



**LCI MOTORIZED LEVELING  
(2002-2008)  
OWNER'S MANUAL**

**LIPPERT  
COMPONENTS™**

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### **⚠ WARNING**

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

The use of the LCI Motorized Leveling System to support the coach for any reason other than which it is intended is prohibited by Lippert's Limited Warranty. The LCI Motorized Leveling System 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 a coach. Any attempts to change tires or perform other service while coach is supported by the LCI Motorized Leveling System could result in death, serious injury and/or damage to the motor home.

#### **NOTES:**

1. Be sure to park the coach on solid, level ground.
2. Clear all jack landing locations of debris and obstructions. Locations should also be free of depressions.
3. When parking the coach on extremely soft surfaces, utilize load distribution pads under each jack.
4. People and pets should be clear of coach while operating leveling system.
5. Be sure to keep hands and other body parts clear of fluid leaks. Oil leaks in the LCI Motorized Leveling System may be under high pressure and can cause serious skin-penetrating injuries.
6. 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.
7. 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 personal injury.

### System Description

The LCI Motorized 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 LCI Motorized Leveling System are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

### Component Description

#### **1. Jacks**

- A. 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 oil reservoir tank.
- C. Control Valve Manifold.
- D. Solenoid Valves.

#### **3. System Controls**

- A. Controlled electronically from the driver's seat of the coach.
- B. Touch pad is mounted in the dash.
- C. Touch pad can be operated in manual mode or fully automatic mode.

## Features

- A. Automatic extension of jacks from full retract position (with automatic ground detection).
- B. Automatic leveling of jacks.
- C. Manual leveling of jacks.
- D. Automatic retraction of jacks (with automatic full retract detection).
- E. Air bag suspension features (configurable on/off).
- F. Emergency retract/user alarm mode (jacks not retracted and park brake disengaged).
- G. Automatic jack error detection and error mode.
- H. Configuration mode for Air features.
- I. Configurations mode for Leveling Zero Point.

## System Wiring Requirements

- A. Battery power (2 ga. SAE J1127. Type SGX)
- B. Battery ground (2 ga. SAE J1127. Type SGX)
- C. Logic power (switched via ignition)
- D. Power brake signal (open=park brake disengaged, GND=park brake engaged)
- E. 4-wire harness connecting Controller to Touch Pad
- F. Jacks status input-Switched to GND
  - I. Jacks not all up – switch closed to ground
  - II. Jacks all up – switch open

## Air and Auxiliary Features

System has the option to control external Air and Auxiliary features. When enabled, the feature works according to the following logic:

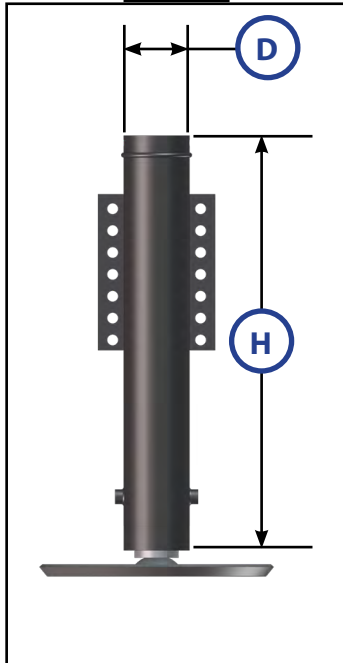
- A. Air bag pressure automatically lowered when starting the auto or manual sequence to maximize lift of jacks.
- B. An Auxiliary mode activated when starting an auto retract sequence to fill airbags.
- C. Auxiliary is active when jacks are all retracted and park brake is disengaged to fill airbags.

## Miscellaneous

- A. The system will automatically shut down after 4 minutes of no operation.
- B. Auto leveling cycle cannot be started until all jacks are fully retracted. Make sure jacks are retracted before attempting to auto level (unit will perform full retract automatically if jacks are not down on the request of an auto cycle).
- C. System will refuse any operation when a low voltage condition is present.
- D. 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.
- E. Note the Wait LED shows the status of Air/Auxiliary features.

**NOTE:** The LEDs blink differently when in special controller modes (error, alarm, and configuration). Learning how to recognize these modes is important. Excess slope LED blinks whenever the Y axis (vehicle length) is over 5° from programmed level point.

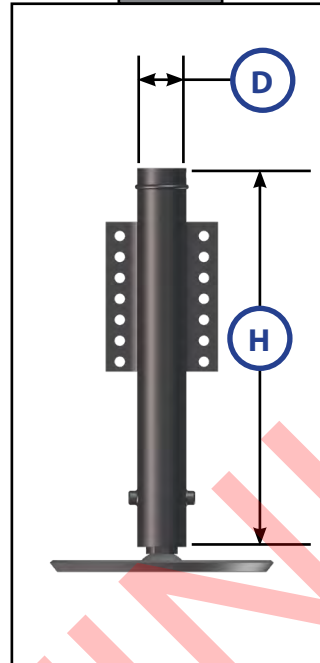
**Fig. 1**



**FIG. 1 - [115842](#)**

Capacity - 22,000 lb.  
Stroke - 16 in.  
H - 20 ½ in.  
D - 3 ¾ in.  
12" Footpad-standard

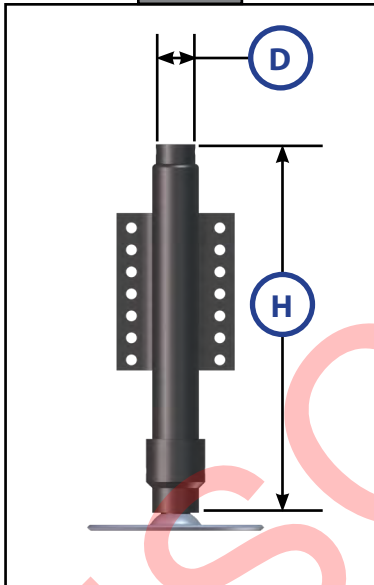
**Fig. 2**



**FIG. 2 - [115841](#)**

Capacity - 12,000 lb.  
Stroke - 15 in.  
H - 19 ½ in.  
D - 2 ¾ in.  
9" Footpad-standard  
12" Footpad-optional

