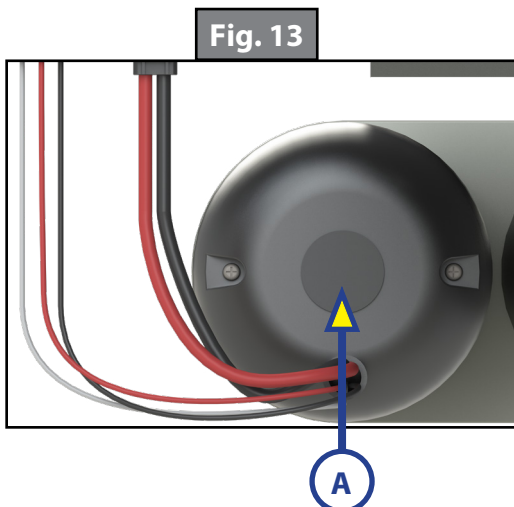
1. Find the port on the top of the jack motor (Fig. 10A).
2. Remove the rubber plug (Fig.11).
3. Insert the 3/8" drive ratchet into the port (Fig. 12).
4. Turn the override until the jack extends or retracts to desired position.



Rear Jack - Bottom of Jack Motor Override:

Tools needed: 3/8" drive ratchet and extension, 5/16" socket

1. Find the port on the bottom of the jack motor (Fig. 10B).
2. Remove the rubber plug (Fig. 13).
3. Insert the 5/16" socket into the port (Fig. 14).
4. Turn the override until the jack extends or retracts to desired position.



Touch Pad Error Codes

NOTE: To clear an error from the touch pad, repair or otherwise correct the issue, then press "ENTER." If the error is still present, the message will be displayed again.

Touch Pad Error Codes		
LCD Message	What's Happening?	What Should Be Done?
****ERROR**** Excess Angle	Excessive angle reached during auto operation.	Relocate the travel trailer.
****ERROR**** Excessive Angle	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."
****ERROR**** Feature Disabled	Hitch recognition requested but no hitch height set.	Perform "AUTO LEVEL" sequence to establish hitch height.
	Zero point not set.	Set zero point.
****ERROR**** Low Voltage	Battery voltage dropped below 9.5V.	Check wiring - repair or replace.
		Test battery voltage under load - charge or replace.
****ERROR**** Out Of Stroke	Jack has reached maximum stroke length and is unable to lift.	Check disposition of jacks. Relocate the travel trailer.
	Unexpected high amp current stall.	Check jacks in manual mode or perform manual override procedure. Repair or replace as needed.
		Check for bent or damaged jacks. Repair or replace as needed.
****ERROR**** External Sensor	Bad connection or wiring from the controller to the leveling sensor.	Replace or repair connection to leveling sensor.
****ERROR**** Jack Timeout	Time limit exceeded for the requested auto operation.	Check disposition of jacks.
****ERROR**** Auto Level Fail	Unable to auto level due to uneven ground.	Check disposition of jacks. Relocate the travel trailer.
	Unable to auto level due to zero point being set incorrectly.	Reset zero point.
****ERROR**** Comm Error	Communication between controller and touch pad has been lost.	Check harness for proper connections or damage. Replace if necessary.
****ERROR**** Bad Calibration	Sensor calibration values are out of range.	Replace controller.
ABORT Function Aborted	The user pressed a button on the touch pad during an automatic operation.	Restart automatic operation and then refrain from pressing any buttons on the touch pad.
****ERROR**** Hall Power Short	Short circuit detected in one of the hall effect power wires.	Test for short and repair or replace.

Special Jack Error Codes

To clear one of the error codes listed below:

1. Correct or otherwise repair the issue (see the table below).

NOTE: In order to clear the special jack error code the jacks need to be "homed." In order to "home" jacks, each jack **MUST** be able to retract a minimum of 6 inches.

2. Extend all jacks to reach the 6 inches of minimum retract needed.
 - A. Press "FRONT" (Fig. 1G) to extend the front jacks (if required).
 - B. Press "REAR" (Fig. 1J) to extend the rear jacks (if required).
3. Press and hold the retract button until all of the jacks begin to retract. The jacks will retract until they reach the hard current limit.
4. The jacks are now "homed" and the special jack error code will be cleared.

NOTE: If the jacks do not retract, an error should display on the touch pad screen. This is typically caused by wiring interruption.

Special Leveling Jack Error Codes		
LCD Message	What's Happening?	What Should Be Done?
ERROR LF Jack RF Jack LR Jack RR Jack Tongue Jack	Error at a specific jack (left front, right front, left rear, right rear, tongue jack). <ul style="list-style-type: none">• Hall signal issue (open, short, malfunction or loss of communication)• Open or short circuit between controller and motor.	Check harness connections at controller and at jack. Check harness for damage. Check fuses at controller. Repair or replace as necessary.

System Settings

Zero Point Calibration

The “Zero Point” is the programmed point that the travel trailer will return to each time the Auto Level feature is used. The “Zero Point” must be programmed prior to using the Auto Level feature to ensure the proper operation of the system.

NOTE: Prior to starting this procedure, double check all connections on the controller, jacks, and touch pad.

1. In manual mode run the jacks to level the travel trailer. This is best achieved by placing a level in the center of the travel trailer and leveling it both front to back and then side to side. (See “Basic Jack Operation” for instructions on how to manually operate the system).
2. Once the travel trailer is level, turn off the touch pad.
3. With the touch pad off, press and release the “FRONT” button (Fig. 1H) five (5) times and then press and release the “REAR” button (Fig. 1K) five (5) times.
4. The touch pad will flash and beep and the display will read “ZERO POINT CALIBRATION ENTER to set, Power to Exit” (Fig. 15).
5. To set the current position as the zero point, press the “ENTER” button (Fig. 1C).
6. LCD display will read “Zero point stability check” (Fig. 16).
7. LCD display will read “Zero point set successfully” once process is complete (Fig. 17).
8. The system will set this point as its level state and the touch pad will turn off.

Fig. 15

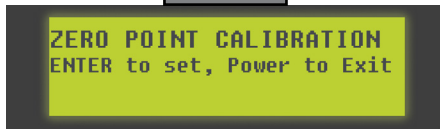


Fig. 16

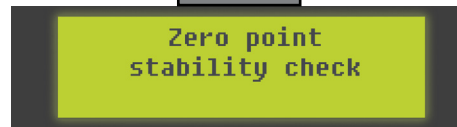
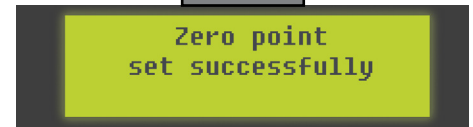


Fig. 17



Preventive Maintenance

1. For optimum performance, the system requires full battery current and voltage. The battery must be maintained at full capacity.
2. Check the terminals and other connections at the battery, the controller, and the jacks for corrosion, and loose or damaged connections.
3. Remove dirt and road debris from jacks as needed.
4. If jacks are down for extended periods, it is recommended to spray exposed leveling jack rods with a silicone lubricant every three months for protection. If the coach is located in a salty environment, it is recommended to spray the rods every four to six weeks.

GROUND CONTROL® TT LEVELING ONECONTROL™ TOUCH PANEL

LEVELING AND STABILIZATION

System Information

With the push of a button, the Ground Control® TT Leveling System levels and stabilizes your travel trailer quickly and accurately, enhancing your overall camping experience. It can take up to an hour to get a travel trailer level with manual jacks, chocks and wedges. The Ground Control® TT Leveling System saves you time by leveling and stabilizing the travel trailer in a matter of minutes, and prevents annoying rocking and swaying at the campsite.

Features:

1. Saves time setting up camp
2. Fast, accurate automatic electric leveling
3. Auto re-hitch memory function
4. Level travel trailers function more efficiently than non-level trailers.

The controllers for this system are automatic leveling controls and interface to the Ground Control TT Leveling system to level the trailer. The system utilizes one main control board and a separate waterproof remote level sensor to measure and manage level point, and can be operated from several user interface devices, including:

- Auto Leveling Control Touch Pad - Mounted outside the trailer within view of the hitch.
- myRV® OneControl™ Touch Panel (OCTP) - Mounted on a wall inside the living space of the trailer or in a trailer compartment.
- myRV® OneControl™ Leveling App - The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users. iTunes®, iPhone® and iPad® are registered trademarks of Apple Inc. Google Play™ and Android™ are trademarks of Google Inc.
- Linc® Remote Control - Optional.

NOTE: The Ground Control® TT Leveling is specific to travel trailer applications only.

There are four different options for the controller depending on which jacks are installed:

- A. Install SE Green Controller (P/N 433633) for a four 3K C-Jack configuration using Auto Leveling Control Touch Pad and OneControl Touch Panel.
- B. Install Red Controller (P/N 695502) for a two 2K C-Jack and two 3K C-Jack configuration using Auto Leveling Control Touch Pad and OneControl Touch Panel.
- C. Install Purple Controller (P/N 695501) for a two 2K C-Jack and two 5K Jack configuration using Auto Leveling Control Touch Pad and OneControl Touch Panel.
- D. Install HD Blue Controller (P/N 433632) for a two 3K C-Jack and two 5K Jack configuration using Auto Leveling Control Touch Pad and OneControl Touch Panel.

Safety Information

WARNING

Failure to act in accordance with the following may result in death or serious personal injury. The use of the Ground Control® TT Leveling system to support the trailer for any reason other than which it is intended is prohibited by Lippert's limited warranty. The Lippert leveling system is designed as a "leveling" system only and should not be used to provide service for any reason under the trailer such as changing tires or servicing the leveling system. Any attempts to change tires or perform other service while trailer is supported by the Ground Control TT Leveling system could result in damage to the trailer and/or cause death or serious injury.

⚠ CAUTION

People and pets should be clear of the trailer while the leveling system is operated. Never lift the trailer completely off the ground. Lifting the trailer so the wheels are not touching the ground will create an unstable and unsafe condition.

Prior to Operation

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

1. **Make sure the trailer is parked on solid and level ground. The locations should also be free of surface depressions and moisture.**
2. Make sure all persons, pets, and property are clear of the trailer while the leveling system is in operation.
3. Make sure battery(ies) are fully charged at a minimum of 12V DC.

Operation - Power Tongue Jack

⚠ WARNING

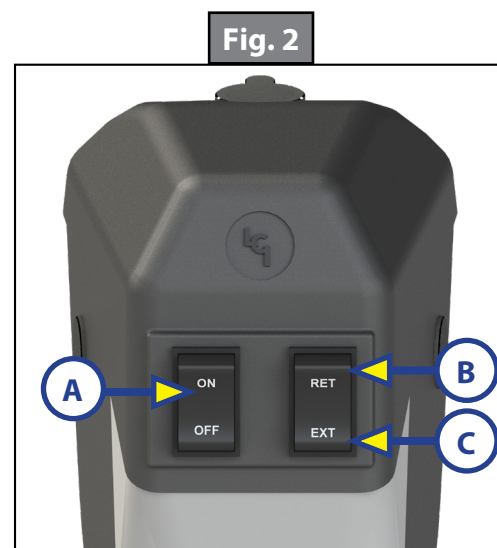
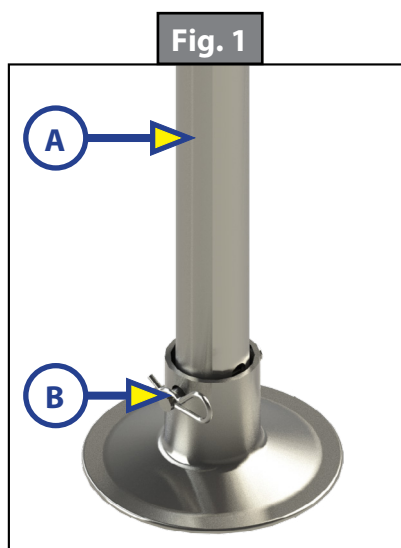
When parking the trailer on extremely soft surfaces, utilize load distribution pads under each jack.

NOTE: The "ON" and "OFF" switch (Fig. 2A) controls the Power Tongue Jack's light only. If left on for an extended period of time, the light will drain the trailer's battery.

NOTE: The Power Tongue Jack is designed for vertical movement of the trailer only.

Unhitching From A Tow Vehicle

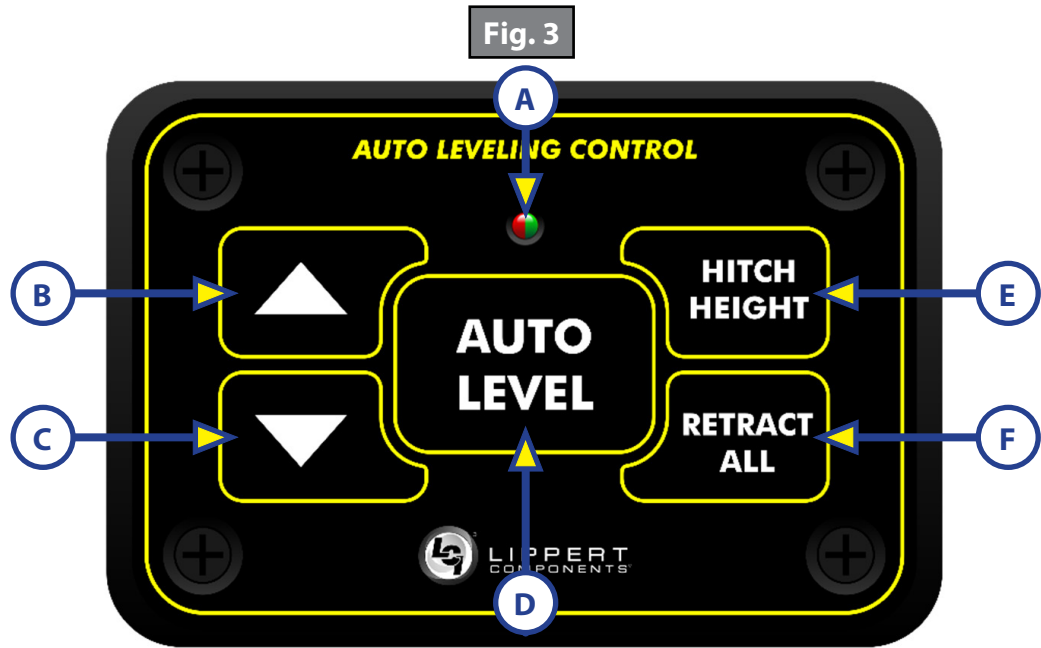
1. Prior to unhitching from the tow vehicle, make sure the trailer is parked on a level surface and chock the tires of the trailer.
2. Make sure the footpad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin (Fig. 1B).
3. Disconnect any wires, chains, or sway control that may be equipped between the tow vehicle and the trailer. Unlatch the trailer coupler.
4. Push "EXT" (Fig. 2C) two times holding on the third time approximately five seconds, then release the switch. The Power Tongue Jack will automatically extend to the ground.
5. Push "EXT", again, until the coupler clears the hitch ball.
6. Move the tow vehicle away from the trailer.
7. Push "RET" (Fig. 2B) as needed to return the front of the trailer to level or use the Auto Level function on the Touch Pad (Fig. 3D) to level the trailer. See "Auto Level" in "Auto Leveling Control Touch Pad" section.



Reconnecting to Tow Vehicle

- 1. Chock the tires of the trailer.
- 2. Press "EXT" (Fig. 2C) if needed to allow the coupler to clear the hitch ball.
- 3. Push "RET" (Fig. 2B) to retract the Power Tongue Jack until the coupler properly mounts the hitch ball and the leg.
- 4. Latch the tow vehicle hitch and connect any wires, chains or sway control that may be equipped between the tow vehicle and trailer.
- 5. Press "RET" two times and hold on the third time approximately 5 seconds until the Power Tongue Jack pauses. Let go of the switch and the Power Tongue Jack will automatically retract.
- 6. Be sure the leg of the Power Tongue Jack (Fig. 1A) is fully retracted prior to moving the tow vehicle.

Touch Pad Diagram - Auto Leveling Control Touch Pad



Callout	Description	
A	Red/Green LED - Indicates the status of the system.	
B	Up Arrow - Extends Power Tongue Jack .	To turn on the touch pad, press the UP and DOWN arrow buttons at the same time.
C	Down Arrow - Retracts Power Tongue Jack.	
D	AUTO LEVEL Button - Places leveling system into auto level mode.	
E	HITCH HEIGHT Button - Initiates the Hitch Recognition feature.	
F	RETRACT ALL Button - Places leveling system into full retract mode. Power Tongue Jack does not retract.	

Operation - Auto Leveling Control Touch Pad

Basic Power Tongue Jack Operation

- 1. To turn on the touch pad, press both "UP" and "DOWN" arrows (Fig. 3B and 3C) at the same time. The green indicator LED (Fig. 3A) will turn "On".
- 2. Press the "UP" arrow (Fig. 3B) to extend the Power Tongue Jack and lift the front of trailer to take the weight of the trailer off of the hitch.
- 3. Press the "DOWN" arrow (Fig. 3C) to retract the Power Tongue Jack.

Unhitching From A Tow Vehicle

1. Prior to unhitching from the tow vehicle, make sure the trailer is parked on a level surface and chock the tires of the trailer.
2. Make sure the footpad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin.
3. To turn on the touch panel, press both "UP" and "DOWN" arrows (Fig. 3B and 3C) at the same time. The green indicator LED (Fig. 3A) will turn "On".

NOTE: The touch pad will remain "On" as long as the user is pressing buttons. The touch pad will time out after five minutes without use.

4. Press the "UP" arrow (Fig. 3B) to extend the Power Tongue Jack and lift the front of trailer to take the weight of the trailer off of the hitch.
5. Uncouple the trailer and disconnect the electrical wire harness from the tow vehicle.
6. Pull tow vehicle away from the trailer and park at a safe distance.

Auto Level

1. Prior to auto leveling, make sure the trailer is unhitched from the tow vehicle and the tow vehicle is parked a safe distance away from the trailer.
2. Press both "UP" and "DOWN" arrows (Fig. 3B and 3C) at the same time if the green indicator LED is not "On".
3. Press "AUTO LEVEL" (Fig. 3D).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

NOTE: Pressing any button during an Auto Level sequence will abort the auto leveling cycle.

NOTE: Auto Leveling sequence may vary slightly based on the height of the trailer coupler prior to leveling.

4. When the Auto Level sequence begins:
 - A. The system checks that the rear jacks are retracted.
 - B. The Power Tongue Jack may adjust depending on the orientation of the trailer.
 - C. Front jacks will extend until movement of the trailer is sensed.
 - D. The Power Tongue Jack will then retract.
 - E. The front jacks will extend/retract near level.
 - F. Rear jacks will extend and ground.
 - G. Trailer will level front-to-rear and then side-to-side.
 - H. The Auto Level sequence will ground all jacks to ensure all foot pads are on the ground.
 - I. The Auto Leveling sequence is complete when the indicator light turns solid green.

NOTE: If the "AUTO LEVEL" sequence does not perform as described, locate the OneControl Touch Panel, or use the OneControl App, to place the system in Manual Mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or OneControl App; e.g., "Front" button operates only the front jacks, etc. See "Operation - OneControl Touch Panel" or "Operation - Linc Remote" section.

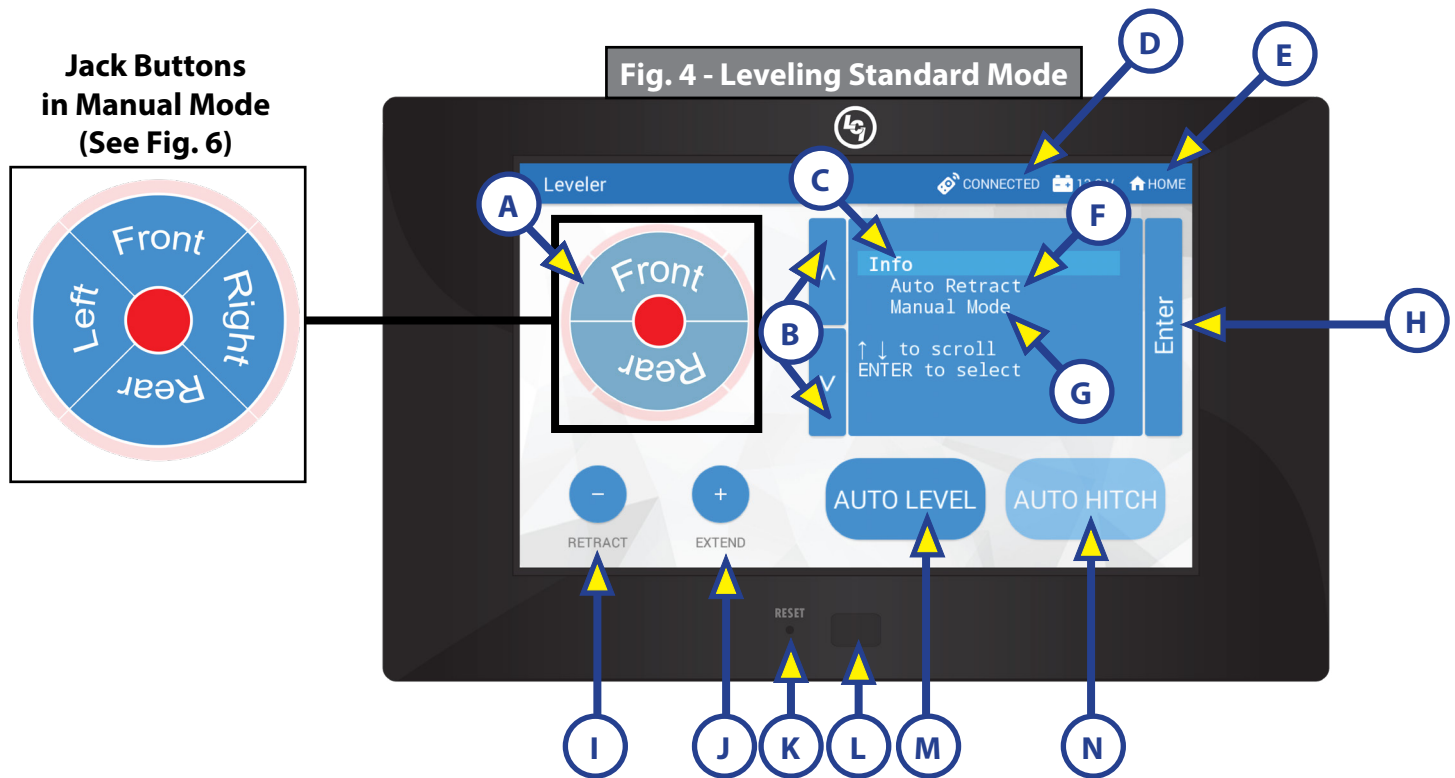
Hitch Recognition

1. To turn on the Auto Leveling Control Touch Pad, press both "UP" and "DOWN" arrows (Fig. 3B and 3C) at the same time. The green indicator LED (Fig. 3A) will turn "On".
2. Press "HITCH HEIGHT" (Fig. 3E).
 - J. Rear jacks will retract.
 - K. The Power Tongue Jack will extend to the ground.
 - L. The front leveling jacks will retract.
 - M. The tongue jack will then adjust the height of the front of the trailer coupler to the point at which the "AUTO LEVEL" button was most recently pressed.
1. The front of the trailer will raise to the height where the auto level sequence was started.

NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks, but will not retract the Power Tongue Jack to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

2. Back the tow vehicle into position to align the tow vehicle hitch and trailer coupler with each other.
3. Press and hold the "DOWN" (Fig. 3C) arrow to retract the tongue jack until the coupler sets into position on top of the tow vehicle hitch.
4. Latch the tow vehicle hitch and reconnect any wires, chains or sway controls that may be equipped between the tow vehicle and trailer.
5. Press and hold the "DOWN" (Fig. 3C) arrow until the Power Tongue Jack is fully retracted.
6. Press "RETRACT ALL" (Fig. 3F) button. System will immediately retract all jacks.

Touch Panel Diagram - OneControl Touch Panel



Callout	Description
A	Jack Buttons - Select Front, Rear, Right and Left jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. In Standard Mode (Fig. 4), only the Power Tongue Jack can be operated and rear jacks can only be retracted. In Manual Mode (Fig. 6), only front and rear jacks are available to be operated (no Power Tongue Jack operation available).
B	UP and DOWN Arrows - Scrolls through options on screen.
C	Info - Displays system information, e.g. angle, jack stroke or software version.
D	Connected Icon - Press 6 times to program zero point/wireless configurations.
E	HOME Icon - Returns screen to home page.
F	Auto Retract - Enters Auto Retract mode to retract all jacks. Power Tongue Jack does not retract.
G	Manual Mode - Enters Manual Mode to manually operate jacks.
H	Enter - Push to select various modes.
I	RETRACT - Retracts jacks in several modes. Jacks available will be highlighted in blue.
J	EXTEND - Extends jacks in several modes. Jacks available will be highlighted in blue.
K	RESET - Resets to factory default.
L	Power Button - Turns touch panel on and off.
M	AUTO LEVEL- Starts the Auto Level sequence.
N	AUTO HITCH - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - OneControl Touch Panel

Basic Jack Operation In Standard Mode

To reach Standard Mode (Fig. 4) for leveling:

1. Power on the OneControl Touch Panel (Fig. 4L).
2. Press the "Leveling" icon (Fig. 5A).

NOTE: On previous versions of the One Control Touch Panel, the screen will open to "myRV." Press MyRV Control Panel. The screen will show multiple function icons: choose "Leveler."

3. The screen will show the system menu (Fig. 4) for Standard Mode. The Power Tongue Jack can be extended/retracted in Standard Mode. Front and rear jacks cannot be operated in standard mode.

Basic Jack Operation In Manual Mode

To reach Manual Mode (Fig. 6) for leveling:

1. While in Standard Mode (Fig. 4), use the arrows (Fig. 4B) to scroll to Manual Mode (Fig. 4G). Press "Enter" (Fig. 4H).
2. Front and rear jacks can be operated in Manual Mode. The Power Tongue Jack cannot be operated in Manual Mode.

Fig. 5

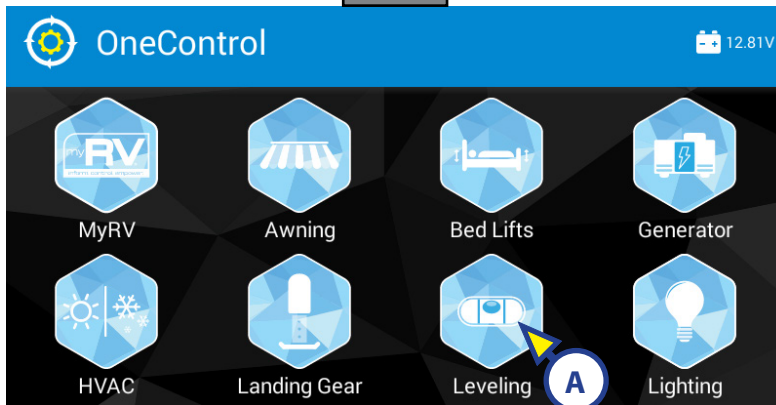
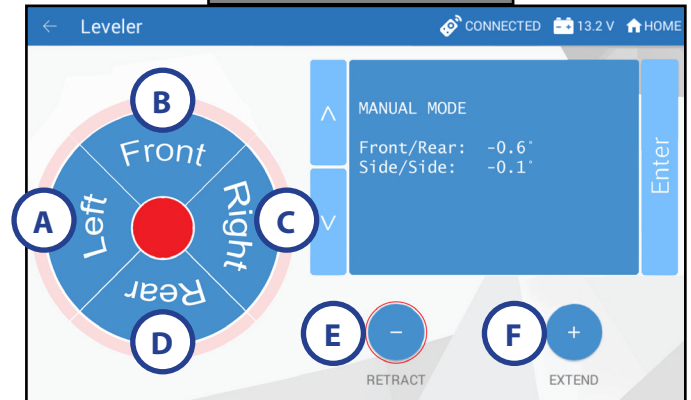


Fig. 6 Manual Mode



OneControl Touch Panel In Standard and Manual Modes

Standard Mode Features

- "EXTEND" (Fig. 4J) or "RETRACT" (Fig. 4I) and "FRONT" (Fig. 4A) extends or retracts the Power Tongue Jack.
- "AUTO LEVEL" (Fig. 4M) button starts the auto leveling sequence.
- "AUTO HITCH" (Fig. 4N) button starts the hitch recognition sequence when reconnecting to the tow vehicle.
- Use the "UP" or "DOWN" arrow (Fig. 4B) buttons to cycle through the menu screen options:
 - **Info:** Scroll to "Info" (Fig. 4C) and press "Enter" (Fig. 4H) button to display system information, e.g., angle, jack stroke or software version.
 - **Auto Retract:** Scroll to "Auto Retract" (Fig. 4F) and press "Enter" button to start the "Auto Retract" sequence, which will retract all jacks. The Power Tongue Jack does not retract.

Manual Mode: Scroll to "Manual Mode" (Fig. 4G) and press "Enter" button to start manual leveling process.

Manual Mode Features

Upon entering Manual Mode, a tutorial on operating the jacks will appear on the screen. Press "OK" to clear the tutorial. To delete the tutorial, click the "Don't show this again" box in the bottom right of the screen.

NOTE: The jacks operate in pairs. If at any time in manual mode the jacks operate individually, the Twist Protection Prevention System has been activated to prevent frame twist. The OneControl Touch Panel or OneControl App will display "Relieving frame twist." The jacks will resume operating in pairs when the potential frame twist has been relieved.

Press "EXTEND" (Fig. 6F) or "RETRACT" (Fig. 6E) and "Front" (Fig. 6B) to operate front jacks.

Press "Extend" or "Retract" and "Rear" (Fig. 6D) operate rear jacks.

Press "Extend" or "Retract" and "Right" (Fig. 6C) operate right jacks.

Press "Extend" or "Retract" and "Left" (Fig. 6A) operate left jacks.

NOTE: To operate jacks individually, press "EXTEND" or "RETRACT" then press the "Left" (Fig. 6A) or "Right" (Fig. 6C) button while simultaneously pressing the "Front" (Fig. 6B) or "Rear" button (Fig. 6D), depending on which jack needs to be operated.

NOTE: If the jacks will not operate individually as intended, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the trailer.

Unhitching From Tow Vehicle

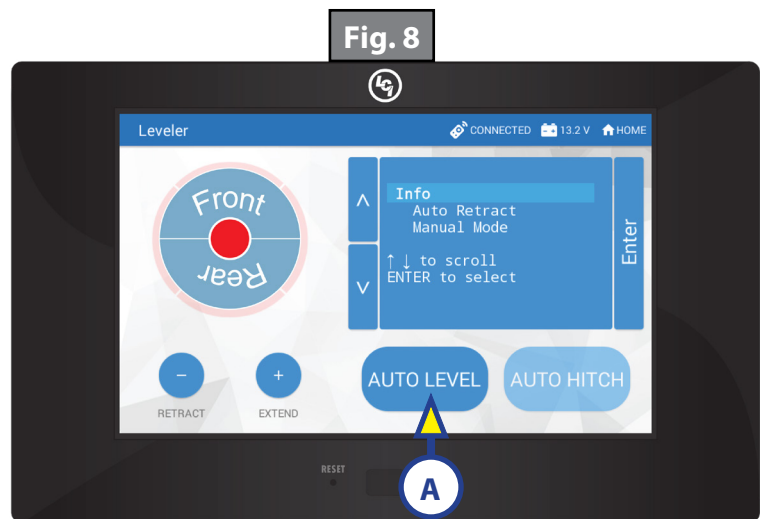
1. Before unhitching the trailer, make sure trailer is parked on a level surface.
2. Make sure the ground surface under the Power Tongue Jack is firm and level.
3. Make sure the footpad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin.
4. Chock all tires of the trailer.
5. Disconnect any wires, chains, or sway controls that may be equipped between the tow vehicle and the trailer.
6. Unlatch the trailer coupler.
7. Press and hold the "EXT" button (Fig. 7A) on the Power Tongue Jack or press the "Front" button (Fig. 4A) on the OneControl Touch Panel in standard mode to extend the Power Tongue Jack until the footpad touches the ground and the coupler clears the hitch ball.
8. Once the coupler is clear of the hitch ball, move the tow vehicle a safe distance away from the trailer.

Auto Level

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the leveling process is complete. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

1. Follow steps 1-6 in "Unhitching From Tow Vehicle" section.
2. Use Power Tongue Jack to lift coupler off of hitch ball.
3. Move the tow vehicle a safe distance away from the trailer.
4. Press "AUTO LEVEL" button (Fig. 8A).

NOTE: Pressing any button on the touch panel will "ABORT" the auto leveling cycle during an Auto Level sequence.



Auto Level Sequence

NOTE: Sequence may vary slightly based on the height of the trailer coupler prior to leveling.

5. When the Auto Level Sequence begins, it will make sure that the rear jacks are retracted first.
6. The Power Tongue Jack will ground.
7. Front jacks will lower close to level.
8. Rear jacks will deploy and ground.
9. Trailer will level front-to-rear and then side-to-side.
10. The Auto Level Sequence will ground all leveling jacks to ensure all foot pads are on the ground, then the display will show complete.

NOTE: Step 5 may repeat several times, if the controller deems necessary.

If the "AUTO LEVEL" sequence does not perform as intended, place the system in Manual Mode. Test that the jacks operate correctly by pushing their corresponding buttons on the touch panel; e.g., "Front" button only operates the front jacks.

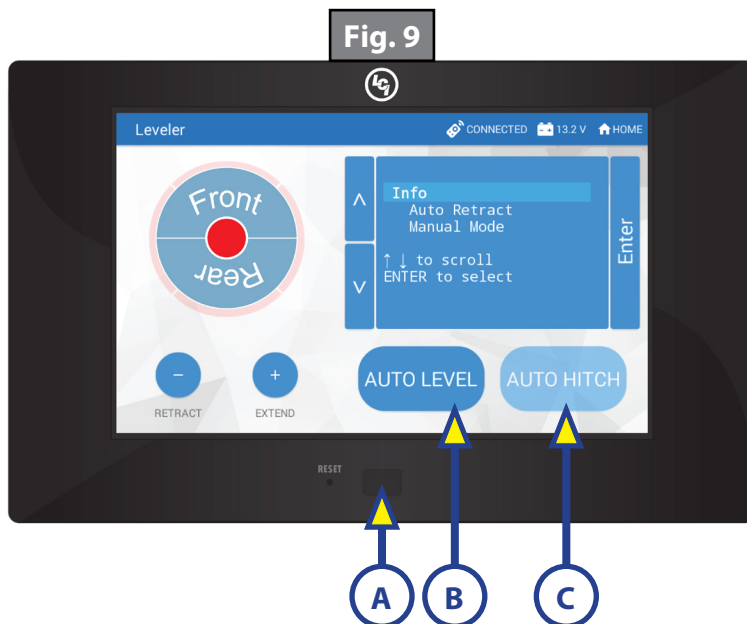
Hitch Recognition

1. Press the "On/Off" button (Fig. 9A) to turn the touch panel "On".
2. Press "AUTO HITCH" (Fig. 9C) button to retract rear jacks.

NOTE: The rear leveling jacks will retract, followed by the tongue jack extending to the ground, then followed by the front leveling jacks retracting. The tongue jack will then adjust the height of the front of the trailer coupler to the point at which the "AUTO LEVEL" button (Fig. 9B) was most recently pressed.

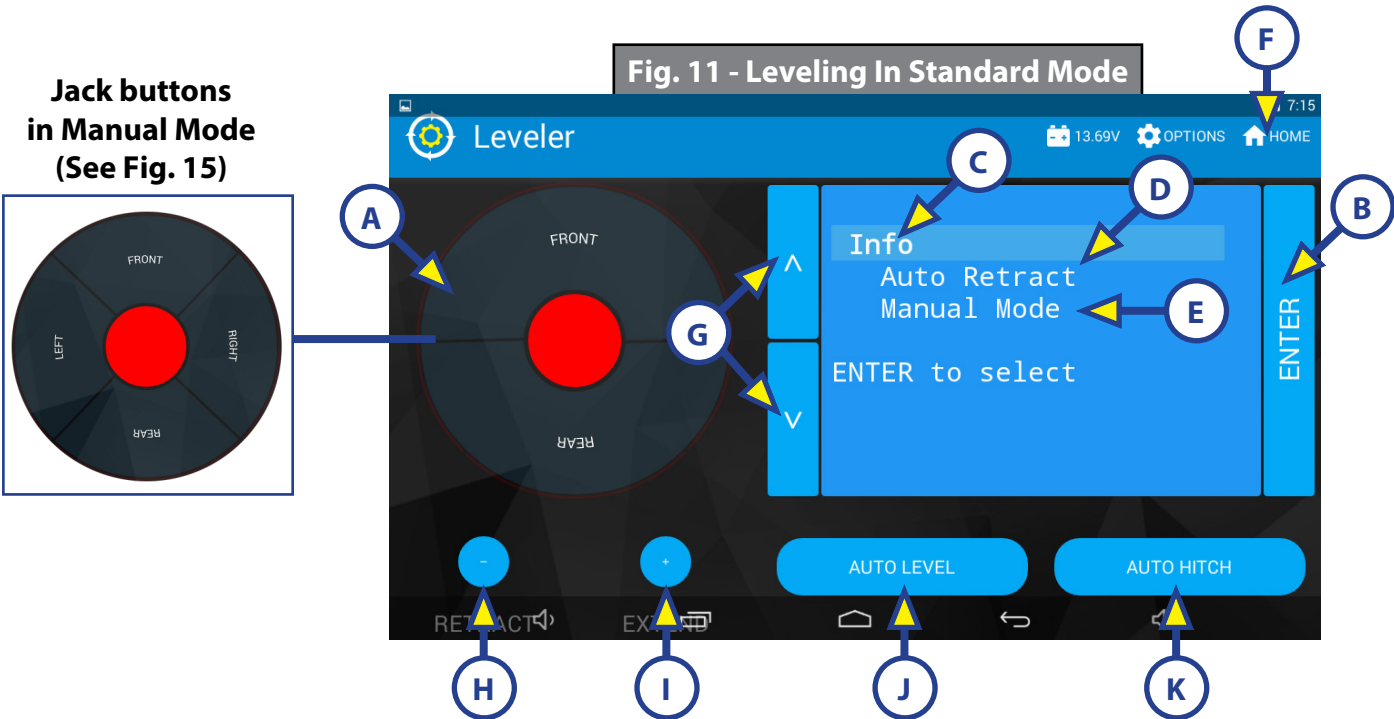
3. Press the "On/Off" button (Fig. 9A) to turn the touch panel "Off".
4. Back the tow vehicle into position to align the tow vehicle's hitch with trailer's coupler.
5. Press and hold "RET" button (Fig. 10A) on the tongue jack to retract the Power Tongue Jack until the coupler sets into position on top of the tow vehicle hitch.
6. Latch the tow vehicle hitch and reconnect any wires, chains or sway control that may be equipped between the tow vehicle and trailer.
7. Press the "RET" button (Fig. 10A) twice, then press and hold the "RET" button for 3-5 seconds to engage the tongue jack's Auto Retract feature.

NOTE: To utilize the Power Tongue Jack for the hitching process, see "Operation - Power Tongue Jack" section.



Touch Panel Diagram - OneControl App from myRV

NOTE: The OneControl Leveling App is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.



