



by  Lippert Components®

**AUTOMATIC ELECTRO-
HYDRAULIC LEVELING
OWNER'S MANUAL
(82-L0130-00)**

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Introduction

The PowerGear® leveling system on your coach is designed and built to give you years of trouble-free leveling and stabilizing operation. The PowerGear system reflects state-of-the-art technology in both hydraulic and electric components. Please read and study this manual before operating the leveling system.

System Description

The PowerGear automatic electro-hydraulic leveling system consists of the following major components:

1. PowerGear supplies spring return jacks rated at a lifting capacity appropriate for your coach. Each jack has a large diameter shoe for maximum surface area on soft surfaces.
2. Each jack is powered from a central 12V DC motor/pump assembly which also includes the hydraulic oil reservoir tank, control valve manifold, and solenoid valves.
3. The system is controlled by the solid state touchpad located near the driver's seat and a controller mounted on the top of a storage bin centrally located in the coach.

Safety

WARNING

Do not use leveling jacks (or air suspension) to support the coach while under coach or changing tires. The hydraulic leveling system is designed as a leveling system only. Do not use as a jack or in conjunction with a jack. It is highly recommended that, should a tire change be required, a knowledgeable and trained professional perform it. Attempts to change tires while supporting the coach with the hydraulic system could result in damage to the coach and risk causing serious personal injury or death.

CAUTION

Check that potential jack contact locations are clear of obstructions or depressions before operation.

CAUTION

Keep people clear of coach prior to turning the leveling system on and while leveling system is in use.

CAUTION

Never expose hands or other parts of the body near hydraulic leaks. High pressure oil leaks may cut and penetrate the skin causing serious injury.

CAUTION

Park coach on a reasonably solid surface or jacks may sink into ground. On extremely soft surfaces, use load distribution pads under each jack.

CAUTION

Never lift the wheels off the ground to level the coach. Doing so may create an unstable condition.

Operation

Before Operating

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 is in park or neutral for a diesel coach.
4. The coach engine is running.

Selecting A Site

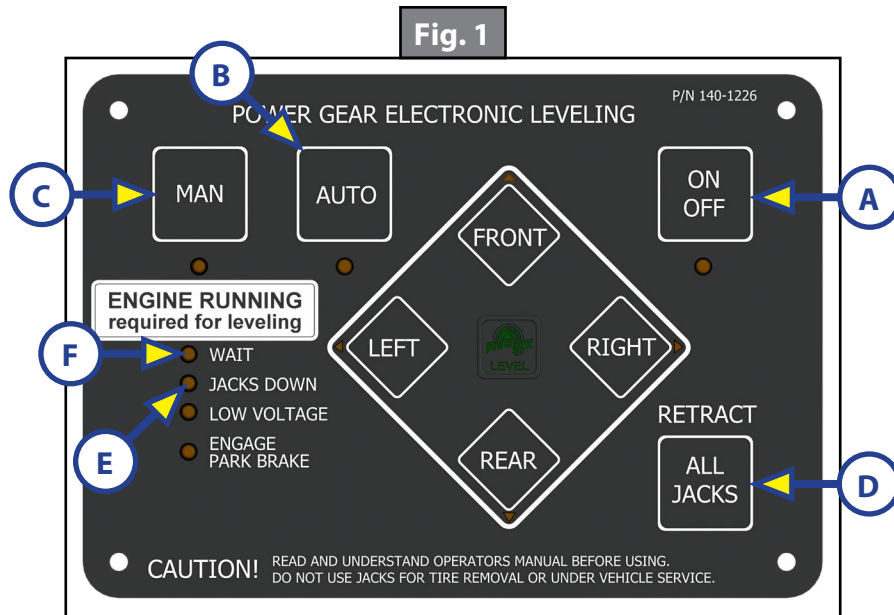
When the coach is parked on an excessive slope, the leveling requirements may exceed the jack lift stroke capability. When this occurs, the four jack buttons' orange LEDs and the green LEVEL LED—located in the center of the jack buttons—will blink together. See Figure 1. The coach must be moved to a more level surface before the leveling jacks are deployed. However, if the green Level LED in the center is on and/or blinking by itself, it means the coach is already level. If desired, jacks can be operated anyway to act as stabilizers.

Automatic Safety Shutoff Feature

If the touchpad 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. The ON/OFF button (Fig. 1A) must be pressed again.

Driveaway Protection System

If the coach engine is running, the jacks are down, and the operator takes the transmission out of neutral or park or releases the parking brake, all of the LEDs will flash and the alarm beeper will activate. The system will then automatically retract all jacks until they are fully retracted. During this time, the touchpad cannot be turned off.



Leveling Procedure

1. Press the ON/OFF button (Fig. 1A) on the touchpad. The system is now operational and some of the electronic level LEDs will turn on and/or flash. If ON/OFF light is not on, see Before Operating section.
2. Press the AUTO button (Fig. 1B) to begin the automatic leveling cycle.
3. If further adjustments are necessary, simply press and hold the MANUAL button (Fig. 1C) for approximately five seconds until its LED illuminates. Press the appropriate jack button (LEFT, RIGHT, FRONT, REAR) to override the system and level the coach.

NOTE: When in manual mode, if the RETRACT ALL JACKS button (Fig. 1D) is pressed the jacks will only continue to retract while the button is pressed and held. Release the button to stop retraction.

NOTE: When the WAIT LED (Fig. 1E) is flashing by itself, it means the control is busy and the jacks cannot be operated. After 5-30 seconds, the WAIT LED will turn off again, and normal operation can resume.

4. Press the ON/OFF button to de-energize the system.

Retracting Jacks

1. Power on the system by pressing the ON/OFF button on the touchpad. The ON/OFF and JACKS DOWN light (Fig. 1F) will turn on.
2. Press and release the RETRACT ALL JACKS button. All jacks will start to automatically retract to their fully retracted position. As the jacks approach the fully retracted position, the WAIT light will flash for about 30 seconds. This is to ensure that the jacks retract all the way. During this 30 second wait period, the touchpad cannot be turned off. When all jacks are fully retracted, the JACKS DOWN light will turn off.
3. When the JACKS DOWN light turns off, press the ON/OFF button on the touchpad to power off the system.
4. Perform a visual check to make sure all jacks are fully retracted before starting to travel. If all jacks did not fully retract, repeat steps 1-3.

Maintenance

1. Check 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 5 years.

NOTE: Make sure that the hydraulic reservoir is properly filled. An inaccurately filled reservoir can lead to the float switch sending a false trigger to the emergency retract, due to the system not recognizing that the jacks are already retracted.

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

NOTE: When checking the hydraulic fluid, fill to the desired level indicated by the sticker on the system.

2. Inspect and clean all power unit electrical connections every 12 months. If corrosion is evident, spray power unit electrical connections with electrical contact cleaner.
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 coach is located in a salty environment, it is recommended to spray the rods every 4 to 6 weeks.

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 https://www.lci1.com/assets/content/support/technical-information-sheets/TI_188_Hydraulic_Operation_Fluid_Recommendation.pdf

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.

Troubleshooting

What Is Happening?	Why?	What Should Be Done?
Orange jack button LEDs and green LEVEL LED are blinking together.	Coach is on an excessive slope that is beyond the jacks' leveling capability.	Coach should be moved to a more level site.
Green LEVEL LED is on or blinking by itself.	Coach is already on level ground.	No action necessary.
Touchpad turns off automatically.	Touchpad has been left inactive for four minutes and has been turned off automatically.	Reset the system by turning off the coach ignition, turning it back on, and then pressing the ON/OFF button on the touchpad.



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