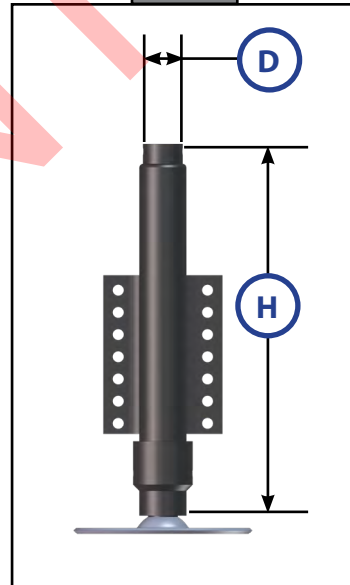
**Fig. 3**



**FIG. 3 - [113314](#)**

Capacity - 7,000 lb.  
Stroke - 13.75 in.  
H - 18 ¼ in.  
D - 2 ¾ in.  
A - 2 ½ in.  
9" Footpad-standard  
12" Footpad-optional

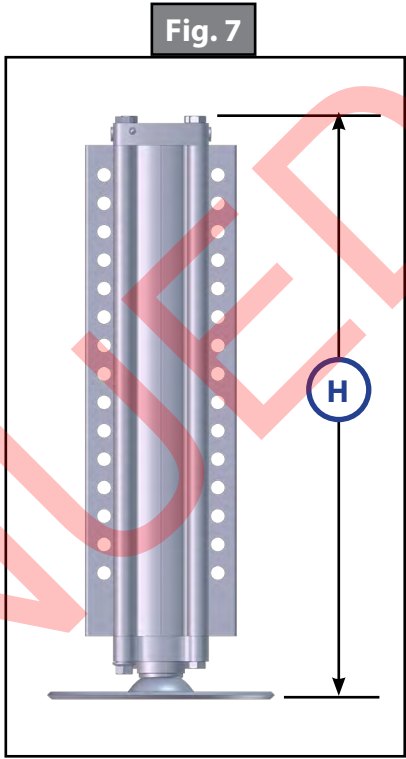
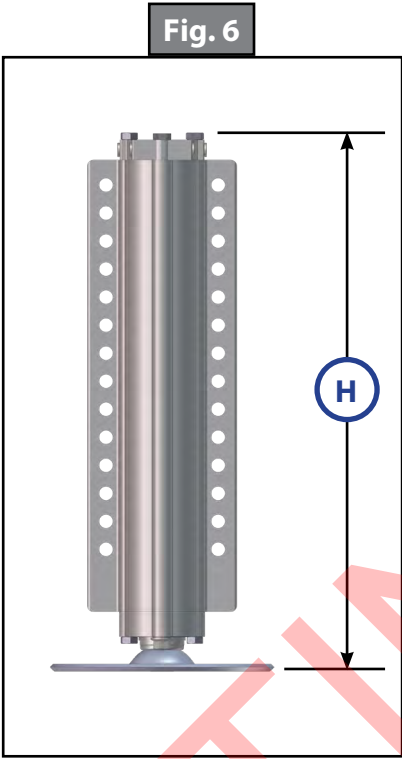
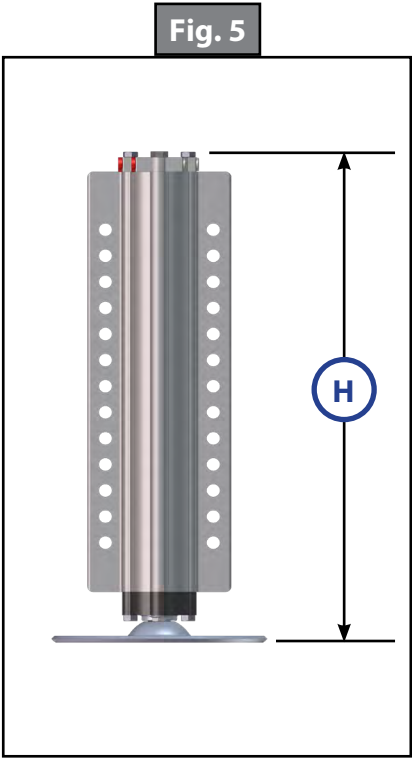
**Fig. 4**



**FIG. 4 - [117179](#)**

Capacity - 7,000 lb.  
Stroke - 13.75 in.  
H - 18 ¼ in.  
D - 2 ¾ in.  
A - 5 ¾ in.  
9" Footpad-standard  
12" Footpad-optional

**NOTE:** OEM to supply attachment brackets for leveling jacks.



**Fig. 5 - [433458](#)**

Capacity - 8,000 lb.  
Stroke - 15.00 in.  
Bore - 2.00 in.  
H - 21.375 in.  
Rod dia. - 1.50 in.  
9" Footpad-standard  
12" Footpad-option - 117238