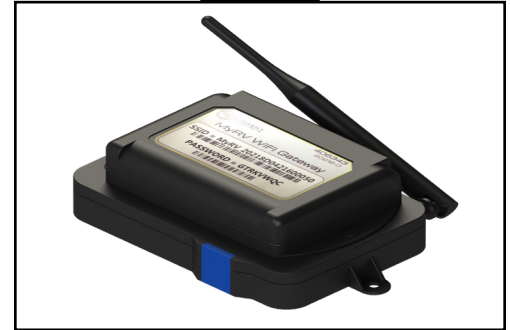
Callout	Description
A	Jack Buttons - Select FRONT, REAR, RIGHT and LEFT jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. Only the Power Tongue Jack can be operated in Standard Mode (Fig. 11). In Manual Mode (Fig. 15), all jacks are available to be operated (no Power Tongue Jack operation available.)
B	ENTER - Push to activate various modes.
C	Info - Displays system information, e.g., angle, jack stroke, software version.
D	Auto Retract - Enters Auto Retract mode to retract all jacks. Power Tongue Jack does not retract.
E	Manual Mode - Enters Manual Mode to manually operate jacks.
F	HOME Icon - Returns screen to home page.
G	Up and Down Arrows - Scroll through options on screen.
H	RETRACT - Retracts jacks in several modes. Jacks available will be highlighted in blue.
I	EXTEND- Extends jacks in several modes. Jacks available will be highlighted in blue.
J	AUTO LEVEL - Starts the Auto Level sequence.
K	AUTO HITCH - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - OneControl App from myRV

Accessing the OneControl App

1. Make sure there is power to the trailer's wireless network.
2. Navigate to the device's (smart phone, tablet, etc.) wifi settings. Turn wireless feature on and connect to the myRV wireless network.
 - A. If this is the first time connecting to the myRV wireless network, a password will be required.
 - B. The password is located on the trailer's wifi hub (Fig. 12).
3. Open the OneControl application on the compatible device.
 - C. If the device states "Unresolved Network Connection," retry connecting to the myRV wireless network.
 - D. Wait for the connection to resolve and display "Connected" under the myRV wireless connection.
4. The application will request the user to "Agree" to an End User License Agreement (EULA).
 - E. Create a 4-digit Personal Identification Number (PIN).
 - F. Enter the PIN when prompted by the "Re-enter PIN to confirm." command.
5. On "Initial Setup", choose "myRV" (Fig.13A).
6. The OneControl app will now display all functions (Fig. 14).

Fig.12



Basic Jack Operation In Standard Mode

To reach Standard Mode (Fig. 11) for leveling:

1. Power on the OneControl Touch Panel App. See "Accessing the OneControl App," steps 3-5.
2. Press the "Leveler" icon (Fig. 14A).
3. The screen will show the system menu (Fig. 11) for Standard Mode. The Power Tongue Jack can be extended/retracted in Standard Mode. Front and rear jacks cannot be operated in Standard Mode.

Fig. 13

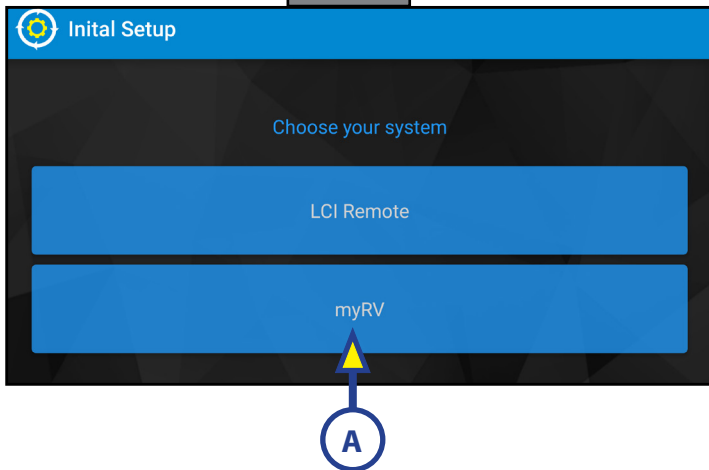
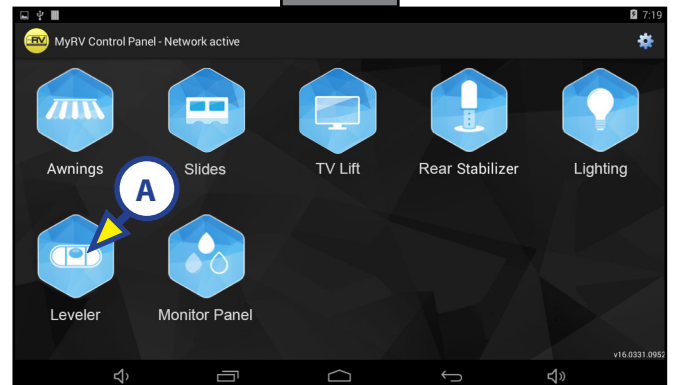


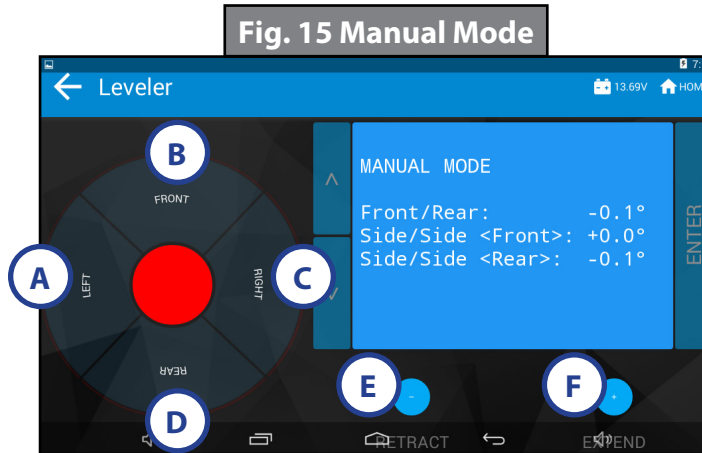
Fig.14



Basic Jack Operation In Manual Mode

To reach Manual Mode (Fig. 15) for leveling:

1. While in Standard Mode (Fig. 11), use the arrows (Fig. 11G) to scroll to "Manual Mode" (Fig. 11E). Press "ENTER" (Fig. 11B).
2. Front and rear jacks can be operated in Manual Mode. The Power Tongue Jack cannot be operated in Manual Mode.



OneControl Touch Panel App In Standard and Manual Modes

Standard Mode Features

- "EXTEND" (Fig. 11I) or "RETRACT" (Fig. 11H) and "FRONT" (Fig. 11A) extends or retracts the Power Tongue Jack.
- "AUTO LEVEL" (Fig. 11J) button starts the auto leveling sequence.
- "AUTO HITCH" (Fig. 11K) button starts the hitch recognition sequence when reconnecting to the tow vehicle.
- Use the "UP" or "DOWN" arrow (Fig. 11G) buttons to cycle through the menu screen options:
 - **Info:** Scroll to "Info" (Fig. 11C) and press "ENTER" (Fig. 11B) button to display system information, e.g., angle, jack stroke or software version.
 - **Auto Retract:** Scroll to "Auto Retract" (Fig. 11D) and press "Enter" button to start the "Auto Retract" sequence, which will retract all jacks. The Power Tongue Jack does not retract.
 - **Manual Mode:** Scroll to "Manual Mode" (Fig. 11E) and press "Enter" button to start manual leveling process.

Manual Mode Features

Upon entering Manual Mode, a tutorial on operating the jacks will appear on the screen. Press "OK" to clear the tutorial. To delete the tutorial, click the "Don't show this again" box in the bottom right of the screen.

NOTE: The jacks operate in pairs. If at any time in manual mode the jacks operate individually, the Twist Protection Prevention System has been activated to prevent frame twist. The OneControl Touch Panel or OneControl App will display "Relieving frame twist." The jacks will resume operating in pairs when the potential frame twist has been relieved.

Press "EXTEND" (Fig. 15F) or "RETRACT" (Fig. 15E) and "FRONT" (Fig. 15B) to operate front jacks.

Press "Extend" or "Retract" and "REAR" (Fig. 15D) operate rear jacks.

Press "Extend" or "Retract" and "RIGHT" (Fig. 15C) operate right jacks.

Press "Extend" or "Retract" and "LEFT" (Fig. 15A) operate left jacks.

NOTE: To operate jacks individually, press "EXTEND" or "RETRACT" then press the "LEFT" (Fig. 15A) or "RIGHT" (Fig. 15C) button while simultaneously pressing the "Front" (Fig. 15B) or "Rear" button (Fig. 15D), depending on which jack needs to be operated.

NOTE: If the jacks will not operate individually as intended, but they operate properly when Auto Level is performed, the Twist Prevention Protection system has locked out the operation to prevent damage to the frame of the trailer.

Unhitching From A Tow Vehicle

1. Prior to unhitching from the tow vehicle, make sure trailer is parked on a level surface and chock the tires of the trailer.
2. Make sure the foot pad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin.
3. Disconnect any wires, chains, or sway controls that may be equipped between the tow vehicle and the trailer. Unlatch the trailer coupler.
4. Press the "FRONT" button (Fig 11A) on the OneControl Touch Panel App in Standard Mode to extend the Power Tongue Jack until the foot touches the ground and the coupler clears the hitch ball.
5. Pull tow vehicle away from the trailer and park at a safe distance.

NOTE: To utilize the Power Tongue Jack for the unhitching process, see "Operation - Power Tongue Jack."

Auto Level

6. Prior to auto leveling, make sure the trailer is unhitched from the tow vehicle and the tow vehicle is parked a safe distance away from the trailer.
7. Power on the OneControl Touch Panel App. See "Accessing the OneControl App," steps 3-5.
8. Press the "Leveler" icon (Fig. 14A).
9. Press "AUTO LEVEL" (Fig. 11J).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the leveling process is complete. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

NOTE: Sequence may vary slightly based on the height of the trailer coupler prior to leveling.

10. When the Auto Level Sequence begins:
 - A. The system checks that the rear jacks are retracted.
 - B. The Power Tongue Jack may adjust depending on the orientation of the trailer.
 - C. Front jacks will extend until movement of the trailer is sensed.
 - D. The Power Tongue Jack will then retract.
 - E. The front jacks will extend/retract near level.
 - F. Rear jacks will extend and ground.
 - G. Trailer will level front-to-rear and then side-to-side.
 - H. The Auto Level sequence will ground all jacks to ensure all foot pads are on the ground.
 - I. The Auto Level sequence is complete when the OneControl Touch Panel indicates, "Auto Level Success".

If the AUTO LEVEL sequence does not perform as intended, locate the OneControl Touch Panel or use the OneControl App to place the system in Manual Mode. Test that the jacks operate correctly by pushing their corresponding buttons on the OneControl Touch Panel or App; e.g., "FRONT" button operates only the front jacks, etc. See "Operation - OneControl Touch Panel" or "Operation - OneControl App".

Hitch Recognition

1. Power on the OneControl Touch Panel App. See "Accessing the OneControl App", steps 3-5.
2. Press the "Leveler" icon (Fig. 14A).
3. Press "AUTO HITCH" (Fig. 11K).

NOTE: Rear jacks will retract. The Power Tongue Jack will extend to the ground. Front leveling jacks will retract. The tongue jack will then adjust the height of the front of the trailer coupler to the point at which the "AUTO LEVEL" button was most recently pressed.

4. Back the tow vehicle into position to align the tow vehicle hitch and trailer coupler with each other.
5. Press "RETRACT" button (Fig. 15E) then press the "FRONT" button (Fig. 15B) to retract the tongue jack until the coupler sets into position on top of the tow vehicle hitch.
6. Latch the tow vehicle hitch and connect any wires, chains or sway controls that may be equipped between the tow vehicle and trailer.
7. Press the "RETRACT" button (Fig. 15E), then press and hold the "FRONT" button (Fig. 15B) until the Power Tongue Jack fully retracts.

NOTE: To utilize the Power Tongue Jack for the hitching process, see "Operation - Power Tongue Jack."

Touch Panel Diagram - Linc Remote Control - Optional

NOTE: When the OneControl Touch Panel is placed in Manual Mode, the Linc Remote will operate the jacks in a similar fashion as the OneControl, with the exception of operating individual jacks. Jacks will operate in pairs only. See "Operation - OneControl Touch Panel".



Callout	Description
A	RET - Retracts front and rear jacks.
B	Front Arrow - Operates front jacks.
C	Left Arrow - Operates left rear jacks.
D	Help - Provides contact information for LCI.
E	EXT - Extends front and rear jacks.
F	Right Arrow - Operates right rear jacks.
G	Rear Arrow - Operates rear jacks.
H	AUTO LEVEL - Initiates Auto Level sequence.
I	Power Button - Turns remote control "On" and "Off".

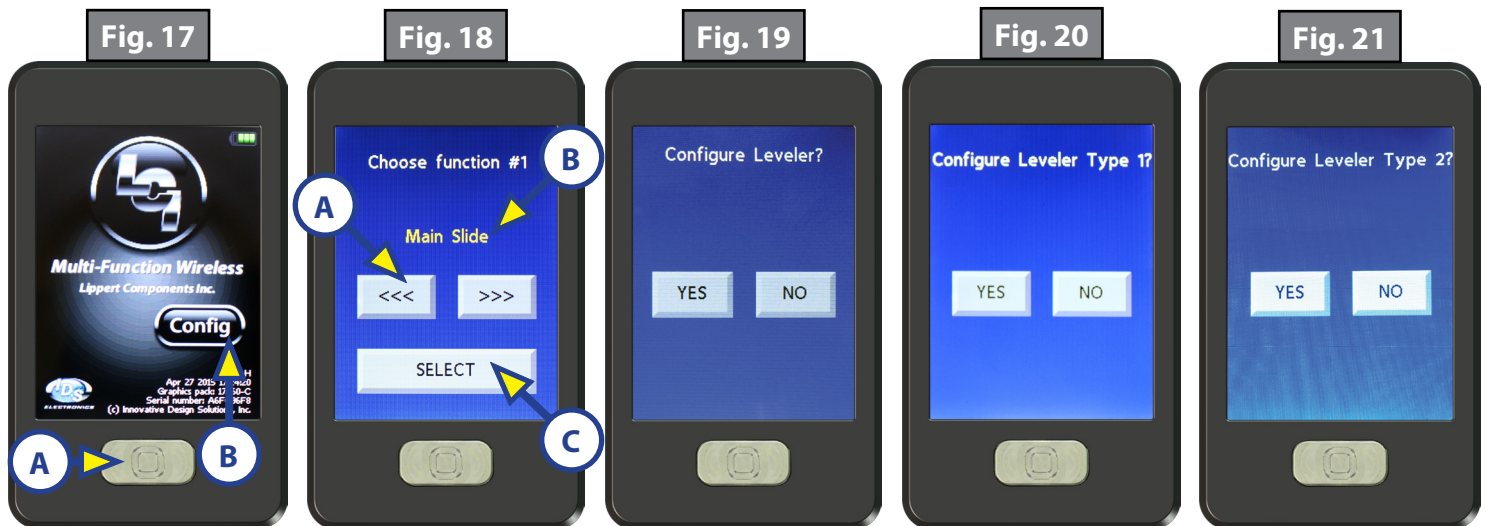
Operation - Linc Remote

Configuring the Linc Remote

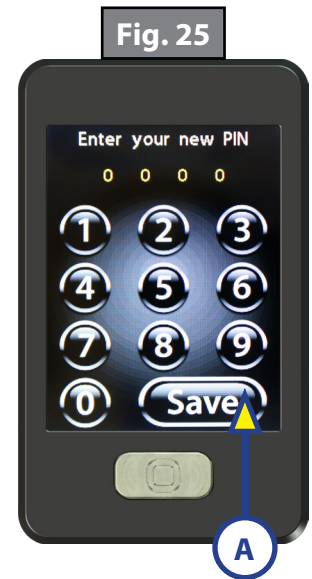
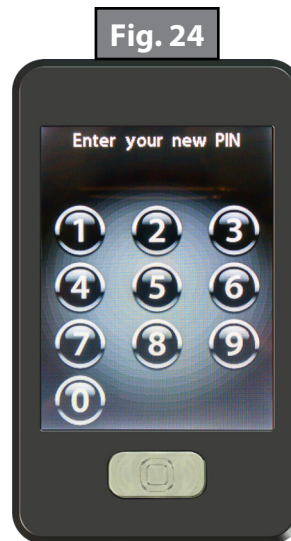
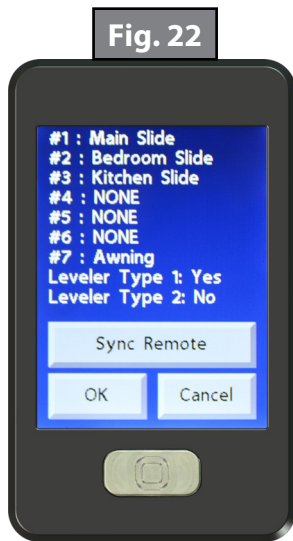
NOTE: If the trailer does not have a LCI Multifunction wireless system installed, each of the listed functions (Fig. 22) steps 1-7 will read as "NONE."

1. Turn the Linc Remote "On" by pressing and releasing the large silver button at the bottom of the remote (Fig. 17A).
 - A. If the remote has never been configured, it will display the "Config" button (Fig. 17B) immediately after it is turned on.
 - B. To reconfigure the remote after the initial programming, push the silver button five times (Fig. 17A).
2. Press the "Config" button (Fig. 17B) on the touch screen to begin configuring the remote.
3. Using the arrow buttons (Fig. 18A) at the bottom of the screen, navigate to the specific items the remote will control.
4. When the name of the item appears in the middle of the screen (Fig. 18B), press the large "SELECT" button (Fig. 18C).
5. Assign an item or "None" to each of the function spaces available.
6. Press the SELECT button at each screen.

NOTE: Without a LCI Multifunction Wireless system installed on the trailer, no other functions will be able to be programmed on the remote.



7. If remote was purchased before July 2013, refer to Step A, if purchased after July 2013, refer to Step B.
 - C. After all the functions have been assigned a "title," the next screen will ask: "Configure Leveler?" (Fig. 19). If trailer is so equipped, and you want to have leveling available on your transmitter, select "YES." If not, select "NO" (Fig. 19).
 - D. After all the functions have been assigned a "title," the next screen will ask: "Configure Leveler Type 1?" (Fig. 20) and then "Configure Leveler Type 2?" (Fig. 21) will appear. If syncing the transmitter to a LCI Level Up, Ground Control® or Motorized Dual Sensor system, select "YES" for Type 1 and "NO" for Type 2. If you will not be syncing the transmitter to either of these leveling systems select "NO" for both Type 1 and Type 2.
8. A confirmation screen will appear showing all of the configured functions (Fig. 22). If the trailer does not have a LCI Multifunction Wireless system installed, the screen will show "NONE" for the listed functions, then "Leveler Type 1: Yes" and "Leveler Type 2: No." Press "OK" button to save the configuration or the "Cancel" button to restart the process.
9. Once a configuration is saved, a "Config Fuses?" screen (Fig. 23) will appear. Press "NO" button, since any fuse configuring will need to be done by the manufacturer of the trailer.



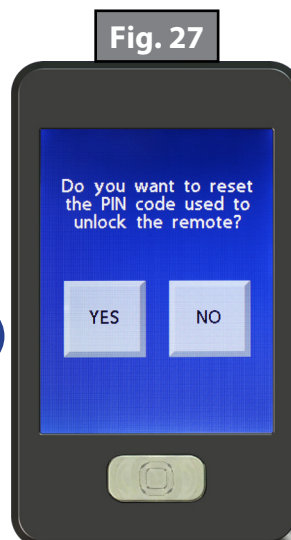
10. Enter a 4-digit PIN security code for accessing the remote (Fig. 24).
11. Once a PIN is entered, the "Save" button (Fig. 25A) will appear at the bottom right of the screen.
12. Press "Save" to confirm the PIN.
13. Re-enter the PIN, then press "Save" to confirm it.

NOTE: This PIN will be required to access the remote and any functions configured into it. Write the PIN down for later reference.

Resetting the Remote

Once the remote has been configured it can be reconfigured in the event of a function change or when a new security PIN is required.

1. Turn the remote "On" by pressing and releasing the large silver button at the bottom of the remote (Fig. 26C).
2. Press the large silver button five times (Fig. 26C).
3. Two options come up for reconfiguration:
 - E. Option 1 - "Set PIN" (Fig. 26A) will allow the user to reset the PIN and enter a new one.
 - I. Once the "Set PIN" option is selected, the user will be asked for verification that they want to reset the PIN (Fig. 27).
 - II. Select "YES" and the PIN will be reset, follow steps 10-12 of the "Configuring the Linc Remote" section.
 - III. Select "NO" to keep the current PIN.



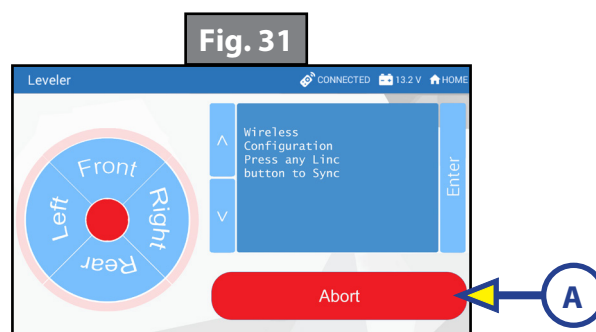
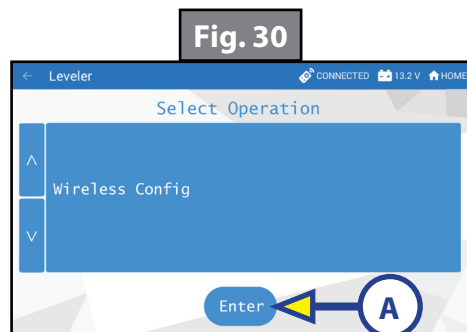
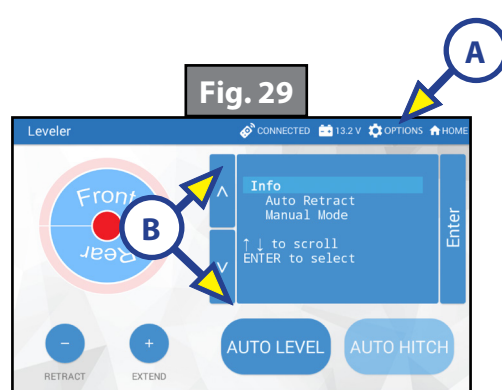
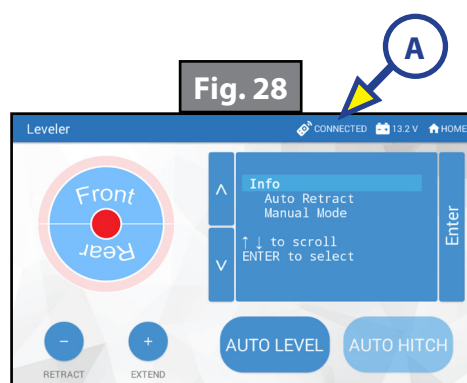
F. Option 2 - The "Config" (Fig. 26B) button allows the user to adjust the configuration.

I. Select "Config".

II. Do steps 1-9 of the "Configuring the Linc Remote" section.

Configuring Linc Remote to Sync to The OneControl Touch Panel

1. Turn on the Linc Remote control (Fig. 16I) and enter a PIN.
2. Choose "Leveler" from the menu screen (Fig. 16).
3. Turn on the OneControl Touch Panel (Fig. 4L).
4. On the OneControl Touch Panel, press the "CONNECTED" icon at the top of the screen (Fig. 28A) quickly six times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig. 29A).
5. Press the gear icon with "options" (Fig. 29A).
6. Use the "Up" and "Down" arrows (Fig. 29B) to scroll to "Wireless Config" (Fig. 30).
7. Press "Enter" (Fig. 30A). The screen will display "Wireless Configuration, Press any Linc button to Sync" (Fig. 31).
8. Press any button in "Leveler" mode on the Linc Remote control (Fig. 16).
9. Pressing "Abort" on the OneControl Touch Panel (Fig. 31A) will cancel the configuration sequence.



Basic Jack Operation

1. Press "RET" (Fig. 16A) or "EXT" (Fig. 16E) and Front Arrow (Fig. 16B) to retract or extend the front jacks (left front, right front).
2. Press "RET" or "EXT" and Rear Arrow (Fig. 16G) to retract or extend the rear jacks (left rear, right rear).
3. Press "RET" or "EXT" and Right Arrow (Fig. 16F) to retract or extend the right jacks (right front, right rear).
4. Press "RET" or "EXT" and Left Arrow (Fig. 16C) to retract or extend the left jacks (left front, left rear).
5. Press "AUTO LEVEL" (Fig. 16H) to start the auto leveling sequence.

Unhitching From A Tow Vehicle

1. Prior to unhitching the trailer from the tow vehicle, make sure the trailer is parked on a level surface.
2. Chock the tires of the trailer.
3. Make sure the footpad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin.
4. Disconnect any wires, chains, or sway controls that may be equipped between the tow vehicle and the trailer.
5. Unlatch the trailer coupler.
6. Turn "On" the Linc Remote (Fig. 16I), then enter a PIN code to access the system.
7. Choose the "Leveler" option.
8. Press "EXT" (Fig. 16E) and Front Arrow (Fig. 16B) to extend front jacks to lift the front of the trailer to take the weight of the trailer off of the hitch.
9. Uncouple trailer from tow vehicle.
10. Pull tow vehicle away from the trailer and park at a safe distance.

NOTE: To utilize the Power Tongue Jack for the unhitching process, see "Operation - Power Tongue Jack" section.

Auto Level

1. Prior to auto leveling, make sure the trailer is unhitched from the tow vehicle and the tow vehicle is parked a safe distance away from the trailer.
2. Press the "On/Off" button (Fig. 16I) on the Linc Remote to turn the device "On."
3. Enter a PIN.
4. Choose the "Leveler" option.
5. Press "AUTO LEVEL" (Fig. 16H).

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the leveling process is complete. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

NOTE: Pressing any button on the Linc Remote during an AUTO LEVEL sequence will abort the auto leveling cycle. To restart the AUTO LEVEL process, refer to "Operation - OneControl Touch Panel" section.

6. When the auto leveling sequence begins:
 - A. The system checks that the rear jacks are retracted.
 - B. The Power Tongue Jack may adjust, depending on the orientation of the trailer.
 - C. Front jacks will extend until movement of the trailer is sensed.
 - D. The Power Tongue Jack will then retract.
 - E. The front jacks will extend/retract near level.
 - F. Rear jacks will extend and ground.
 - G. Trailer will level front-to-rear, then side-to-side.
 - H. The AUTO LEVEL sequence will ground all jacks to ensure all foot pads are on the ground and auto leveling is complete.
 - I. The Auto LEVEL sequence is complete when the indicator light turns solid green.

NOTE: Step 6 may repeat several times, if the controller deems necessary.

NOTE: If the AUTO LEVEL sequence does not perform as described above, test that the jacks operate correctly by pushing their corresponding buttons on the Linc Remote; e.g., "Front" button only operates the front jacks, etc. The jacks can also be tested in manual mode from the OneControl Touch Panel (Fig. 4). See "Operation - OneControl Touch Panel" section.

NOTE: There is no Hitch Recognition sequence programmed for the Linc Remote.

Troubleshooting

Red/Green LED Indicator Light - Auto Leveling Control Touch Pad

LED Condition	Mode
Off	Touch pad is locked.
Solid Green	Touch pad is active.
Blinking Green	Jacks are moving.
Solid Red	Low battery.
Blinking Red	Error - Refer to OneControl Touch Panel or the OneControl App. screen for the specific error code, then consult the OneControl Touch Panel/App. chart to clear the error.

Error Display Screen - OneControl Touch Panel/App.

NOTE: Errors can only be cleared via the OneControl Touch Panel (Fig. 4) or the OneControl App. The only exception is when the Auto Leveling Control Touch Pad (Fig. 3) was used to abort an auto sequence. In this case, the error can be cleared by pressing any Auto Leveling control button. Correct Error to clear it, then press "OK." If Error persists, message will continue to display.

LCD Message	What Is Happening?	What Should Be Done?
"EXCESS ANGLE"	Unsecured sensor.	Check and secure sensor placement.
	Uneven or sloped site.	Relocate the trailer.
"EXCESSIVE ANGLE"	Sensor not properly secured.	Check and secure sensor placement.
	Excessive angle reached during manual operation.	Relocate the trailer.
"BAD CALIBRATION"	Trailer Zero Point was not set correctly.	Reset Zero Point. See "Zero Point Calibration" section.
"FEATURE DISABLED"	Hitch recognition requested but no hitch height set.	Perform "AUTO LEVEL" sequence to establish hitch height.
	Zero Point not set.	Set Zero Point. See "Zero Point Calibration" section.
"LOW VOLTAGE"	Bad connection or wiring.	Check wiring - repair or replace.
	Discharged or bad battery.	Test battery voltage under load - charge or replace.
"OUT OF STROKE"	Unsecured controller.	Check and secure controller placement.
	Uneven or sloped site.	Relocate the trailer.
"EXTERNAL SENSOR"	Bad connection or wiring.	Replace or repair connection to rear remote sensor.
"JACK TIME OUT"	System could not level in expected time.	Check for obstructions, leaks, fluid level and voltage to power unit motor under load.
"AUTO LEVEL FAILURE"	Unsecured controller.	Check and secure controller placement.
	Voltage drop.	Test battery voltage under load - charge or replace.
"FUNCTION ABORTED"	User has aborted an automatic leveling sequence.	Restart the sequence.
"HALL POWER SHORT"	Short circuit detected on one or more of the 5K jack power lines.	Check harness and replace or repair.
"CAN'T COMPLETE LEVEL IN THIS LOCATION. PLEASE RELOCATE RV TO FLATTER TERRAIN"	The trailer is parked on a steep incline during auto level. The front cannot be leveled and the front jacks are already fully retracted.	Relocate the trailer.

Special Jack Error Codes

To clear special jack error code, do as follows:

1. Correct or otherwise repair the issue. See Touch Panel Error Code Chart.

NOTE: In order to clear special jack error codes the jacks need to be “homed.” In order to “home” jacks, each jack must be able to retract a minimum of 6”.

NOTE: The Power Tongue Jack does not need to be “homed.” The Power Tongue Jack cannot be operated from the OneControl Touch Panel or OneControl App from myRV while clearing special jack error codes. The Power Tongue Jack can be operated using the “RET/EXT” switch on the tongue jack during this procedure.

2. Extend all jacks to reach the 6” of minimum retract needed.
 - A. If required, press “EXTEND” and “FRONT” to extend the front jacks. Refer to “Operation - OneControl Touch Panel” and “Operation - OneControl App. from myRV” sections.”
 - B. Press “EXTEND” and “REAR” to extend the rear jacks (if required). Refer to “Operation - OneControl Touch Panel” and “Operation - OneControl App. from myRV” sections.”
3. Press “ENTER” to AUTO RETRACT. The jacks will retract until they reach the hard current limit. The Power Tongue Jack will perform an automatic grounding during the AUTO RETRACT sequence.
4. The jacks are now “homed” and the special jack error code will be cleared.

Touch Panel Error Code Chart

Touch Panel Message?	What Is Happening?	What Should Be Done?
ERROR Left-Front Jack Fault Right-Front Jack Fault Left-Rear Jack Fault Right-Rear Jack Fault Tongue Jack Fault	Error at a specific jack (left front, right front, left middle, right middle, left rear, right rear, tongue). Hall signal issue (open, short, malfunction or loss of communication); open or short circuit between controller and motor.	Check voltage at the battery under load.
		Check harness connections at controller and at jack.
		Check harness for damage.
		Check fuses at controller.
		Repair or replace as necessary.

Zero Point Calibration

The "Zero Point" is the programmed point that the trailer will return to each time the Auto Level feature is used. Zero Point must be programmed prior to using the Auto Level feature to ensure the proper operation of the leveling system. The Zero Point feature is only available on the OneControl Touch Panel leveling system.

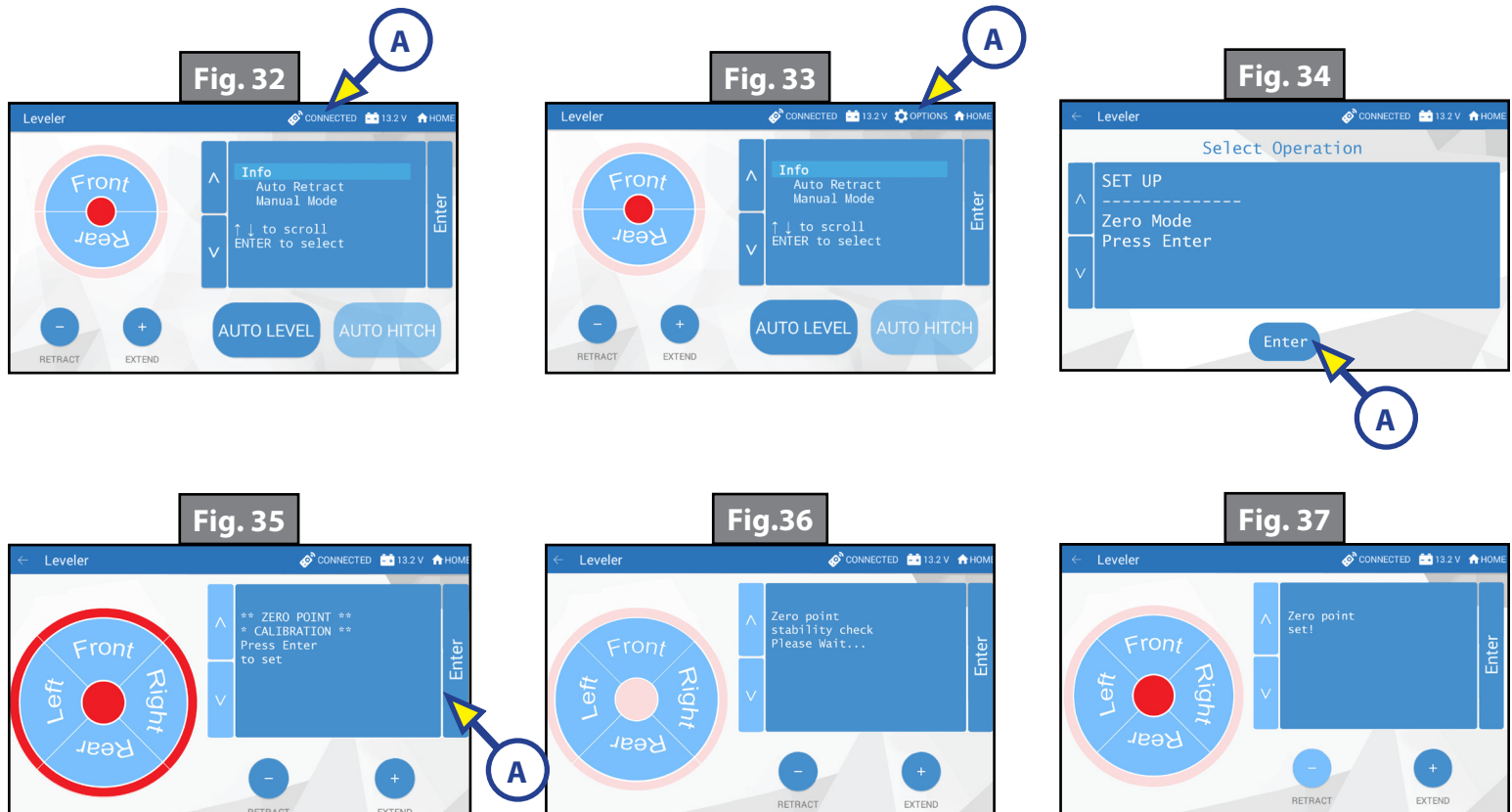
NOTE: Prior to starting this procedure, double check all connections on the controller, jacks and touch panel.

NOTE: When calibrating Zero Point, the user has full manual control over the jacks. See "Basic Jack Operation In Manual Mode in the "Operation - OneControl Touch Panel" section to adjust to the desired level position. Press the "Enter" (Fig. 4H) button to set.

Setting the Zero Point

NOTE: The following procedure works from Standard Mode only. See "Basic Jack Operation In Standard Mode" in the "Operation - OneControl Touch Panel" section.

1. Press the "CONNECTED" icon (Fig. 32A) at the top of the leveling screen, quickly six times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig. 33A).
2. Press the gear icon with "options" (Fig. 33A).
3. The screen will show "SET UP: Zero Mode, Press Enter" (Fig. 34).
4. Press the "Enter" button (Fig. 34A).
5. The touch panel will present options for further leveling of the trailer, if needed. The screen will also state "ZERO POINT CALIBRATION. Press Enter to set" (Fig. 35).
6. Press "Enter" (Fig. 35A).
7. Screen will show "Zero point stability check. Please wait..." (Fig. 36), followed by "Zero point set!" (Fig. 37).



⚠ CAUTION

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

Manual Override

NOTE: For ease of manual override it is recommended to unplug the power harness to the motor prior to performing the manual override procedure.

⚠ CAUTION

Do not use an impact screw gun to perform any of the override procedures, as this may damage the motor

NOTE: Use of a 12-18 volt cordless screw gun or pneumatic screw gun is acceptable to manually override the jacks. If manual override is necessary there are two options for each style of jack.

NOTE: If the travel trailer is equipped with four C-Jacks, the override procedure is the same for the front and rear.

2K or 3K C-Jack Motor Override:

Tools needed: A $\frac{3}{8}$ " drive ratchet and extension, no socket.

1. Find the port on the jack gearbox (Fig. 38A).
2. Remove the rubber plug (Fig. 39A).
3. Insert the $\frac{3}{8}$ " drive ratchet into the port.
4. Turn the override until the jack extends or retracts to desired position.

2K or 3K C- Jack Manual Override Nut:

Tools needed: $\frac{3}{4}$ " socket and ratchet

1. Locate the manual override nut (Fig. 38B).
2. Place $\frac{3}{4}$ " socket and ratchet over the manual override nut (Fig. 40A) and turn the override nut until the jack extends or retracts to desired position.

Fig. 38

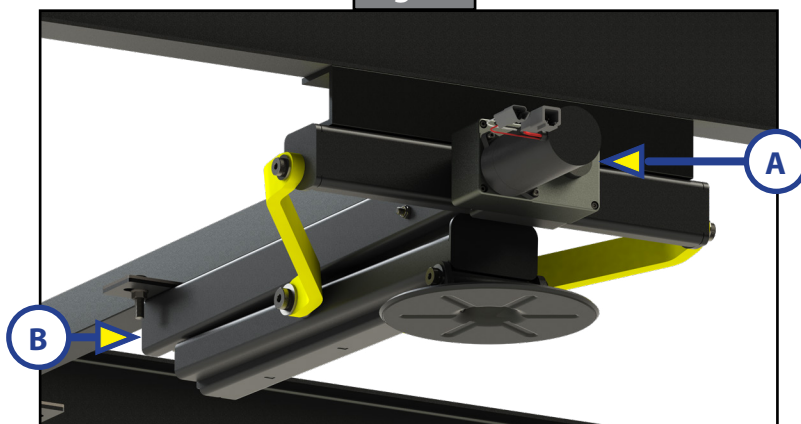
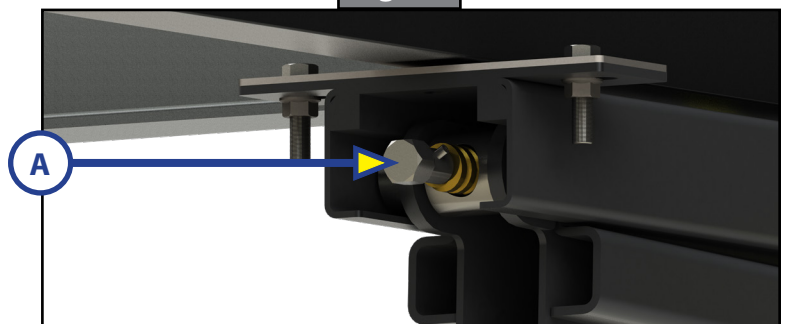


Fig. 39



Fig. 40



5K Jack - Top of Jack Motor Override:

Tools needed: $\frac{3}{8}$ " drive ratchet and extension, no socket.

1. Find the port on the top of the jack motor (Fig. 41A).
2. Remove the rubber plug (Fig. 42A).
3. Insert the $\frac{3}{8}$ " drive ratchet into the port (Fig. 43).
4. Turn the override until the jack extends or retracts to desired position.

5K Jack - Bottom of Jack Motor Override:

Tools needed: $\frac{3}{8}$ " drive ratchet and extension, and a $\frac{5}{16}$ " socket.

1. Find the port on the bottom of the jack motor (Fig. 41B).
2. Remove the rubber plug (Fig. 44A).
3. Insert the $\frac{5}{16}$ " socket into the port and onto the nut (Fig. 45A).
4. Turn the override until the jack extends or retracts to desired position.

