



Electric Jack Controller Install & Calibration Rev. 0K

© Power Gear 01/08 #3010000914 Rev. 0D

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Before you begin this procedure, please read and understand these instructions.



Engine must be running while operating the jacks. Turning off ignition or the engine during the leveling process can result in extremely erratic behavior of the jacks causing potential chassis or structural damage.



Electric Jack Installation/Calibration Control # 140-1224 Rev 0K

Introduction

To complete the steps outlined in this procedure you will need the following:

1. This tip sheet.
2. Electric jack operations manual #82-L0368 available on our website.
3. A carpenter's or torpedo level for manually setting the level of the coach.

Be sure that control is mounted securely and that the directional arrow is pointing towards the front of the vehicle. Controls should be mounted upside down (usually from the ceiling of a storage compartment). If you are unsure of the control box mounting location, contact the coach manufacturer for specific control placement details.

Installation

Note: If you are installing a new control, then please read this first section to understand how to take the control out of installation mode. If you are recalibrating an existing control, you may proceed to Level Zero Point Configuration Mode on page 3.

Installation of new control:

1. Mark all existing harness connections at the leveling control mounting location.
2. Unplug all harness connections from the existing control.
3. Install the new 140-1224 control in the same location. If the control is being replaced under warranty, please repackage the old control in the new control package for return to Power Gear.
4. Reconnect all of the previously marked harnesses into the new control. Verify that all harnesses are connected into the proper location on the control.
5. You are now ready to validate installation of the control and to reset the level zero point.

Note: Important steps in the procedure are bolded and marked with "VERIFY". It is critical that these steps take place.

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Installation Verification

Verifying installation of Electric Jack system control:

1. VERIFY controller is in installation mode:

- Insure park brake is engaged and transmission is in park (for gas coaches) or neutral (for diesel coaches).
- Engine must be running.
- Control pad should illuminate for 2 seconds.
- **VERIFY that the control pad is flashing the following LED's:**
 - a. MANUAL
 - b. AUTO
 - c. LEFT, FRONT, RIGHT, AND REAR level indicator lights
- Press the ON button. The ON/OFF LED should illuminate. Other LED's continue to flash as indicated above.

2. VERIFY left-front (LF) jack wiring:

- **VERIFY: check that the LF jack has room to safely extend.**
- Extend the LF jack by holding down the MAN, AUTO, and RETRACT ALL JACKS until you hear an audible beep sound, then hold down the AUTO, LEFT and FRONT buttons (the AUTO, LEFT and FRONT LED's will flash rapidly during this procedure).
- **VERIFY: verify that the LF jack ONLY is extending.**
- Continue to extend the jack until it is at least 2 inches down. This puts the jack in the proper state for later operation.
- FAILURE: In case of failure, check the connection at the control box for the two-way LF jack harness.

3. VERIFY right-front (RF) jack wiring:

- **VERIFY: check that the RF jack has room to safely extend.**
- Extend the RF jack by holding down the MAN, AUTO, and RETRACT ALL JACKS until you hear an audible beep sound, then hold down the AUTO, RIGHT and FRONT buttons (the AUTO, RIGHT and FRONT LED's will flash rapidly during this procedure).
- **VERIFY: verify that the RF jack ONLY is extending.**
- Continue to extend the jack until it is at least 2 inches lower than the LF jack. This puts the jack in the proper state for later operation.
- FAILURE: In case of failure, check the connection at the control box for the two-way RF jack harness.

4. VERIFY left-rear (LR) jack wiring:

- **VERIFY: check that the LR jack has room to safely extend.**
- Extend the LR jack by holding down the MAN, AUTO, and RETRACT ALL JACKS until you hear an audible beep sound, then hold down the AUTO, LEFT and REAR buttons (the AUTO, LEFT and REAR LED's will flash rapidly during this procedure).
- **VERIFY: verify that the LR jack ONLY is extending.**
- Continue to extend the jack until it is at least 2 inches lower than the RF jack. This puts the jack in the proper state for later operation.
- FAILURE: In case of failure, check the connection at the control box for the two-way LR jack harness.

If you have problems or questions, consult your local authorized dealer or call LCI® at 574-537-8900



Be sure that control is mounted securely and that the directional arrow is pointing towards the front of the vehicle. Controls should be mounted upside down (usually from the ceiling of a storage compartment). If you are unsure of the control box mounting location, contact the coach manufacturer for specific control placement details.