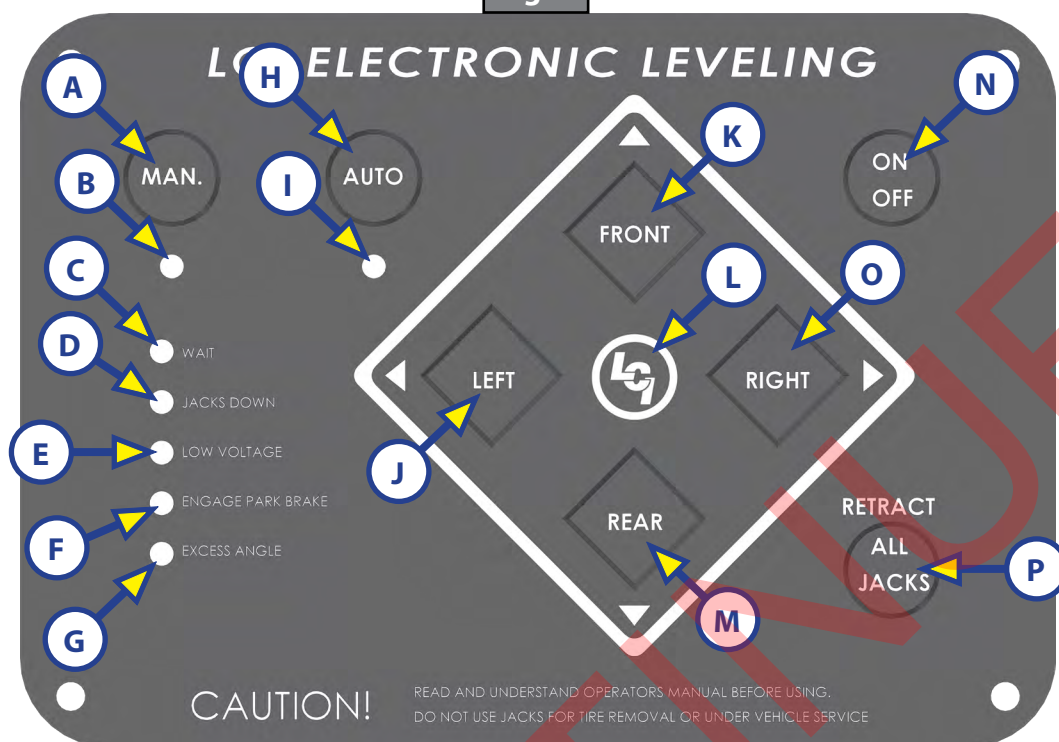
**Fig. 6 - [236560](#)**

Capacity - 14,000 lb.  
Stroke - 15.13 in.  
Bore - 2.50 in.  
H - 21.50 in.  
Rod dia. - 1.875 in.  
9" Footpad-standard  
12" Footpad-option - 117238

**Fig. 7 - [258550](#)**

Capacity - 20,000 lb.  
Stroke - 16.00 in.  
Bore - 3.00 in.  
H - 23.063 in.  
Rod dia. - 2.25 in.  
9" Footpad-standard  
12" Footpad-option - 117238

Fig. 8



| Callout | Description                                                                                                                          |
|---------|--------------------------------------------------------------------------------------------------------------------------------------|
| A       | Manual Operation - Places touch pad in manual operation mode.                                                                        |
| B       | Manual Operation LED - Indicates touch pad in manual operation mode.                                                                 |
| C       | Wait LED - Indicates to the operator to pause operation until the LED turns off.                                                     |
| D       | Jacks Down LED - Indicates jacks are not fully retracted.                                                                            |
| E       | Low Voltage LED - Indicates voltage has dropped below safe operable level. Solid LED indicates voltage is too low to operate system. |
| F       | Engage Park Brake LED - Flashes when park brake is disengaged; off when park brake has been engaged.                                 |
| G       | Excess Angle LED - Coach may not be able to level in current location and must be moved to a more level location.                    |
| H       | Automatic Operation - Places touch pad in automatic operation mode.                                                                  |
| I       | Automatic Operation LED - Indicates touch pad in automatic operation mode.                                                           |
| J       | Left Button - Controls operation of both left jacks.                                                                                 |
| K       | Front Button - Controls operation of both front jacks.                                                                               |
| L       | Coach Level LED - Indicates that the coach has been leveled.                                                                         |
| M       | Rear Button - Controls operation of both rear jacks.                                                                                 |
| N       | Power Button - Turns system on and off.                                                                                              |
| O       | Right Button - Controls operation of both right jacks.                                                                               |
| P       | Retract All Jacks - Retracts all jacks automatically.                                                                                |