Fig. 41

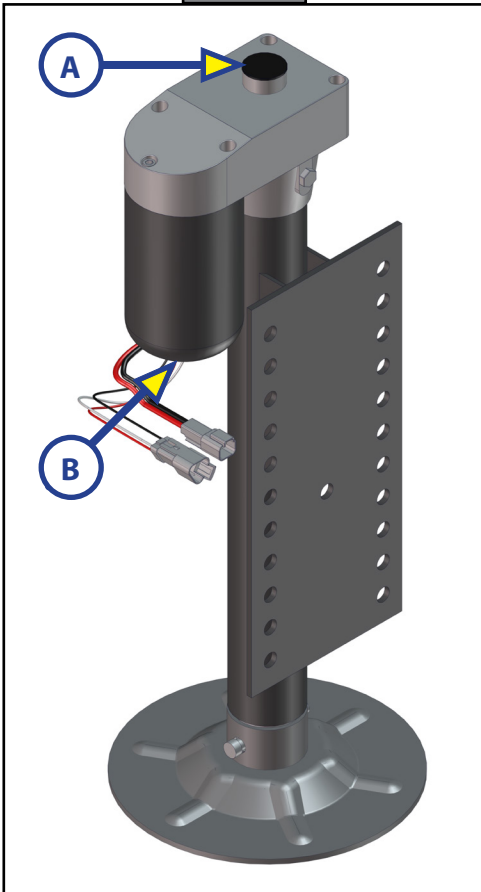


Fig. 42

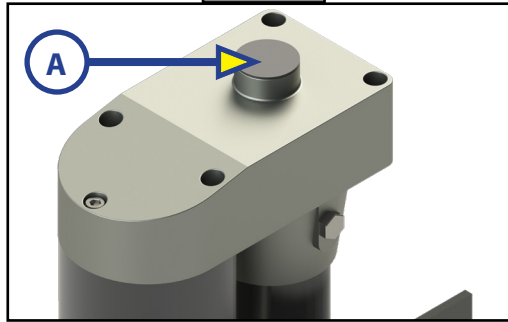


Fig. 43

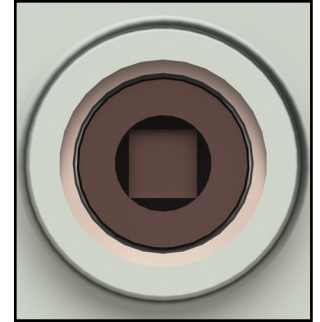


Fig. 44

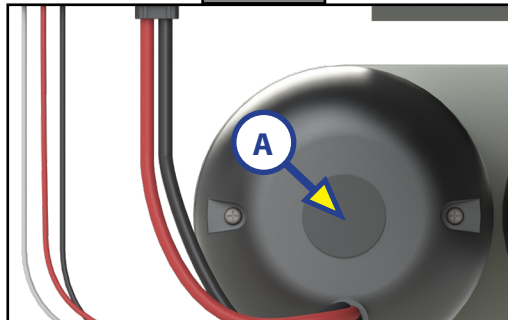
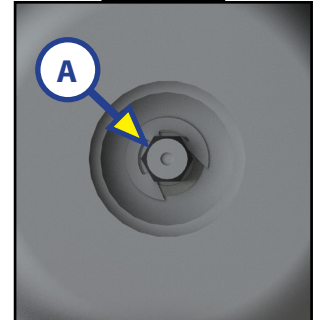
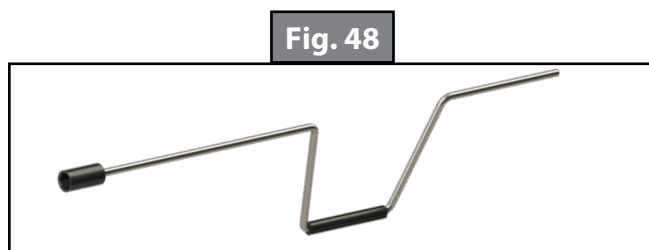
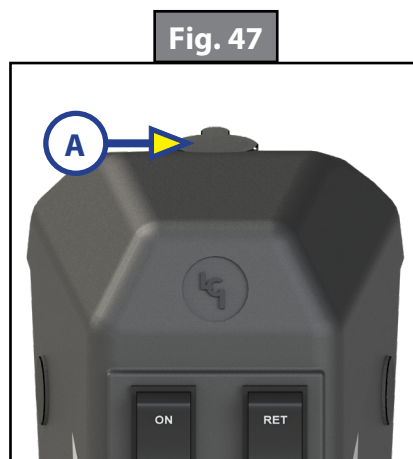
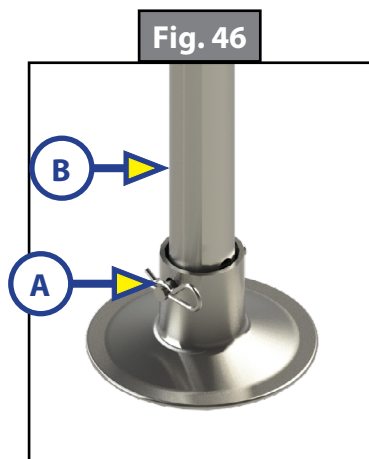


Fig. 45



Power Tongue Jack Manual Override

1. Chock the tires of the trailer.
2. Make sure the footpad of the Power Tongue Jack is pinned securely in place with the clevis pin and hairpin cotter pin (Fig. 46A).
3. Open the rubber plug (Fig. 47A) on top of the Power Tongue Jack's gearbox to expose the override nut. Insert the manual crank handle (Fig. 48).
4. Turn the override until the jack extends or retracts to desired position.
5. Remove the crank handle.
6. Replace the rubber plug.
7. Make sure the leg (Fig. 46B) of the Power Tongue Jack is fully retracted prior to moving the tow vehicle.



Preventive Maintenance

1. For optimum performance, the system requires a fully charged battery to maintain required currents and voltages. Keep battery at full capacity whenever possible.
2. Check battery terminals and other battery connections, the controller and the jacks for corrosion and loose or damaged connections.
3. Remove dirt, road debris and grease from jacks as needed. Then lightly lubricate the jack screw and wipe off any excess lubrication, leaving only a thin coating for protection.

System and Safety Information

- Be sure to park the unit on solid, level ground.
- Ensure all jack landing locations are cleared of debris and obstructions and also free of depressions.
- When parking the unit on extremely soft surfaces, utilize load distribution pads under each jack.
- People and pets should be clear of unit while operating leveling system.
- Be sure to keep hands and other body parts clear of fluid leaks. Oil leaks in the Lippert Leveling System may be under high pressure and can cause serious skin-penetrating injuries.

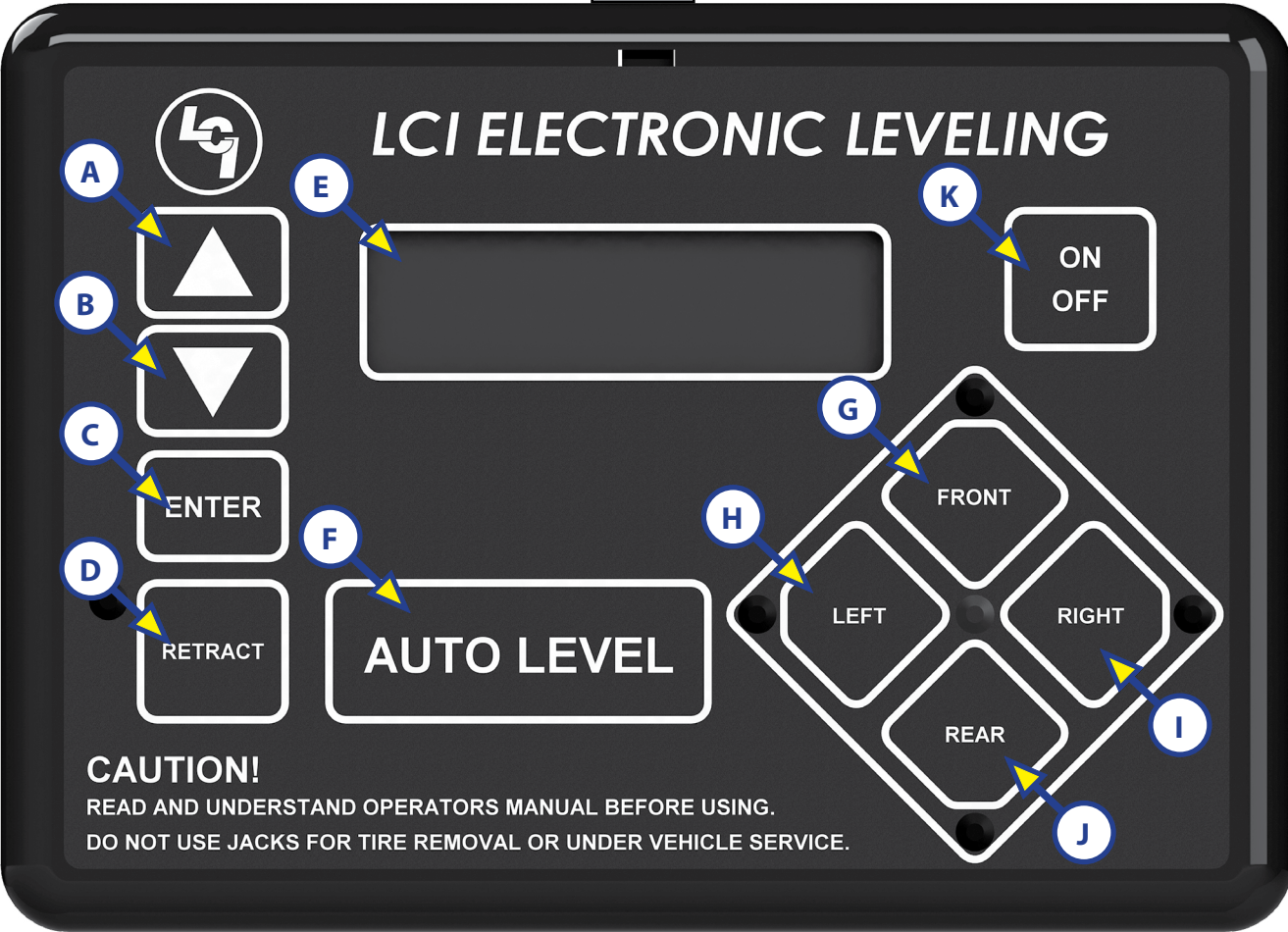
WARNING

Lippert Components Inc. recommends that a trained professional be employed to change the tires on the unit. Ensure that the unit is properly supported with jack stands, or other adequate devices, under the frame of the unit prior to commencing any service or repair procedure. Any attempts to change the tires or perform other service while unit is supported solely by the LCI Level-Up® with Automatic Leveling System could result in death, serious injury, unit or property damage.

Introduction

Level Up® is an Automatic Leveling system. This system is equipped with 14K aluminum landing gear and 8K aluminum leveling jacks. The jacks in the Level Up® system work in pairs.

Fig. 1



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 - Manual mode ONLY.
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 unit is parked on a reasonably level surface.
2. Be sure all persons, pets and property are clear of the unit while LCI Level-Up Automatic System is in operation.
3. Ensure the battery of the unit is fully charged or that the unit is plugged into shore power prior to attempting to operate the system. Level-Up requires a minimum of 12 VDC from the battery for proper operation.

Operation

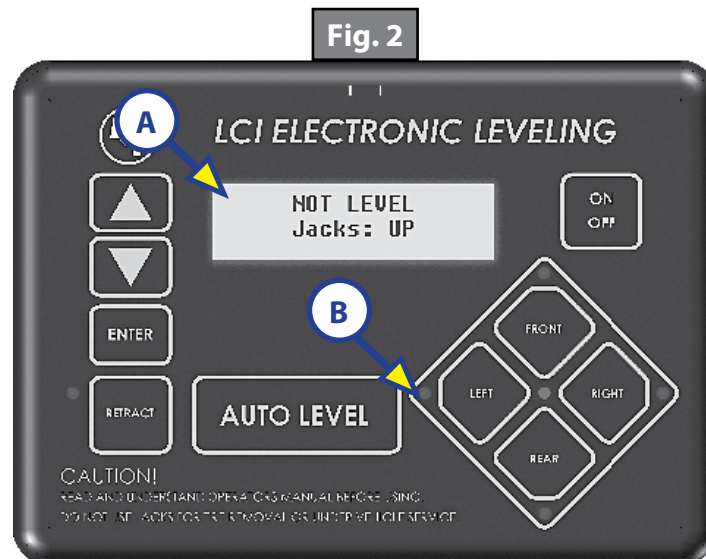
Basic Jack Operation

1. Landing gear Jacks
 - A. Landing gear jacks can be operated any time the system is "ON" but NOT in the "AUTO MODE." By pushing the "FRONT" button (Fig. 1G), both front or landing gear jacks can be extended. If the touch pad is put in the "RETRACT" mode, indicated by the orange illuminated LED next to the "RETRACT" button (Fig. 1D), the front jacks can be retracted together by pushing the "FRONT" button.
2. Level-Up jacks
 - A. The Level-Up jacks operate when the "AUTO MODE" is activated or the touch pad is in the "MANUAL MODE." Once system is in "MANUAL MODE," pressing the "REAR" button (Fig. 1J) will extend all Level-Up jacks at the same time. Press the "LEFT" or "RIGHT" buttons (Fig. 1H and 1I) to operate Level-Up jacks on the left or right side of the unit, respectively.

5th Wheel Operation

Unhitching Instructions

1. Push touch panel "ON/OFF," (Fig. 1K) to turn system on. LCD Screen (Fig. 1E) lights up.
 2. LCD will display status ... "NOT LEVEL JACKS: UP" (Fig. 2A).
- NOTE:** Orange arrow lights (Fig. 2B) may come on, indicating the current disposition of the unit.
3. Push "FRONT" button (Fig. 1G) to extend landing gear jacks and lift front of unit to take the weight of the 5th wheel off of the hitch.
 4. Uncouple the 5th wheel connection on the tow vehicle.
 5. Pull tow vehicle away and park at a safe distance.



Auto Level

NOTE: Prior to unhitching from the tow vehicle, ensure unit is parked on a level surface and chock the tires of the unit.

1. After unhitching from tow vehicle press "AUTO LEVEL" (Fig. 1F).

NOTE: Pressing any button during an Auto Level sequence will abort the auto leveling cycle.

NOTE: In order for hitch recognition feature to function, the auto level sequence **MUST** be started with the front of the unit above level.

Auto Level Sequence

1. Front landing gear retract, lowering the front of the unit below level, stopping, then lifting the front end to level the unit front to back.
2. The left side leveling jack(s) extend and raise the roadside of the unit.
3. The right side leveling jack(s) extend and raise the curbside of the unit, beginning side to side leveling.
4. The front landing gear extend to complete the leveling cycle.

NOTE: 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.

Hitch Recognition

1. Turn on touch pad.
2. Press the "LEFT" and "RIGHT" buttons simultaneously (Fig. 1H and 1I).
3. The front of the unit 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 unit in a below level condition, the Hitch Recognition will not function and the LCD will display "Feature Disabled." In order for the hitch recognition feature to function, the auto level sequence **MUST** be started with the front of the unit above level.

4. Connect tow vehicle and make sure 5th wheel and hitch are connected and locked.
5. Push "UP" arrow (Fig. 1A) until "AUTO RETRACT" appears in LCD screen.
6. Push "ENTER" (Fig. 1C). System will immediately retract all jacks.

Travel Trailer Operation

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure unit is parked on a level surface and chock the tires of the unit.

1. Push "ON/OFF" button (Fig. 1K) to turn system "ON" (green light).
2. Push "UP" (Fig. 1A) or "DOWN" arrow (Fig. 1B) to scroll through features to "MANUAL MODE" in display.
3. Push "ENTER" (Fig. 1C).
4. Push "FRONT" button (Fig. 1G) to extend front jacks to the ground until the trailer is unhitched from the tow vehicle.

NOTE: The Power Tongue Jack should **ONLY** be used when storing the trailer.

Auto Level

NOTE: The Power Tongue Jack **MUST** be retracted prior to starting auto level sequence (Fig. 3 shows the LCD alert).

1. After unhitching from tow vehicle press "AUTO LEVEL" (Fig. 1F).



NOTE: Pressing any button during an Auto Level sequence will abort the auto leveling cycle.

NOTE: In order for hitch recognition feature to function, the auto level sequence **MUST** be started with the front of the unit above level.

Auto Level Sequence

1. Front jacks retract, lowering the front of the unit below level, stopping, then lifting the front end to level the unit front to back.
2. The rear left side leveling jack extends and raises the roadside of the unit.
3. The rear right side leveling jack extends and raises the curbside of the unit, beginning side to side leveling.
4. The front jacks extend to complete the leveling cycle.

NOTE: 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.

Hitch Recognition

1. Turn on touch pad.
2. Press the left and right buttons simultaneously (Fig. 1H and 1I).
3. The front of the unit 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 unit in a below level condition, the Hitch Recognition will not function and the LCD will display "Feature Disabled." In order for hitch

recognition feature to function, the auto level sequence **MUST** be started with the front of the unit above level.

4. Connect tow vehicle and make sure travel trailer and hitch are connected and locked.
5. Push "UP" arrow until "AUTO RETRACT" appears in LCD screen.
6. Push "ENTER." System will immediately retract all jacks.

Manual Operation

1. Front landing gear (5th Wheels) or Front jacks (Travel Trailers)

NOTE: The landing gear or front jacks will operate manually any time system is "ON" except in "AUTO MODE."

- A. Push "ON/OFF" (Fig. 1K) to turn system on.
- B. Push "UP" arrow (Fig. 1A) once or until screen reads "MANUAL MODE" (Fig. 4).
- C. Push "ENTER" (Fig. 1C) once while screen reads "MANUAL MODE" (Fig. 4).
- D. Push "FRONT" (Fig. 1G) to extend front landing gear or front jacks.
- E. Push "RETRACT" (Fig. 1D) and orange LED (Fig. 5) comes on.
- F. Push "FRONT" (Fig. 1G) to retract front landing gear or front jacks.

NOTE: If orange LED (Fig. 5) is on, landing gear or jacks will retract. If orange LED (Fig. 5) is off, landing gear or jacks will extend.

- G. Push "ON/OFF" to turn system off.
- H. After 3 minutes the system will turn off by itself.

Fig. 4

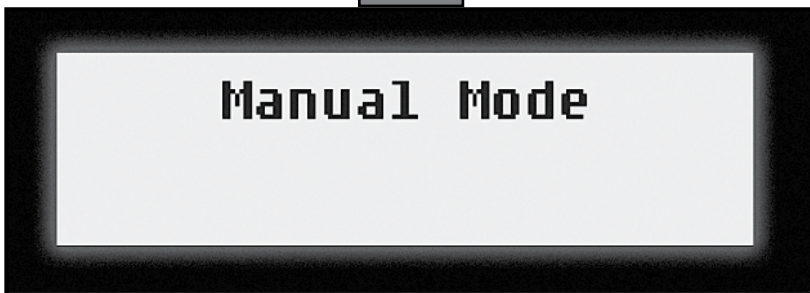
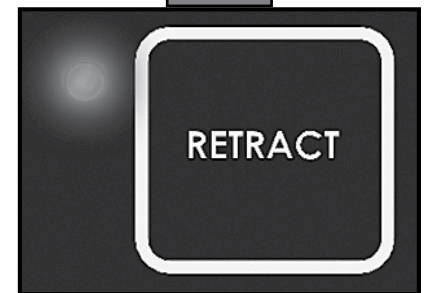


Fig. 5



2. Level-Up jacks - EXTEND

- A. Turn "ON/OFF" button "ON."
- B. Push scroll arrow to display "MANUAL MODE" (Fig. 4).
- C. Push "ENTER" button, "MANUAL MODE" displayed (Fig. 4).

NOTE: By pushing "RIGHT," passenger side Level-Up jacks operate. By pushing "LEFT," driver side Level-Up jacks operate, and so on.

3. Level-Up jacks - RETRACT

- A. Push "RETRACT" and orange LED (Fig. 5) will come on.
- B. Push "REAR" to retract all Level-Up jacks.
- C. To extend, the "RETRACT" light (Fig. 5) should be off.

NOTE: The side-to-side movement in manual mode is limited to 5° of tilt.

Zero Point Calibration

The “Zero Point” is the programmed point that the unit will return to each time the Auto Level feature is used. The “Zero Point” must be programmed prior to using the Auto Level feature to ensure the proper operation of the system.

NOTE: Prior to starting this procedure, double check all connections on the controller, jacks, and touch pad.

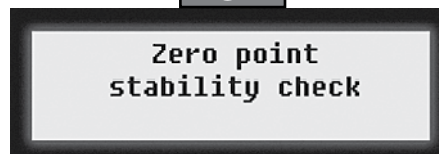
1. Manually run the jacks to level the unit. This is best achieved by placing a level in the center of the unit and leveling it both front to back and then side to side. (See “Basic Jack Operation” for instructions on how to manually operate the system).
2. Once the unit is level, turn off the touch pad.
3. With the touch pad off, press and release the “FRONT” button (Fig. 1G) ten (10) times and then press and release the “REAR” button (Fig. 1J) ten (10) times.
4. The touch pad will flash and beep and the display will read “ZERO POINT CALIBRATION ENTER to set, Power to Exit” (Fig. 5).
5. To set the current position as the zero point, press the “ENTER” button (Fig. 1C).

Fig. 5



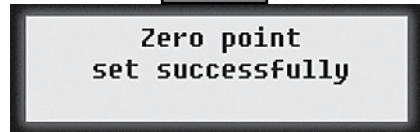
6. LCD display will read “Zero Point stability check” (Fig. 6).

Fig. 6



7. LCD display will read “Zero point set successfully” once process is complete (Fig. 7).

Fig. 7



8. The system will set this point as its level state and the touch pad will turn off.

Maintenance

1. Each month, check that the fluid level is within 1/4" of the fill spout lip while jacks and slide-outs are fully retracted.

NOTE: Always fill the reservoir with the jacks and slide-outs in the fully retracted position. Filling reservoir when jacks and slide-outs are extended will cause reservoir to overflow into its compartment when jacks and slide-outs are retracted.

2. Inspect and clean all power unit electrical connections prior to the first use of the unit of the season and prior to storing the unit. If corrosion is evident, clean all corrosion with a wire brush and apply dielectric grease to the connections.
3. Remove dirt and road debris from jacks as needed.
4. If jacks are down for extended periods, it is recommended to spray exposed leveling jack rods with a silicone lubricant every three months for protection. If the unit is located in a salty air environment, it is recommended to spray the rods every 4 to 6 weeks.

Fluid Recommendation

The Lippert Electronic Leveling System is pre-filled, primed and ready to operate direct from the manufacturer. Type "A" Automatic Transmission Fluid (ATF) is utilized and will work. ATF with Dexron III® or Mercon 5® or a blend of both is recommended by Lippert Components, Inc.

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. For a list of approved fluid specifications, see TI-188.

Troubleshooting

Error Display In LCD Screen

NOTE: To clear Error Code, push "ENTER" - If error remains, the code will appear again.

LCD Message	What's Happening?	What Should I Do?
"EXCESS ANGLE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the unit.
"BAD CALIBRATION"	Unit zero point was not set correctly.	Reset zero point. See "Calibration."
"FEATURE DISABLED"	Front of unit below level when starting Auto Level process.	Raise front of unit above level and restart Auto Level process.
"LOW VOLTAGE"	Bad connection or wiring. Discharged or bad battery.	Check wiring - repair or replace. Test battery voltage under load - charge or replace.
"OUT OF STROKE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the unit.
"EXTERNAL SENSOR"	Bad connection or wiring.	Replace or repair connection to rear remote sensor.
"JACK TIME OUT"	System could not level in expected time.	Check for obstructions, leaks, fluid level and voltage to power unit motor under load.
"AUTO LEVEL FAILURE"	Unsecured controller. Voltage drop.	Check and secure controller placement. Test battery voltage under load - charge or replace.

Manual Override

The LCI Level-Up Automatic Leveling System can be manually operated with an electric drill. In the event of electrical or system failure, this manual method of extending and retracting the jacks can be used. See the instructions below.

NOTE: Unhook the power unit motor from the power source prior to attempting the manual override procedure.

1. Locate the valves that are paired with the landing gear or leveling jack to be manually overridden.
 - A. Landing Gear - Valve located on the landing gear (Fig. 8).
 - B. Leveling Jacks - Valve located on manifold (Fig. 9).
2. Using a $\frac{5}{32}$ " hex wrench, open the valve by turning the manual override set screw clockwise (Fig. 10A).
3. Remove protective label (Fig. 11A) from power unit to reveal the manual override coupler.
4. Using an electric drill with a $\frac{1}{4}$ " hex bit, insert the hex bit into the manual override coupler to manually operate the Level-Up system (Fig. 12).
 - A. Run the drill forward (clockwise) to retract the landing gear or leveling jack (Fig. 12A).
 - B. Run the drill in reverse (counterclockwise) to extend the landing gear or leveling jack (Fig. 12B).
5. Be sure to turn the manual override set screw on the valve (Fig. 13A) back to the counterclockwise position after extending or retracting the landing gear or leveling jack.

Fig. 8

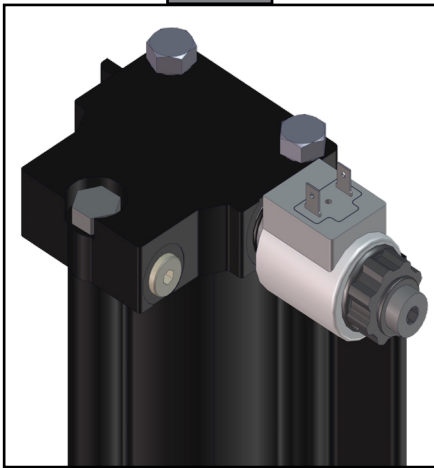


Fig. 9

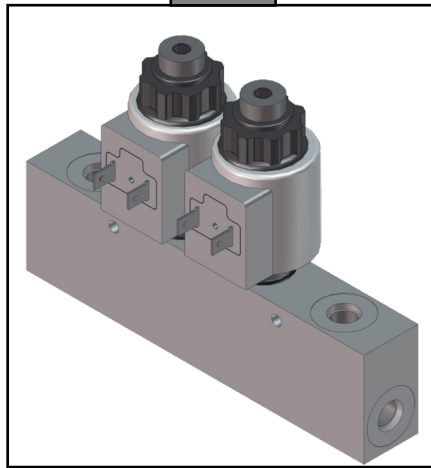


Fig. 10

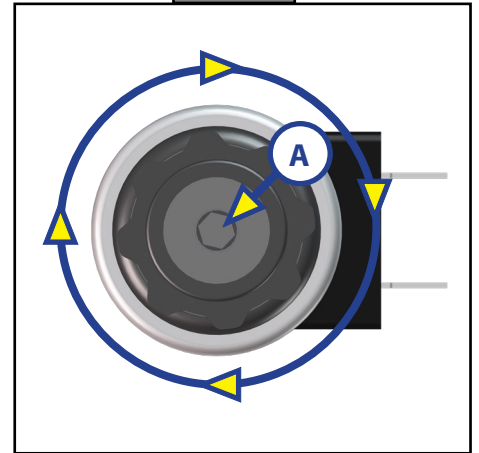


Fig. 11

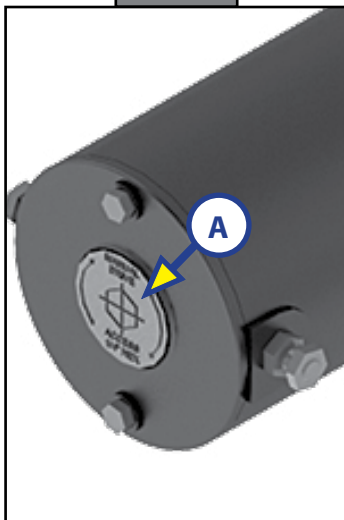


Fig. 12

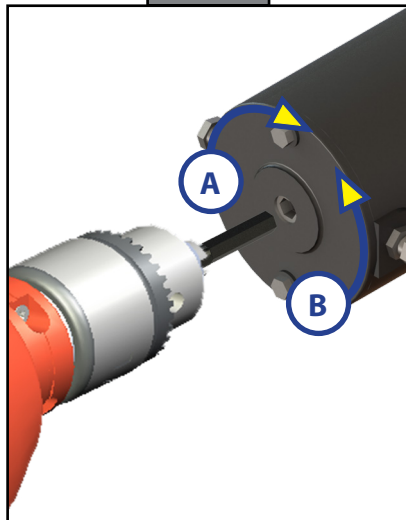
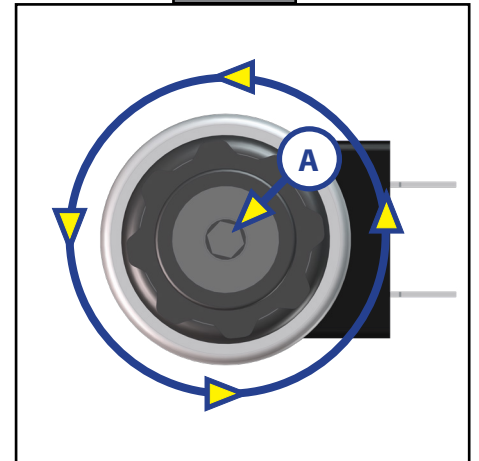


Fig. 13



LEVEL UP® WITH ONECONTROL™ TOUCH PANEL

LEVELING AND STABILIZATION

System Information

The LCI Level Up® OneControl Touch Panel is an automatic leveling system control for fifth wheel applications. It interfaces to the LCI Level Up® pump/jack system to level the trailer. The system utilizes one main control board and a separate waterproof remote level sensor to measure and manage level point, and can be operated from several user interface devices, including:

Auto Leveling Control Touch Pad - Mounted outside the trailer within view of the hitch.

MyRV® OneControl™ Touch Panel (OCTP) - Mounted on a wall inside the living space of the trailer.

MyRV® OneControl™ Leveling App - The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users. iTunes®, iPhone® and iPad® are registered trademarks of Apple Inc. Google Play™ and Android™ are trademarks of Google Inc.

Linc® Remote Control - Optional.

The LCI Level-Up® OneControl Touch Panel is for fifth wheel applications only.

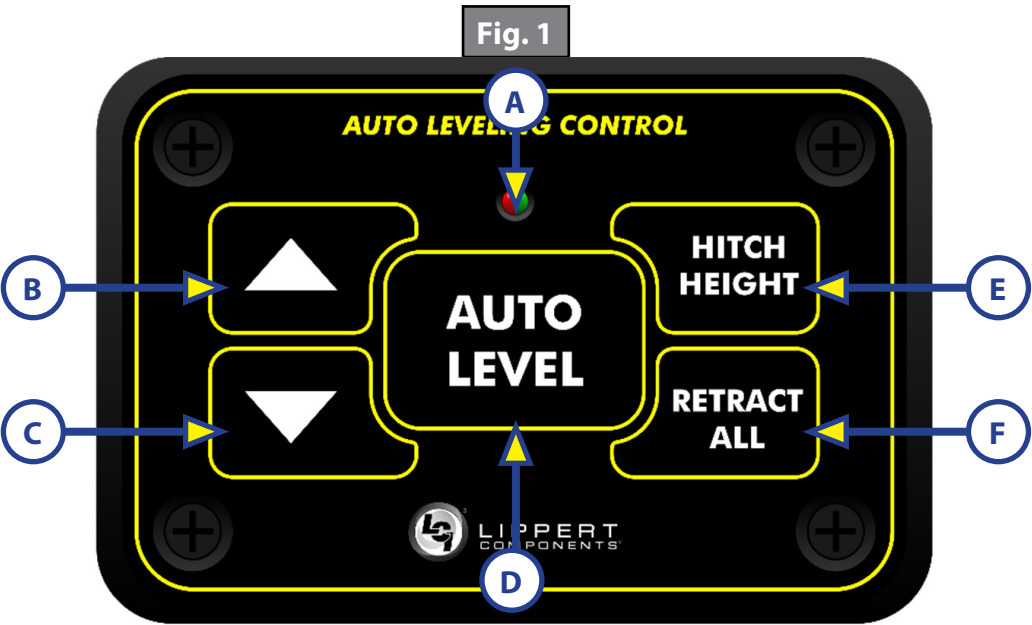
Safety Information

Be sure to park the trailer on solid, level ground. Ensure all jack landing locations are cleared of debris and obstructions and also free of depressions. People and pets should be clear of trailer while operating the leveling system. Ensure the battery of the trailer is fully charged or that the trailer is plugged into shore power prior to attempting to operate the system. Level-Up requires a minimum of 12.75 VDC from the battery for proper operation. Be sure to keep hands and other body parts clear of fluid leaks. Hydraulic fluid leaks in the Lippert Leveling System may be under high pressure and can cause serious skin-penetrating injuries.

WARNING

Lippert Components Inc. recommends that a trained professional be employed to change the tires on the trailer. Ensure that the trailer is properly supported with jack stands, or other adequate devices, under the frame of the trailer prior to commencing any service or repair procedure. Any attempts to change the tires or perform other service while trailer is supported solely by the LCI Level-Up could result in death, serious injury, trailer or property damage.

Touch Pad Diagram - Auto Leveling Control



Callout	Description	
A	Red/Green LED - Indicates the status of the system.	
B	Up Arrow - Extends front jacks (landing gear).	To turn on the touch pad, press the Up and Down arrow buttons at the same time.
C	Down Arrow - Retracts front jacks (landing gear).	
D	Auto Level Button - Places leveling system into auto level mode.	
E	Hitch Height Button - Initiates the Hitch Recognition feature.	
F	Retract All Button - Places leveling system into full retract mode.	

Red/Green LED Indicator

What Is Happening	Why?
Off	Touch pad is locked.
Solid Green	Touch pad is active.
Blinking Green	Jacks are moving.
Solid Red	Low battery.
Blinking Red	Error - Refer to OneControl™ Touch Panel screen or the Leveling App for the specific error, then consult the Troubleshooting section of this manual to clear the error.

Operation - Auto Leveling Control Touch Pad

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure trailer is parked on a level surface and chock the tires of the trailer.

1. To turn on the touch pad, press both "UP" and "DOWN" arrows (Fig. 1B and Fig. 1C) at the same time. The green indicator LED (Fig. 1A) will turn on.

NOTE: The touch pad will remain on as long as the user is pressing buttons. It will time out after approximately 7 minutes without use.

2. Press the "UP" arrow (Fig. 1B) to extend the front jacks and lift the front of trailer to take the weight of the trailer off of the hitch.
3. Uncouple the trailer connection on the tow vehicle.
4. Pull tow vehicle away and park at a safe distance.

Auto Level

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

1. After unhitching from tow vehicle press "AUTO LEVEL" (Fig. 1D).

NOTE: Pressing any button during an Auto Level sequence will abort the auto leveling cycle.

Auto Level Sequence

NOTE: Sequence may vary slightly based on the height of the trailer king pin prior to leveling.

1. When the Auto Level sequence begins, the front of the trailer will seek a position near a level state, then the trailer will level from front to back.
2. The left side jack(s) extend to ground (left mid and left rear).
3. The right side jack(s) extend to ground (right mid and right rear).
4. Jack pairs will extend as needed in order to level the trailer.

NOTE: Step 4 may repeat several times if the controller deems necessary.

NOTE: If the AUTO LEVEL sequence does not perform as described above, place the system in manual mode and test that the jacks operate correctly by pushing their coordinating buttons on the OneControl™ Touch Panel inside the trailer; e.g., "FRONT" button operates only the front jacks, etc. See Operation - myRV® OneControl™ Touch Panel in this manual.

Hitch Recognition - Reconnecting to Tow Vehicle

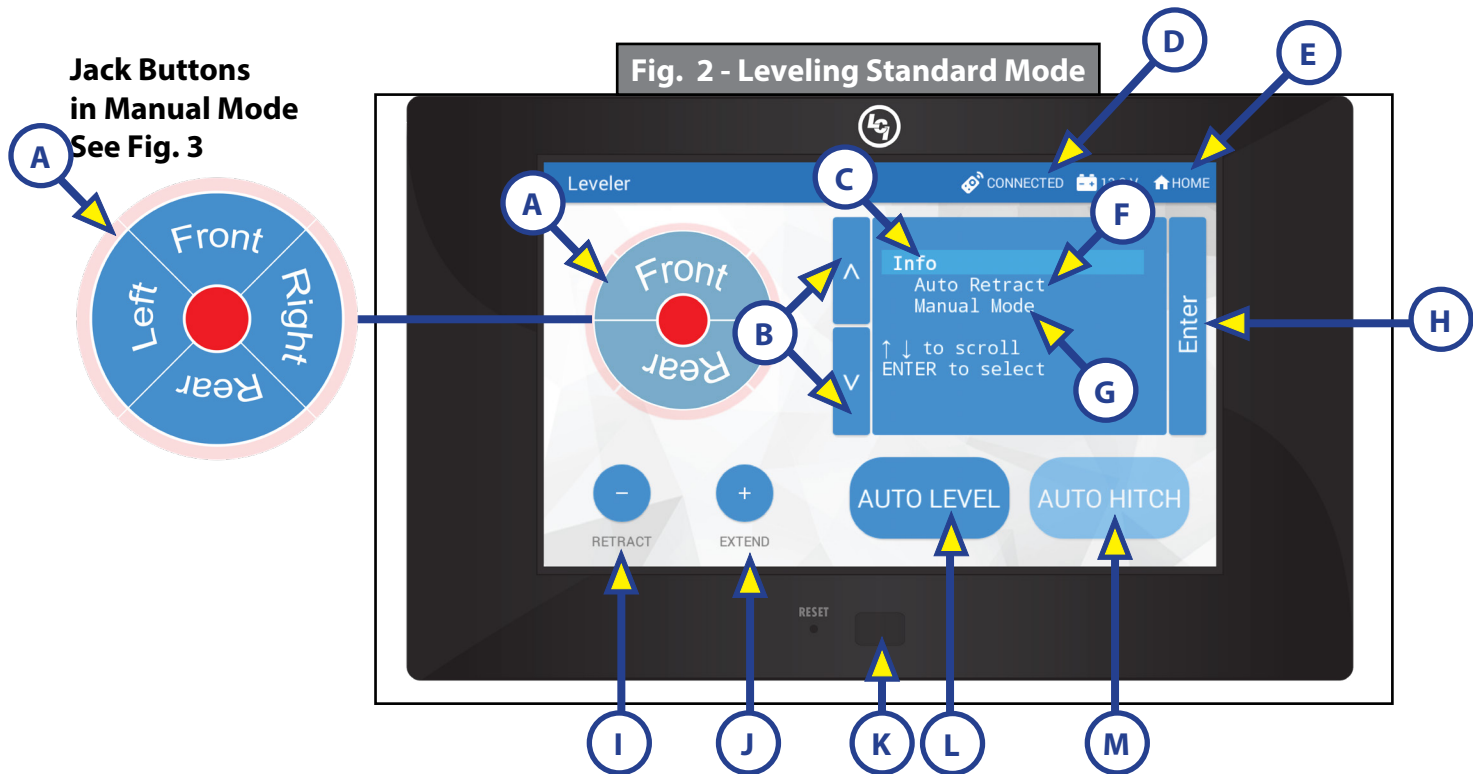
1. To turn on the touch pad, press both "UP" and "DOWN" arrows (Fig. 1B and Fig. 1C) at the same time. The green indicator LED (Fig. 1A) will turn on.
2. Press "HITCH HEIGHT" (Fig. 1E). The rear jacks will retract.
3. The front of the trailer will raise to the height where the auto level sequence was started.

NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks but will not retract the front jacks to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

4. Connect tow vehicle and make sure trailer and hitch are connected and locked.
5. Press "RETRACT ALL." System will immediately retract all jacks.

Touch Panel Diagram - myRV OneControl Touch Panel

Fig. 2 - Leveling Standard Mode



Callout	Description
A	Jack Buttons - Select front, rear, right and left jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. In Standard Mode (Fig. 2), only front and rear jacks are available to be operated. In Manual Mode (Fig. 3), all jacks are available to be operated.
B	Up and Down Arrows - Scrolls through options on screen.
C	Info - Displays system information, e.g. angle, jack stroke or software version.
D	Connected Icon - Press 6 times to program zero point/ wireless configurations.
E	Home Icon - Returns screen to home page.
F	Auto Retract - Enters Auto Retract mode to retract all jacks.
G	Manual Mode - Enters Manual Mode to manually operate jacks.
H	Enter - Push to select various modes.
I	Retract - Retracts jacks in several modes. Jacks available will be highlighted in blue.
J	Extend - Extends jacks in several modes. Jacks available will be highlighted in blue.
K	Power Button - Turns touch panel on and off.
L	Auto Level - Starts the Auto Level sequence.
M	Auto Hitch - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - MyRV OneControl Touch Panel

Standard Mode and Menu

To reach Standard Mode (Fig. 2) for leveling:

1. Power on the OneControl Touch Panel (Fig. 2K).
2. Press "MyRV Control Panel" on the main screen.
3. Press the "Leveler" icon.
4. The screen will show the system menu (Fig. 2) for Standard Mode. The front jacks can be extended/retracted in Standard Mode. Rear jacks can be retracted from this mode.

