



GROUND CONTROL 3.0
OWNER'S MANUAL

L I P P E R T
C O M P O N E N T S™

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WARNING

Failure to act in accordance with the following may result in serious personal injury or death. The use of the Ground Control 3.0 leveling system to support the unit 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 coach such as changing tires or servicing the leveling system. Any attempts to change tires or perform other service while unit is supported by the Ground Control 3.0 leveling system could result in damage to the 5th wheel and/or cause serious injury or death.

WARNING

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. People and pets should be clear of coach while operating leveling system. 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.

Operation

Basic Jack Operation

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

Landing gear jacks can be operated any time the system is "ON". By pushing the "FRONT" button, both front or landing gear jacks can be extended. By pushing either the "LEFT" or "RIGHT" button, while simultaneously pressing the "FRONT" 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, while simultaneously pressing the "FRONT" 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 while simultaneously pressing the rear button 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 unit.

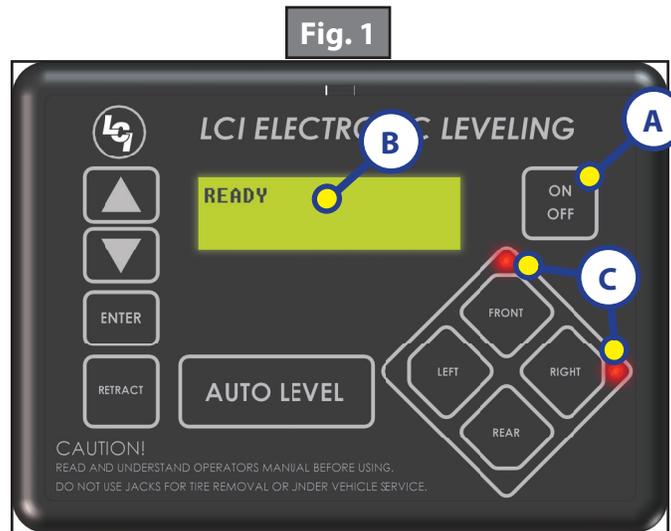
Prior To Operation

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 3.0 Leveling System 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 4-5 inches.

Dropping Off the Unit

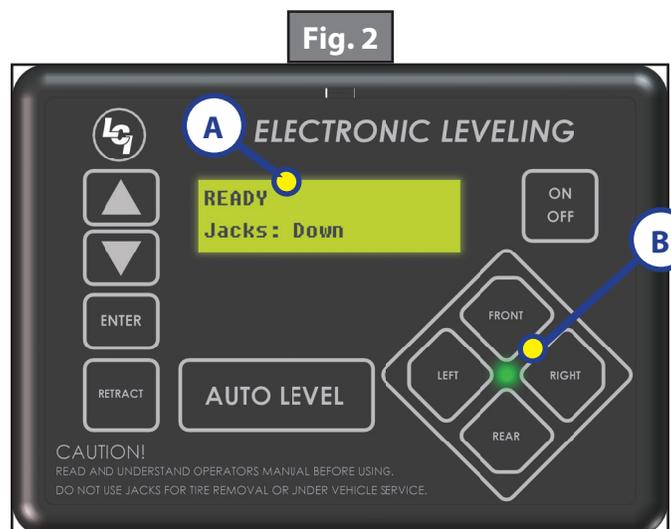
1. Release the inner legs of both landing gear jacks by pulling on the quick release pins and extending the inner leg 4-5 inches.
2. Push touch panel ON/OFF (Fig. 1A) to turn system on. LCD Screen will light up and displays "READY" (Fig. 1B).



3. Push the DOWN ARROW to scroll to "DROP FRONT JACKS" option on LCD screen.

NOTE: Red arrow lights (Fig. 1C) may come on, indicating the current disposition of the unit. In this case the FRONT and RIGHT sides of the unit are low.