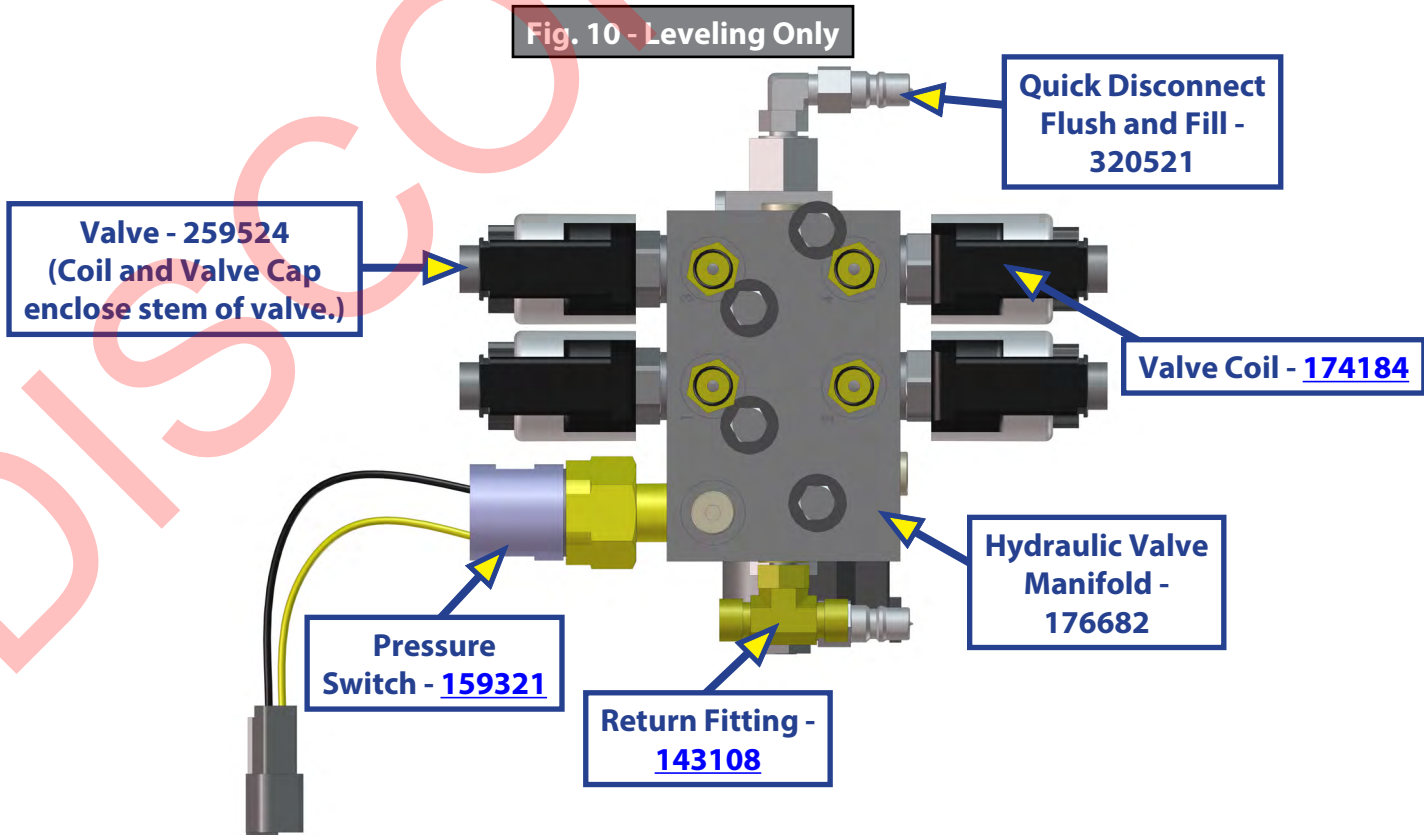
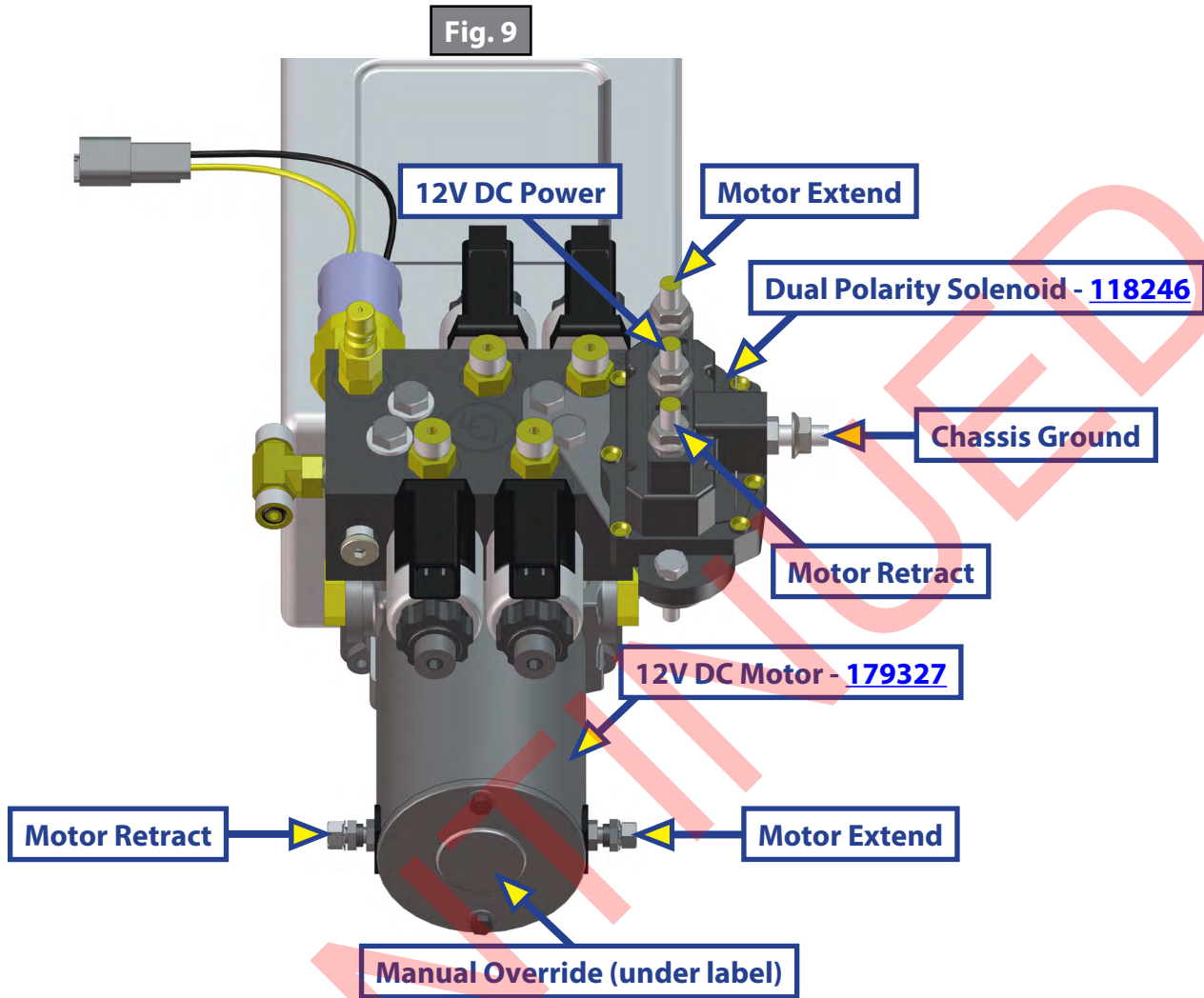
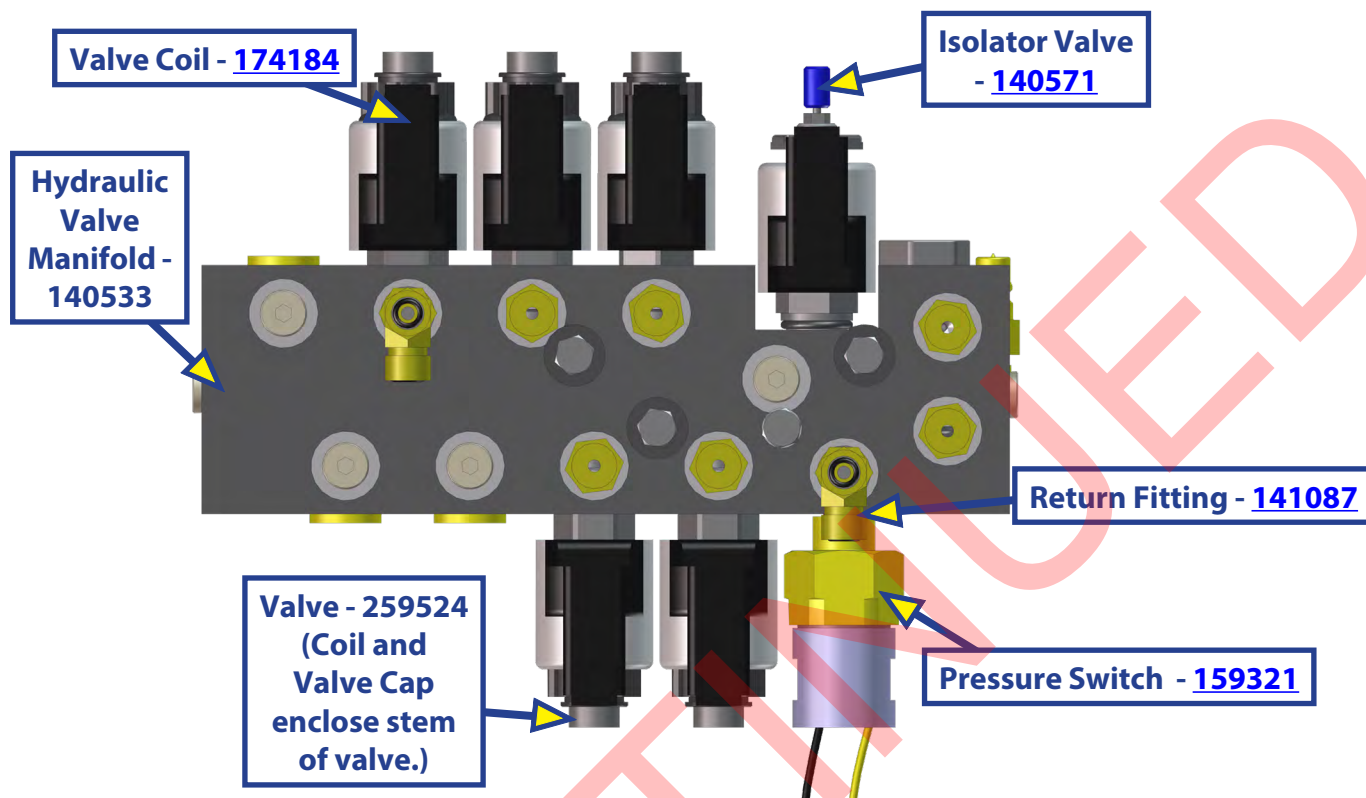