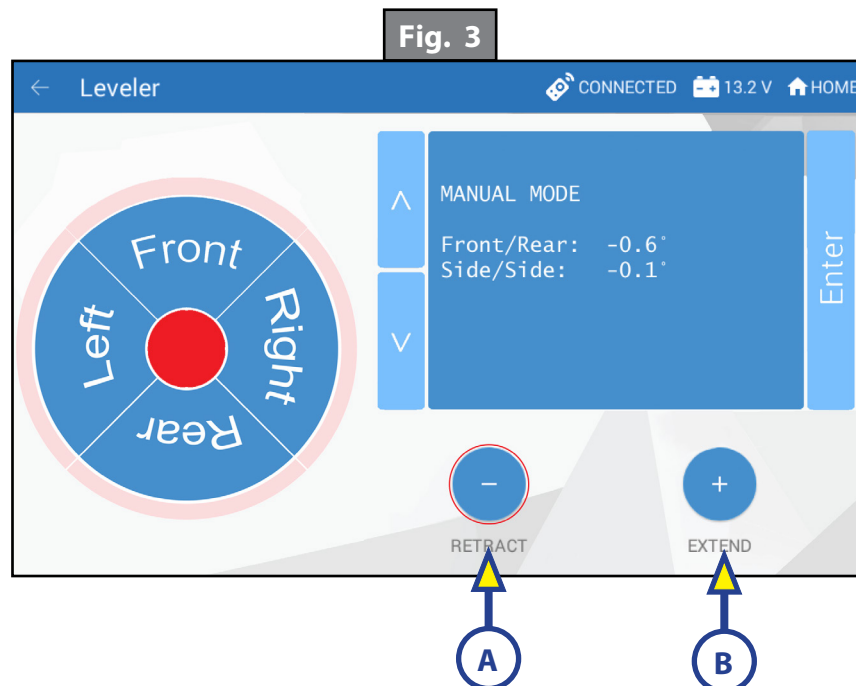
Basic Jack Operation

While in Standard Mode:

1. Press "RETRACT" (Fig. 2I) or "EXTEND" (Fig. 2J) and "FRONT" to retract or extend front jacks.
2. Press "RETRACT" and "REAR" to retract rear jacks.
3. Press the "AUTO LEVEL" (Fig. 2L) button to start the auto leveling sequence.
4. Press the "AUTO HITCH" (Fig. 2M) button to start the hitch recognition sequence when reconnecting to the tow vehicle.
5. Use the "UP" or "DOWN" arrow (Fig. 2B) buttons to cycle through the menu screen options:
 - A. Info:** Scroll to "INFO" (Fig. 2C) and press "ENTER" (Fig. 2H) button to display system information, e.g., angle, jack stroke or software version.
 - B. Auto Retract:** Scroll to "AUTO RETRACT" (Fig. 2F) and press "ENTER" button to start the "Auto Retract" sequence, which will retract all jacks.
 - C. Manual Mode:** Scroll to "MANUAL MODE" (Fig. 2G) and press "ENTER" button to start Manual Level operation. Jacks operate in pairs. Use "RETRACT" or "EXTEND" to operate front jacks, right rear and left rear jacks.

NOTE: Upon entering Manual Mode, a tutorial on operating the jacks will appear on the screen. Press "OK" to clear the tutorial. To delete the tutorial, click the "Don't show this again" box in the bottom right of the screen.

- I. Press "RETRACT" (Fig. 3A) or "EXTEND" (Fig. 3B) and "FRONT" (Fig. 3) to operate front jacks.
- II. Press "EXTEND" or "RETRACT" and "REAR" to operate rear jacks (right rear, right mid, left rear and left mid).
- III. Press "EXTEND" or "RETRACT" and "RIGHT" to operate right jacks (right mid and right rear).
- IV. Press "EXTEND" or "RETRACT" and "LEFT" to operate left jacks (left mid and left rear).



Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure trailer is parked on a level surface and chock the tires of the trailer.

1. Push touch panel "ON/OFF" (Fig. 2K) to turn system on (See "Standard Mode and Menu" to reach standard mode.)
2. Push "EXTEND" (FIG. 2J) AND "FRONT" button (Fig. 2) to extend front jacks and lift front of the trailer to take the weight of the trailer off of the hitch.
3. Uncouple the trailer connection on the tow vehicle.
4. Pull tow vehicle away and park at a safe distance.

Auto Level

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

1. After unhitching from tow vehicle press "AUTO LEVEL" (Fig. 2L).

NOTE: Pressing "ABORT" during an Auto Level sequence will abort the auto leveling cycle.

Auto Level Sequence

NOTE: Sequence may vary slightly based on the height of the trailer king pin prior to leveling.

1. When the Auto Level sequence begins, the front of the trailer will seek a position near a level state, then the trailer will level from front to back.
2. The left side jack(s) extend to ground (left mid and left rear).
3. The right side jack(s) extend to ground (right mid and right rear).
4. Jack pairs will extend as needed in order to level the trailer.

NOTE: Step 4 may repeat several times if the controller deems necessary.

NOTE: If the "AUTO LEVEL" sequence does not perform as described above, place the system in manual mode and test that the jacks operate correctly by pushing their coordinating buttons on the touch panel; e.g., "FRONT" button operates only the front jacks, etc.

Hitch Recognition - Reconnecting to Tow Vehicle

1. Push touch panel "ON/OFF" (Fig. 2K) to turn system on (See "Standard Mode and Menu" to reach standard mode.)
2. Press "AUTO HITCH" (Fig. 2M). Rear jacks will retract.
3. The front of the trailer will raise to the height where the auto level sequence was started.

NOTE: If the front of the trailer was below level when the Auto Level process was initiated, the hitch recognition feature will retract the rear jacks but will not retract the front jacks to lower the trailer to the initial hitch height. This feature helps prevent injury and/or damage to anything underneath the trailer.

4. Connect tow vehicle and make sure trailer and hitch are connected and locked.
5. On the Standard Mode screen (Fig. 2) use the "UP" and "DOWN" arrows (Fig. 2B) to scroll to "AUTO RETRACT" (Fig. 2F).
6. Push "ENTER" (Fig. 2H). System will immediately retract all jacks.

Zero Point Calibration

The "Zero Point" is the programmed point that the trailer will return to each time the Auto Level feature is used. The "Zero Point" must be programmed prior to using the Auto Level feature to ensure the proper operation of the system. The "Zero Point" feature is only available on the OneControl™ Touch Panel with this system.

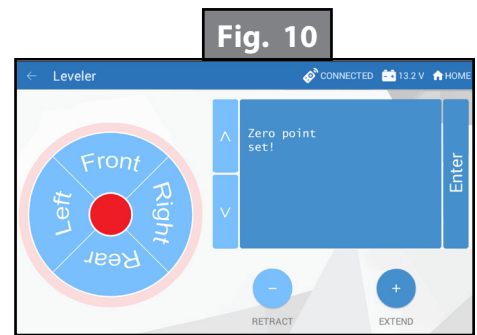
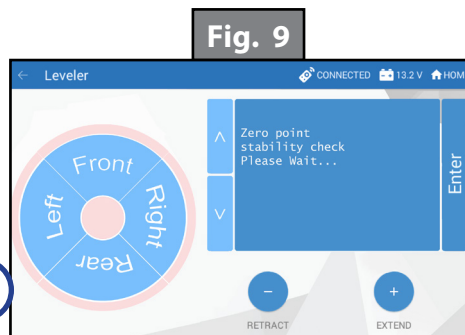
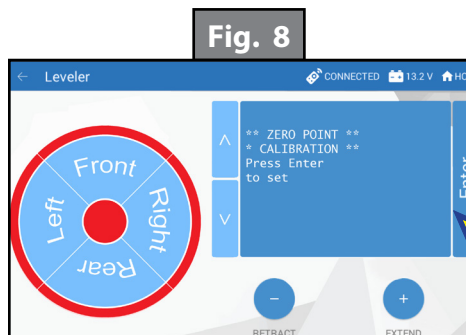
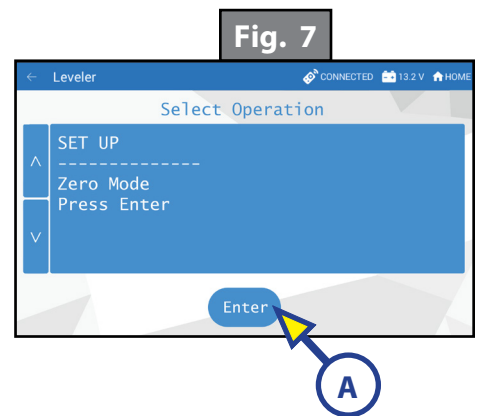
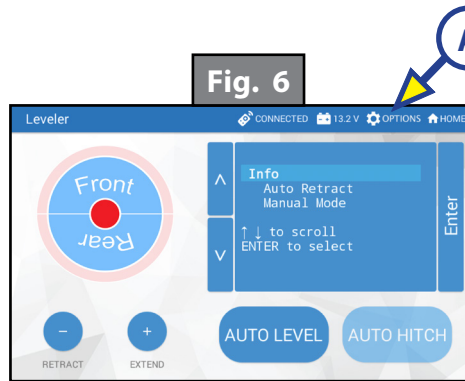
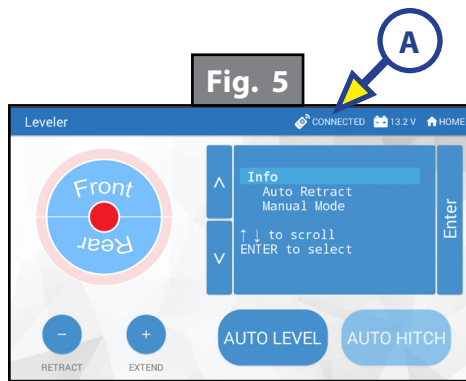
NOTE: Prior to starting this procedure, double check all connections on the controller, jacks, and touch panel.

NOTE: When calibrating Zero Point, the user has full manual control over the jacks. See "Basic Jack Operation - Manual Mode" to adjust to the desired level position. Press the enter button to set.

To Set the Zero Point

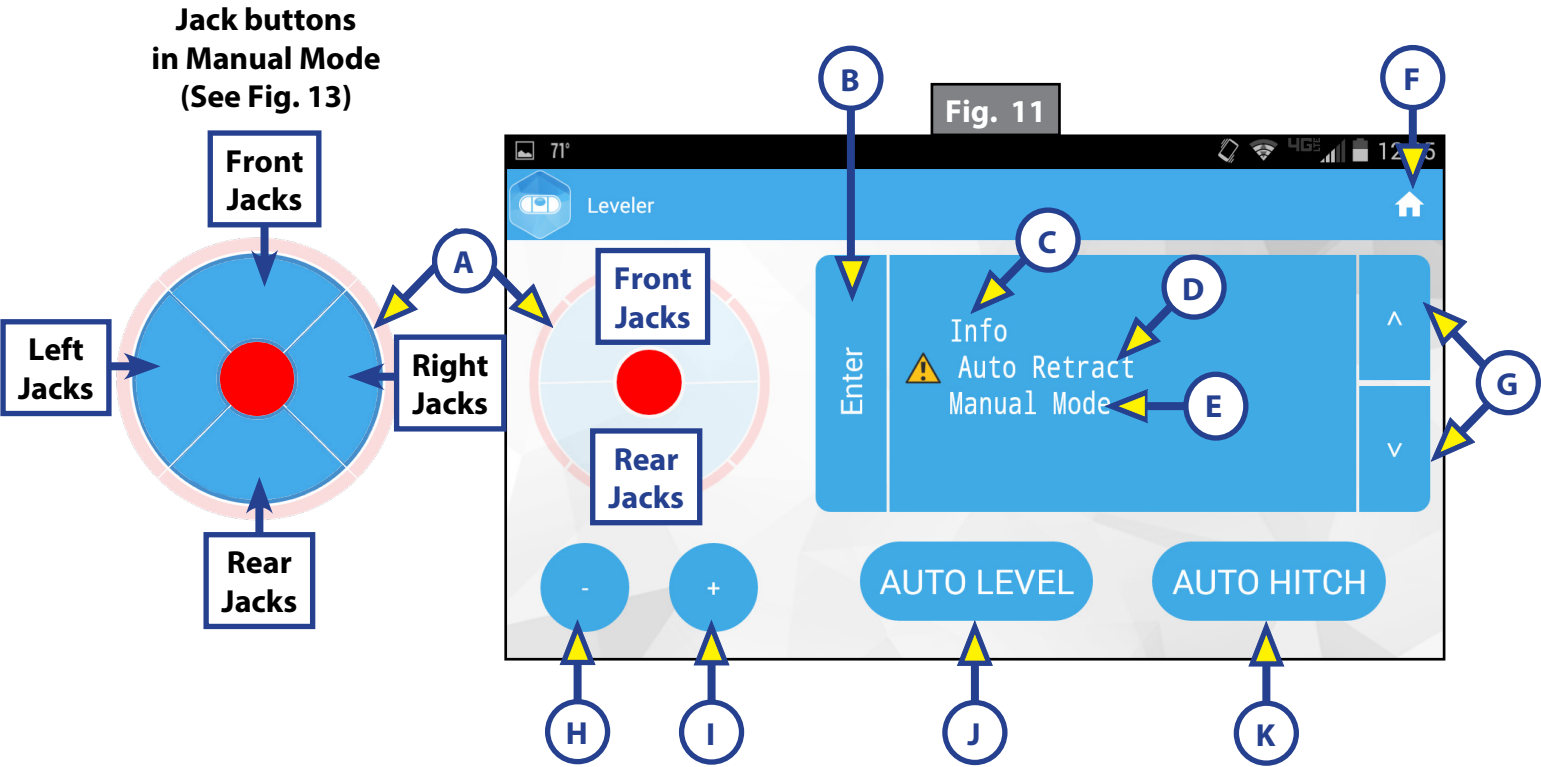
NOTE: The following procedure works from Standard Mode only. (See "Standard Mode and Menu" to reach standard mode.)

1. Press the "CONNECTED" icon (Fig. 5A) at the top of the leveling screen quickly 6 times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig. 6A).
2. Press the gear icon with "OPTIONS" (Fig. 6A).
3. The screen will show "SET UP: Zero Mode Press Enter" (Fig.7).
4. Press the "Enter button" (Fig. 7A).
5. The touch pad will present options for further leveling of the trailer if needed. The screen will also state "ZERO POINT CALIBRATION - Press Enter to Set" (Fig. 8).
6. Press "ENTER" (FIG. 8A).
7. Screen will show "Zero Point Stability Check ... Please Wait" (Fig. 9), followed by "Zero Point Set" (Fig. 10).



Touch Pad Diagram - OneControl App from MyRV

NOTE: The One Control™ Leveling App is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.



Callout	Description
A	Jack Buttons - Select front, rear, right and left jacks to be operated depending on mode. Jacks available to be operated will be highlighted in blue. In Standard Mode (Fig. 11), only front and rear jacks are available to be operated. In Manual Mode (Fig. 13), all jacks are available to be operated.
B	Enter - Push to activate various modes.
C	Info - Displays system information, e.g., angle, jack stroke, software version.
D	Auto Retract - Enters Auto Retract mode to retract all jacks.
E	Manual Mode - Enters Manual Mode to manually operate jacks.
F	Home Icon - Returns screen to home page.
G	Up and Down Arrows - Scroll through options on screen.
H	Retract - Retracts jacks in several modes. Jacks available will be highlighted in blue.
I	Extend - Extends jacks in several modes. Jacks available will be highlighted in blue.
J	Auto Level - Starts the Auto Level sequence.
K	Auto Hitch - Returns trailer to previous hitch height for reconnecting to tow vehicle.

Operation - OneControl App

Accessing the OneControl App

1. Turn on the trailer to provide power to the trailer's wireless network.
2. Navigate to the device's (smart phone, tablet, etc.) wifi settings. Turn wireless feature on and connect to the myRV® wireless network.

NOTE: If this is the first time connecting to the myRV® wireless network, a password will be required. The password is located on the trailer's wifi hub (Fig. 12).

3. Open the OneControl™ application on the compatible device.

NOTE: If the device states "Unresolved Network Connection," retry connecting to the myRV® wireless network and/or wait for the connection to resolve and display "Connected" under the myRV® wireless connection.

4. The application will request the user "Agree" to an end user license agreement, create a PIN and "Re-enter PIN to confirm."
5. The OneControl™ app will now display all functions. Choose "Leveler."



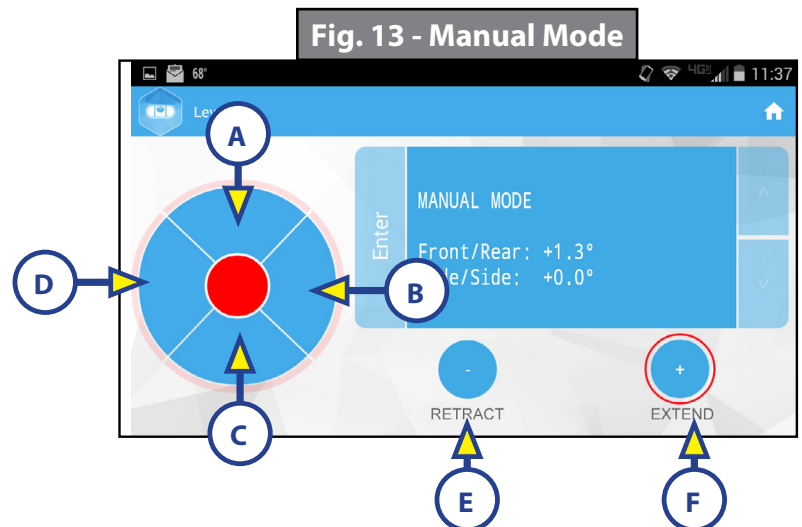
Standard Mode and Menu

Standard Mode is the mode launched when the OneControl™ app "Leveler" function is powered up. The screen will show the system menu (Fig. 11). The front jacks can be extended/retracted in Standard Mode. Rear jacks can be retracted from this mode.

Basic Jack Operation

While in Standard Mode:

1. Press "RETRACT" (Fig. 11H) or "EXTEND" (Fig. 11I) and "FRONT" (Fig. 11) to extend or retract front jacks.
2. Press "RETRACT" and "REAR" (Fig. 11) to retract rear jacks.
3. Press the "AUTO LEVEL" (Fig. 11J) button to start the leveling sequence.
4. Press the "AUTO HITCH" (Fig. 11K) button to start the hitch recognition sequence when reconnecting to tow vehicle.
5. Use the "UP" or "DOWN" arrow buttons (Fig. 11G) to cycle through the menu options:
 - A. **Info:** Scroll to "INFO" (Fig. 11C) and press "ENTER" button to display system information, e.g., angle, jack stroke or software version.
 - B. **Auto Retract:** Scroll to "AUTO RETRACT" (Fig. 11D) and press "ENTER" button to start the Auto Retract sequence.
 - C. **Manual Mode:** Scroll to "MANUAL MODE" (Fig. 11E) and press "ENTER" button to start Manual Level operation. Jacks operate in pairs. Use "RETRACT" or "EXTEND" to operate front jacks and rear jacks.
 - I. Press "RETRACT" (Fig. 13E) or "EXTEND" (Fig. 13F) and FRONT (Fig. 13A) to operate front jacks.
 - II. Press "RETRACT or "EXTEND" and "REAR" (Fig. 13C) to operate rear jacks (right rear, right mid, left rear and left mid).
 - III. Press "RETRACT" or "EXTEND" and "RIGHT" (Fig. 13B) to operate right jacks (right mid and right rear).
 - IV. Press "RETRACT" or "EXTEND" and "LEFT" (FIG. 13D) to operate left jacks (left mid and left rear).



Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure trailer is parked on a level surface and chock the tires of the trailer.

- 1. Push "Extend" (Fig. 11I) and "FRONT" buttons (Fig. 11) to extend front jacks and lift front of trailer to take the weight of the trailer off of the hitch.
- 2. Uncouple the trailer connection on the tow vehicle.
- 3. Pull tow vehicle away and park at a safe distance.

Auto Level

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

- 1. After unhitching from tow vehicle press "AUTO LEVEL" (Fig. 11J).

NOTE: Pressing "ABORT" during an Auto Level sequence will abort the auto leveling cycle.

Auto Level Sequence

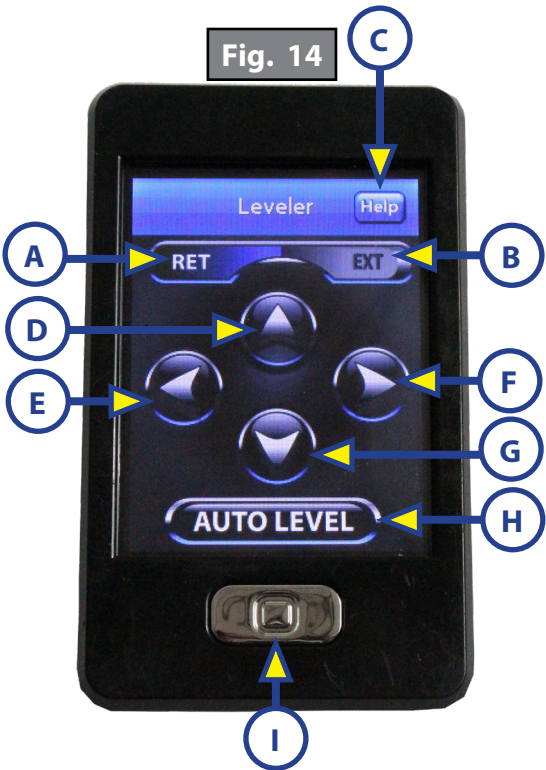
- 1. Sequence may vary slightly based on the height of the trailer king pin prior to leveling.
- 2. When the Auto Level sequence begins, the front of the trailer will seek a position near a level state, then the trailer will level from front to back.
- 3. The left side jack(s) extend to ground (left mid and left rear).
- 4. The right side jack(s) extend to ground (right mid and right rear).
- 5. Jack pairs will extend as needed in order to level the trailer.

NOTE: Step 4 may repeat several times if the controller deems necessary.

NOTE: If the AUTO LEVEL sequence does not perform as described above, place the system in manual mode and test that the jacks operate correctly by pushing their coordinating buttons on the touch panel in manual mode, e.g., "FRONT" button operates only the front jacks, etc.

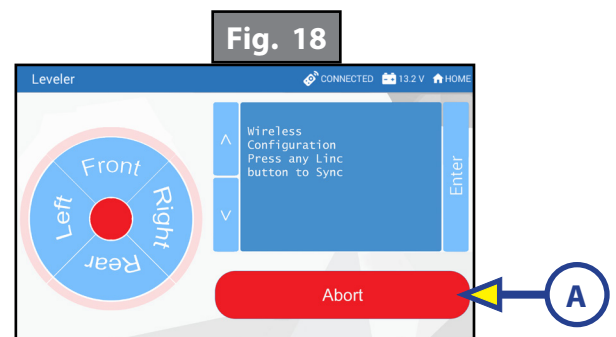
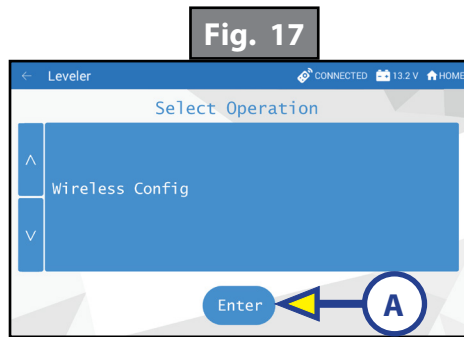
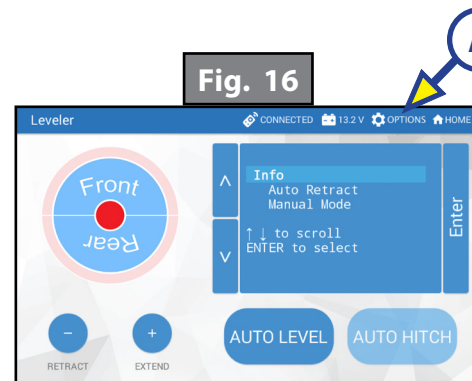
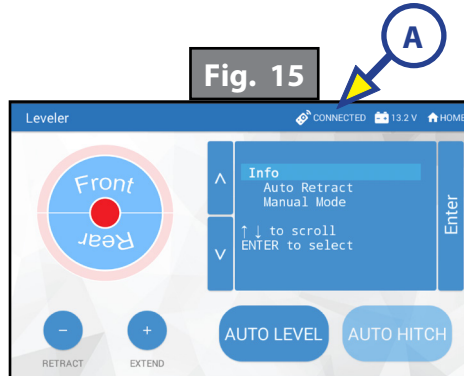
Touch Pad Diagram - Linc Remote Control - Optional

Callout	Description
A	Retract - Retracts front jacks and rear jacks.
B	Extend - Extends front jacks and rear jacks.
C	Help - Provides contact information for LCI.
D	Front Arrow - Operates front jacks.
E	Left Arrow - Operates left rear jacks.
F	Right Arrow - Operates right rear jacks.
G	Rear Arrow - Operates rear jacks.
H	Auto Level- Initiates Auto Level sequence.
I	Power Button - Turns remote control on and off.



Configuring Linc Remote to Sync to MyRV One Control Touch Panel

1. Turn on the Linc™ remote control (Fig. 14I) and enter a PIN.
2. Choose "Leveler" from the menu screen.
3. Turn on the myRV® OneControl™ Touch Panel (Fig. 2K).
4. On the myRV® OneControl™ Touch Panel, press the "CONNECTED" icon at the top of the screen (Fig. 15A) quickly 6 times. Wait a few seconds until the gear icon with "OPTIONS" appears (Fig. 16A).
5. Press the gear icon with "OPTIONS" (Fig. 16A).
6. Use the "UP" and "DOWN" arrows (Fig. 16B) to scroll to "WIRELESS CONFIG" (Fig. 17).
7. Press "ENTER" (Fig. 17A). The screen will display "Wireless Configuration Press any Linc button to Sync" (Fig. 18).
8. Press any button in "Leveler" mode (Fig. 14) on the Linc remote control (Fig. 14).
9. Pressing "ABORT" on the myRV® OneControl™ Touch Panel (Fig. 18A) will cancel configuration sequence.



Basic Jack Operation

- Press "RETRACT" (Fig. 14A) or "EXTEND" (Fig. 14B) and "Front" arrow (Fig. 14D) to operate front jacks.
- Press "RETRACT" or "EXTEND" and "Rear" arrow (Fig. 14G) to operate rear jacks (right rear, right mid, left rear and left mid).
- Press "RETRACT" or "EXTEND" and "Right" arrow (Fig. 14F) to operate right jacks (right mid and right rear).
- Press "RETRACT" or "EXTEND" and "LEFT" arrow (Fig. 14E) to operate left jacks (left mid and left rear).
- Press "AUTO LEVEL" (Fig. 14H) to start auto level sequence.

Unhitching Instructions

NOTE: Prior to unhitching from the tow vehicle, ensure trailer is parked on a level surface and chock the tires of the trailer.

1. Turn the Linc™ remote on (Fig. 14I) and enter a PIN code to turn system on.
2. Press the "LEVELER" button.
3. Press "EXTEND" (Fig. 14B) and "FRONT" arrow (Fig. 14D) to extend front jacks and lift front of trailer to take the weight of the trailer off of the hitch.
4. Uncouple the trailer connection on the tow vehicle.
5. Pull tow vehicle away and park at a safe distance.

Auto Level

NOTE: Once the automatic leveling cycle has been started, it is important that there is no movement in the trailer until the trailer has completed the leveling process. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

1. After unhitching from the tow vehicle press "AUTO LEVEL" (Fig. 14H).

NOTE: Pressing any button on the Linc™ remote during an Auto Level sequence will abort the auto leveling cycle. To restart the Auto Level process, refer to the OneControl™ Touch Panel (Fig. 2).

Auto Level Sequence

NOTE: Sequence may vary slightly based on the height of the trailer king pin prior to leveling.

1. When the Auto Level sequence begins, the front of the trailer will seek a position near a level state, then the trailer will level from front to back.
2. The left side jack(s) extend to ground (left mid and left rear).
3. The right side jack(s) extend to ground (right mid and right rear).
4. Jack pairs will extend as needed in order to level the trailer.

NOTE: Step 4 may repeat several times if the controller deems necessary.

NOTE: If the AUTO LEVEL sequence does not perform as described above, test that the jacks operate correctly by pushing their coordinating buttons on the Linc™ remote; e.g., "FRONT" button operates only the front jacks, etc. The jacks can also be tested in manual mode on the OneControl™ Touch Panel (Fig. 2). See Operation - myRV® OneControl Touch Panel.

Maintenance Level Up OneControl

1. Each month, check that the fluid level is within 1/4" of the fill spout lip while jacks and slide-outs are fully retracted.

NOTE: Always fill the reservoir with the jacks and slide-outs in the fully retracted position. Filling reservoir when jacks and slide-outs are extended will cause reservoir to overflow into its compartment when jacks and slide-outs are retracted.

2. Inspect and clean all power unit electrical connections prior to the first use of the trailer of the season and prior to storing the trailer. If corrosion is evident, clean all corrosion with a wire brush and apply dielectric grease to the connections.
3. Remove dirt and road debris from jacks as needed.
4. If jacks are down for extended periods, it is recommended to spray exposed jack rods with a silicone lubricant every 3 months for protection. If the trailer is located in a salty air environment, it is recommended to spray the rods every 4 to 6 weeks.

Fluid Recommendation

The Lippert Electronic Leveling System is pre-filled, primed and ready to operate direct from the manufacturer. Type "A" Automatic Transmission Fluid (ATF) is utilized and will work. ATF with Dexron III® or Mercon 5® or a blend of both is recommended by Lippert Components, Inc. 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. For a list of approved fluid specifications, see TI-188.

Manual Override

The LCI Level Up Automatic Leveling System can be manually operated with an electric drill. In the event of electrical or system failure, this manual method of extending and retracting the jacks can be used. See the instructions below.

NOTE: Unhook the power unit motor from the power source prior to attempting the manual override procedure.

1. Locate the valves that are paired with the front jacks or rear jacks to be manually overridden.
 - A. Front jacks - Valve located on the front jacks (Fig. 19).
 - B. Rear Jacks - Valve located on manifold (Fig. 20).
2. Using a $\frac{5}{32}$ " hex wrench, open the valve by turning the manual override set screw clockwise (Fig. 21A).
3. Remove protective label (Fig. 22A) from power unit to reveal the manual override coupler.
4. Using an electric drill with a $\frac{1}{4}$ " hex bit, insert the hex bit into the manual override coupler to manually operate the Level-Up system (Fig. 23).
 - A. Run the drill forward (clockwise) to retract the front jacks or rear jacks (Fig. 23A).
 - B. Run the drill in reverse (counterclockwise) to extend the front jacks or rear jacks (Fig. 23B).
5. Be sure to turn the manual override set screw on the valve (Fig. 24A) back to the counterclockwise position after extending or retracting the front jacks or rear jacks.

Fig. 19

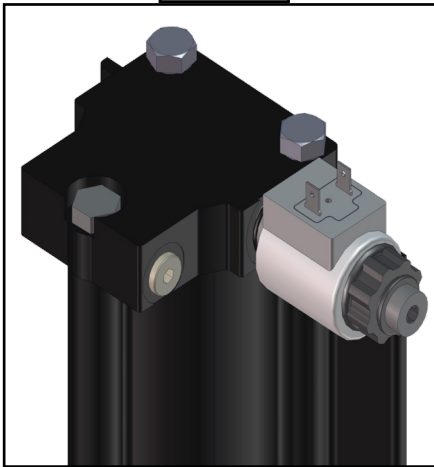


Fig. 20

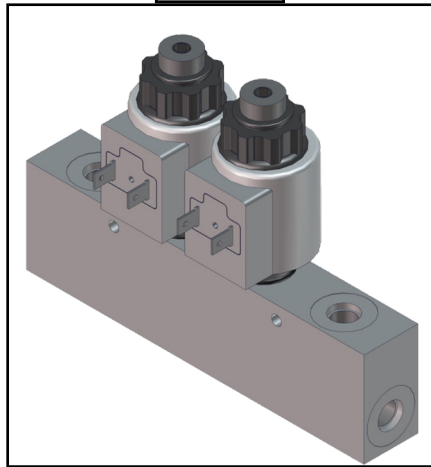


Fig. 21

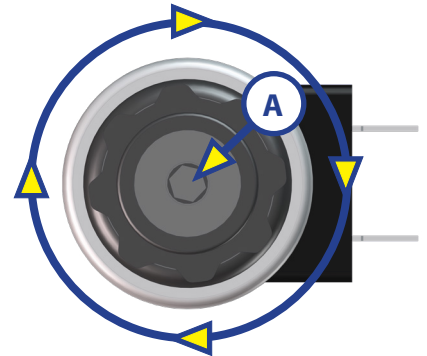


Fig. 22

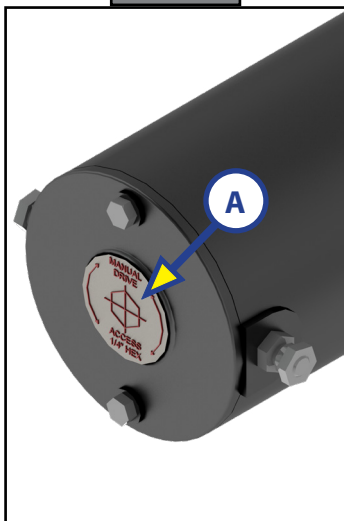


Fig. 23

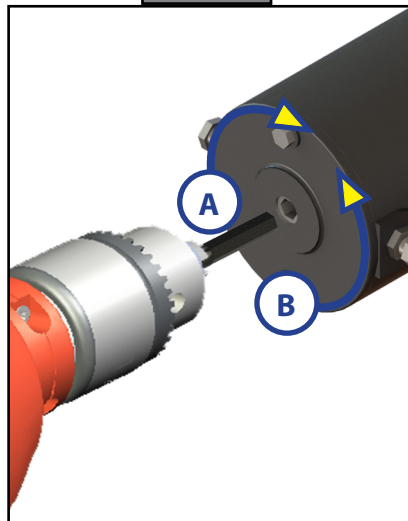
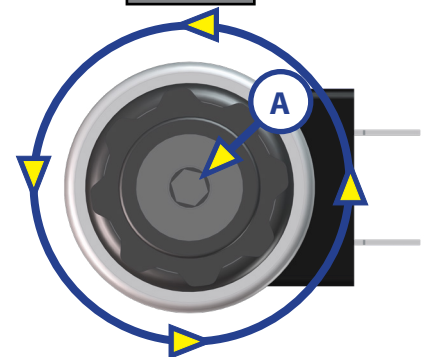


Fig. 24



Troubleshooting

Error Display In LCD Screen

Faults can only be cleared via the OneControl™ Touch Panel or OneControl™ Leveling App through myRV®. The only exception is when the Auto Leveling Control mini-touch pad (Fig. 1) was used to abort an auto-sequence. In this case the fault can be cleared by pressing any Auto Leveling Control button.

LCD Message	What's Happening?	What Should I Do?
"EXCESS ANGLE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the trailer.
"EXCESSIVE ANGLE"	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during manual operation.	Relocate the coach.
"BAD CALIBRATION"	Trailer zero point was not set correctly.	Reset zero point.
"FEATURE DISABLED"	Hitch recognition requested but no hitch height set.	Perform "AUTO LEVEL" sequence to establish hitch height.
	Zero point not set.	Set zero point.
"LOW VOLTAGE"	Bad connection or wiring. Discharged or bad battery.	Check wiring - repair or replace. Test battery voltage under load - charge or replace.
"OUT OF STROKE"	Unsecured controller. Uneven or sloped site.	Check and secure controller placement. Relocate the trailer.
"EXTERNAL SENSOR"	Bad connection or wiring.	Replace or repair connection to rear remote sensor.
"JACK TIME OUT"	System could not level in expected time.	Check for obstructions, leaks, fluid level and voltage to power unit motor under load.
"AUTO LEVEL FAILURE"	Unsecured controller. Voltage drop.	Check and secure controller placement. Test battery voltage under load - charge or replace.
"FUNCTION ABORTED"	User has aborted an automatic leveling sequence.	Restart the sequence.

HYDRAULIC LANDING GEAR

LEVELING AND STABILIZATION

System



Failure to act in accordance with the following may result in death or serious injury.

The use of the Lippert Hydraulic Landing Gear to support the coach for any reason other than which it is intended is prohibited by Lippert's limited warranty. The Lippert Hydraulic Landing Gear system is designed as a system to drop the unit off of a truck, level the unit from front to back and stabilize the front of the unit only and should not be used to provide service for any reason under the coach such as changing tires or servicing the landing gear.

Lippert Components, Inc. recommends that a trained professional be employed to change the tire of the coach. Any attempts to change tires or perform other service while coach is supported by the hydraulic landing gear could result in death, serious personal injury and/or damage to the coach.

- Be sure to park the coach on solid, level ground.
- Clear all jack landing locations of debris and obstructions. Location should also be free of depressions.
- When parking the coach on extremely soft surfaces, utilize load distribution pads under each jack.
- People and pets should be clear of coach while operating Lippert hydraulic landing gear system.
- Be sure to keep hands and other body parts clear of fluid leaks. Oil leaks in the Lippert hydraulic landing gear may be under high pressure and can cause serious skin penetrating issues.
- Never lift the coach completely off the ground. Lifting the coach so the wheels are not touching ground will create an unstable and unsafe condition.

Prior to Operation

The Lippert Hydraulic Landing Gear shall only be operated under the following conditions:

1. The unit is parked on a reasonably level surface.
2. The towing vehicle is disengaged from the unit.
3. Be sure all persons, pets and property are clear of the coach while Lippert Hydraulic Landing Gear is in operation.

System Description

Please read and study the operating manual before you operate the Lippert Hydraulic Landing Gear.

- The Lippert Hydraulic Landing Gear is an electric/hydraulic 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 coach.
- There are no serviceable parts within the electric motor. If the motor fails, it must be replaced.
- Disassembly of the motor voids the warranty.
- Mechanical portions of the Lippert Hydraulic Landing Gear are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Component Description

The Lippert Hydraulic Landing Gear consists of the following major components:

- Lippert Hydraulic Landing Gear are rated at a lifting capacity appropriate for your coach.
- Lippert Hydraulic Landing Gear is powered from a central 12VDC motor/pump assembly, which also includes the hydraulic oil reservoir tank, control valve manifold, and solenoid valves.
- The Lippert Hydraulic Landing Gear is controlled electronically from the switch near the pump.

Preventative Maintenance Procedures

The Lippert Hydraulic Landing Gear has been designed to require very little maintenance. To ensure the long life of your slide-out system, read and follow these few simple procedures.

1. Check the fluid level every month.
 - A. Check fluid only when jacks are fully retracted.
 - B. Always fill the reservoir with the jacks in the fully retracted position. Filling reservoir when jacks are extended will cause reservoir to overflow into its compartment when jacks are retracted.
 - C. When checking fluid level, fluid should be within ¼" of fill spout lip.
2. Inspect and clean all Pump Unit electrical connections every 12 months.
3. Remove dirt and road debris from Landing Gear as needed.

WARNING

The coach should be supported at both front and rear axles with jack stands before working underneath. Failure to do so may result in death or serious injury.

The Lippert Hydraulic Landing Gear has been static tested to over 6,000 continuous cycles without any noticeable wear to rotating or sliding parts. It is recommended that when operating in harsh environments and conditions (road salt, ice build-up, etc.) the moving parts be kept clean. They can be washed with mild soap and water. No grease or lubrication is necessary and in some situations may be detrimental to the environment and long-term dependability of the system.

Mechanical Components

Although the system is designed to be almost maintenance-free, actuate the landing gear once or twice a week to keep the seals and internal moving parts lubricated.

Check for any visible signs of "leaking" before and after movement of the system and the coach.

When the landing gear is down, visually inspect the inner and outer assemblies. Refer to components list for location of inner assemblies. Check for excess build-up of dirt or other foreign material; remove any debris that may be present.