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5. Verify right-rear (RR) jack wiring:

- **VERIFY: check that the RR jack has room to safely extend.**
- Extend the RR jack by holding down the MAN, AUTO, and RETRACT ALL JACKS until you hear an audible beep sound, then hold down the AUTO, RIGHT and REAR buttons (the AUTO, RIGHT and REAR LED's will flash rapidly during this procedure).
- **VERIFY: verify that the RR jack ONLY is extending.**
- Continue to extend the jack until it is at least 2 inches lower than the LR jack. This puts the jack in the proper state for later operation.
- **FAILURE:** In case of failure, check the connection at the control box for the two-way RR jack harness.

6. Take system out of Installation Mode:

- **VERIFY that the jacks are in the proper state for later tests. No two jacks should be at the same height – they should appear staggered.**
- Reset the system by pressing and holding the ON/OFF button for 3 seconds. The touch pad will beep and all LED's will flash.
- **VERIFY: The following LED's are on solid: ON/OFF and JACKS DOWN.**

7. Verify Jack Leg Sensor Wiring:

- Press the RETRACT ALL JACKS button. All 4 jacks should begin retracting.
- **VERIFY that each jack is retracting and stops at the proper time. Since the jacks are staggered, no two jacks should stop at the same time. Instead, each jack will stop in the following sequence: LF, RF, LR, and RR. If the jacks do not stop exactly in this sequence, this is an installation failure.**
- If the installation process is failed, the system will enter ERROR MODE. The MAN, AUTO, and at two Jack LED's will be illuminated. For ERROR MODE operation see Operations Manual, page 4.
- **FAILURE:** In case of failure, check the connection on the 6-way sensor harness at the control and the four sensor connectors for proper orientation.



When the leveling control is put into Manual Mode, the control will extend each jack until coach movement is sensed by the control. Once this is complete, the user then has manual control over the leveling system.

Air Feature Configuration Mode is for OEM's who have chosen the control as the means for dumping air from the air suspension before leveling begins. IF there is a harness plugged into the 4 pin Auxiliary Harness Connector located on the control box, then you should enable the Air Features. The control will then send signal to the air suspension to fill when jack retraction is in progress.



Setting Zero Level Point

Before auto leveling features are available, the vehicle level zero point must be set. This is the point to which the system will return when Auto Level Mode is activated.

To set the zero point (controller module must be fully secured in production intent location), first use Manual Level Mode and a carpenter's or torpedo level to get the vehicle at the desired level point. Then activate the Level Zero Point Configuration Mode. This mode is enabled by performing the following sequence:

1. Turn the panel off
2. Within 20 seconds, perform the following:
 - Press the FRONT button 5 times.
 - Press the REAR button 5 times.
3. At this point all LED outputs will flash, and the alarm will be off. You are now in Level Zero Point Configuration Mode.
4. Once in Level Zero Point Configuration Mode, hit the RETRACT ALL button 3 times to set the zero point. Verify that all LED's on the touch pad are off, except the ON/OFF LED which should be flashing.
5. Turn the touch pad off, and then on again. Press the RETRACT ALL button to retract all jacks.
6. Press the AUTO button to automatically level the coach. Verify that:
 - Jacks are dropped to the ground
 - Selected jacks are then extended to level the coach.
 - When auto level is complete, the coach has returned to the programmed level zero point. The green Power Gear LED in the center of the leveling buttons should be illuminated.
 - If the system does not level the coach, but instead all lights on the touch pad illuminate, this means that the leveling zero point was not set and you will need to repeat the calibration sequence.
7. Turn the touch pad off, and then on again. Press the RETRACT ALL button to retract all jacks.
8. Set up of the control is now complete.

Air Feature Configuration Mode:

This mode is indicated by **only** the ON/OFF LED flashing. The control can be put into this mode by the following method:

1. Turn the panel off.
2. Within 20 seconds perform the following:
 - Press the FRONT button 10 times.
 - Press the REAR button 10 times.

To enable Air Features, perform the following:

1. Press the LEFT button 3 times.
2. The WAIT LED will then blink for 2-3 seconds, confirming that air Feature is enabled.
3. The system will then return to Off Mode.

To disable Air Features, perform the following:

1. Press the RIGHT button 3 times.
2. No feedback is given to confirm that Air Feature is disabled.
3. The system will immediately return to Off Mode.



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