Fig. 11 - 4 Point Leveling +1 Slideout Manifold



## Prior to Operation

The LCI Motorized Leveling System shall 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 neutral or park position.
4. The ignition is in the run position, or engine is running.
5. Be sure all persons, pets and property are clear of the coach while Lippert Leveling System is in operation.

## Operation

### Selecting a Site

When the coach is parked on an excessive slope the leveling requirements may exceed the jack lift stroke capability. 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.

### Automatic Leveling Procedure

**NOTE:** Coach **MUST** be running and parking brake **MUST** be engaged for LCI Motorized Leveling System to operate.

**NOTE:** If any Warning Indicators are lit, see troubleshooting, page 18.

1. Push ON/OFF button on Touch pad. The system is now operational and the electronic level lights will become active.
2. Push the AUTO button to begin the automatic leveling cycle.

**NOTE:** After starting the automatic leveling cycle it is very important that you do not move around in the coach until the unit is level and the green LCI logo 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.

3. If further adjustments are necessary, simply push and hold the MAN button for approximately 5 seconds until the light under this button is illuminated. Push the appropriate leg button to override the system and level the coach to your liking.
4. Push ON/OFF button to de-energize the system.

### **WARNING**

**Never lift any of the wheels off the ground to level the coach! Lifting all wheels off the ground may result in death or serious personal injury.**

## Manual Leveling Procedure

**NOTE:** When leveling the coach, the coach should be leveled from FRONT TO REAR first (step 2-4). When the coach is level from FRONT TO REAR, then level the coach from LEFT TO RIGHT (step 6).

**NOTE:** Coach must be running for LCI Electronic Leveling System to operate.

1. Push ON/OFF button on touch pad. If ON/OFF light is not lit, see **PRIOR TO OPERATION** page 9.
2. Push and hold MAN button for 5 seconds.
3. Push FRONT button until jacks contact the ground.
4. Push REAR button until jacks contact the ground.
5. Push FRONT or REAR button; if bubble is towards front of coach push REAR button; if bubble is towards rear of coach, push FRONT button. Keep button depressed until bubble is centered in vial.
6. Push LEFT or RIGHT button; if bubble is towards left of coach, push RIGHT button; if bubble is towards right of coach push LEFT button. Keep button depressed until bubble is centered in vial.

**NOTE:** The right and left jacks are used to level the coach side to side. Pushing the LEFT button on the touch pad will extend both left jacks. Pushing the RIGHT button on the touch pad will extend both right jacks. Jacks always work in pairs, both front jacks together, both right side jacks, etc.

7. Repeat steps 2 through 6 if needed.
8. Turn power off to leveling system by pushing ON/OFF button.
9. Visually inspect all jacks to ensure all footpads are touching the ground. Should one of the rear jack footpads not be touching the ground, press the corresponding LEFT or RIGHT rear jack buttons to lower the corresponding jack to the ground.

### **WARNING**

**Never lift all the wheels off the ground to level the coach! Lifting all wheels off the ground may result in death or serious personal injury.**

## Jack Retract Procedures

1. Energize the system by pushing ON/OFF button on touch pad. The ON/OFF light will be lit.
2. Push the RETRACT ALL JACKS button. All the jacks will start to retract and return to the full retract position. When all jacks return to full retract position the JACKS DOWN light will go out.

**NOTE:** If the retracting process needs to be stopped, turn the system off and back on again by pushing the on/off pad twice. If the coach needs to be re-leveled, see page 10 for leveling procedures.

3. When the JACKS DOWN light goes out, push the ON/OFF button on the touch pad to de-energize the system. After a brief visual inspection around the coach to verify the jacks are fully retracted, the coach is ready to travel.

**NOTE:** When in the MANUAL mode, if the RETRACT button is pushed the jacks will only retract as long as the RETRACT button is depressed. In AUTOMATIC mode, the RETRACT button need only be pressed once and released for the jacks to fully retract.

## Programming and Calibration

### Level Zero Point Calibration

Before the auto leveling features are available, the Level Zero Point must be set. This is the point to which the system will return when an auto leveling cycle is initiated. To set the Zero Point (controller module must be fully secured in production intent location), first run a manual leveling sequence to get the vehicle to the desired level point. Then activate the Level Zero Point configuration mode. This mode is enabled by performing the following sequence.