If the system squeaks or makes any noises it is permissible to apply a coat of lightweight oil or silicone lubricant spray to the hydraulic rod but remove any excess oil so dirt and debris do not build-up. DO NOT use grease.

Electrical Components

For optimum performance, the landing gear system requires full battery current and voltage. The battery must be maintained at full capacity. Other than good battery maintenance, check the terminals and other connections at the battery, the control switch and the pump motor for corrosion and loose or damaged terminals. Check motor leads under the coach chassis. Since these connections may be subject to damage from road debris, be sure they are in good condition.

NOTE: The Lippert Hydraulic Landing Gear is designed to operate as a negative ground system. A negative ground system utilizes the chassis frame as the ground source. An independent ground wire back to the battery is not needed. It is important the electrical components have good wire to chassis contact. Over 90% of unit electrical problems can be attributed to bad ground connections.

NOTE: For long-term storage: It is recommended that the room be closed (retracted) and if your unit is equipped with the IRC room control, it is recommended all of the control knobs be kept in the closed position.

Auxiliary Operation

The Lippert Hydraulic Landing Gear can be run with power devices like electric drills or cordless screwdrivers. In the event of electrical or system failure, this manual method of extending and retracting the jacks can be used. A standard hand-held cordless or power drill is all that is required.

1. Locate the blocking valve (Fig. 1) on the top cap of either of the landing gear jacks.
2. Using a $\frac{5}{32}$ " Allen wrench, manually open the valve by turning the manual override set screw in the end of the valve clockwise (Fig. 1).
3. Remove protective label from the motor (Fig. 2).
4. Using a standard $\frac{1}{4}$ " hex bit, insert into auxiliary drive device, i.e. cordless drill or power drill. Insert hex bit into coupler found under protective label (Fig. 2).
5. Run drill forward or clockwise to retract jacks and in reverse or counterclockwise to extend jacks.
6. Be sure to turn manual override set screw back to the counterclockwise position after extending or retracting landing gear (Fig. 3).

Fig. 1

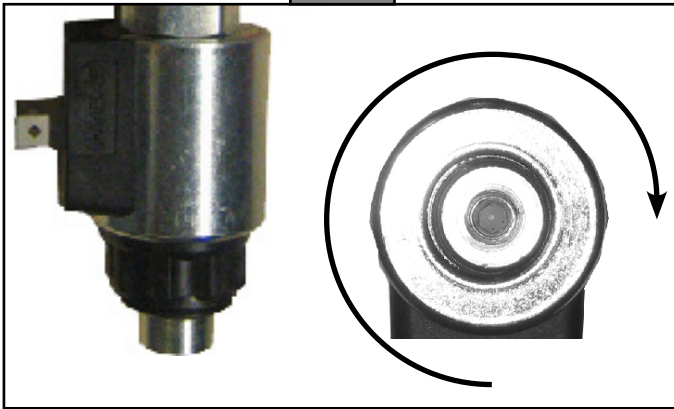
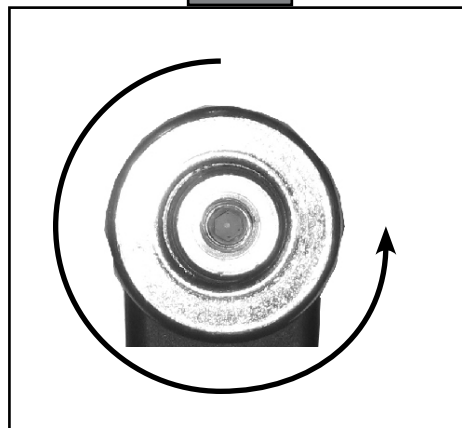


Fig. 2



Fig. 3



Fluid Recommendation

The Lippert Electronic Leveling System is pre-filled, primed and ready to operate direct from the manufacturer. Type "A" Automatic Transmission Fluid (ATF) is utilized and will work. ATF with Dexron III® or Mercon 5® or a blend of both is recommended by Lippert Components, Inc.

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. For a list of approved fluid specifications, see [TI-188](#).

Filling Directions

NOTE: Be sure landing gear are fully retracted prior to filling reservoir to prevent over-filling.

1. Remove Breather/Fill Cap
2. Pour ATF into Breather/Fill opening.

NOTE: Do not allow any contamination into reservoir during fill process.

NOTE: Standard reservoir holds approximately 2 quarts (1.89 liters) of ATF.

3. Fill to within ½" of top.
4. Replace Breather/Fill cap when finished.

System is self-purging. By simply cycling the system 2-3 times, any air in the system will be forced back to the reservoir and out of the Breather/Fill cap.

Troubleshooting

Power Unit

Before attempting to troubleshoot the Power Unit, make sure an adequate power source is available. The unit batteries should be fully charged or the unit should be plugged into to A/C service with batteries installed. Do not attempt to troubleshoot the Power Unit without assuring a full 12V DC charge.

The following tests require only a DC voltmeter (or DC test light) and a jumper lead.

1. Attach voltmeter (or test light) leads to the negative and positive terminals on motor solenoid. Does the meter indicate 12V DC? If YES, see Step 2; if NO see Step 3.
2. If YES, at the motor, check the incoming leads to 12V DC (if necessary, disconnect leads at wire splices). Does meter indicate 12V DC? If YES, Power Unit needs to be replaced. The motor is not field serviceable. Do not attempt to repair. If NO, Inspect all wires and connections between the wall switch and the motor. Repair connections as necessary. Recheck as in Step 1.
3. If NO, Inspect all connections between battery and solenoid. Inspect 30A Auto-reset Circuit Breaker. Recheck as above in Step 1.

NOTE: Since there are no field serviceable parts in the motor of the Power Unit, electrical troubleshooting and service is limited to replacing only those components as previously outlined.

NOTE: Thorough inspection of wiring and connections is the only other electrical service that can be performed.

Problem	Probable Cause	Corrective Action
Jacks will not extend to ground, pump is running.	Little or no fluid in reservoir.	Fill reservoir with Dexron III ATF.
	Leg valve is inoperative.	Clean, repair or replace.
	Electronic signal is lost between switch and leg valves.	Trace wires for voltage drop or loss of signal. Repair or replace necessary wires or replace switch.
Any one or two jacks will not retract.	Hose damaged or not connected.	Replace with new hose or reconnect.
	Return valve is inoperative.	Replace inoperative return valve.
	Electronic signal is lost between switch and solenoid.	Attempt to retract jacks in manual mode, if successful replace control pad; if not, test voltage drop.
	Electronic signal is lost between switch and leg valve.	Repair bad wiring or replace defective board or valve.

PSX1™ (POWER STABILIZING SYSTEM)

LEVELING AND STABILIZATION

System Description

The PSX1™ is a 12V DC electric motor-driven system. The electric motor drives Acme-threaded screws to extend and retract the stabilizer legs to stabilize the trailer.

The stabilizing system can be installed on travel trailers and 5th Wheels. Travel trailer options include both front and rear stabilizers or a rear stabilizer only, while 5th Wheels typically utilize only a rear stabilizer. The standard duty stabilizer is suitable for all trailers.

There are no serviceable parts within the electric motor. If a motor fails, it must be replaced. Disassembly of the motor voids the warranty. Mechanical portions of the PSX1 are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Safety Information

The PSX1 is intended for the purpose of stabilizing the trailer after the trailer has been leveled. The use of this system for any reason other than which it is intended is prohibited by Lippert's Limited Warranty and may result in serious personal injury or death. The PSX1 is designed as a stabilizing component system and should not be used to provide service under the trailer for any reason such as changing tires or repairing or replacing any components beneath the trailer.

WARNING

The “WARNING” symbol above is a sign that an installation procedure has a safety risk involved and may cause death, serious personal injury or severe product or property damage if not performed safely and within the parameters set forth in this manual. Always wear eye protection when performing this installation procedure. Other safety equipment to consider would be hearing protection, gloves, and possibly a full face shield, depending on the nature of the installation procedure.

WARNING

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 trailer is supported by the PSX1 could result in death, serious personal injury or severe product or property damage.

Operation

⚠ WARNING

Failure to act in accordance with the following may result in death, serious personal injury or severe product or property damage. Always make sure the stabilizer area is clear of pets, people and objects before and during operation of the system. Always keep away from the stabilizer legs when in operation.

⚠ CAUTION

The PSX1 is to be used for stabilizing the trailer, not leveling the trailer. The stabilizer legs should never be extended longer than two seconds beyond initial contact with the ground.

⚠ CAUTION

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

⚠ CAUTION

Never lift the trailer completely off the ground. Lifting the trailer completely off the ground creates an unstable condition that could result in property damage and personal injury.

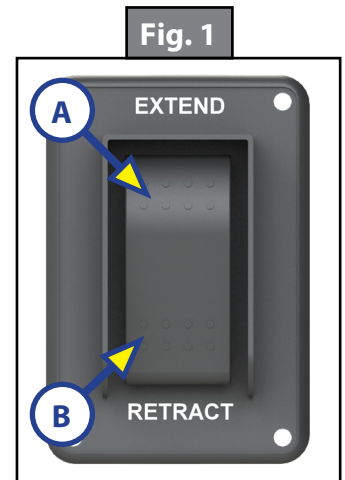
Preparation

The PSX1 is intended for the purpose of stabilizing the trailer after the trailer has been leveled.

1. Make sure the trailer is on solid, level ground.
2. Clear all stabilizer leg landing locations of debris and obstructions. Locations should also be free of depressions.
3. When parking the trailer on extremely soft surfaces, utilize load distribution pads under each stabilizer leg.
4. People and pets should be clear of trailer while operating the stabilizers.

Extending Stabilizers

1. Make sure the trailer is level.
2. Verify the battery is fully charged and hooked up to the electrical system.
3. Press and hold "EXTEND" on the switch (Fig. 1A) for the rear stabilizer until the footpads of the stabilizer legs contact the ground and the rear of the trailer is stabilized. Then release the switch.
4. If a front stabilizer is installed, press and hold "EXTEND" on the switch (Fig. 1A) for the front stabilizer until the footpads of the stabilizer legs contact the ground and the front of the trailer is stabilized. Then release the switch.



⚠ CAUTION

Once the stabilizer legs have been extended, do not use the tongue jack on a travel trailer or the landing gear on a 5th Wheel. Damage to the stabilizer legs can occur when lifting or leveling the trailer after the stabilizer legs have been extended. Doing so will void the warranty of the stabilizers.

Retracting Stabilizers

1. Verify the battery is fully charged and hooked up to the electrical system.
2. If a front stabilizer is installed, press and hold "RETRACT" on the switch (Fig. 1B) for the front stabilizer until the stabilizer legs are fully retracted. Then release the switch.
3. Press and hold "RETRACT" on the switch (Fig. 1B) for the rear stabilizer until the stabilizer legs are fully retracted. Then release the switch.

Stabilizing System

By keeping the "EXTEND" switch (Fig. 1A) engaged for one to two seconds after the legs' footpads make contact with the ground, the trailer will be stabilized and ready for use.

In the event the system shuts off while trying to stabilize the trailer, an in-line auto-reset circuit protection has tripped and will reset within 10 seconds. This is an indication the PSX1 is not being used as intended and is trying to lift too much weight.

NOTE: Make sure the stabilizer legs are fully retracted before moving the trailer.

Manual Override

The PSX 1 comes with a manual override system located on the stabilizer end opposite the electric motor (Fig. 2A).

To manually operate the stabilizer:

1. Disconnect one of the wire leads from the motor to prevent backfeeding the motor.
2. Next, insert the $\frac{1}{2}$ " diameter manual crank handle (PN #119226) (Fig. 3) over the coupler and pin at the end of the stabilizer (Fig. 2A). The slot in the end of the crank handle (Fig. 3) accommodates the pin on the coupler (Fig. 2A) to allow the manual extension/retraction of the stabilizer legs.

⚠ CAUTION

The gears can be stripped if the stabilizer legs are retracted/extended to the fullest extent and the operator continues to rotate the manual override. Do NOT use a power tool to extend or retract stabilizers.

3. Rotate the crank handle clockwise to extend or counterclockwise to retract the stabilizer legs.

Fig. 2

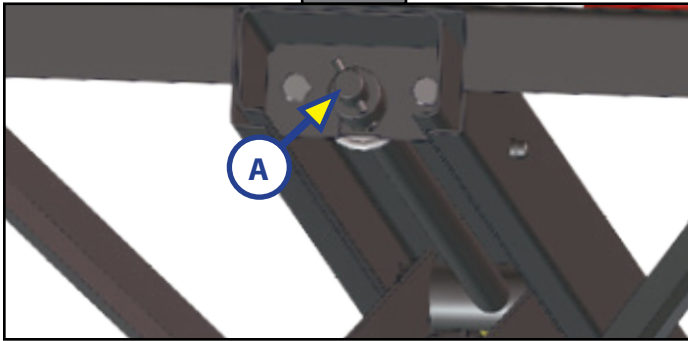
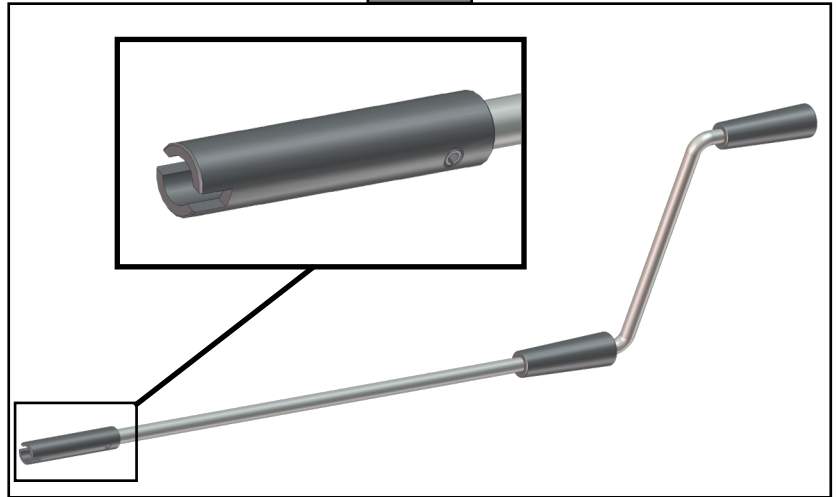


Fig. 3



System Maintenance



Do not work on the stabilizer unless the battery is disconnected. Failure to act in accordance with the following may result in death, serious personal injury or severe product or property damage.

Mechanical Maintenance

It is recommended that when operating in harsh environments, e.g. road salt or ice buildup, the moving parts be kept clean. They can be washed with mild soap and water. The ACME screw is precoated with grease. If the screw is cleaned, it may be necessary to add grease to the screw to ensure smooth stabilizer operation.



Operating the stabilizer without grease on the screw could lead to product failure.

Electrical Maintenance

For optimum performance, the system requires full battery current and voltage. The battery must be maintained at full capacity. Other than good battery maintenance, check the terminals and other connections at the battery, the control switch and the electric motors for corrosion and loose or damaged terminals. Check motor leads under the trailer chassis. Since these connections are subject to damage from road debris, make sure they are in good condition.

Troubleshooting

What Is Happening?	Why?	What Should Be Done?
System shuts off	Too much weight.	Circuit protection will reset in 10 seconds.
Switch does not activate system	Low voltage.	Test battery voltage under load. Charge or replace.
		Use Manual Override.
	Damaged or disconnected wiring.	Check wiring. Repair or replace.
		Use Manual Override.

PSX2™ (POWER STABILIZING SYSTEM)

LEVELING AND STABILIZATION

Safety Information

The PSX2™ (Power Stabilizing System) is intended for the purpose of stabilizing the trailer. The use of this system for any reason other than which it is intended is prohibited by Lippert's Limited Warranty and may result in serious personal injury or death. The PSX2™ is designed as a stabilizing component system and should not be used to provide service under the trailer for any reason, including changing tires or repairing or replacing any components beneath the trailer.

WARNING

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

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

WARNING

The PSX2™ is designed as a stabilizing component system. Do NOT use this stabilizing system to attempt to level the trailer. Failure to follow instructions in this manual could result in death, serious personal injury or severe product or property damage.

WARNING

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 trailer is supported by the PSX2™ could result in death, serious injury and/or damage to the trailer.

CAUTION

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

System Description

Please read and study the Operation section of the manual before operating the PSX2™. The PSX2™ is a 12V DC electric motor-driven system. The electric motors drive Acme-threaded screws to extend and retract the stabilizer legs to stabilize the trailer.

The stabilizing system can be installed on travel trailers and 5th Wheels. Travel trailer options include both front and rear stabilizers or a rear stabilizer only, while 5th Wheels typically utilize only a rear stabilizer. The PSX2™ has two motors per stabilizer.

There are no serviceable parts within the electric motors. If either motor fails, it must be replaced. Disassembly of the motor voids the warranty. Mechanical portions of the PSX2™ are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Operation

WARNING

Failure to act in accordance with the following may result in death or serious injury. Always make sure that the stabilizer area is clear of people, pets and objects before and during operation of the system. Always keep away from the stabilizer legs when operated.

CAUTION

The PSX2™ is to be used for stabilizing the trailer, not leveling the trailer. The stabilizer legs should never be extended longer than two seconds beyond initial contact with the ground.

CAUTION

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

Preparation

The PSX2™ is intended for the purpose of stabilizing the trailer after the trailer has been leveled.

WARNING

Never lift the trailer completely off the ground. Lifting the trailer completely off the ground creates an unstable condition that could result in death, serious personal injury or severe product or property damage.

1. Make sure the trailer is parked on solid, level ground.
2. Clear all stabilizer leg landing locations of debris and obstructions. Locations should be free of depressions.
3. When parking the trailer on extremely soft surfaces, utilize load distribution pads under each stabilizer leg.
4. Make sure people and pets are clear of the trailer while operating the stabilizers.

Extending Stabilizers

1. Make sure the trailer is level.
2. Verify the battery is fully charged and hooked up to the electrical system.
3. Press and hold "EXTEND" on the switch (Fig. 1A) for the rear stabilizer until the footpads of the stabilizer legs contact the ground and the rear of the trailer is stabilized. Then release the switch.
4. If a front stabilizer is installed, press and hold "EXTEND" on the switch (Fig. 1A) for the front stabilizer until the footpads of the stabilizer legs contact the ground and the front of the trailer is stabilized. Then release the switch.

⚠ CAUTION

Once the stabilizer legs have been extended, do not use the tongue jack on a travel trailer or the landing gear on a 5th Wheel. Damage to the stabilizer legs can occur when lifting or leveling the trailer after the stabilizer legs have been extended. Doing so will void the warranty of the stabilizers.

Retracting Stabilizers

1. Verify the battery is fully charged and hooked up to the electrical system.
2. If a front stabilizer is installed, press and hold "RETRACT" on the switch (Fig. 1B) for the front stabilizer until the stabilizer legs are fully retracted. Then release the switch.
3. Press and hold "RETRACT" on the switch (Fig. 1B) for the rear stabilizer until the stabilizer legs are fully retracted. Then release the switch.

Stabilizing System

By pressing and holding the "EXTEND" switch (Fig. 1A) for one to two seconds after the stabilizer legs' footpads make contact with the ground, the trailer will be stabilized and ready for use.

In the event the system shuts off while trying to stabilize the trailer, the auto-reset circuit protection contained within the motors has tripped and will reset within 10 seconds. The internal circuit protection is included to prevent the stabilizer from lifting. If the circuit protection trips, then the stabilizer legs should not be extended farther.

If the stabilizer legs are not synchronized and are extending unevenly, press and hold "RETRACT" (Fig. 4B) on the switch until both legs are fully retracted. The circuit protection will trip. After the circuit protection resets, the stabilization sequence can be restarted.

NOTE: Make sure the stabilizer legs are fully retracted before moving the trailer.

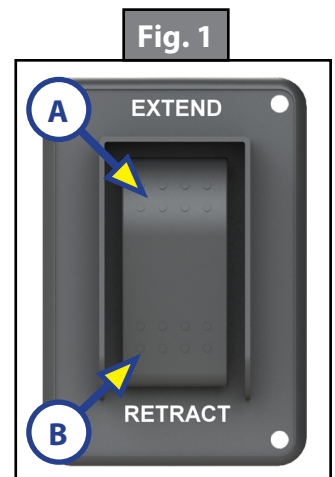
Manual Override

The PSX2™ comes with a manual override system located on the side of each motor.

NOTE: Use of a ratchet with a $\frac{5}{16}$ " socket or a $\frac{5}{16}$ " manual override tool (optional tool sold separately) is recommended to manually override the system. Do not use a power tool to perform any of the override procedures since this may damage the motor.

⚠ CAUTION

The gears can be stripped if the stabilizer legs are manually retracted/extended to the fullest extent and the operator continues to rotate the manual override. Use of a power tool could cause harm to the user or damage the stabilizer motor.

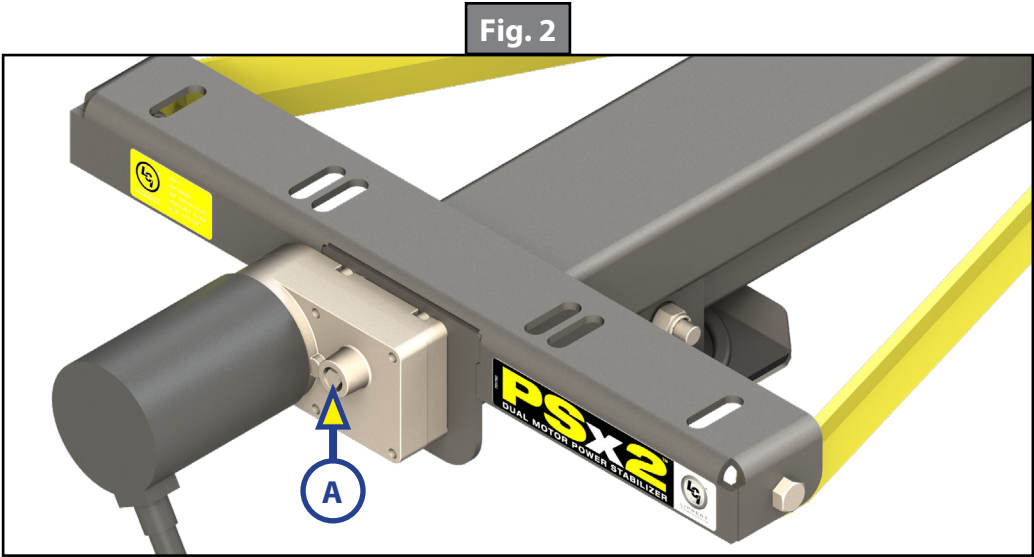


To manually operate the stabilizers:

1. Disconnect one of the wire leads from each motor to prevent backfeeding the motors.

NOTE: The manual override procedure must be performed individually on each motor of PSX2 in order to manually extend or retract the legs.

2. Find the access port on the side of the leg motor (Fig. 2A).
3. Remove the rubber plug.
4. Place the 5/16" socket or 5/16" manual override tool (optional) over the manual override nut (Fig. 2A).
5. Turn the override nut until the leg extends or retracts to the desired position. A clockwise rotation will extend the leg and counterclockwise will retract the leg.



System Maintenance

⚠ WARNING

Do not work on the stabilizer unless the battery is disconnected. Failure to act in accordance with the following may result in death, serious personal injury or severe product or property damage.

Mechanical Maintenance

It is recommended that when operating in harsh environments, e.g. road salt or ice buildup, the moving parts be kept clean. They can be washed with mild soap and water. The ACME screw is pre-coated with grease. If the screw is cleaned, it may be necessary to add grease to the screw to ensure smooth stabilizer operation.

Electrical Maintenance

For optimum performance, the system requires full battery current and voltage. Maintain battery at full capacity. Also, check the terminals and other connections at the battery, the control switch and the electric motors for corrosion and loose or damaged terminals. Check motor leads under the trailer chassis. Since these connections are subject to damage from road debris, make sure they are in good condition.

Troubleshooting

What Is Happening?	Why?	What Should Be Done?
Legs out of sync	Uneven ground.	Fully retract both stabilizer legs to synchronize.
	Stabilizer legs extended unevenly.	
System shuts off	Too much weight.	Internal circuit protection will reset in 10 seconds.
Switch does not activate system	Low voltage.	Test battery voltage under load. Charge or replace.
	Damaged or disconnected wiring.	Check wiring. Repair or replace.

MANUAL OVERRIDE WRENCH

LEVELING AND STABILIZATION

Introduction

This product is a 3 in 1 manual override handle for your tongue jack or stabilizer system. The three options are $\frac{3}{4}$ " hex override, $\frac{5}{16}$ " hex override, and pin override (as seen on the PSX1). The $\frac{3}{4}$ " socket can be used on tongue jacks and scissor jacks. The $\frac{5}{16}$ " socket is intended for PSX2, and the pin override is intended for PSX1.

Safety

Read and understand all instructions before starting any procedures stated in this manual. Adhere to all safety labels to prevent personal injury and/or product damage. Failure to follow instructions and safety labels may void product warranty.

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

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

Preparation

1. Applicable tongue jack or stabilizer owner's manual with operation, override and troubleshooting instructions.
2. Frame supports as per manufacturers recommendations.

Manual Override

Most stabilizers and tongue jacks come equipped with a manual override system.

NOTE: The manual override procedure must be performed individually on each motor of PSX2 in order to manually extend or retract the stabilizer legs.

Manual Operation For Stabilizers

⚠ CAUTION

The gears can be stripped if the stabilizer legs are retracted/extended to the fullest extent and the operator continues to rotate the manual override. Do NOT use a power tool to extend or retract stabilizers.

⚠ CAUTION

Operating the stabilizer without grease on the screw could lead to product failure.

1. If equipped, disconnect one of the wire leads from the motor to prevent backfeeding the motor.
2. Insert the ½" pin over the nut or coupler and pin on the end of the stabilizer (Fig. 1A). The slot in the end of the Manual Override Wrench (Fig. 2) accommodates the pin on the coupler (Fig. 1A) to allow the manual extension/retraction of the stabilizer legs. Rotate the Manual Override Wrench clockwise to extend or counterclockwise to retract the stabilizer legs.

NOTE: Make sure the stabilizer legs are fully retracted before moving the trailer.

Fig. 1

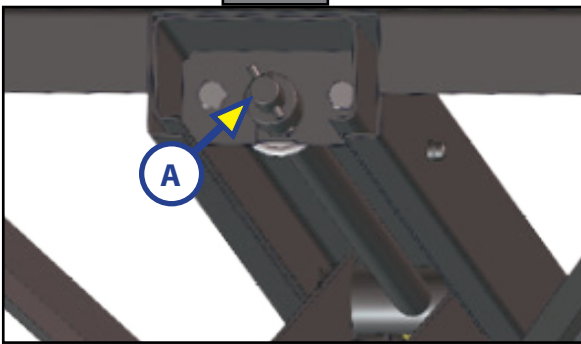
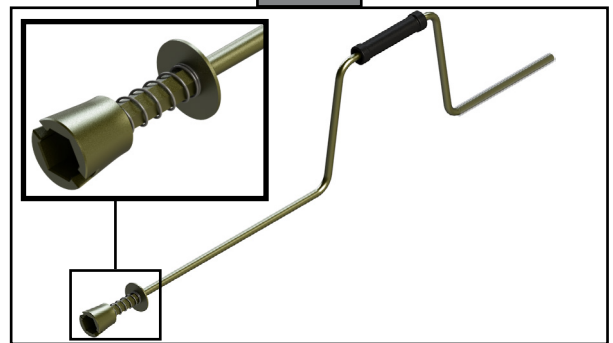


Fig. 2



Manual Operation For Tongue Jacks

⚠ CAUTION

Chock the tires of the trailer. Be sure the footpad of the tongue jack is pinned securely in place with the clevis pin and hairpin cotter pin. Make sure the ground surface under the tongue jack is firm and level.

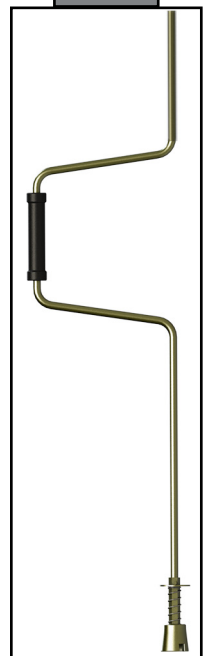
1. Open the rubber plug on top of the tongue jack's gearbox (Fig. 3A) to expose the manual drive shaft.
2. Insert the Manual Override Wrench (Fig. 4).
3. Turn the crank handle counterclockwise to retract the jack leg or clockwise to extend the jack leg.
4. Remove the crank handle.
5. Replace the rubber plug.

NOTE: Be sure the leg of the tongue jack is fully retracted prior to moving the tow vehicle.

Fig. 3



Fig. 4



CLASS C HYDRAULIC LEVELING

LEVELING AND STABILIZATION

System Information

Please read and study the operating manual before operating the leveling system. The Class C Hydraulic Leveling System is an electric/hydraulic 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 coach. Mechanical portions of the Class C Hydraulic Leveling System are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Component Description

1. Jacks
 - A. Steel jack rated at a lifting capacity for the coach.
 - B. 9" diameter (63.5 square inch) footpad on a ball swivel for maximum surface contact on all surfaces.
 - C. 12" diameter - (113 square inch) footpad also available.
 - D. Powered from a 12V DC motor/pump assembly.
2. Motor/Pump Assembly
 - A. 12V DC motor
 - B. Hydraulic fluid reservoir tank
 - C. Control valve manifold
 - D. Solenoid valves
3. System Controls
 - A. Controlled electronically from touchpad.
 - B. Touchpad can be operated in manual mode or fully automatic mode.
4. Fittings and Hoses
 - A. Fittings - High pressure O-Ring Face - Size 4
 - B. Hose - 1/4" I.D., 3000 psi - W.P. Rated

Safety Information

WARNING

Make sure that the coach is supported at all four corners according to the manufacturer's recommendations. Lift the coach by the frame and never the axle or suspension. Do not go under the coach unless it is properly supported. Unsupported coaches can fall causing death, serious personal injury, severe product or property damage or voiding of the component warranty.

WARNING

Failure to act in accordance with the following may result in serious personal injury or death.

CAUTION

Moving parts can pinch, crush, or cut. Keep clear at all times.

The use of the Lippert Components, Inc. Class C Hydraulic Leveling System to support the coach for any reason other than which it is intended is prohibited by the Lippert Limited Warranty. The Class C Hydraulic Leveling System is designed as a leveling system only and should not be used to provide service for any reason under the coach, 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 coach. Any attempts to change tires or perform other service while coach is supported by the Class C Hydraulic Leveling System could result in death, serious personal injury or severe product or property damage or voiding of the component warranty.

⚠ WARNING

Be sure to park the coach on solid, level ground. Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions. When parking the coach on extremely soft surfaces, utilize load distribution pads under each jack. Make sure to keep hands and other body parts clear of fluid leaks. Hydraulic system leaks in the Class C Hydraulic Leveling System may be under high pressure and can cause serious skin penetrating injuries. People and pets should be clear of the coach while operating leveling system. Never lift the coach completely off the ground. Lifting the coach so the wheels are not touching the ground will create an unstable and unsafe condition.

Operation

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

1. The coach is parked on a reasonably level surface.
2. The coach parking brake is engaged.
3. The coach transmission should be in the park position.
4. Make sure all persons, pets and property are clear of the coach while LCI Class C Hydraulic Leveling System is in operation.

⚠ CAUTION

After starting the automatic leveling cycle it is very important that you do not move around in the coach until the coach is level and the green LED light illuminates in the center of the touchpad. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Selecting A Site

When the coach is parked on an excessive slope, the leveling requirements may exceed the jack lift stroke capability. For angles greater than 1.0 degree, leveling blocks and jack pads may be required in order to level properly. If the coach is parked on an excessive slope, the coach should be moved to a more level surface before the leveling system is deployed. "EXCESS ANGLE" will appear on the LCD screen if the coach is 3.5 degrees out of level from front-to-rear, or side-to-side.

NOTE: Leveling blocks and jack pads may be needed to achieve proper leveling if front to rear angles exceed 1 degree when the 4" maximum extension of the jack may not be enough.

⚠ WARNING

While utilizing leveling blocks and jack pads, all the wheels MUST NOT leave the ground during the leveling of the coach. Lifting all the wheels off the ground creates an unsafe condition that could result in death, serious personal injury, severe product or property damage or voiding of the component warranty.

Zero Point Calibration

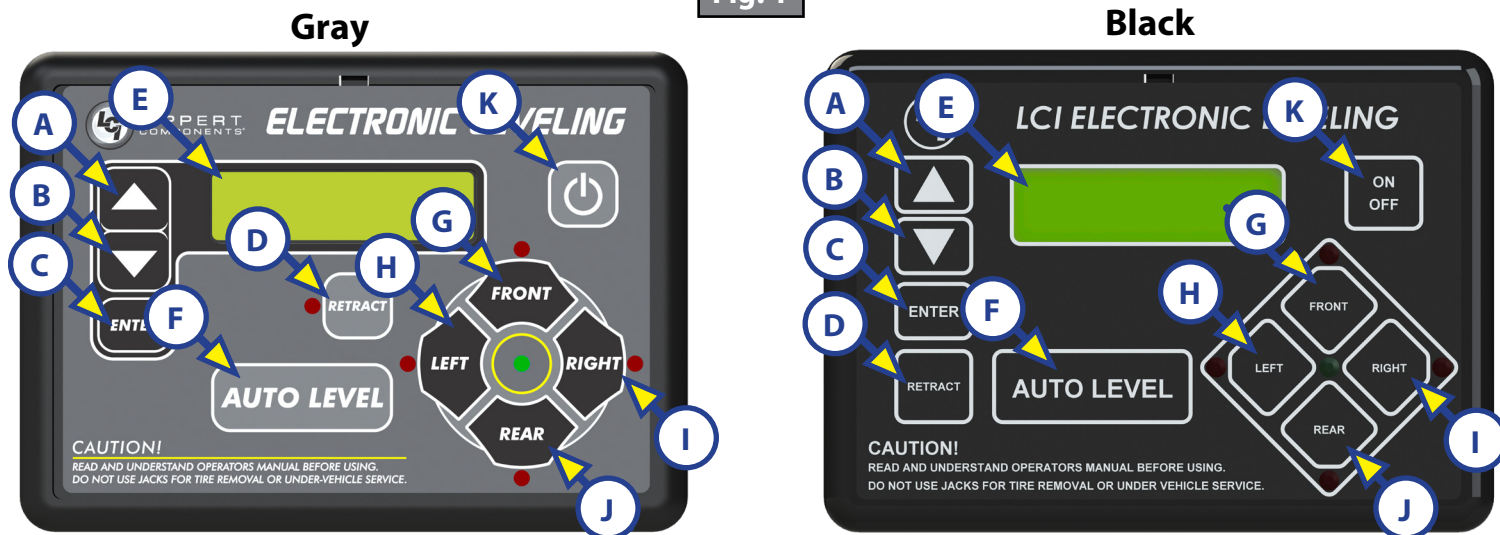
NOTE: Zero Point Calibration may have been preset by the OEM. Verify if Zero Point has already been set. If not, then recalibration for Zero Point must be performed.

Before auto-leveling features can be made available, the Zero Point **MUST** be set. This is the point to which the system will return to when an auto-leveling cycle is initiated. To set the Zero Point, first run a manual leveling sequence to get the coach to the desired level point. Then activate the Zero Point configuration mode. This mode is enabled by performing the following sequence:

1. Turn panel off.
2. Press the FRONT button (Fig. 1G) five times.
3. Press the REAR button (Fig. 1J) five times.

4. At this point, an alarm will sound and the LCD display will read "***ZERO POINT CALIBRATION** ENTER to Set, POWER to Exit."
5. Press ENTER (Fig. 1C) to set the Zero Point.
6. Screen will then display "PLEASE WAIT."
7. Alarm will sound and the screen will display "ZERO POINT SUCCESSFUL."
8. LCD will display "configuring air feature".
9. Control will then turn off.

Fig. 1



NOTE: Units manufactured before Jan. 2018 will utilize the black touchpad.

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. - Manual mode ONLY Press and hold for several seconds to activate Auto Retract Function.
E	LCD Display - Displays procedures and results.
F	AUTO LEVEL - Places leveling system into auto level mode.
G	FRONT - Activates both front jacks in manual mode.
H	LEFT - Activates left rear jack in manual mode.
I	RIGHT - Activates right rear jack in manual mode.
J	REAR - Activates both rear jacks in manual mode.
K	Power Button - Turns leveling system on and off.

Automatic Leveling Procedure

NOTE: Coach requires 12.75V DC to commence auto leveling function.

NOTE: The coach **MUST** be running and the parking brake **MUST** be engaged for the Class C Hydraulic Leveling System to operate.

NOTE: Refer to the Wiring Diagram or Hydraulic Plumbing Diagram in this document for questions regarding location and functions of the Class C Hydraulic Leveling System.

1. Press "On/Off" button to turn system on (Fig. 1K).
2. Press AUTO LEVEL button (Fig. 1F). LCD Screen will display "Remain Still."
3. The coach will level automatically and indicate "Auto Level - Success" in the LCD display (Fig. 1E).

NOTE: Display will then read "Level - Jacks: Down." Do not press any buttons until this message appears or a "Function Aborted" error will be displayed.

Automatic Leveling Descriptive Logic



After starting the automatic leveling cycle it is very important that you do not move around in the coach until the coach is level and the green LED light illuminates in the center of the touch pad. Failure to remain still during the leveling cycle could have an effect on the performance of the leveling system.

Grounding

The following steps describe the process of how the auto leveling sequence extends the jacks to the ground:

1. Depending on which end of the coach is lowest to the ground, the level sensor in the controller will activate the jacks—the lowest end first, either front or rear.
 - A. If the rear of the coach is the lowest end, ground the lowest rear jack first.
 - B. If the front end is the lowest end, ground the front jack closest to the power unit.
2. Ground the remaining front or rear lowest end jack.
3. Lift lowest end jacks together until level.
4. The leveling system will then ground remaining end jacks.
 - A. If the rear of the coach is the remaining end, ground lowest jack first.
 - B. If the front of the coach is the remaining end, ground the front jack closest to the power unit.
5. Ground the remaining front or rear remaining end jack
6. Lift remaining end jacks together until level.
7. Visually inspect all jacks to ensure all footpads are touching the ground. If one of the rear jack footpads is not touching the ground, put the system in manual mode. See Manual Leveling Procedure then press the corresponding LEFT or RIGHT arrow buttons to lower the non-compliant jack to the ground.

Leveling:

The following steps describe the process of how the auto leveling sequence levels the coach, once the jacks have been grounded. This process may repeat several times until level.

1. Front-to-Rear
2. Side-to-Side
3. Individually
4. Minor adjustments to confirm grounding.

WARNING

All the wheels *MUST NOT* leave the ground during the leveling of the coach. Lifting all the wheels off the ground may result in death or serious personal injury.

Manual Leveling Procedure

NOTE: When leveling the coach, level from front-to-rear first. When the coach is level from front-to-rear, then level the coach from side-to-side.

NOTE: The coach **MUST** be running and the parking brake **MUST** be engaged for the Class C Hydraulic Leveling System to operate.

NOTE: Coach requires a minimum of 9.5V DC to perform manual leveling.

1. Press Power Button (Fig. 1K) to turn system on.
2. Press UP or DOWN button (Fig. 1A and 1B) to scroll through features to "MANUAL MODE" in display.
3. Press ENTER (Fig. 1C).
4. Press FRONT button (Fig. 1H) to extend front jacks to the ground; press REAR button (Fig. 1I) to run rear jacks to the ground and level the coach front-to-back.
5. Press appropriate LEFT or RIGHT button to level the coach from side-to-side. Red lights next to the buttons on the touchpad will indicate which side(s) of the coach needs to be raised to achieve level condition.

NOTE: The front jacks will work in pairs, e.g., FRONT button operates both front jacks, etc.

NOTE: The right and left rear jacks are used to level the coach side-to-side. Pressing the LEFT button (Fig. 1G) on the touchpad will extend left rear jack. Pressing the RIGHT button (Fig. 1J) on the touchpad will extend the right rear jack.

6. Repeat steps 4 and 5 as needed.
7. Turn power off to leveling system by pressing Power Button (Fig. 1K).
8. Visually inspect all jacks to ensure all footpads are touching the ground. If one of the rear jack footpads is not touching the ground, press the corresponding LEFT or RIGHT arrow buttons to lower the non-compliant jack to the ground.

Jack Retract Procedures

CAUTION

Check to make sure all jacks are fully retracted before travel.