4. Push ENTER. Both front landing gear jacks will go to ground and stop.
5. Push the FRONT button extending the front landing gear to a sufficient height, which raises the front of the unit off of the tow vehicle's 5th wheel hitch plate.
6. Pull tow vehicle away and park at a safe distance.
7. Push AUTO LEVEL. The unit will commence to auto level by setting the landing gear jacks close to level. Rear-most jacks will extend to ground, followed by a second ground verification.
8. When auto level is complete, LCD indicates "READY, Jacks: Down" (Fig. 2A) and the green light in the middle of the jack buttons will light (Fig. 2B).



Connecting To A Tow Vehicle

1. Press the ON/OFF button to activate the system.
2. Press the LEFT and RIGHT buttons at the same time.
3. The rear leveling jacks will fully retract and then the front landing gears will extend to raise the unit back to the memorized hitch height.

NOTE: The hitch recognition feature will only work if the auto level process was started with the unit in an above level condition.

4. Ensure that the landing gears are fully retracted.

NOTE: Each time the landing gears are completely retracted, the memorized hitch height will be reset.

Zero Point Calibration

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 side to side and front to back.
2. Once the unit is level, turn off the touch pad.
3. With the touch pad off, press and release the FRONT button ten (10) times and then press and release the REAR button ten (10) times. This will put the system in a zero calibrated state.
4. Press the ENTER button.
5. The system will set this point as its level state.

Troubleshooting

Error Display In LCD

1. If an error occurs before or during operation, the error will be displayed in the LCD and a buzzer will sound.
2. The errors that will be displayed are:
 - A. "Excess angle" - Relocate the unit.
 - B. "Bad calibration" - Bad zero point.
 - C. "Feature disabled" - This will happen only during Hitch Recognition. This indicates that the landing gears were not fully retracted prior to starting the unhitch process.
 - D. "Low voltage"
 - E. "Out of stroke" - Relocate the unit.
 - F. "External sensor" - Bad connection to rear remote sensor.
 - G. "Jack time out"
 - H. "Auto level failure" - Retry.
 - I. "Not configured" - Unit was not zeroed properly.
3. To clear an error, make sure that the jacks have all extended at least six (6) inches, then press and hold the RETRACT button; all jacks will retract and clear error.
4. Special JACK codes
 - A. LF JACK
 - B. RF JACK
 - C. LR JACK
 - D. RR JACK
 - I. If any of these error codes appear, the system does have manual control over the jacks to prevent being stuck.
 - II. It is important that once the error code has been resolved, the user of the unit must manually retract all jacks completely before exiting the error code. If this step is not completed, the LCD will prompt the user to complete this step as follows:
 - a. "ERROR"
 - b. "LR JACK"
 - c. "MANUALLY RETRACT"
 - d. "ALL JACKS"
 - e. "PRESS ENTER"