1. Turn the Touch Pad OFF.
2. Turn the Touch Pad ON and perform the following.
  - A. Press the Front button 5 times.
  - B. Press the Rear button 5 times.

**NOTE:** At this point all LED outputs will blink. This indicates the system is in the IDLE mode ready to set Zero Point.

3. Press the Retract All button 3 times.

**NOTE:** All LEDs will go out except the WAIT light. The WAIT light will blink continuously for approximately 20 seconds while the Level Zero Point is being programmed into the controller.

**NOTE: For Diesel Units with Automatic Airbag Suspensions ONLY:** - Press the Retract All button 3 more times to program the auto dump/auto fill feature for the airbags.

4. The WAIT light will then go off and the LCI logo in the middle will illuminate, indicating a successful programming of the Zero Point configuration.

### Air and Auxiliary Feature Configuration

#### **For DIESEL UNITS with Airbag Suspensions ONLY:**

- Feature is entered ONLY *after* zero point calibration.
- The WAIT LED will blink for 20 seconds. System is now in Air/Auxiliary Feature Configuration mode.

#### **To enable Air Auxiliary features, perform the following:**

- Press the RETRACT ALL switch 3 times.
- User must do this within 20 seconds of entering this mode.

#### **To disable Air features, perform the following:**

- Do nothing.
- After 20 seconds, module will exit mode with features disabled.

## Maintenance

### 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](#).

### Preventative Maintenance Procedures

1. Each month, check that the fluid level is within ¼" 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 coach of the season and prior to storing the coach. 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 your coach is located in a salty environment, it is recommended to spray the rods every 4 to 6 weeks.

## Troubleshooting

The LCI Motorized Leveling System is a new feature that allows the owner more options and flexibility for quickly and effectively leveling the coach. It is a totally integrated system with your coach's chassis and electronics.

Every coach has its own personality and what may work to fix one coach may not work on another even if the symptoms appear to be the same.

When something restricts mechanized travel, system performances will be unpredictable. It is very important that leveling legs be free of contamination and allowed to travel freely the full distance. Dirt, sand, mud and other contaminants build up during travel and can be potentially damaging to the performance of the system.

When beginning to troubleshoot the system, make sure the battery is fully charged, there are no visible signs of external damage to the legs, motor or hoses and that the motor is wired properly and all connections are secure.

**If you have any problems or questions,  
consult your local authorized dealer or call Lippert at (574) 537-8900.**

### Automatic Safety Shutoff

If the touch pad is left on and inactive for four 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 must again be pushed.

## 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.

## User Alarm Mode

If the alarm system detects that the park 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 panel will signal this error to the user.

When in alarm mode, all LEDs will flash and the buzzer will beep. The Status LEDs will show the system status. The system performs an automatic retract. No other features are available in this mode.

## Error Mode

If any problem is detected with the jacks, the system will enter error mode. Error mode may be recognized by the blinking of LEFT, LEVEL and RIGHT LEDs.

The following errors are detected by this system:

- Jack over current/short circuit
- Jack under current/open circuit
- Jack extending too long (ground not detected after 2 min.)
- Jack retracting too long (fully retracted not detected after 2 min.)
- Out of stroke detection during auto cycle (if enabled)

The user must respond by pressing ON/OFF switch, which resets operation.

All normal features are disabled in Error mode.

If panel loses communication with the controller for more than 5 seconds, the panel will blink the JACKS DOWN, PARK BRAKE and ON/OFF (if included) LEDs.

## "Jacks Down" Alarm

The LCI Motorized Leveling System is designed to sound an alarm and illuminate the touch pad in the event of two (2) possible scenarios:

1. A "RETRACT" hose leaks.
2. The pressure holding the jacks in the retracted position falls to a approximately 1500 psi to sound the alarm.

If the alarm sounds and the touch pad illuminates and flashes while driving the vehicle:

1. Immediately find an area to safely pull the vehicle off of the roadway.
2. Set the PARKING BRAKE.
3. Inspect all jacks hoses and check valve for leaks.
4. If no leaks are observed:
  - A. Turn touch pad "ON."
  - B. Push "RETRACT ALL JACKS" button.
  - C. Wait until "JACKS DOWN" light and alarm are off.
  - D. Inspect jacks. If jacks are retracted and no leaks are observed, vehicle can be driven.

If system is leaking or alarm does not subside after applying the above procedure, disconnect wires from pressure switch and proceed immediately to a service center. For prolonged travel to the service center, be sure to stop and check the disposition of the leveling jacks periodically to make sure they are not extending.

## 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, activate system, 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 motor solenoid and the motor. Repair connections or replace motor solenoid as necessary. Recheck as in **Step 1**.
3. If **NO**, Inspect all connections between battery and motor solenoid. Inspect Manual-reset Circuit Breaker in battery feed line. Recheck as above in **Step 1**.

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.

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

## Low Voltage Signal

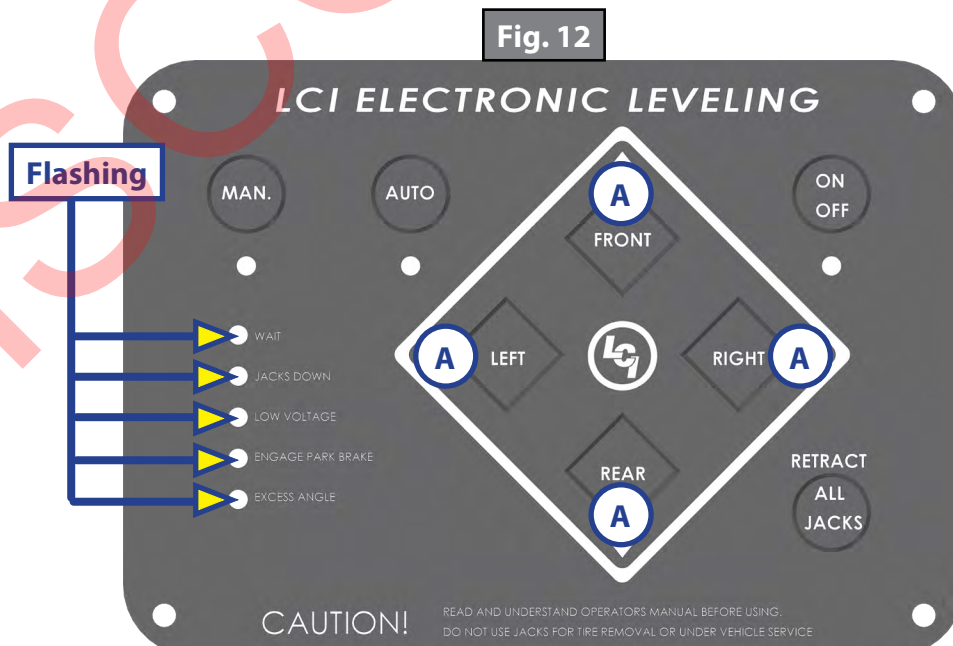
If LOW VOLTAGE light is on solid, it is an indication of a charging system problem. Turn ignition OFF and then back ON to reset system. If LOW VOLTAGE light persists, test battery under load at battery and at the motor solenoid on the pump unit. Check all power and ground connections at the battery, alternator and chassis.