1. Energize the system by pressing Power Button (Fig. 1K) on touchpad. The LCD screen will display "READY Jacks: Down."
2. Press UP or DOWN button (Fig. 1A) to display "Auto Retract All" on the screen.
3. Press ENTER (Fig. 1C) to begin.

NOTE: Auto retract feature can also be initiated by pressing and holding the RETRACT button (Fig. 1D) for one second.

NOTE: To stop the jacks from retracting, turn the system off and back on again by pressing the Power Button (Fig. 1K) twice. The coach can then be manually leveled by following steps 1-9 in the MANUAL LEVELING PROCEDURE section. Press "ENTER" to acknowledge.

4. The jacks will retract and shut off automatically; the display will read "READY - Jacks: Up." Press the "ON/OFF" button (Fig. 1K) on the touch pad to de-energize the system. After a brief visual inspection around the coach to verify the jacks are fully retracted, you may proceed to travel.

5. To retract in the manual mode, press the RETRACT button (Fig. 1D) until it lights. Pressing the FRONT or REAR jack buttons will operate front or rear jacks in pairs. Pressing the RIGHT or LEFT jack buttons will operate the right or left rear jacks individually.

NOTE: To enter the manual mode, refer to Manual Leveling Procedure section.

Manual Override of The Power System and Jacks

In the event that the jacks do not retract, the valves can be manually overridden.

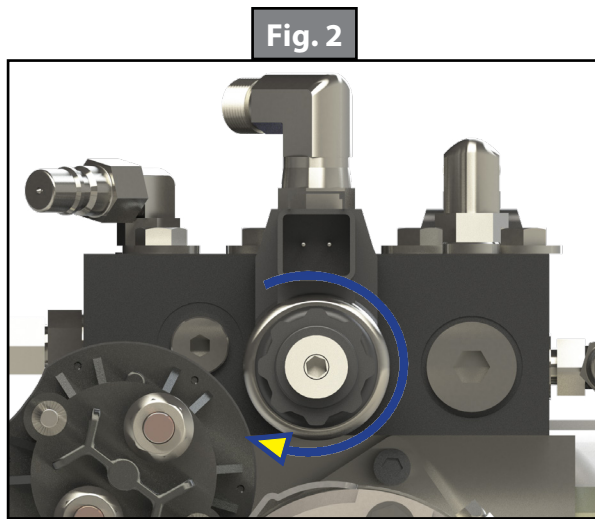
NOTE: Valves should be opened prior to operating them with any auxiliary power device.

The Class C Hydraulic Coach Leveling System can be run with auxiliary power devices, like cordless or power drills. In the event of electrical or system failure, this manual method of retracting the jacks can be used. A standard handheld drill is all that is required.

⚠ WARNING

Do not overtighten override set screws as this can damage the valves.

1. Use a $\frac{5}{32}$ " hex wrench to turn the manual override on the valve clockwise (Fig. 2).
2. Remove plastic cap (Fig. 3A).
3. Disconnect or shield power cables on the motor.
4. Unplug the harness wire to the directional valve. See Wiring Diagram.
5. Using a $\frac{1}{2}$ " socket and auxiliary drive device, e.g. cordless or power drill, insert $\frac{1}{2}$ " socket onto the coupler (Fig. 4A) found under plastic cap (Fig. 3A).
6. Run drill in reverse or counterclockwise to retract jacks.
7. Turn the manual override on the valves counterclockwise (Fig 5).



Clockwise for manual override

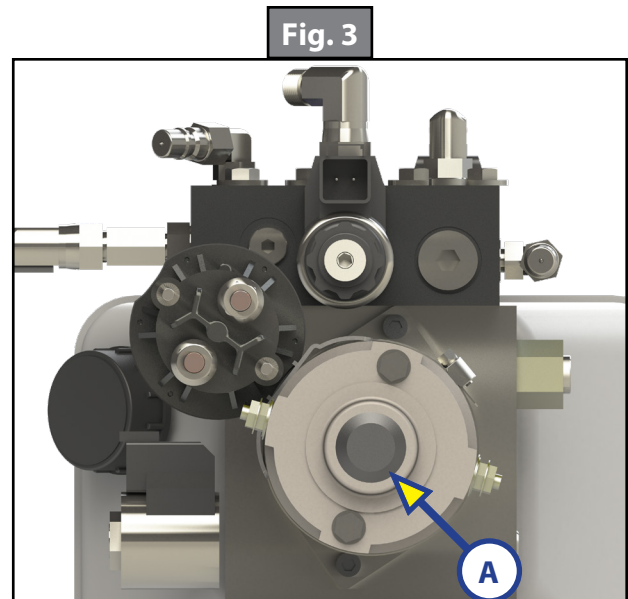
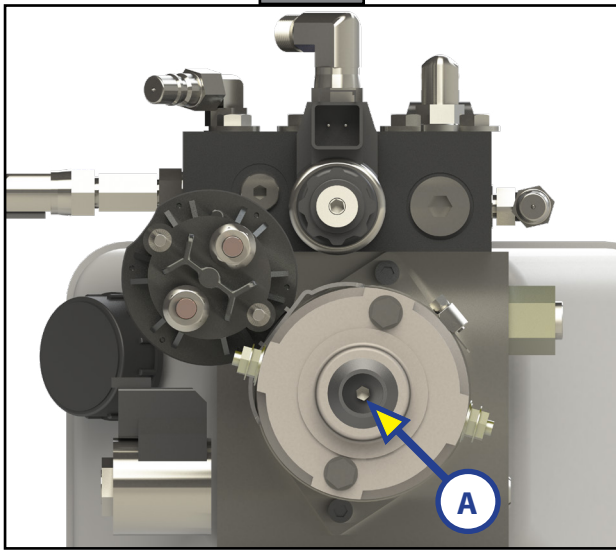
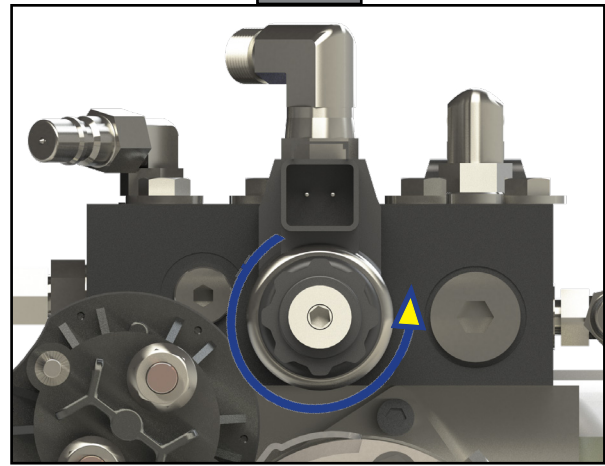


Fig. 4**Fig. 5**

Counterclockwise for normal operation

Automatic Safety Shutoff

If the touch pad is left on and inactive for 4 minutes it will shut off automatically. To reset the system, the coach ignition must be turned off, then back on, and the ON/OFF button (Fig. 1K) must again be pressed.

Drive Away Protection System

If the ignition is in the "RUN" position, jacks are down, and the operator releases the parking brake, all indicator lights will flash and the alarm beeper will activate. The system will then automatically retract the jacks until the jacks are fully retracted or the operator resets the parking brake.

Jacks Up Verification

If the ignition is in the "RUN" position, the parking brake is released, and the vehicle is in motion, the system may activate the power unit to ensure that the retract pressure is high enough to keep the jacks fully retracted. The LCD screen will say "JACKS UP VERIFICATION" until the retract pressure has returned to normal. If the touch pad was previously off, the touch pad will shut off again. No beeping will occur and the "JACKS DOWN" dash light will not illuminate.

Troubleshooting

Error Mode

1. If an error occurs before or during operation, the error will be displayed in the LCD screen and an alarm will sound. To reset common ERROR displays, press ENTER (Fig. 1C).
NOTE: To reset "Return for Service" errors, press "ENTER" (Fig. 1C) and "RETRACT" (Fig. 1D) simultaneously.
2. All normal functions will be disabled when the system is in error mode.

Excess Slope

1. The control will not operate at extreme slopes, e.g. 3.5 degrees fore and aft and 3.5 degrees side-to-side.
2. If the coach indicates "EXCESS ANGLE" or "OUT OF STROKE " during an auto level cycle, move the coach to a more level spot.

Error Codes		
LCD Message	What Is Happening?	What Should Be Done?
Excess Angle	Coach not parked on level ground. Zero point incorrectly calibrated.	Move coach to level ground prior to starting auto level sequence. Recalibrate Zero Point.
Out of Stroke	Jack has insufficient length to complete the leveling procedure.	Check the disposition of the jack.
Low Voltage	Battery voltage dropped below 9.5V DC during operation.	Turn engine on, check battery voltage under load.
Function Aborted	A button was pressed on touch pad during Auto Level operation.	Hit enter to acknowledge. Restart procedure.
Unable to Finish Leveling	Excessive movement inside coach during auto level sequence.	Discontinue movement inside coach during auto level sequence.
Engage Park Brake	Parking brake not set prior to starting auto level sequence.	Set parking brake prior to starting auto level sequence.
Comm Error Check Wiring NOTE: Screen will not back light.	Wiring connections loose or faulty between touch pad and controller.	Check connections, replace communication harness if necessary.
Retract Timeout Return Levelers for Service	Pressure switch did not sense retract pressure and pump timed out. Leaking hose or fitting.	Return levelers for service. Check for leaks, repair if necessary. Press enter and retract to clear error.
Excessive Angle	Occurs only in manual mode when the angle of the unit is too severe.	Use the manual functions to return coach to a more level condition.

User Alarm Mode

If the alarm system detects that the parking brake has been disengaged while at least one jack is not fully retracted and the sensor value changes in any axis more than a predefined amount, the touch pad will buzz and the LED will signal this error to the user. The system will perform an automatic retract. No other features are available in this mode.

Miscellaneous

1. The leveling system will automatically shut off after being idle for 4 minutes.
2. A "Re-Level" feature is programmed into the controller. If the jacks are extended and the user presses "AUTO LEVEL" again the system will re-level from that point. The system will not retract before performing the re-level.
3. System will refuse any operation when a low voltage condition is present.
4. System will automatically alarm and retract if park brake is disengaged and jacks are not retracted with any change in sensor readings. In alarm mode, the only available feature is to retract all jacks.

Low Voltage Signal

1. The vehicle requires 12.75V DC to operate in the AUTO mode. If the voltage is too low, the screen will display "LOW VOLTAGE."
2. Minimum Voltage - If voltage drops below 9.5V DC during AUTO or MANUAL operation, "LOW VOLTAGE" will appear in the screen and the system will cease operating.

NOTE: Coach will operate in manual mode between 9.5V DC and 12.75V DC.

Troubleshooting		
What Is Happening?	Why?	What Should Be Done?
System will not turn on and the on/off indicator light does not illuminate.	Coach ignition is not in RUN position.	Turn ignition to RUN position.
	Touch pad has been on for more than 4 minutes and has timed out.	Turn ignition OFF and then back ON.
Touch pad turns on but turns off when jack directional buttons are pressed or touch pad displays "low voltage."	Blown fuse.	Check and replace faulty fuse(s).
	Low voltage on battery.	Start coach to charge battery.
Touch pad turns on, coach will not auto-level, "Jacks Down" displayed, jacks are retracted.	Low fluid level.	Check fluid level in reservoir, if fluid is low, add fluid to 1/2" from top of reservoir with jacks retracted. If "JACKS DOWN" light remains on, call Customer Service.
Jacks will not extend to ground, pump is running.	Little or no fluid in reservoir.	Add fluid as recommended.
	Cartridge valve is inoperative.	Clean, repair, or replace.
	Electronic signal is lost between controller and solenoid.	Trace wires for voltage drop or loss and valves signal. Repair or replace necessary wires or replace control pad.
Any one or two jacks will not retract.	Hose damaged or unconnected.	Replace with new hose or reconnect hose.
	Cartridge valve inoperative.	Replace inoperative cartridge valve.
	Electronic signal is lost between controller and solenoid.	Attempt to retract jacks in MANUAL mode. If successful, replace touch pad; if not, test for voltage drop between touch pad control and valve, repair bad wiring or replace defective board or valve.
"READY - Jacks: Up" does not display when all jacks are retracted.	Low fluid level.	Add fluid as recommended.
	Retract pressure switch inoperable.	Check connection or replace pressure switch.
Alarm sounds and "Jacks Down" light starts flashing while traveling; jacks are fully retracted.	Low fluid level.	Add fluid as recommended.
	Retract pressure switch inoperable.	Check connection or replace pressure switch.
Coach drifts down after jacks are extended. Jack bleeds down after being retracted.	Possible fluid leak.	Check for fluid leaks and repair or replace components as necessary.
	Valve manual override open.	Close override, see Manual Override of The Power System and Jacks.
Touch pad powers up; screen displays "Low Voltage."	Loose ground wire at power unit.	Check for loose wires.
	Engine not running.	Start coach engine.
No power to touch pad.	Tripped circuit breaker.	Reset.
	Circuit protection tripped.	Replace circuit protection.
	Ignition not "ON".	Turn ignition "ON".
Auto level function does not finish.	Error code "Unable to finish leveling."	Move coach to a more level site.

Maintenance

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 on-line, go to <http://www.lci1.com/support-lci4a3lcd>. 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.

Preventive Maintenance

1. Check hydraulic fluid in reservoir every 12 months. If fluid is a clear, red color do not change. If fluid is milky, pink and murky and not clear red in color, drain reservoir and add new fluid. Hydraulic fluid in reservoir should be changed a minimum of every five years.

NOTE: Check the fluid only when all the jacks are fully retracted.

NOTE: When checking the hydraulic fluid level, fill to within ¼" to ½" of fill spout.

2. Inspect and clean all power unit electrical connections every 12 months. If corrosion is evident, use a small amount of lubricant to remove corrosion. Contacts must be cleaned with a non-residue cleaner prior to use. LCI recommends the use of an electrical contact cleaner spray.
3. Remove dirt and road debris from jacks as needed.

WARNING

The coach should be supported at both front and rear axles with jack stands before working underneath. Failure to do so may result in death, serious personal injury, severe product or property damage.

4. If jacks are down for extended periods of time, it is recommended to spray exposed jack rods with a dry silicone lubricant every three months for protection. If the coach is located in a salty environment, it is recommended to spray the rods every 4 - 6 weeks.

POWER TONGUE JACK

LEVELING AND STABILIZATION

Product Information

This manual provides general service and maintenance procedures. Many variables can change the circumstances of the service procedure, ie., the degree of difficulty involved in the service operation and the ability level of the individual performing the operation.

This manual cannot begin to plot out procedures for every possibility, but will provide the general instructions for effectively servicing the vehicle. In the event the skill level required is too high or the procedure too difficult, a certified technician should be consulted before performing the necessary service.

Our 3,500 lbs. capacity Power Tongue Jacks make lifting and lowering a trailer so easy. With just the flip of the switch, the power tongue jack lifts a trailer with ease.

Helical cut gears reduce noise and improve operating efficiencies, and four LED lights makes setting up camp simple, day or night. The owner's manual for the trailer may have more procedures for service and maintenance.

NOTE: The Power Tongue Jack is designed for vertical movement of the trailer only.

Safety

WARNING

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

WARNING

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

WARNING

Failure to correctly service the vehicle may result in death, serious injury or property damage.

WARNING

- Never allow anyone unfamiliar with this product to install, operate or service this product.
- Never lift or level the trailer without a properly installed footpad.
- Never crank the jack or couple the trailer without preventing the trailer from rolling.
- Never exert excessive side forces to the power tongue jack.
- Never allow anyone, including the operator, to put any body parts under the power tongue jack or the supported load during jack operation.
- Never drop the trailer off the hitch ball.
- Never exceed the load capacity.
- Never use the power tongue jack to lift the trailer for service or tire change.
- Never move the trailer before the power tongue jack is fully retracted.
- Never use the power tongue jack unless the footpad clevis pin and hairpin cotter pin are fully inserted through both sides of the jack's inner tube.

Operation

NOTE: The ON and OFF light switch (Fig. 2) controls the power tongue jack's light only. If left on for an extended period of time, the light will drain the trailer's battery.

NOTE: The power tongue jack is designed for vertical movement of the trailer only.

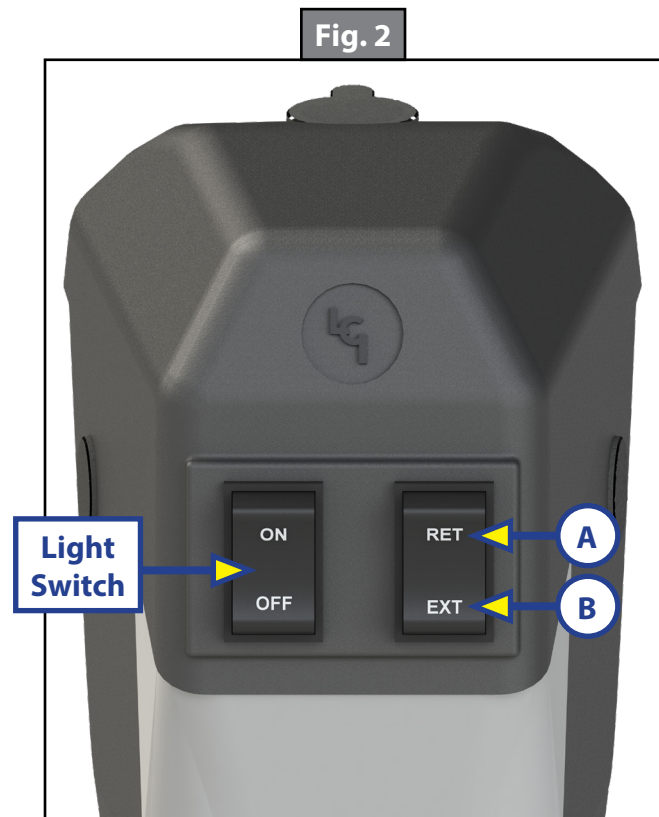
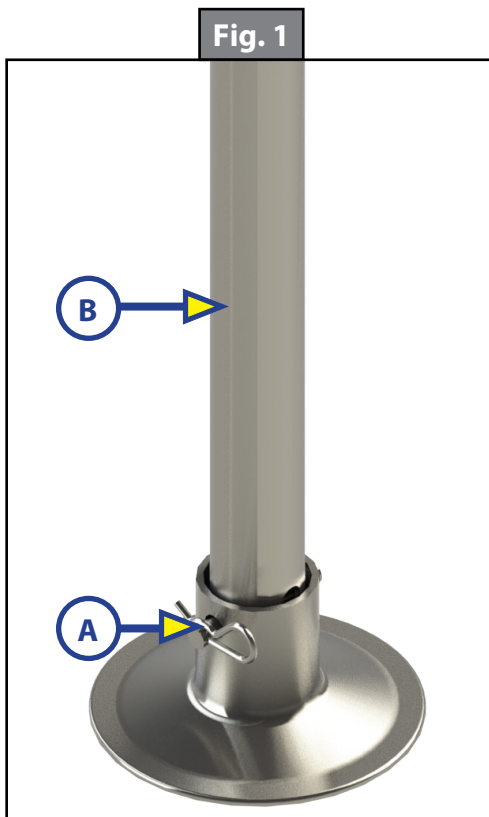
Unhitching From Tow Vehicle

1. Chock the tires of the trailer.
2. Make sure the footpad of the power tongue jack is pinned securely in place with the clevis pin and hairpin cotter pin (Fig. 1A).
3. Make sure the ground surface under the power tongue jack is firm and level.
4. Push EXT (Fig. 2B) to extend the power tongue jack until the footpad touches the ground and the coupler clears the hitch ball.
5. Disconnect all electrical and mechanical connections between the trailer and tow vehicle.
6. Move the tow vehicle away from the trailer.
7. Push RET (Fig. 2A) as needed to return the front of the trailer to level.

Hitching to Tow Vehicle

1. Chock the tires of the trailer.
2. Press EXT (Fig. 2B) if needed to allow the coupler to clear the hitch ball.
3. Push RET (Fig. 2C) to retract the power tongue jack until the coupler properly mounts the hitch ball and the leg of the power tongue jack is fully retracted.

NOTE: Make sure the leg of the power tongue jack (Fig. 1B) is fully retracted prior to moving the tow vehicle.



Manual Operation

NOTE: In the event of loss of power, the power tongue jack can be operated manually.

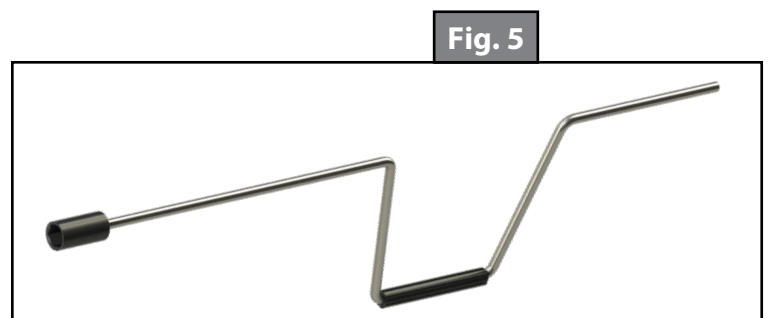
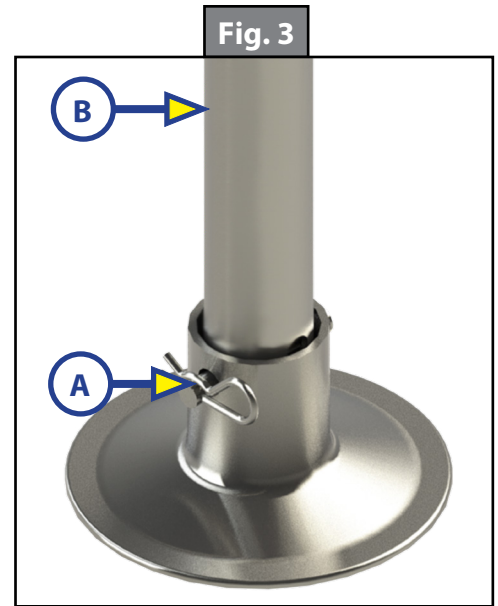
1. Manually Unhitching from Tow Vehicle

- A.** Chock the tires of the trailer.
- B.** Be sure the footpad of the power tongue jack is pinned securely in place with the clevis pin and hairpin cotter pin (Fig. 3A).
- C.** Make sure the ground surface under the power tongue jack is firm and level.
- D.** Open the rubber plug (Fig. 4A) on top of the power tongue jack's gearbox to expose the manual drive shaft.
- E.** Insert the manual crank handle (Fig. 5).
- F.** Turn the handle clockwise until the trailer is supported and the coupler clears the hitch ball.
- G.** Move the tow vehicle away from the trailer.
- H.** Lower the trailer until it is level by turning the crank handle counterclockwise.
- I.** Remove the crank handle (Fig. 5).
- J.** Replace the rubber plug (Fig. 4A).

2. Manually Reconnecting to Tow Vehicle

- A.** Chock the tires of the trailer.
- B.** Be sure the footpad of the power tongue jack is pinned securely in place with the clevis pin and hairpin cotter pin (Fig. 3A).
- C.** Open the rubber plug (Fig. 4A) on top of the power tongue jack's gearbox to expose the manual drive shaft.
- D.** Insert the manual crank handle (Fig. 5).
- E.** Turn the crank handle counterclockwise until the coupler properly mounts the hitch ball and the leg of the power tongue jack is fully retracted.
- F.** Remove the crank handle (Fig. 5).
- G.** Replace the rubber plug (Fig. 4A).

NOTE: Be sure the leg (Fig. 3B) of the power tongue jack is fully retracted prior to moving the tow vehicle.



Troubleshooting

Fuse

1. The power tongue jack has a motor, clutch and a 30A fuse. The 30 Amp fuse will be located in-line and will need to be replaced with a 30A ATO-type fuse if it blows.
2. The battery must be fully charged prior to operating the power tongue jack. Low voltage from the battery will cause the fuse to blow prematurely.
3. The ON and OFF switch (Fig. 2) controls the power tongue jack's light only. If left on for an extended period of time, the light will drain the trailer's battery.

Clutch

The clutch will slip under two conditions:

1. The power tongue jack has reached its extend or retract limit.
2. The tongue weight of the trailer has exceeded the capacity limits of the power tongue jack.
 - A. Items stored in the trailer can vastly influence the weight distribution of the power tongue jack. Reorganize stored items if the power tongue jack motor clutch continues to slip.
 - B. Release the switch immediately when the clutch noise occurs. The clutch is the overload protection for the motor. The clutch should not slip during normal operation. This will cause excessive wear on the clutch and the motor.

Additional Information Sources

Additional information about this product can be obtained from lci1.com/support or by downloading the free myLCI app. The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.

iTunes®, iPhone®, and iPad® are registered trademarks of Apple Inc.

Google Play™ and Android™ are trademarks of Google Inc.

Introduction

The Aftermarket Smart Jack features a high-efficiency motor, a new streamlined plastic shroud, and a new user interface. These features, along with the single power lead and the hitch height memory, give the end user a perfect reason to replace the traditional tongue jack with a far superior product.

Safety Requirements

Warning, Caution and Danger symbols indicate that an installation procedure has a safety risk involved and may cause death, serious injury or property damage if not performed safely and within the parameters set forth in this manual. Always wear eye protection when performing this installation procedure. Other safety equipment to consider would be hearing protection, gloves, and possibly a full face shield, depending on the nature of the installation procedure.

WARNING

Failure to act in accordance with the following may result in death, serious injury or property damage.

CAUTION

Moving parts can pinch, crush or cut. Keep clear at all times.

WARNING

Lifting the unit off of the ground so that the unit's wheels are not touching the ground will create an unstable and unsafe condition. Severe property damage, serious injury or death could occur. Keep people and pets clear of the unit and work area while operating the leveling system.

Preparation

Be sure to park the unit on solid, level ground. Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions. When parking the unit on extremely soft surfaces, utilize load distribution pads under each jack. Make sure tires are chocked.

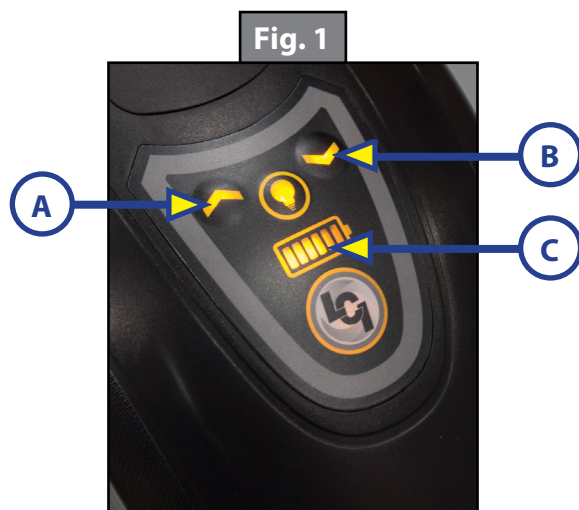
Powered Operation

The hitch height **MUST** be set in the memory prior to normal operation of the Smart Jack. If the hitch height is not set in the memory, the Smart Jack and trailer will not function as intended.

NOTE: The battery indicator light (Fig. 1C) flashes or oscillates to validate certain functions of the Smart Jack. The light also displays the remaining battery charge of the trailer.

Setting Hitch Height Memory

1. Press and hold the up arrow (Fig. 1A) and down arrow (Fig. 1B) at the same time for a minimum of five seconds to store the vertical position of the Smart Jack.
2. The battery indicator lights (Fig. 1C) will flash five times to show that the new position has been successfully stored in memory.



Normal Operation

1. Press and hold the up arrow (Fig. 1A) to extend the Smart Jack.
2. Press and hold the down arrow (Fig. 1B) to retract the Smart Jack.

Return to Hitch Height Operation

1. Press and release the up arrow (Fig. 1A) and the down arrow (Fig. 1B) at the same time 3 times, holding on the 3rd time for several seconds until the jack engages and the indicator light oscillates back and forth.
2. The Smart Jack will automatically extend or retract to the original hitch height position stored in the memory.

NOTE: Visual indication that the jack is actuating to the hitch height is seen through the oscillation of the battery indicator lights (Fig. 1C) (e.g., lights will illuminate left to right, and then right to left). Battery indicator light oscillation will continue until the original hitch height is achieved.

3. To cancel an action, press either the up arrow or down arrow. The action in progress will stop.

Auto Retract Operation

NOTE: This function should only be operated once the tow vehicle has been reconnected and secured to the trailer prior to travel.

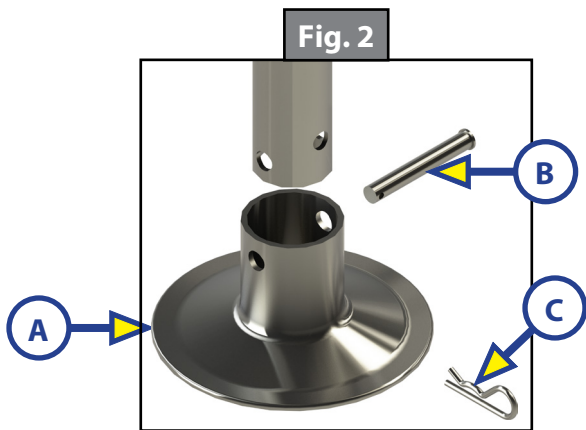
1. Press and release the down arrow three times (Fig. 1B), holding on the 3rd time until the jack engages and the battery indicator light oscillates back and forth.

Manual Operation

If 12V DC power is unavailable to operate the Smart Jack, use the following directions to manually operate the Smart Jack.

Unhitching From Tow Vehicle

1. Chock the tires of the trailer.
2. Be sure the footpad (Fig. 2A) of the Smart Jack is pinned securely in place with the Clevis Pin (Fig. 2B) and Hairpin Cotter Pin (Fig. 2C).
3. Make sure the ground surface under the Smart Jack footpad is firm and level.
4. Remove the manual drive shaft plug (Fig. 3A) on top of the Smart Jack's gearbox.
5. Insert the manual crank handle (Fig. 4) onto the manual drive shaft.
6. Turn the crank handle clockwise to extend the jack until the trailer is supported and the coupler clears the tow vehicle's hitch ball.
7. Move the tow vehicle a safe distance away from the trailer.
8. Turn the crank handle either direction as needed until front of the trailer is level.
9. Remove the crank handle (Fig. 4) from the manual drive shaft.
10. Reinsert the manual drive shaft plug (Fig. 3A).



Hitching to Tow Vehicle

1. Chock the tires of the trailer.
2. Be sure the footpad (Fig. 2A) of the Smart Jack is pinned securely in place with the Clevis Pin (Fig. 2B) and Hairpin Cotter Pin (Fig. 2C).
3. Remove the manual drive shaft plug (Fig. 3A) on top of the Smart Jack's gearbox.
4. Insert the manual crank handle (Fig. 4) onto the manual drive shaft.
5. Turn the crank handle counterclockwise until the coupler properly mounts the hitch ball and the leg of the Smart Jack is fully retracted.

NOTE: The crank handle may need to be initially turned clockwise to extend the jack to clear the hitch ball prior to retracting the jack.

6. Remove the crank handle (Fig. 4) from the drive shaft.
7. Reinsert the manual drive shaft plug (Fig. 3A).

NOTE: Make sure the leg of the Smart Jack is fully retracted before moving the tow vehicle.

GROUND CONTROL® 3.0 LANDING GEAR

LEVELING AND STABILIZATION

System Information

The Ground Control® 3.0 Landing Gear operate independently on uneven terrain. The landing gear feature minimal wiring and each will have an in-line fused link to allow the landing gear to amp out when coming into contact with the ground. The mini breakers on each landing gear also work as amp limiters. When an out-of-sync landing gear is fully retracted, the breaker will trip and allow the other landing gear to fully retract to again synchronize both landing gear. The landing gear system is for 5th wheel applications only.

Operation

WARNING

Never attempt to operate the system without the footpad properly installed. Electric landing gear is designed for vertical operation. Excessive side loads may cause damage to the landing gear. The bolt-on pull pin MUST be inserted fully through both sides of the tube prior to use. Do not use landing gear to service the trailer or change tires. Retract landing gear completely prior to moving the trailer.

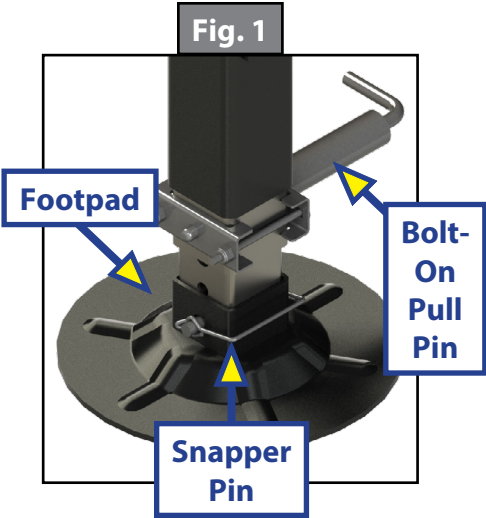
Prior to Operation

The landing gear system should only be operated under the following conditions:

1. The trailer is parked on a reasonably level surface and the tires are chocked.
2. Be sure all persons, pets and property are clear of the trailer while the landing gear system is in operation.
3. Make sure battery is fully charged.

Extending Landing Gear

- 1. Extend both landing gear to the ground by pulling the quick release bolt-on pull pins (Fig. 1).
- NOTE:** If the front of the trailer is above level, do not extend the inner legs to the ground. The trailer cannot be leveled if the front is already above level when released from the tow vehicle.
- 2. Make sure the bolt-on pull pins are re-engaged with the landing gear leg.
 - 3. Push EXT (extend) side of the LANDING LEGS CONTROL switch (Fig. 2).
 - 4. Unhook trailer from tow vehicle.
 - 5. Push and hold the EXT button to raise the landing gear to desired height.



Retracting Landing Gear

- 1. Push RET (retract) side of LANDING LEGS CONTROL switch (Fig. 2).
 - 2. Lower trailer onto tow vehicle.
 - 3. Once trailer is secured, make sure the trailer is latched.
 - 4. Press and hold the RET button to fully retract both landing gear.
- NOTE:** Be sure to hold down the switch until both landing gear are fully retracted before pulling the bolt-on pull pins.
- 5. Pull the bolt-on pull pins and slide the inner legs into the outer landing gear legs.
 - 6. Make sure the bolt-on pull pins are re-engaged upon completion.



NOTE: In the event the landing gear becomes out of sync, fully retract them to resynchronize the landing gear.

Troubleshooting

What Is Happening?	What Should Be Done?
Landing gear out of sync	Fully retract landing gear to synchronize.
Difficulty leveling trailer	If front of trailer is above level, do not extend inner legs to the ground.
Switch does not activate landing gear	Test battery voltage under load. Charge or replace.
	Check wiring. Repair or replace.

Introduction

The Patriot Jack Systems™ are three designs for hydraulic landing gear for gooseneck trailers, including dual jack options with either one valve or two valves and a single jack option. The system features a hydraulic power unit mounted vertically on the roadside jack. Refer to jack rating for system lifting capacity and stroke length.

WARNING

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

WARNING

Make sure the trailer is properly supported before performing any maintenance or repair work. Follow the trailer manufacturer's recommendations for lifting and supporting the trailer. Failure to do so may result in death, serious personal injury or severe product or property damage.

CAUTION

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

Operation

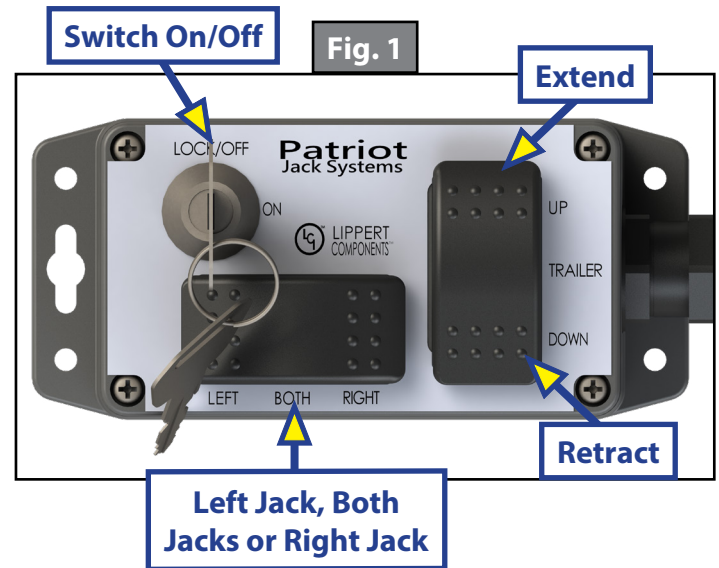
Before operating the jacks, unlock the pendant switch to activate it (Figs. 1 and 2).

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

Dual Jack Two-Valve System

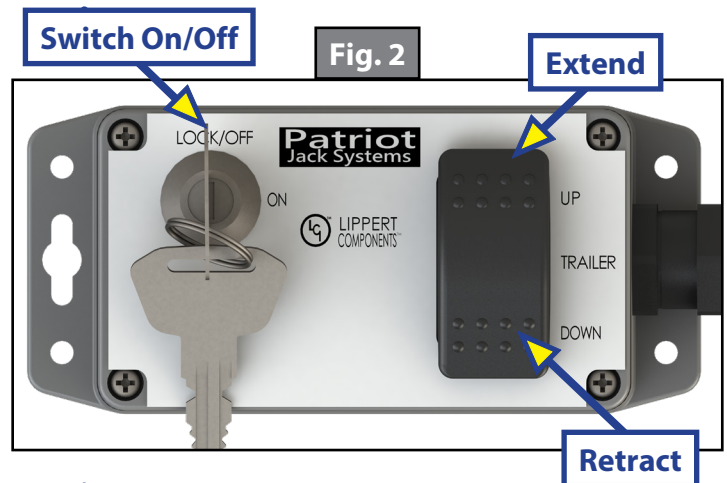
NOTE: The jacks can be operated independently or simultaneously.

1. Using the center portion of the switch, select the left jack (roadside) by moving the switch to the left; select both jacks by moving the switch to the center; or select the right jack (curbside) by moving the switch to the right (Fig. 1).
2. Press the rocker switch to extend the jack(s) (TRAILER UP) or retract the jack(s) (TRAILER DOWN) (Fig. 1).
3. Release the switch when either the trailer is level or stabilized or the jacks have been completely retracted.
4. Turn the key to the LOCK/OFF position.



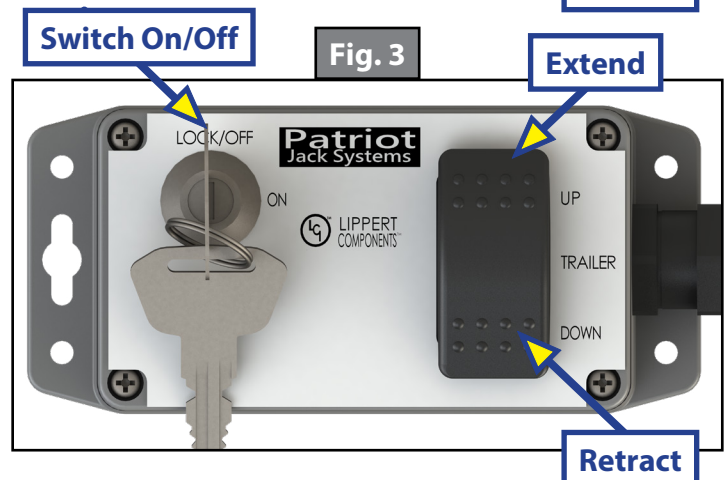
Dual Jack One-Valve System

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



Single Jack One-Valve System

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



Preventive Maintenance

1. Check hydraulic fluid in reservoir every 12 months. If fluid is a clear red color, do not change. If fluid is milky, pink and murky and not clear red in color, drain reservoir and add new fluid. See Adding Fluid, Purging Air From Hydraulic System section.

NOTE: Check and fill the hydraulic fluid only when the jacks are fully retracted. Filling the reservoir when jacks are extended will cause the reservoir to overflow when jacks are then retracted.

NOTE: When adding hydraulic fluid, fill reservoir to the fill line.

2. Inspect and clean all power unit electrical connections every 12 months. If corrosion is evident, spray power unit electrical connectors with lubricant.
3. Remove dirt and road debris from jacks as needed.
4. If jacks are down for extended periods, it is recommended to spray exposed inner tubes with a silicone lubricant every three months for protection. If the trailer is located in a salty environment, it is recommended to spray the exposed inner tubes every four to six weeks.