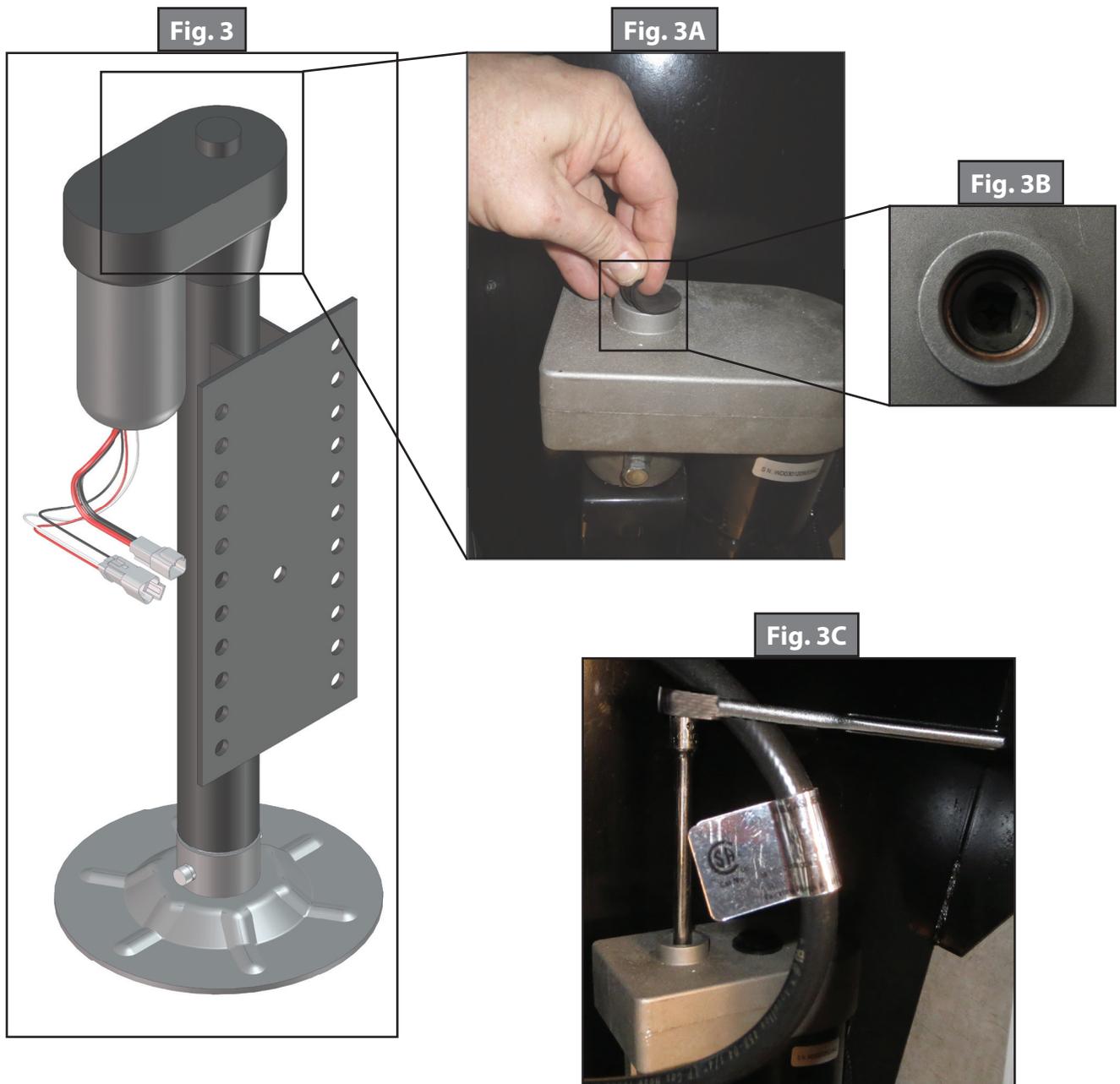
Manual Override Procedure - Top of Jack Motor

NOTE: Use of a 12V-18V cordless screw gun or pneumatic screw gun is acceptable to manually override the jacks. Do not use an impact screw gun to perform the override procedure, as this may damage the motor.

If manual override is necessary on any jack in the system, there are two options. The following process will describe how to use the top override. See Page 8 for the bottom override.