## Latched Out Warning

LATCHED ERROR mode is "Wait", "Jacks Down", "Park Brake", "Excess Slope" and "Low Voltage" lights flashing.

1. Battery voltage below 10.0V DC.
2. Retract time over 67 seconds in auto retract.
3. This is the only LATCHED ERROR mode.
4. All revisions prior to "G" controllers treat this error as regular ERROR mode.

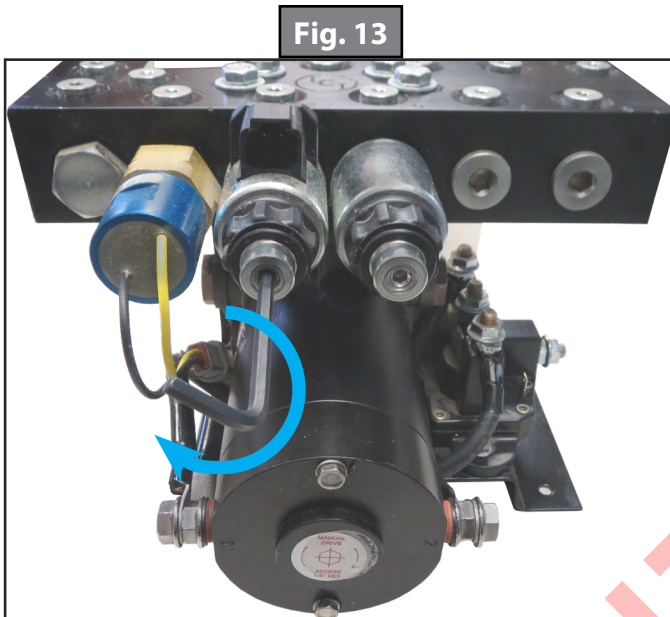
To RESET, push all 4 diamond-shaped jack buttons at the same time (Fig. 12A).



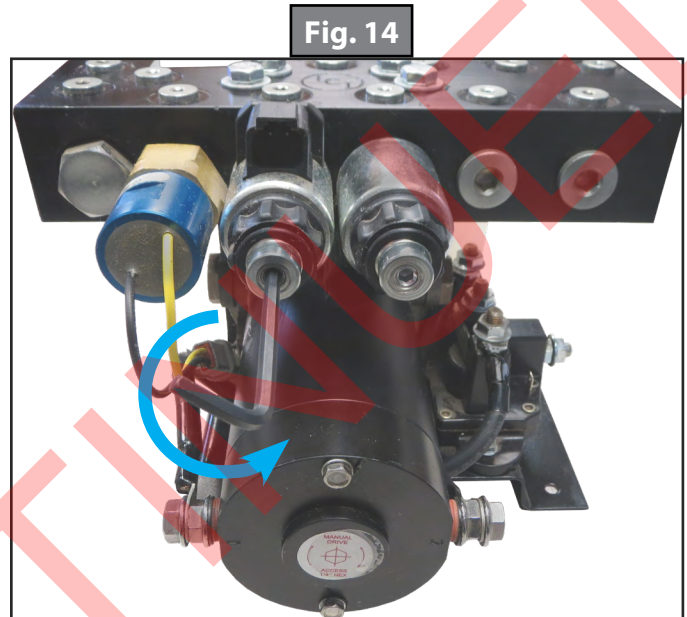
## Manual Override - Jacks

In the event that the jacks will not extend or retract, the valves can be manually overridden. By using a  $\frac{5}{32}$ " hex wrench (pre-2006 model year, see Figs. 15-18 below) turn the manual override clockwise on the valve (Fig. 13). The leveling jacks can then be extended or retracted. Remember to turn the manual override completely counterclockwise (Fig. 14), until it will no longer turn, to close the valve after the jacks have been completely extended or retracted.

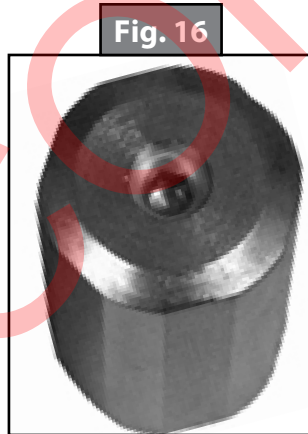
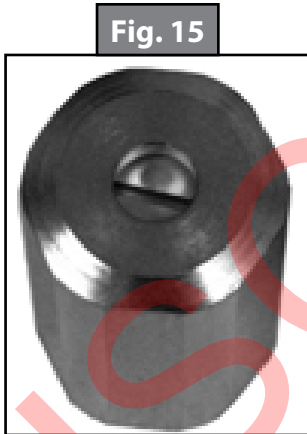
**NOTE:** Valve's Manual Override is slotted and also accepts a No. 2 standard screwdriver.