Adding Fluid, Purging Air From Hydraulic System

1. Start with all hydraulic components in the fully retracted position, i.e. the trailer is ready for travel.
2. Remove motor cover to gain access to the hydraulic reservoir. See Manual Override section.
3. Remove fill cap and check fluid level.

NOTE: When checking the fluid level after the 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. 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 to the fill line, fill the reservoir to the fill line at the top of the reservoir.
5. With the fluid level full and no foam in the reservoir, begin cycling the hydraulic system. Extend the jacks until the footpads touch the ground, and then immediately fully retract the jacks.
6. Check the reservoir for foam. If foam is present, see **NOTE** after step 3 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.
8. Replace fill cap and reinstall motor cover.

Fluid Recommendation

Type "A" automatic transmission Fluid (ATF) is to be utilized. Lippert Components, Inc. recommends ATF with Dexron III® or Mercon V® or a blend of both.

For a list of approved fluid specifications, see [TI-188](#). Or go to <https://www.lci1.com/stabilization/support-patriot-jack-systems>, click on the Technical Information Sheets tab and then select *TI - 188: Hydraulic Operation Fluid Recommendation* from the listed documents.

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

Troubleshooting

Troubleshooting Guide

What Is Happening?	Why?	What Should Be Done?
Switch does not activate system.	Low voltage.	Test battery voltage under load. Charge or replace.
		Use Manual Override.
	Damaged or disconnected wiring.	Check wiring. Repair or replace.
		Use Manual Override.
	Tripped or blown circuit protection.	Reset or replace circuit protection.
Jacks will not extend to ground while pump is running.	Little or no fluid in reservoir.	Add fluid as recommended.
	Cartridge valve is inoperative.	Clean, repair or replace cartridge valve.
	Hose damaged or unconnected.	Replace with new hose or reconnect hose.
Jacks will not retract while pump is running.	Little or no fluid in reservoir.	Add fluid as recommended.
	Cartridge valve is inoperative.	Replace inoperative cartridge valve.
	Hose damaged or unconnected.	Replace with new hose or reconnect hose.
Trailer bleeds down after jacks extended.	Possible fluid leak.	Check for fluid leaks and repair or replace components as necessary.
	Cartridge valve manual override open.	Close override. See Manual Override of the system.
Jack bleeds down after being retracted.	Possible fluid leak.	Check for fluid leaks and repair or replace components as necessary.
	Cartridge valve manual override open.	Close override. See Manual Override of the system.

Manual Override

In the event of electrical or system failure, the jacks can be operated manually. Unhook the hydraulic power unit motor from the power source prior to attempting the manual override procedure.

Two-Valve System

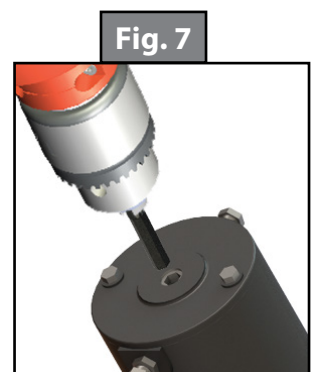
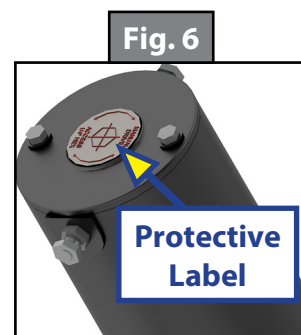
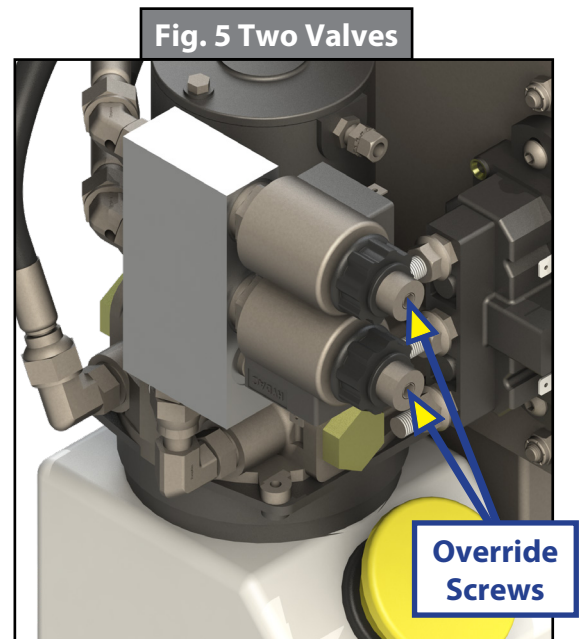
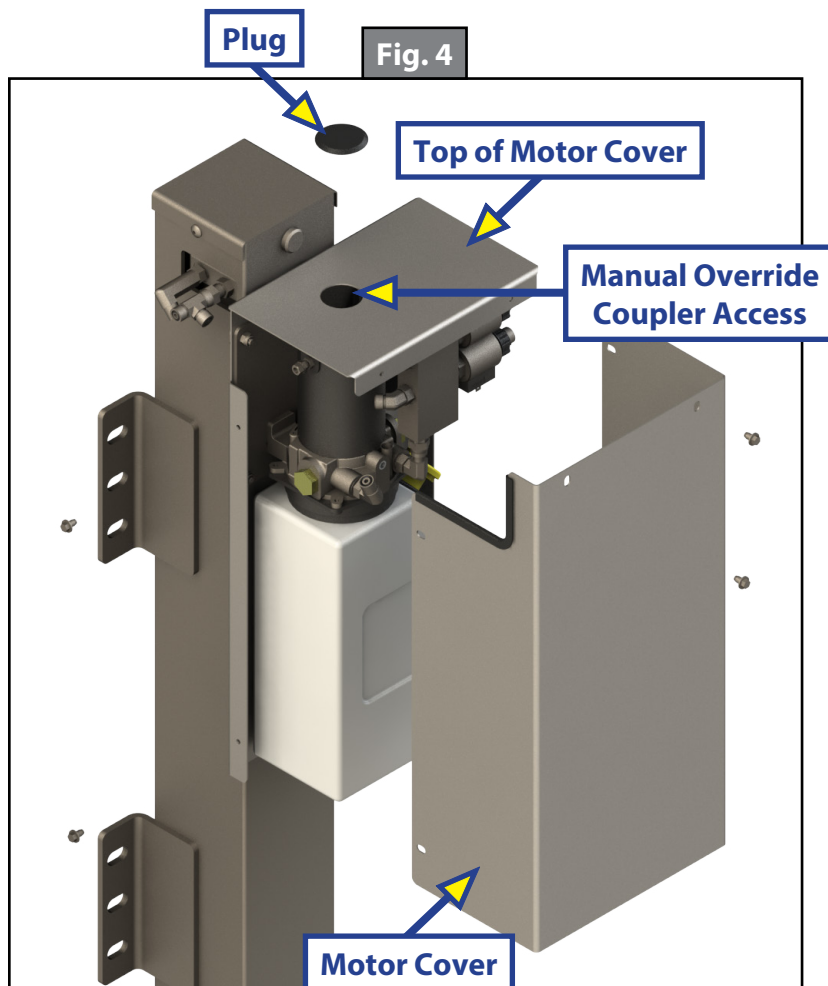
1. Remove six screws around the perimeter of the motor cover and remove cover (Fig. 4).
2. Using a $\frac{5}{32}$ " hex wrench, open the valve(s) by turning the manual override screw(s) clockwise until it stops (Fig. 5).

NOTE: With the two-valve system, the jacks can be independently extended or retracted. To manually extend or retract the curbside (right) jack, open the top valve. To manually extend or retract the roadside (left) jack, open the bottom valve. To manually operate both jacks simultaneously, open both top and bottom valves.

3. Remove plug from top of motor cover (Fig. 4).
4. Remove protective label from power unit to reveal the manual override coupler (Fig. 6).

NOTE: Top of motor cover and wiring removed for clarity in Figs. 5, 6 and 7.

5. Using a drill with a $\frac{1}{4}$ " hex bit, insert the hex bit into the manual override coupler (Fig. 7).
6. Run the drill clockwise to retract the jacks.
7. Run the drill counterclockwise to extend the jacks.
8. After extending or retracting the jacks, make sure to turn the override screw(s) counterclockwise until it stops.
9. Reinstall motor cover and plug.

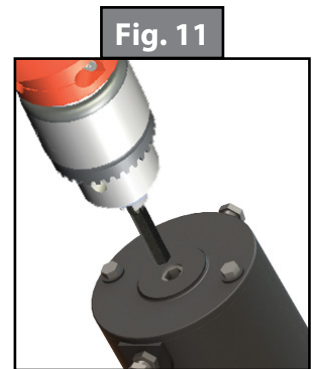
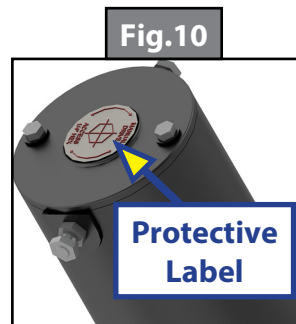
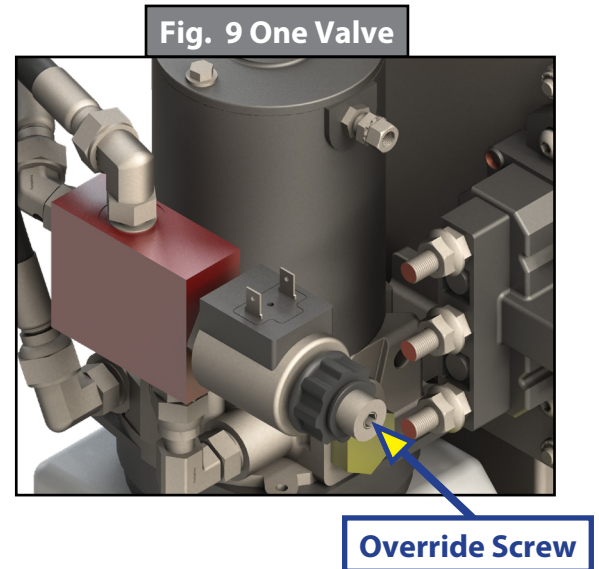
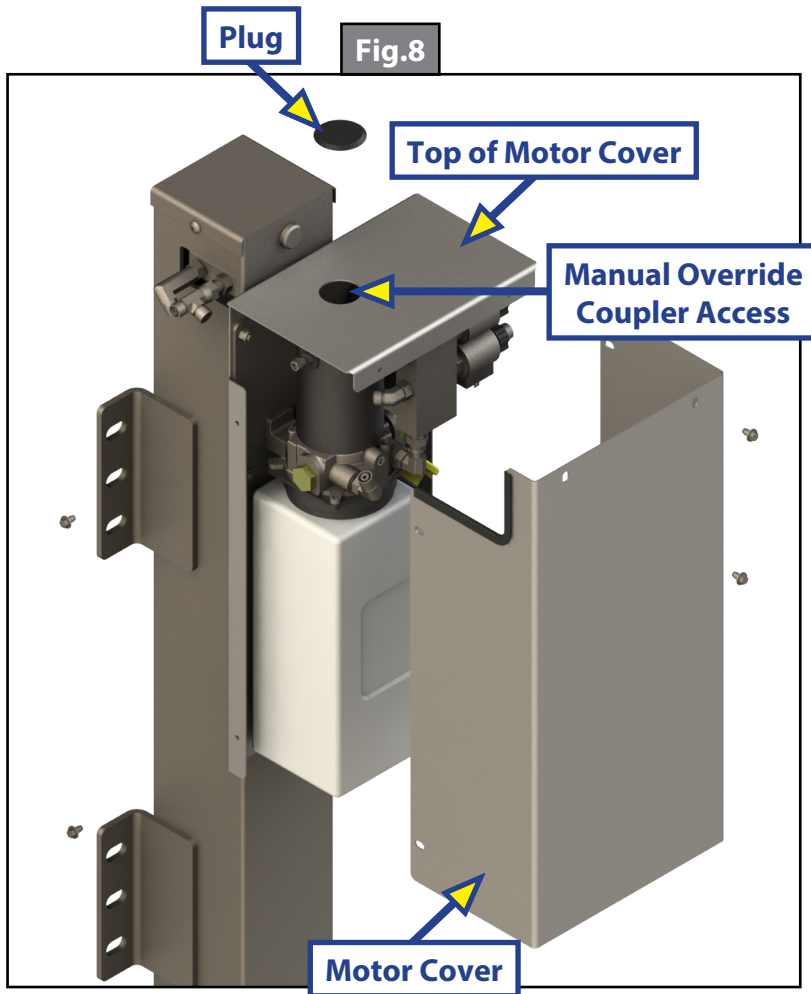


One-Valve Systems

1. Remove six screws around the perimeter of the motor cover and remove cover (Fig. 8).
2. Using a $\frac{5}{32}$ " hex wrench, open the valve by turning the manual override screw clockwise until it stops (Fig. 9).
3. Remove plug from top of motor cover (Fig. 8).
4. Remove protective label from power unit to reveal the manual override coupler (Fig. 10).

NOTE: Top of motor cover and wiring removed for clarity in Figs. 9, 10 and 11.

5. Using a drill with a $\frac{1}{4}$ " hex bit, insert the hex bit into the manual override coupler (Fig. 11).
 - A. Run the drill clockwise to retract the jack(s).
 - B. Run the drill counterclockwise to extend the jack(s).
6. After extending or retracting the jack(s), make sure to turn the override screw counterclockwise until it stops.
7. Reinstall motor cover and plug.



Introduction

This manual is for 5th Wheel applications only.

Level-Up® is an Automatic Leveling system that comes installed in either a 4-point or 6-point configuration. See Plumbing Diagrams for additional information.

The Level-Up hydraulic system is equipped with 14K aluminum landing gear and 8K aluminum leveling jacks. The leveling jacks in the Level-Up® system work in pairs. 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 5th Wheel. Mechanical portions of the system are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

See Wiring Diagram for information pertaining to the electrical connections of this leveling system.

Additional information about this product can be obtained from lci1.com/support or by downloading the free myLCI app. The app is available on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.

iTunes®, iPhone®, and iPad® are registered trademarks of Apple Inc.
Google Play™ and Android™ are trademarks of Google Inc.

Product Features

- One-touch automatic leveling
- Lightning-fast hydraulics
- Lightweight aluminum jacks
- Wireless remote options available

Component Description

1. Jacks
 - A. Rated at a lifting capacity for the trailer.
 - B. Standard 9-inch diameter (63.5 square inch) foot pad on a ball swivel for maximum surface contact on all surfaces.
 - C. Optional 12-inch diameter - (113 square inch) foot pad also available.
 - D. Operational Powered from a 12V DC Motor/Pump assembly.
2. Motor/Pump Assembly
 - A. 12V DC motor
 - B. Hydraulic fluid reservoir tank
 - C. Control valve manifold
 - D. Solenoid valve
3. System Controls
 - A. Touch pad can be operated in manual mode or fully automatic mode.
 - B. Manual override method exists in the event of electrical or system failure.

Safety

WARNING

The “WARNING” symbol above is a sign that a safety risk is involved and may cause death, serious personal injury and/or severe product or property damage if not safely adhered to and within the parameters set forth in this manual.

Read and understand all instructions and safety labels before starting any procedures stated in this manual. Adhere to all safety labels to prevent serious personal injury and/or product damage. Failure to follow instructions and safety labels may void product warranty.

The Level-Up LCD 5th Wheel Leveling 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 trained professionals be employed to change the tires or perform other services on the 5th Wheel.

WARNING

The 5th Wheel MUST be supported per manufacturer's recommendations before working underneath. Any attempts to change the tires, or perform other service, while 5th Wheel is supported solely by the LCI Level-Up® with Automatic Leveling system could result in death or serious personal injury, severe product and/or property damage.

Make sure the 5th Wheel is properly supported with jack stands, or other adequate devices, under the frame of the 5th Wheel prior to performing any service or repair procedure. Never support the 5th Wheel by the axles or suspension. Never allow the tires to leave the ground when lifting the 5th Wheel—this creates an unstable and unsafe condition.

Make sure to keep hands and other body parts clear of fluid leaks. Oil leaks in the Lippert Leveling System may be under high pressure and can cause serious skin-penetrating injuries.

⚠ WARNING

A fluid leak within a highly pressurized hydraulic system can cause serious skin-penetrating injuries. Wear appropriate Personal Protective Equipment (PPE), such as long sleeves, gloves, protective eyewear or a full face shield, when performing service or maintenance to the 5th Wheel.

⚠ CAUTION

The “CAUTION” symbol above is a sign that a safety risk is involved and may cause personal injury and/or product or property damage if not safely adhered to and within the parameters set forth in this manual.

⚠ CAUTION

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

Make sure all persons, pets and property are clear of the 5th Wheel while LCI Level-Up Automatic Leveling system is in operation.

Preparation

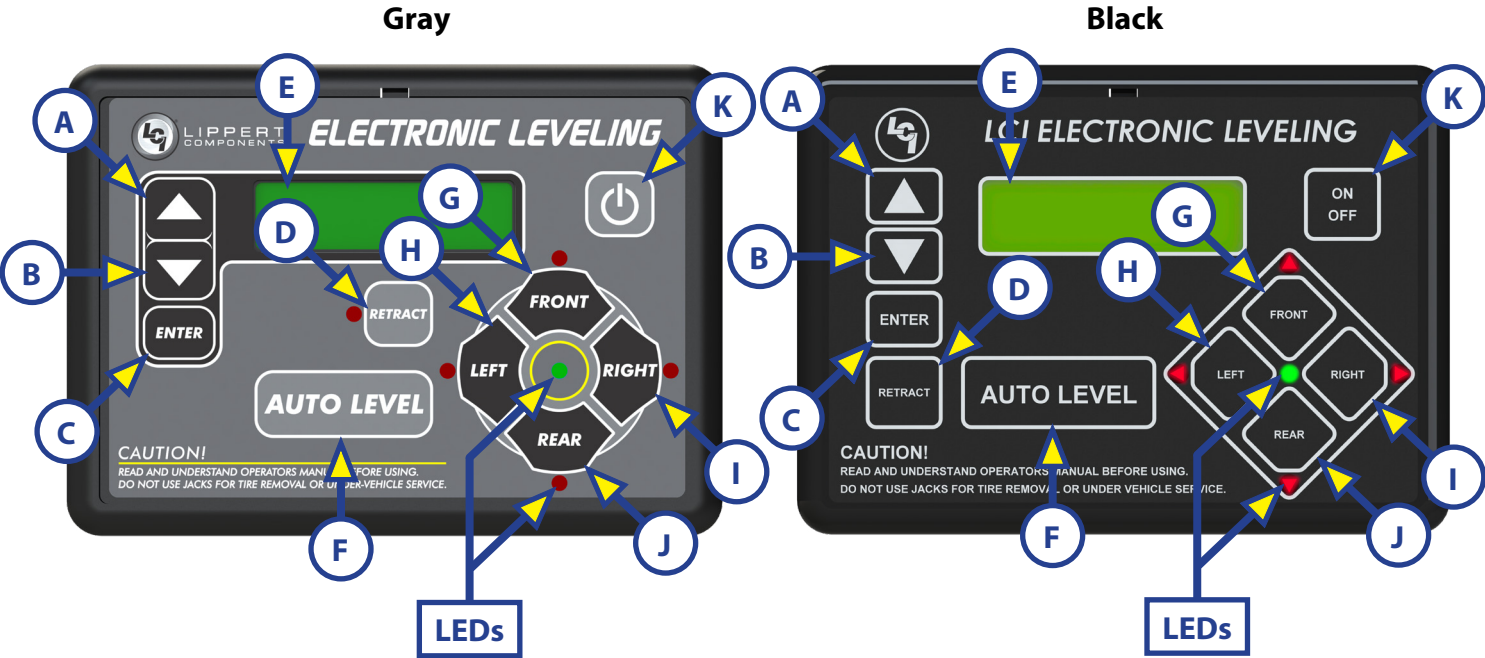
1. Make sure the 5th Wheel is parked on a reasonably level surface.
2. Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions.
3. When parking the 5th Wheel on extremely soft surfaces, utilize load distribution pads under each jack.
4. Make sure the battery of the 5th Wheel is fully charged or that the 5th Wheel is plugged into shore power prior to attempting to operate the system.

NOTE: Level-Up requires a minimum of 12V DC from the battery for proper operation.

Operation

Use the LCD touchpad (Fig. 1) to operate the Level-Up hydraulic system.

Fig. 1



LCD Touchpad Features	
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 while in manual mode only.
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 (ON/OFF) - Turns leveling system on and off.

Zero Point Calibration

The “Zero Point” is the programmed point in which the 5th Wheel will return to whenever the auto-level feature is used. The Zero Point is preset at the factory.

Basic Landing Gear Operation

- 1. Landing Gear Jacks
 - A. Landing gear jacks can be operated any time the system is on, but **NOT** in AUTO MODE. Press the FRONT Button (Fig. 1G), so that both the front, or landing gear, jacks can be extended.
 - B. If the touchpad is put in the RETRACT mode, indicated by the illuminated LED next to its button (Fig. 1D), the front jacks can be retracted together by pressing the FRONT Button.

2. Level-Up Jacks

- C. The Level-Up 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. 1J) to extend all Level-Up jacks at the same time.

NOTE: Manual and Auto modes can be selected through the LCD menu by using the Up and Down Arrow buttons (Figs. 1A and 1B), then press ENTER (Fig. 1C) to select the desired mode

- D. Press the LEFT or RIGHT buttons (Fig. 1H or 1I) to operate Level-Up jacks on the left (roadside) or right (curbside) side of the 5th Wheel, respectively.

Unhitching Instructions

1. Press Power Button (Fig. 1K) (ON) to turn system on. LCD screen (Fig. 1E) lights up.
2. LCD screen will read "NOT LEVEL Jacks: UP."

NOTE: Indicator (LED) lights (Fig. 1) may come on, indicating the current disposition of the 5th Wheel.

3. Press FRONT Button (Fig. 1G) to extend landing gear jacks and lift front of 5th Wheel to take the weight of the 5th Wheel off of the hitch.
4. Uncouple the 5th Wheel connection from the tow vehicle.
5. Pull tow vehicle away and park it at a safe distance.

Auto Level Sequence

Prior to unhitching from the tow vehicle, make sure the 5th Wheel is parked on a level surface and the tires are chocked.

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

NOTE: Pressing any button during an auto level sequence will abort the auto leveling cycle.

NOTE: In order for the hitch recognition feature to function, the auto level sequence **MUST** be started with the front of the 5th Wheel above level.

2. Front landing gear will retract, lowering the front of the 5th Wheel below level, stopping, then lifting the front end to level the 5th Wheel front-to-back.
3. The left side leveling jack extends and raises the roadside of the 5th Wheel.
4. The right side leveling jack extends and raises the curbside of the 5th Wheel, beginning side-to-side leveling.
5. The front landing gear extends to complete the leveling cycle.
6. Additional left-to-right or front-to-back leveling may occur, if the controller deems it necessary.

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

Hitch Recognition

1. Turn on touchpad.
2. Press the LEFT and RIGHT buttons (Fig. 1H and 1I) simultaneously.
3. The front of the 5th Wheel 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 5th Wheel in a below level condition, the Hitch Recognition will not function and the LCD screen will read "Feature Disabled." For the hitch recognition feature to function, the auto level sequence **MUST** be started with the front of the 5th Wheel above level.

4. Connect the tow vehicle to the 5th Wheel. Make sure hitch is connected and locked.
5. Press Up Arrow button (Fig. 1A) until LCD screen reads "AUTO RETRACT."
6. Press ENTER button (Fig. 1C). System will immediately retract all jacks and landing gear.

Zero Point Calibration

The "Zero Point" is the programmed point in which the 5th Wheel will return to whenever the auto-level feature is used. The Zero Point is preset at the factory and should never have to be reset. However, if necessary, Zero Point can be reset.

NOTE: The Zero Point must be programmed prior to using the auto-level feature to ensure the proper operation of the system. Prior to starting the Zero Point Calibration procedure, check all connections on the controller, valve coils, landing gear, leveling jacks and touchpad.

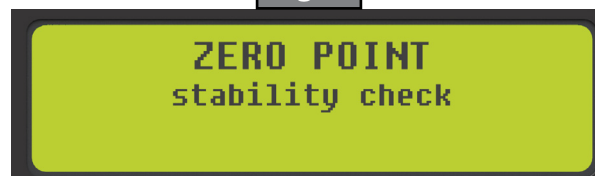
1. Manually run all leveling jacks and landing gear to level the 5th Wheel.
 - A. Manual leveling is best achieved by placing a level in the center of the 5th Wheel and leveling it both front-to-back, then side-to-side.
 - B. See Basic Landing Gear Operation section for instructions on how to manually operate the system.
2. After the 5th Wheel has been leveled, turn off the touchpad.
3. With the touchpad off, press and release the FRONT Button (Fig. 1G) ten times, then press and release the REAR Button (Fig. 1J) ten times.
4. The touchpad will flash and beep, then the LCD screen will read "ZERO POINT CALIBRATION ENTER to set, Power to Exit" (Fig. 2).

Fig. 2



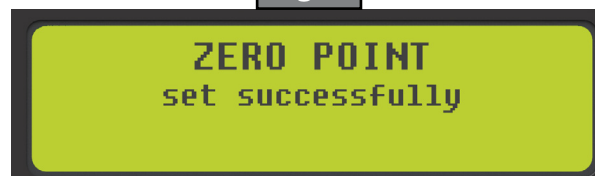
5. To set the current position as the zero point, press the ENTER button (Fig. 1C).
 - A. The LCD screen will read "Zero Point stability check" (Fig. 3).

Fig. 3



- B. LCD screen will read "ZERO POINT set successfully" after the process has been completed (Fig. 4).

Fig. 4



- C. The system will set this point as its level state and the touchpad will turn off.

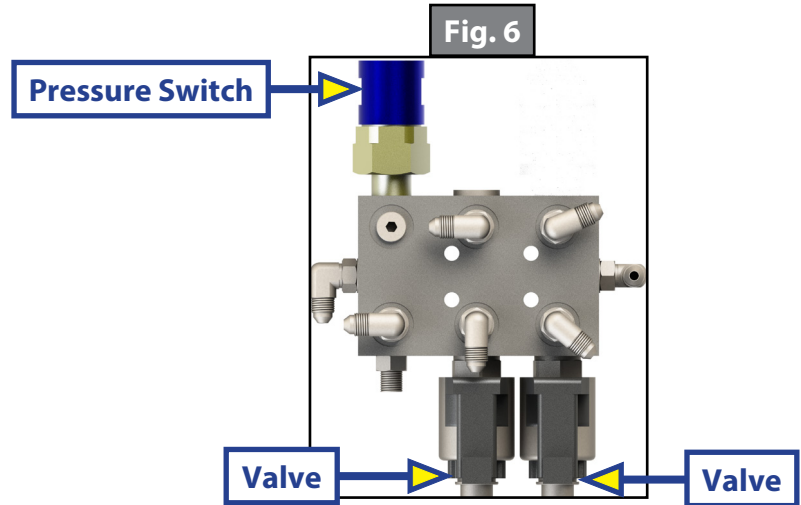
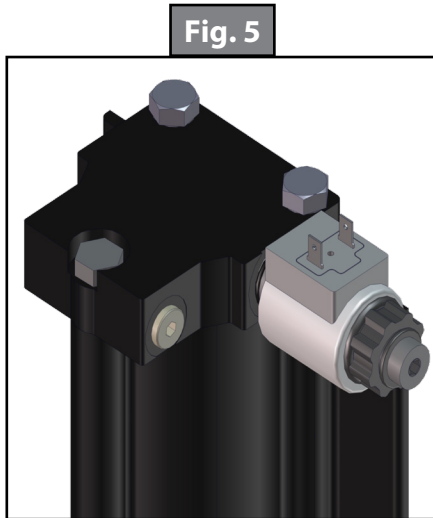
Manual Override

The LCI Level-Up® LCD 5th Wheel 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 or shore power) prior to attempting the manual override procedure.

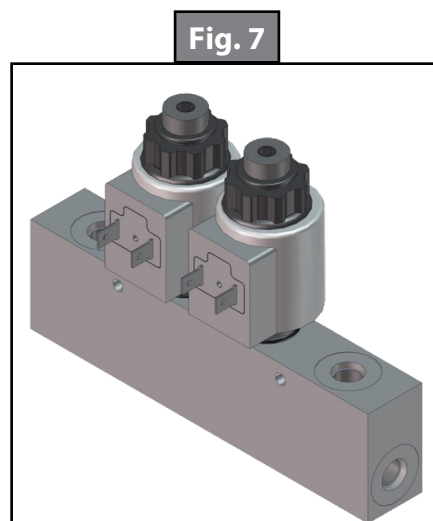
4-Point Leveling

1. Locate the valves that are paired with the landing gear or leveling jack that needs to be manually overridden.
 - A. Landing Gear - Valve located on the lead landing gear (Fig. 5).
 - B. Leveling Jacks - Valves located on the 4 Bank Remote Manifold (Fig. 6).



6-Point Leveling

1. Locate the valves that are paired with the landing gear or leveling jack to be manually overridden.
 - A. Landing Gear - Valve located on the lead landing gear (Fig. 5).
 - B. Leveling Jacks - Valve located on valve block (Fig. 7).



NOTE: Steps 2-5 are identical for both 4-Point and 6-Point Leveling Systems.

2. Using a 5/32" hex wrench, open the valve by turning the manual override set screw clockwise (Fig. 8).
3. Remove protective label (Fig. 9A) 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. 10) to manually operate the system.
 - A. Run the drill forward (clockwise) (Fig. 10A) to retract the landing gear or leveling jacks.
 - B. Run the drill in reverse (counterclockwise) (Fig. 10B) to extend the landing gear or leveling jacks.

Fig. 8

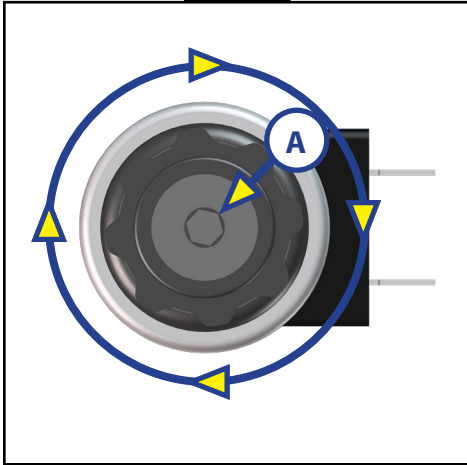


Fig. 9

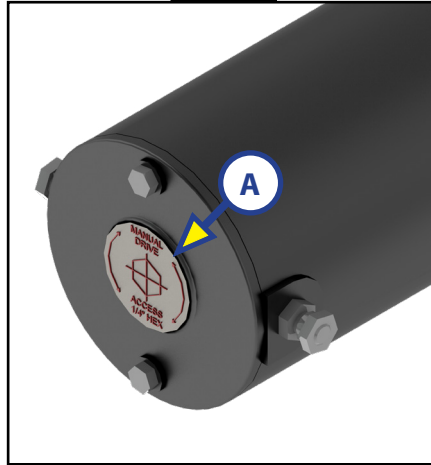
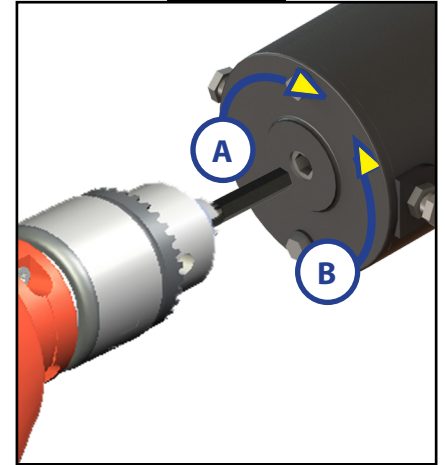
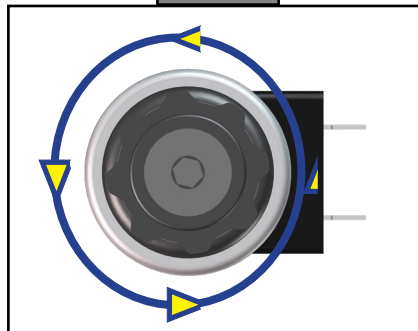


Fig.10



5. Make sure to turn the manual override set screw on the valve back to the counterclockwise position (Fig. 11) after extending or retracting the landing gear or leveling jacks.

Fig. 11



Troubleshooting

Error Display In LCD Screen

To clear an Error Code, repair, correct the issue or press ENTER button (Fig. 1C). If the error remains, the error message will reappear.

Error Codes		
LCD Message	What's Happening?	What Should Be Done?
"EXCESS ANGLE"	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during auto operation.	Relocate the 5th Wheel.
"EXCESSIVE ANGLE"	Controller not properly secured.	Check and secure controller placement.
	Excessive angle reached during manual operation.	Relocate the 5th Wheel.
"FEATURE DISABLED"	Front of 5th Wheel below level when starting auto-level process (only when trying to initiate Hitch Recognition).	Push the FRONT Button to raise the 5th Wheel up to hitch height and connect to tow vehicle.
	Touchpad power not cycled between consecutive leveling operations.	Turn touchpad off and then back on to reset the system.
	Zero Point not set.	Set Zero Point.
"LOW VOLTAGE"	Battery voltage 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 and/or relocate the 5th Wheel.
"EXTERNAL SENSOR"	Bad connection or wiring from the controller to the 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 5th Wheel.
	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.
PANIC STOP "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.

Maintenance

1. Remove dirt and road debris from leveling jacks and landing gear and stabilizer struts (if equipped) as needed.
2. If jacks are down for extended periods, it is recommended to spray exposed jack tubes with a spray lubricant every three months for protection. If the 5th Wheel is located in a salty air environment, it is recommended to spray the jack tubes every 4 - 6 weeks.
3. Each month, check that the fluid level is within 1/4" of the fill spout lip while leveling jacks and slide-outs are fully retracted.

NOTE: Always fill the reservoir with the leveling jacks and slide-outs fully retracted. Filling the reservoir when leveling jacks and slide-outs are extended will cause the reservoir to overflow into its compartment when the leveling jacks and slide-outs are retracted.

4. Inspect and clean all of the 5th Wheel's power and electrical connections prior to the first use of the 5th Wheel at the start of the traveling season and prior to storing the 5th Wheel. If corrosion is evident, clean all corrosion with a wire brush, then apply dielectric grease to the connections.
5. Make sure to turn the manual override set screw on the valve back to the counterclockwise position after extending or retracting the landing gear or leveling jacks.

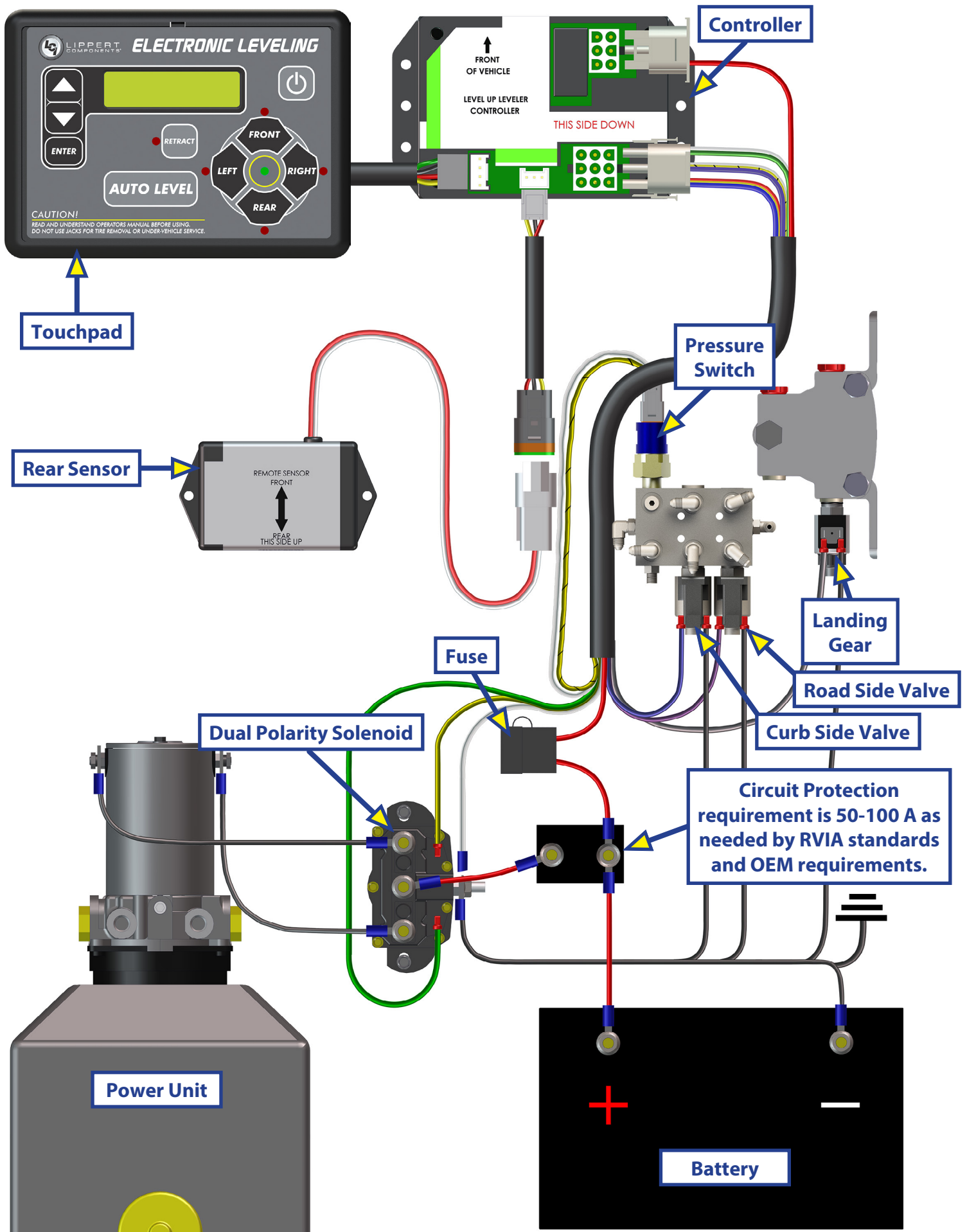
Fluid Recommendation

The LCI Level-Up Automatic Leveling system is pre-filled, primed and ready to operate direct from the manufacturer. Type "A" Automatic Transmission Fluid (ATF) is utilized. Lippert Components, Inc. recommends ATF with Dexron III® or Mercon 5® or a blend of both.