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

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



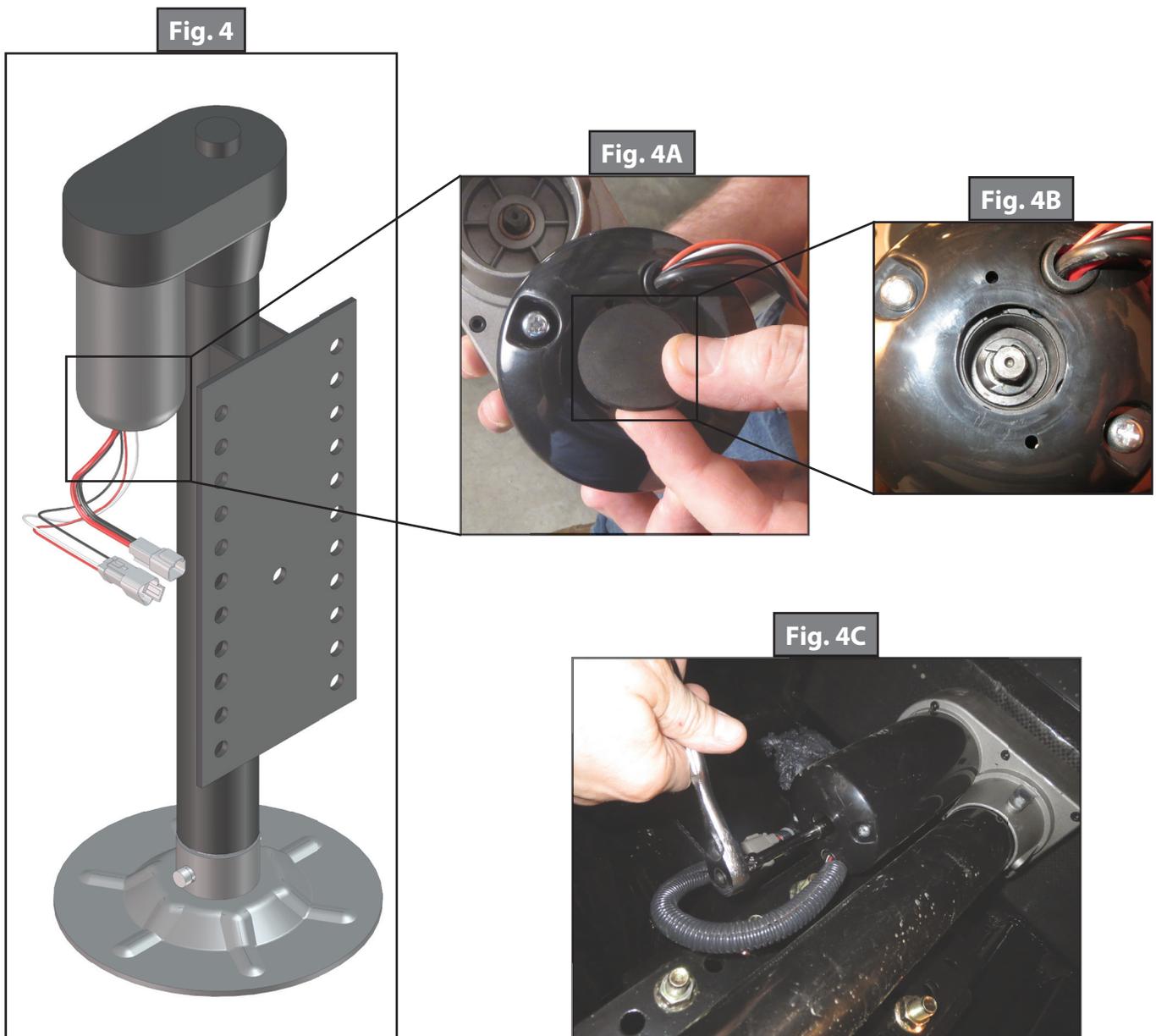
Manual Override Procedure - Bottom of Jack Motor

NOTE: Use of a 12V-18V cordless screw gun or pneumatic screw gun is acceptable to manually override the jacks. Do not use an impact screw gun to perform the override procedure, as this may damage the motor.

If manual override is necessary on any jack in the system, there are two options. The following process will describe how to use the bottom override. See Page 7 for the top override.

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

1. Find the port on the bottom of the leveling jack motor (Fig. 4).
2. Remove the rubber plug (Fig. 4A).
3. Place the 5/16" socket onto the override (Fig. 4B).
4. Turn override until the leg extends or retracts to desired position (Fig. 4C).