**Clockwise for manual override**



**Counterclockwise for normal operation**



Tools required:

**Fig. 15:** Hydra-Force - Standard Screw Driver

**Fig. 16:** Hydra-Force -  $\frac{1}{8}$ " Hex End Wrench

**Fig. 17:** Deltrol -  $\frac{1}{8}$ " Hex End Wrench

**Fig. 18:** Hydac -  $\frac{5}{32}$ " Hex End Wrench

## Manual Override - Power System

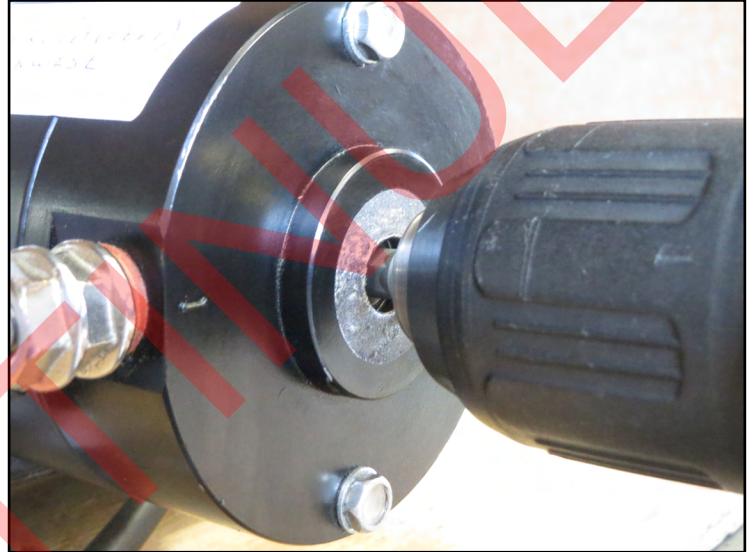
The LCI Motorized Leveling System can be run with auxiliary power devices like electric drills, ratchet wrenches or cordless screwdrivers. In the event of electrical or system failure, this manual method of extending and retracting the jacks can be used. A standard hand-held drill is all that is required.

1. Remove protective label (Fig. 19).
2. Insert hex bit into coupler found under protective label (Fig. 20).
3. Run drill forward or clockwise to extend jacks and in reverse or counterclockwise to retract jacks.

Fig. 19



Fig. 20



## Troubleshooting Chart

| What Is Happening?                                                                          | Why?                                                                 | What Should Be Done?                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System will not turn on and on/off indicator light does not illuminate.                     | Tripped circuit protection at battery.                               | Check circuit protection and reset if necessary.                                                                                                                                                  |
|                                                                                             | Controller connections may be unplugged.                             | Check to make sure all connections are plugged in at the controller.                                                                                                                              |
|                                                                                             | Coach ignition not in RUN position.                                  | Turn ignition to RUN position.                                                                                                                                                                    |
|                                                                                             | Parking brake not set.                                               | Set parking brake.                                                                                                                                                                                |
|                                                                                             | Controls have been on for more than four minutes and have timed out. | Turn ignition off and then back on.                                                                                                                                                               |
| Touch pad turns on, but turns off when leg button is pushed.                                | Low voltage on battery.                                              | Start coach to charge battery.                                                                                                                                                                    |
| Touch pad turns on, coach will not auto-level, jacks down light is on, jacks are retracted. | Low fluid level.                                                     | Check fluid level in reservoir. If fluid is low, add fluid to FILL TO HERE line on reservoir. If JACKS DOWN light remains on call Lippert Service.                                                |
|                                                                                             | Faulty power unit.                                                   | Replace power unit.                                                                                                                                                                               |
|                                                                                             | Controller connections may be unplugged.                             | Check to make sure all connections are plugged in at the controller.                                                                                                                              |
|                                                                                             | Disconnected or faulty pressure switch.                              | Check pressure switch harness connection or replace pressure switch.                                                                                                                              |
| Jacks will not extend to ground, pump is running.                                           | Little to no fluid in reservoir.                                     | Fill reservoir with ATF.                                                                                                                                                                          |
|                                                                                             | Leg valve is inoperative.                                            | Clean, repair or replace.                                                                                                                                                                         |
|                                                                                             | Electronic signal is lost between controller and leg valves.         | Trace wires for voltage drop or loss of signal. Repair or replace necessary wires or replace controller.                                                                                          |
| Any one or two jacks will not retract.                                                      | Hose damaged or unconnected.                                         | Replace with new hose or reconnect hose.                                                                                                                                                          |
|                                                                                             | Return valve inoperative.                                            | Replace inoperative return 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 controller and leg valve. Repair bad wiring or replace defective board or valve. |
| "Jacks Down" LED does not go out when all jacks are retracted.                              | Low fluid level.                                                     | Fill reservoir to proper level with ATF.                                                                                                                                                          |
|                                                                                             | Retract pressure switch inoperable.                                  | Check connection or replace.                                                                                                                                                                      |

| What Is Happening?                                                                            | Why?                                | What Should Be Done?                                                                                              |
|-----------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Alarm sounds and "Jacks Down" LED starts flashing while traveling, jacks are fully retracted. | Faulty check valve in power unit.   | Replace power unit.                                                                                               |
|                                                                                               | Faulty piston seal in jack.         | Replace jack.                                                                                                     |
|                                                                                               | Low fluid level.                    | Visually check for leaks.                                                                                         |
|                                                                                               |                                     | Fill reservoir to proper level with ATF.                                                                          |
| Jack bleeds down after being retracted.                                                       | Retract pressure switch inoperable. | Check connection or replace.                                                                                      |
|                                                                                               | Faulty check valve in power unit.   | Replace power unit.                                                                                               |
|                                                                                               | Faulty piston seal in jack.         | Replace jack.                                                                                                     |
|                                                                                               | Low fluid level.                    | Visually check for leaks.                                                                                         |
|                                                                                               |                                     | Fill reservoir to proper level with ATF.                                                                          |
| Touch pad powers up; "Low Voltage" LED flashes.                                               | Retract pressure switch inoperable. | Check connection or replace.                                                                                      |
|                                                                                               | Manual override valve open.         | Close override.                                                                                                   |
| "Low Voltage" LED is solid.                                                                   | Engine not running.                 | Start coach engine.                                                                                               |
| No Power to touch pad.                                                                        | Charging system fault.              | Turn key OFF then, back ON again to reset. Check power and ground connections on battery, alternator and chassis. |
|                                                                                               | Tripped circuit breaker.            | Reset circuit breaker.                                                                                            |
|                                                                                               | Ignition not on.                    | Turn ignition on.                                                                                                 |
|                                                                                               | Touch pad unplugged.                | Check touch pad connections.                                                                                      |



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