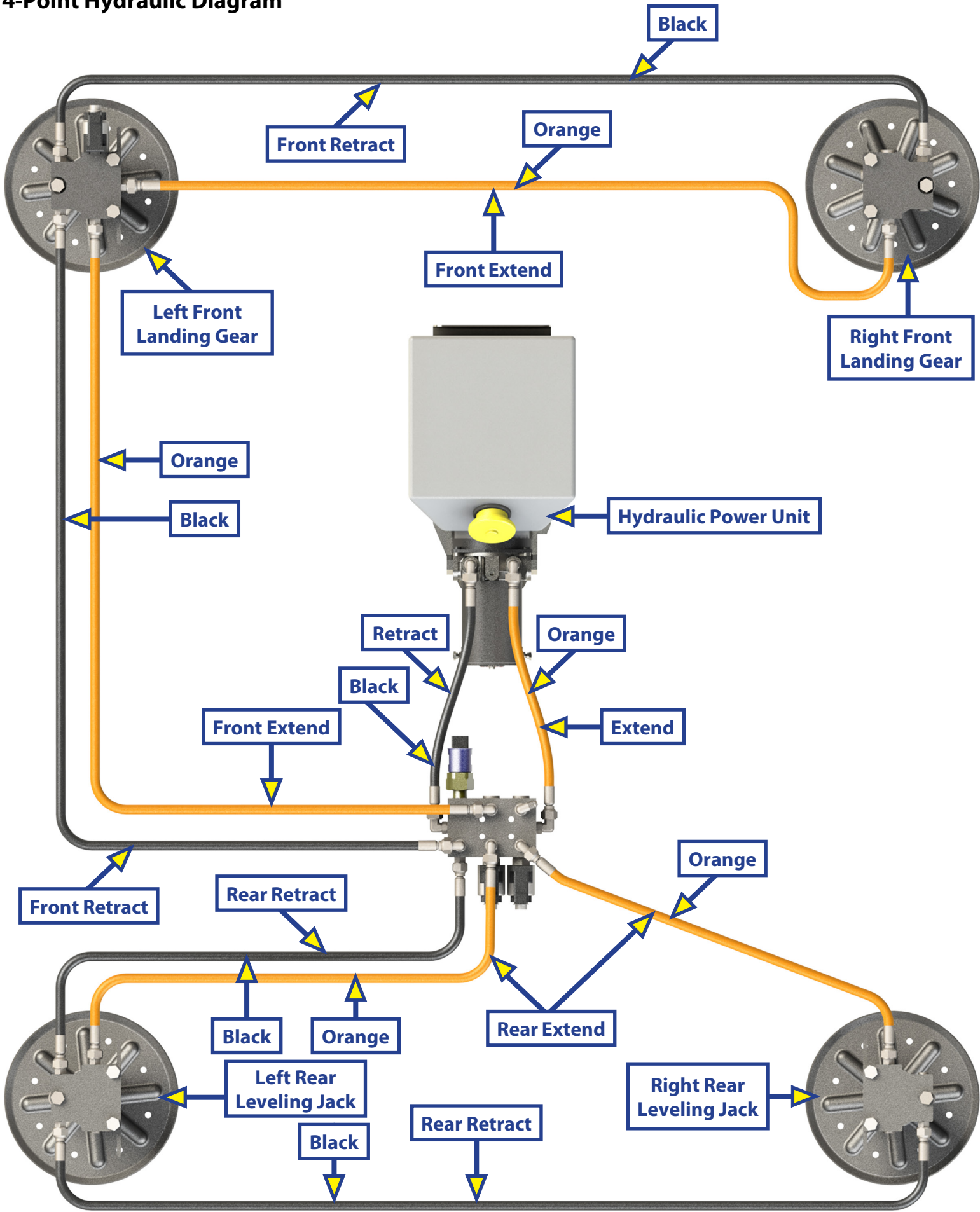
In colder temperatures, less than 10 °F, the leveling jacks and landing gear may extend and retract slowly due to the fluid's molecular nature. For cold weather operation, fluid specifically formulated for low temperatures may be desirable. For a list of approved fluid specifications, see [TI-188](#).

Or go to <https://www.lci1.com/towable-br-level-up/support-towable-level-up-br-touch-pad/>, click on the Technical Information Sheets tab, then select TI - 188: Hydraulic Operation Fluid Recommendation from the listed documents.

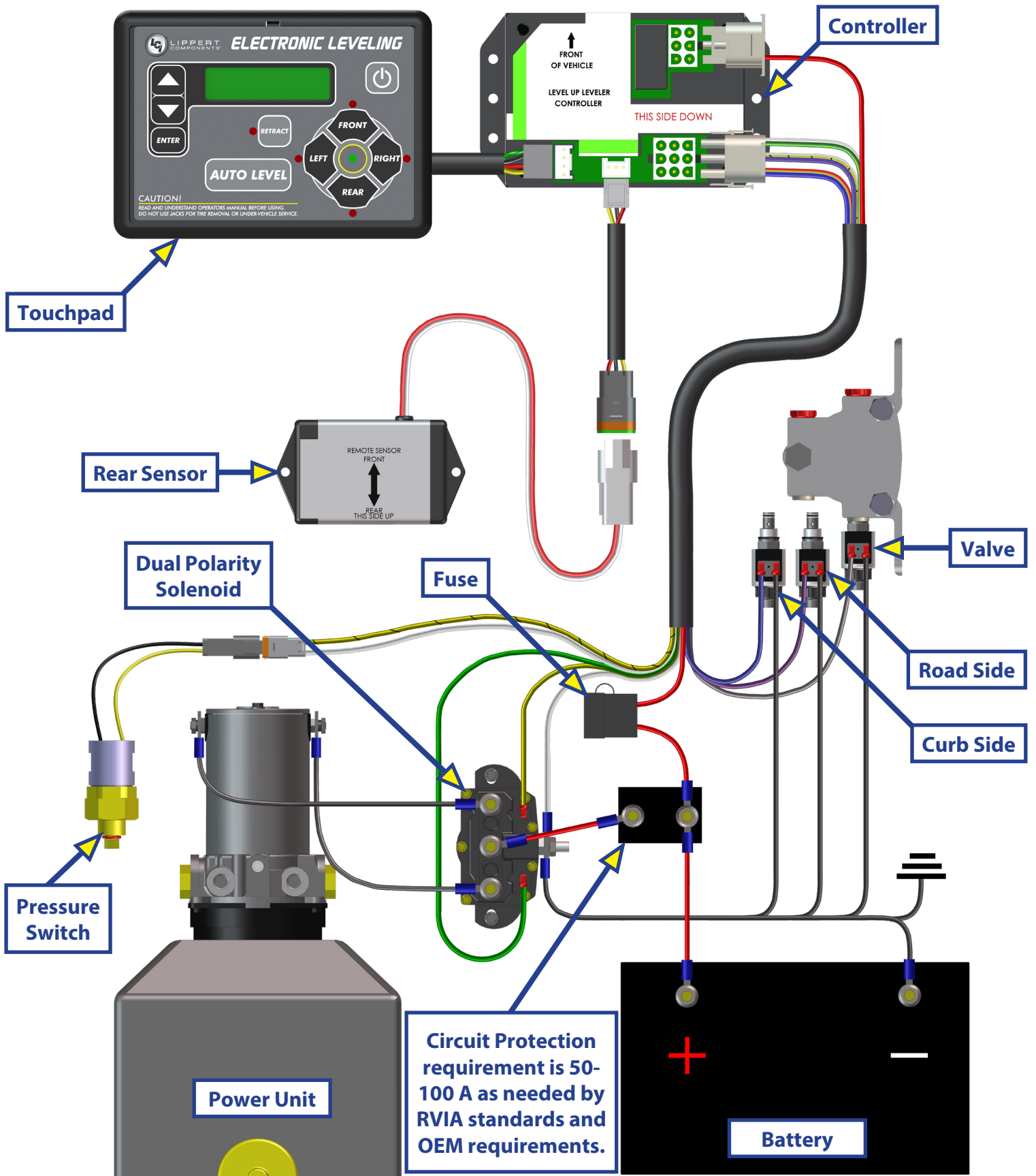
4-Point Wiring Diagram



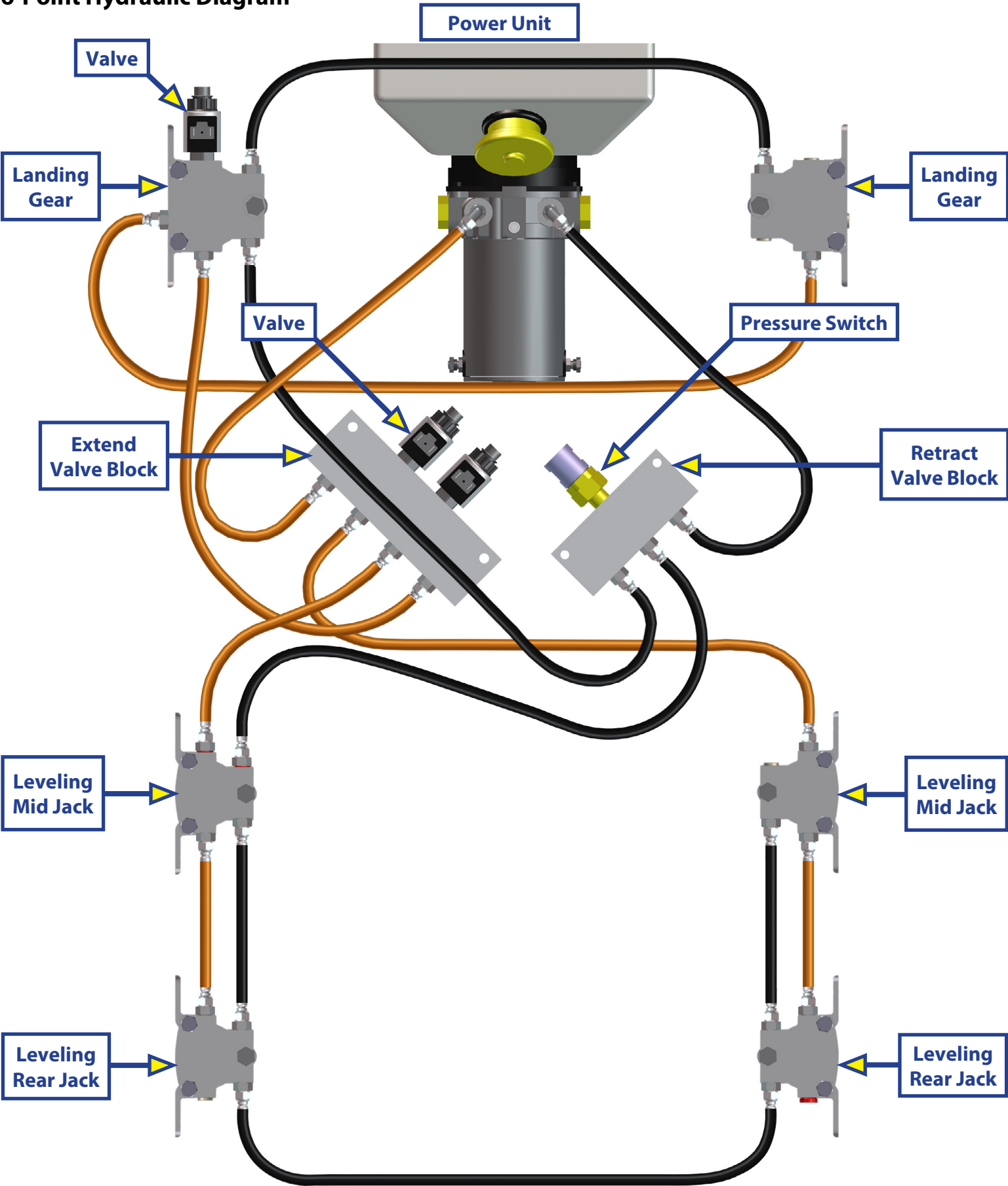
4-Point Hydraulic Diagram



6-Point Wiring Diagram



6-Point Hydraulic Diagram



X-TREK STABILIZATION SYSTEM

LEVELING AND STABILIZATION

System Information

The X-Trek is a stabilizing system for trailers utilizing hydraulic stabilizers and a manual bi-direction pump to simultaneously extend or retract all of the stabilizers.

Safety

This manual provides general instructions. Many variables can change the circumstances of the intended instructions, i.e. the degree of difficulty involved in the service operation and the ability of the individual performing the operation. This manual cannot begin to plot out instructions for every possibility, but will provide the general instructions, as necessary, for effectively installing, operating and servicing the device, product or system. In the event the skill level required is too advanced or the procedure too difficult, a certified technician should be consulted before performing the necessary service. Failure to correctly perform a troubleshooting procedure may result in voiding the warranty, inflicting personal 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

Failure to act in accordance with the following may result in death or serious personal injury. The use of X-Trek to support the trailer for any reason other than which it is intended is prohibited by Lippert's limited warranty. The Lippert stabilizing system is designed as a "stabilizing" system only and should not be used to provide service for any reason under the trailer such as changing tires or servicing the stabilizing system. Any attempts to change tires or perform other service while trailer is supported by X-Trek could result in damage to the trailer and/or cause death or serious injury.

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

The "CAUTION" symbol above is a sign that a procedure has a safety risk involved that may cause personal injury and/or product damage, including voiding of warranty, if not performed safely and in accordance with the safety procedures stated herein.

⚠ 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.

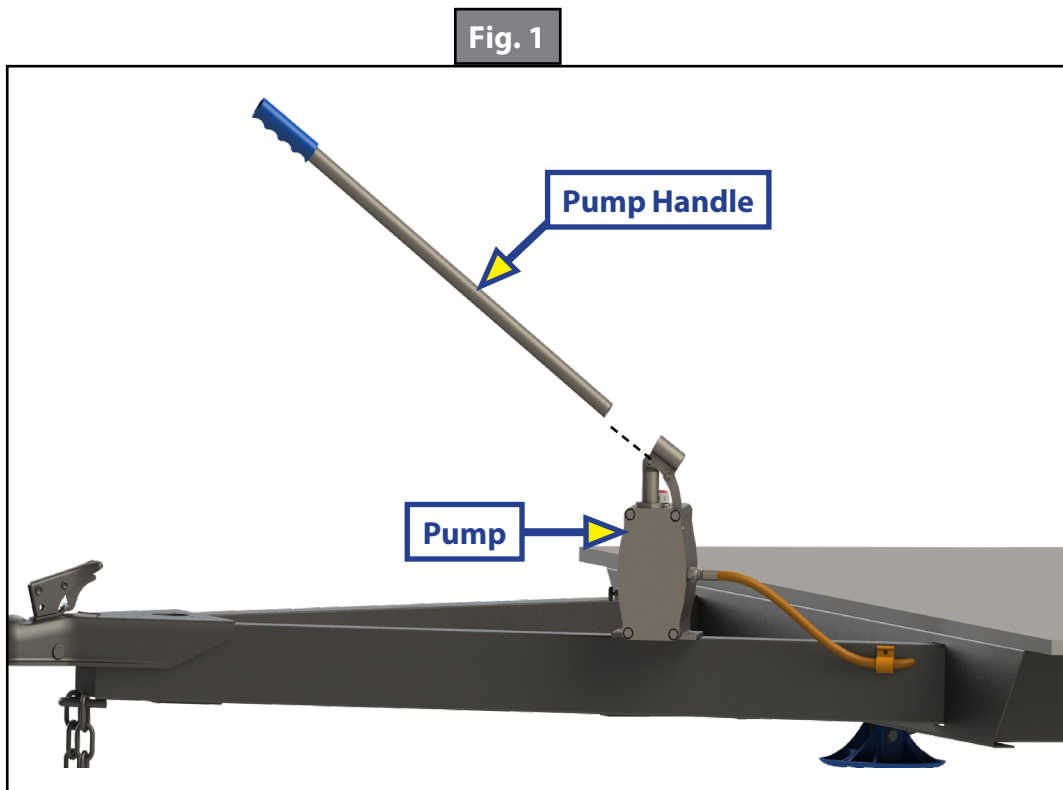
Instructions

⚠ WARNING

The X-Trek Stabilizing System is to be used only for stabilization. Using the system for any other purpose could cause damage the trailer and/or cause death or serious personal injury.

Extending Stabilizers

1. Insert the pump handle into the bracket on the top of the pump (Fig. 1).



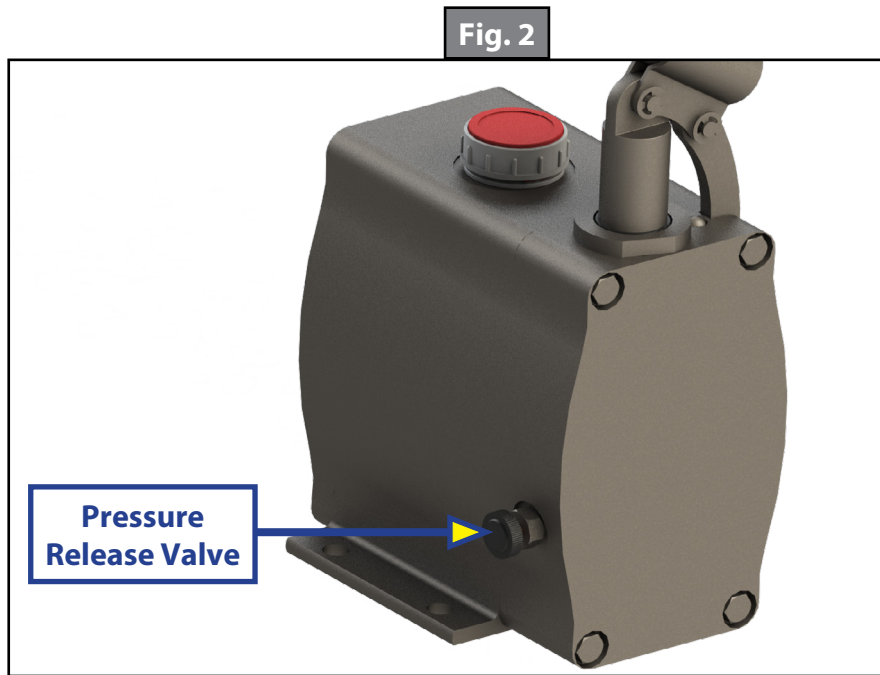
2. Make sure the pressure relief valve on the pump (Fig. 2) is closed by turning it to the right (clockwise).
3. Pump the handle up and down to start extending the stabilizers.

NOTE: The stabilizers will extend incrementally with each up and down stroke and will equalize force when all the stabilizers have made contact with the ground.

4. When stabilizers have been extended to the desired level, remove the handle from the pump and secure in the designated storage area.

Retracting Stabilizers

To retract the stabilizers, make sure the pressure release valve on the pump (Fig. 2) is open by turning it to the left (counterclockwise). This will release the extend pressure in all of the stabilizers simultaneously. No pumping is required because the gas spring will retract the stabilizers.

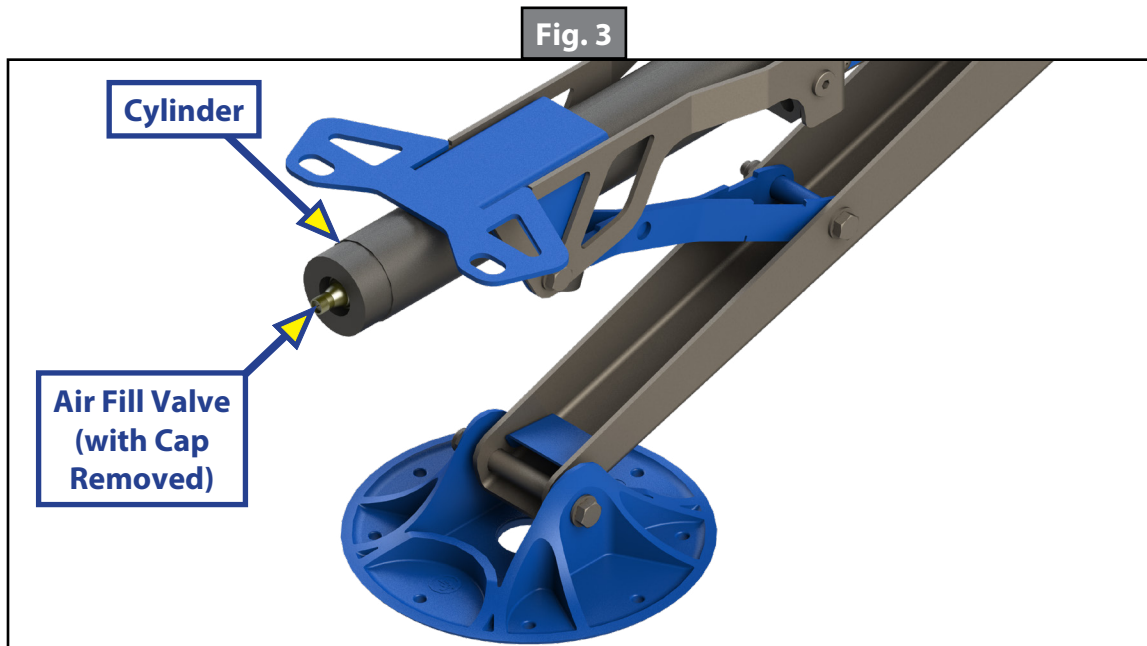


Troubleshooting

Loss of Air Pressure

A loss of air pressure to a level below 60 psi in one or more of the hydraulic cylinders can cause the stabilizer to not retract fully. In the unlikely event that one or more of the cylinders loses air pressure, air can be added by removing the cap from the air fill valve at end of the cylinder (Fig. 3), then filling the cylinder with air using a standard air pump. Pressurize to 60-70 psi

NOTE: A stabilizer that is fully retracted will be held in place magnetically, even if there is air pressure loss.

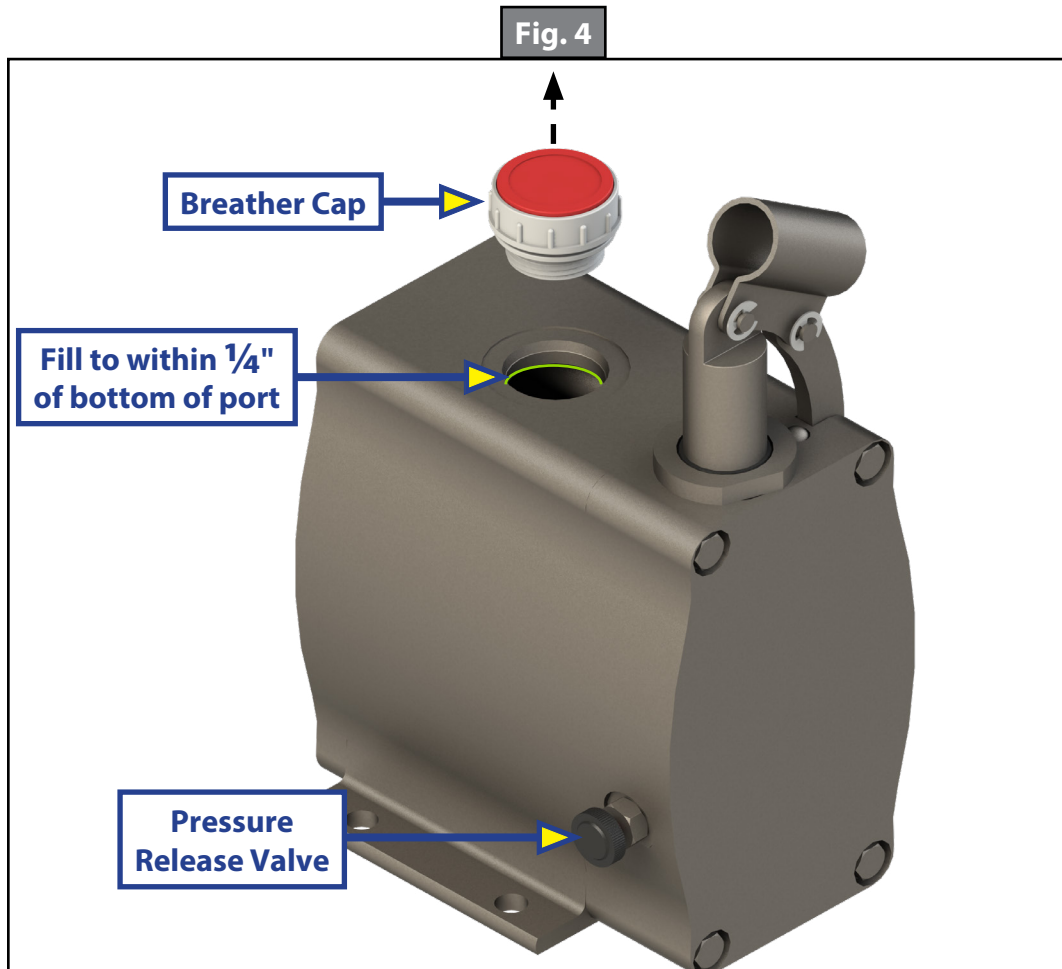


Line Break

High pressure lines are not serviceable. Contact LCI support.

System Purge Procedure

1. With all four stabilizers compressed (in the retracted position), make sure the cylinder retract air pressure in all four stabilizers is 60-70 psi.
2. Remove breather cap and fill fluid reservoir to $\frac{1}{4}$ " from bottom of port (Fig. 4). Replace breather cap.

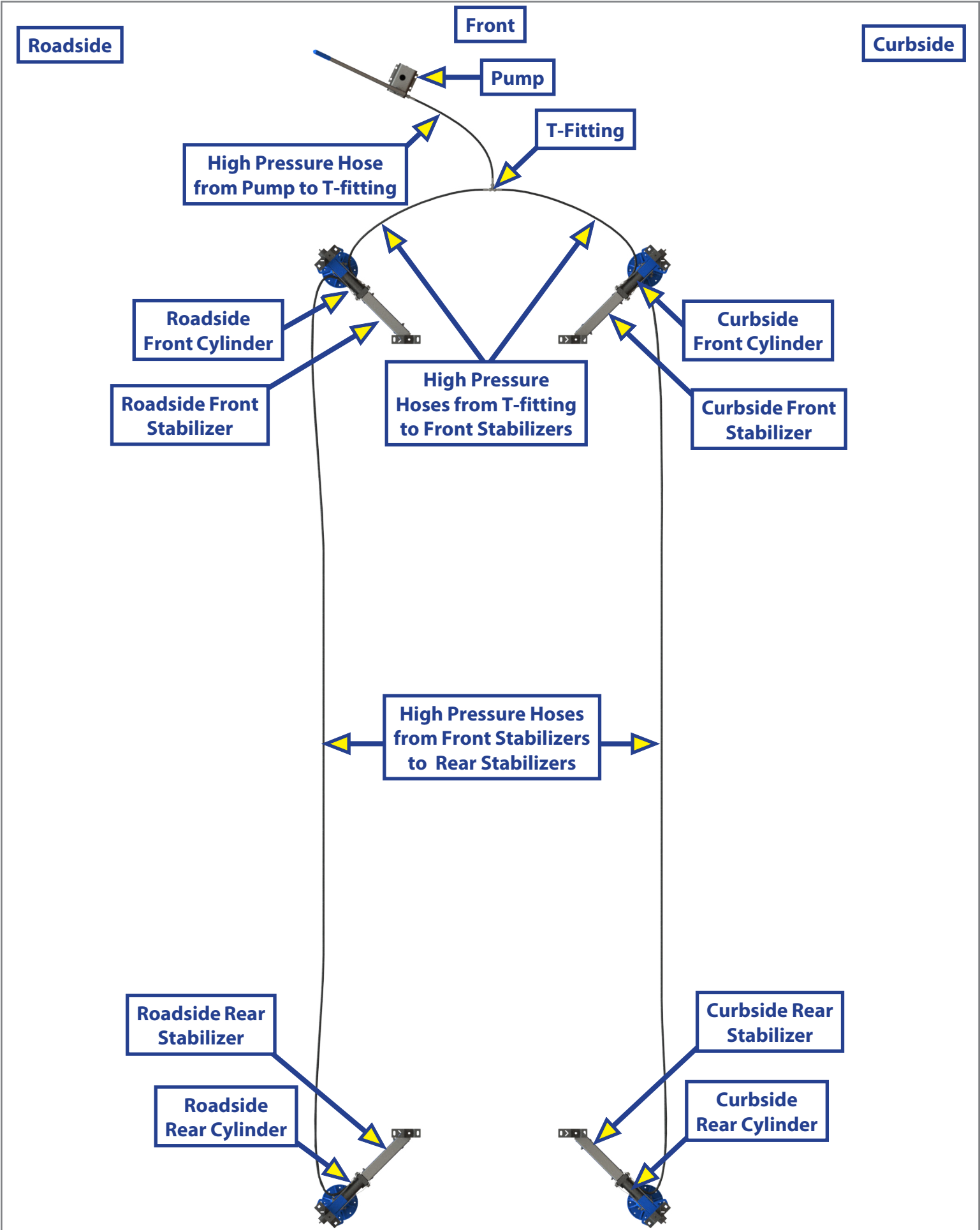


3. Insert the handle into the pump.
4. Close the pressure release valve (Fig. 4) by hand on the pump by turning it to the right (clockwise) until it is firmly hand tight.

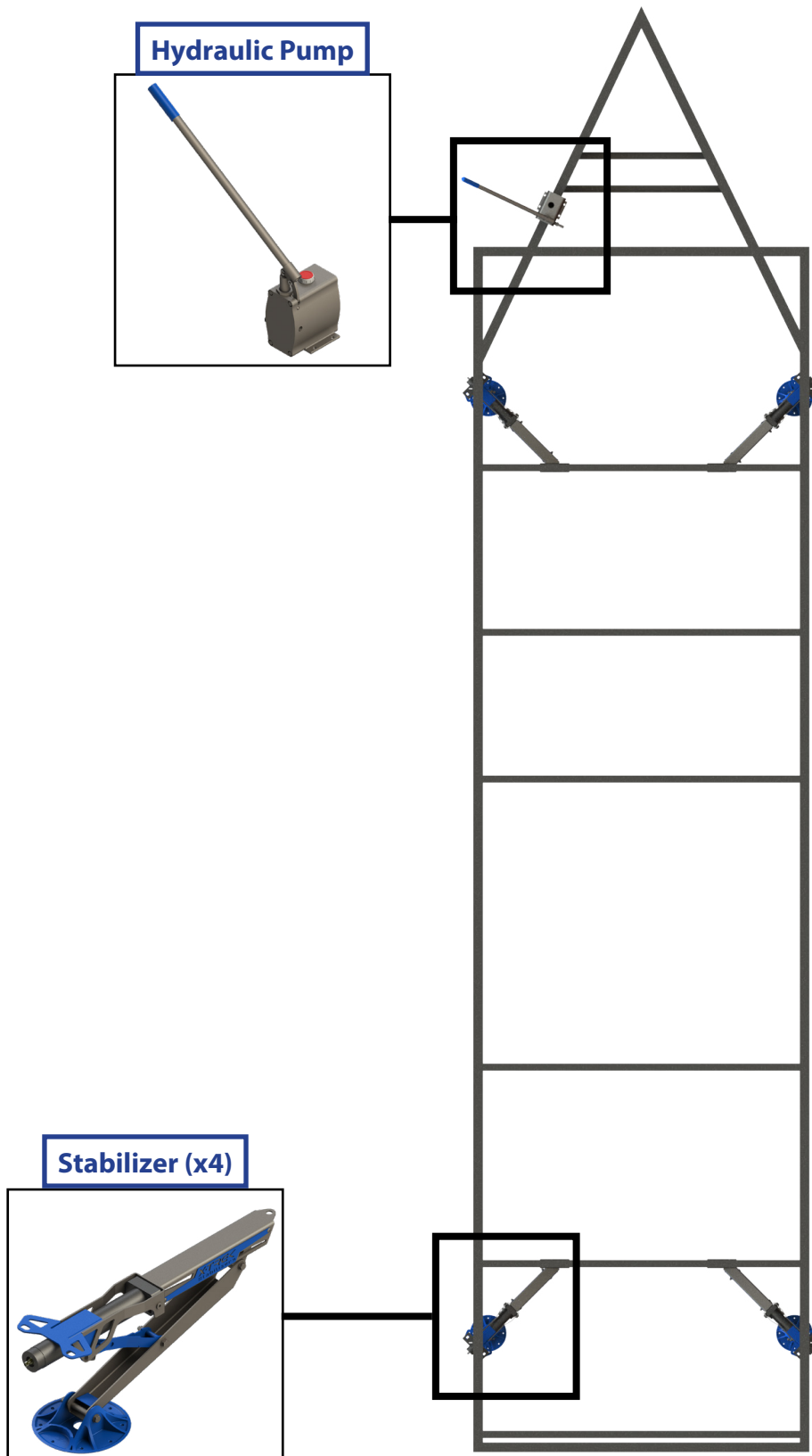
NOTE: Do not force with pliers or other tools.

5. Actuate the pump until all stabilizers have contact with the ground. Actuate 1-2 full cycles (pump handle fully down and back to fully up is one cycle) after ground contact to build some force.
6. Open the bypass valve by turning it to the left (counterclockwise) and allow all four stabilizers to return to the fully retracted position. Stabilizers should be held in retracted position magnetically at this point.
7. Repeat steps 4-6 one more time.
8. Leave the bypass valve open so any trapped air will vent.
9. Check reservoir level again and fill as needed.
10. System is now purged and functional.
11. Remove and stow the pump handle.

Hose Routing Diagram



X-TREK STABILIZING SYSTEM ASSEMBLY



SWING DOWN STABILIZER

LEVELING AND STABILIZATION

Introduction

The Swing Down Stabilizer was designed to be an easy-to-install, easy-to-operate stabilizer for lightweight travel trailers. The leg extends a full 6". The Swing Down Stabilizer is infinitely adjustable from its retracted and extended length, which minimizes time and effort to support the trailer. Rectangular, steel tubing gives a support leg with high strength and minimal weight. A 4-inch square steel foot pad completes the sturdy assembly.

Safety

Read and fully understand all instructions before installing or operating this product. Adhere to all safety labels.

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

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

CAUTION

Never exceed the rated trailer capacity, trailer can collapse or tip over.
Soft or spongy areas may allow stabilizer to sink, causing trailer to tip over. Additional support may be necessary.
Do not place blocks under the stabilizer foot for additional ground clearance.
Put the Swing Down Stabilizer in a stored position before moving trailer.

Operation

Extend Swing Down Stabilizer

1. Make sure the trailer is properly supported or raised for clearance while performing the extend operation.
2. Pull the leg of the stabilizer out (Fig. 1F) from the stowed locking slots (Fig. 1A).
3. Swing the leg downward (Fig. 1E) until the tabs engage in the operational locking slots (Fig. 1B).
4. Press on the release lever (Fig. 1C or Fig. 2A). This will allow the drop leg of the telescoping stabilizer to slide down to the ground (Fig. 1D or Fig. 2B).
5. Insert the stabilizer rod (Fig. 2C) end through the hole in the rear of the stabilizer leg.
6. Crank the stabilizer rod downward for the desired leveling position.
7. Store the stabilizer rod in a secure location.

Fig. 1

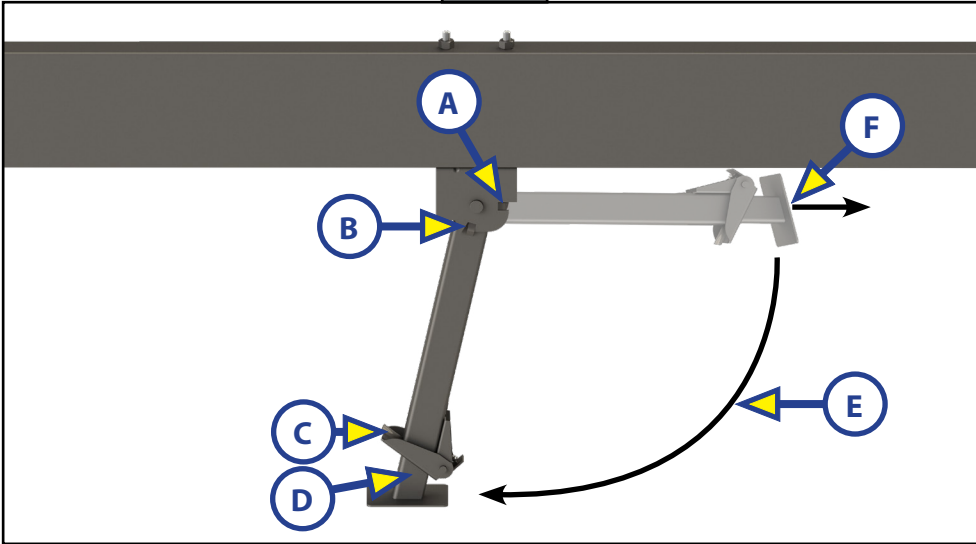
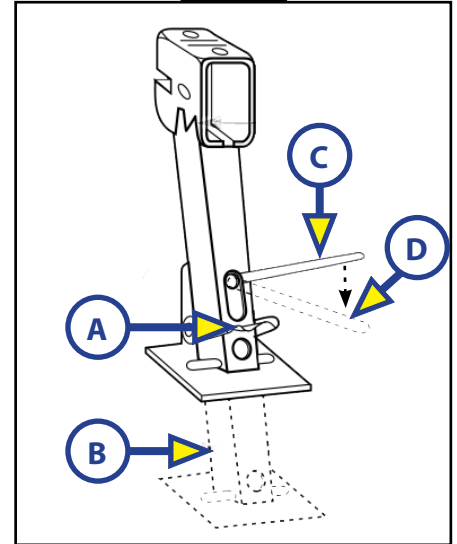


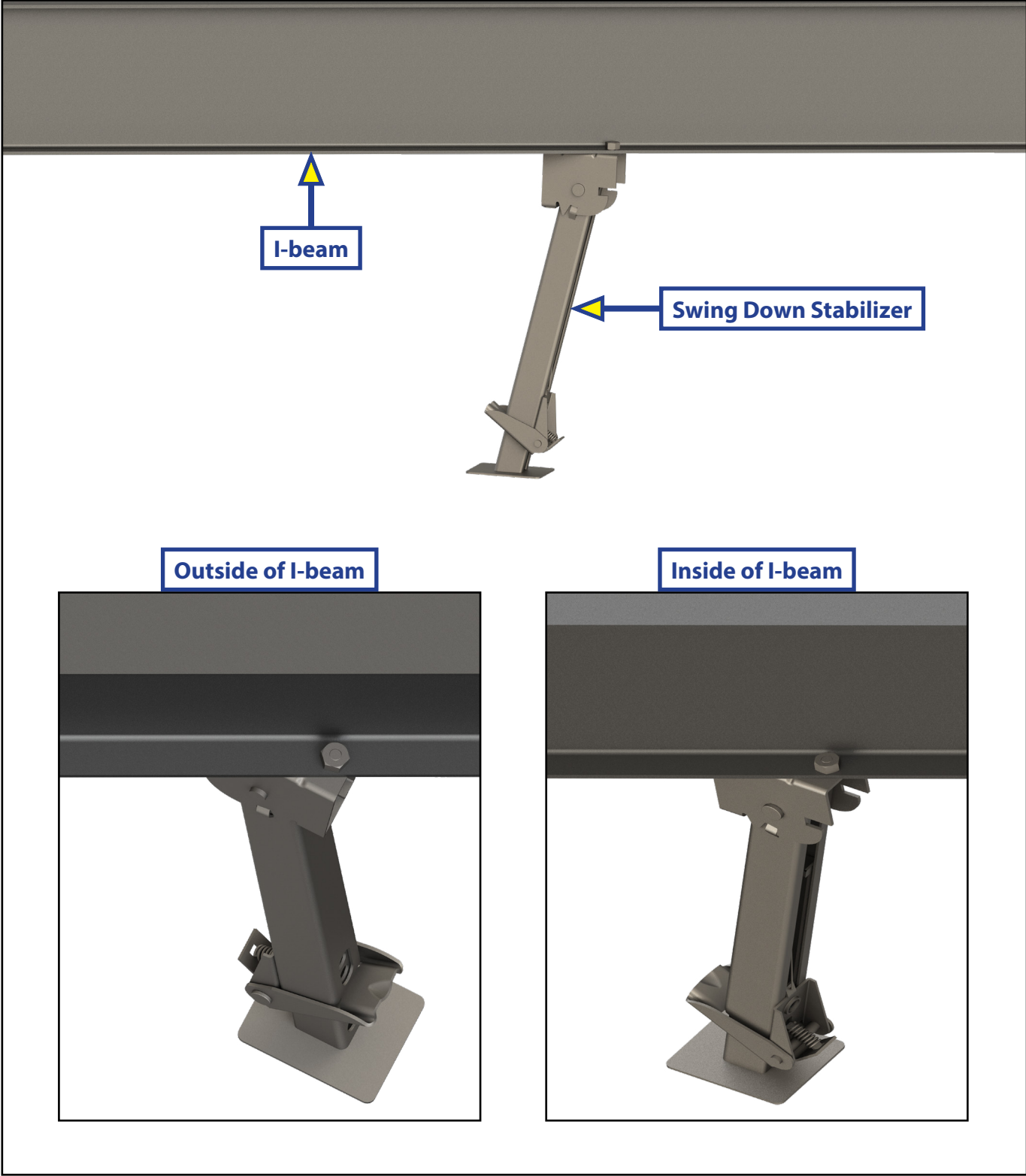
Fig. 2



Retract Swing Down Stabilizer

1. Make sure the trailer is properly supported or raised for clearance while performing the retract operation.
2. Press down on the release lever (Fig. 1C) for a quick release, or insert one end of the stabilizer rod (Fig. 2C) in the hole just above the release lever. Press the rod down (Fig. 2D) for a slower release.
3. Slide the drop leg (Fig. 1D or Fig. 2B) up into the main body of the leg.
4. Pull stabilizer towards the ground to disengage the tabs from the operational locking slots (Fig. 1B).
5. Swing the stabilizer leg upward toward the trailer frame rail until the tabs catch inside the stowed locking slots (Fig. 1A).
6. Store the stabilizer rod in a secure location.

SWING DOWN STABILIZER ASSEMBLY



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