Preventive Maintenance Procedures

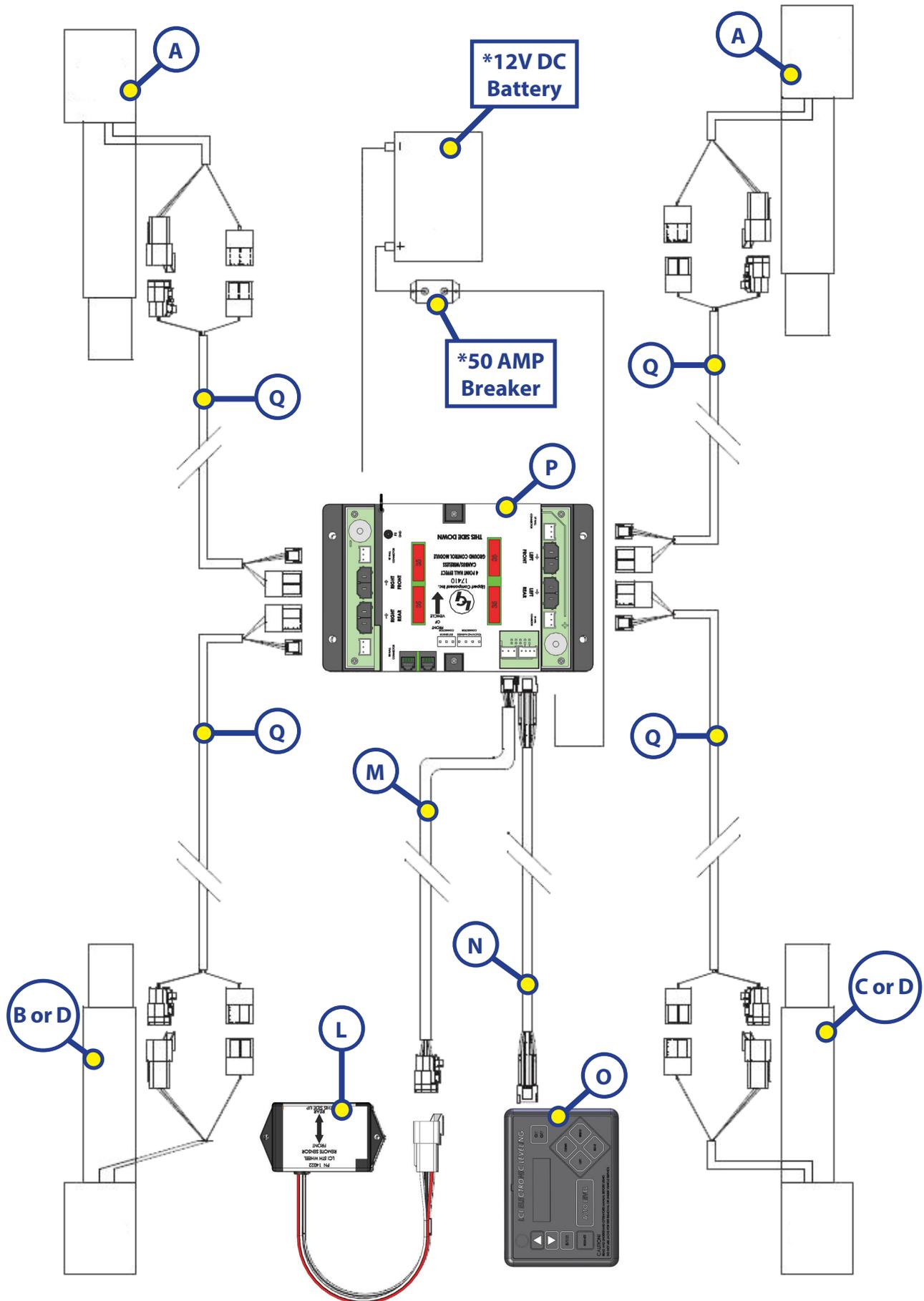
1. Remove dirt and road debris from jacks and stabilizer struts (if equipped) as needed.
2. If jacks are down for extended periods, it is recommended to spray exposed leveling jack tubes with a spray lubricant every 3 months for protection. If the coach is located in a salty environment, it is recommended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



**Make sure the coach is supported at both the front and rear with jack stands before working underneath.
Failure to do so may result in death or personal injury.**

Wiring Diagram

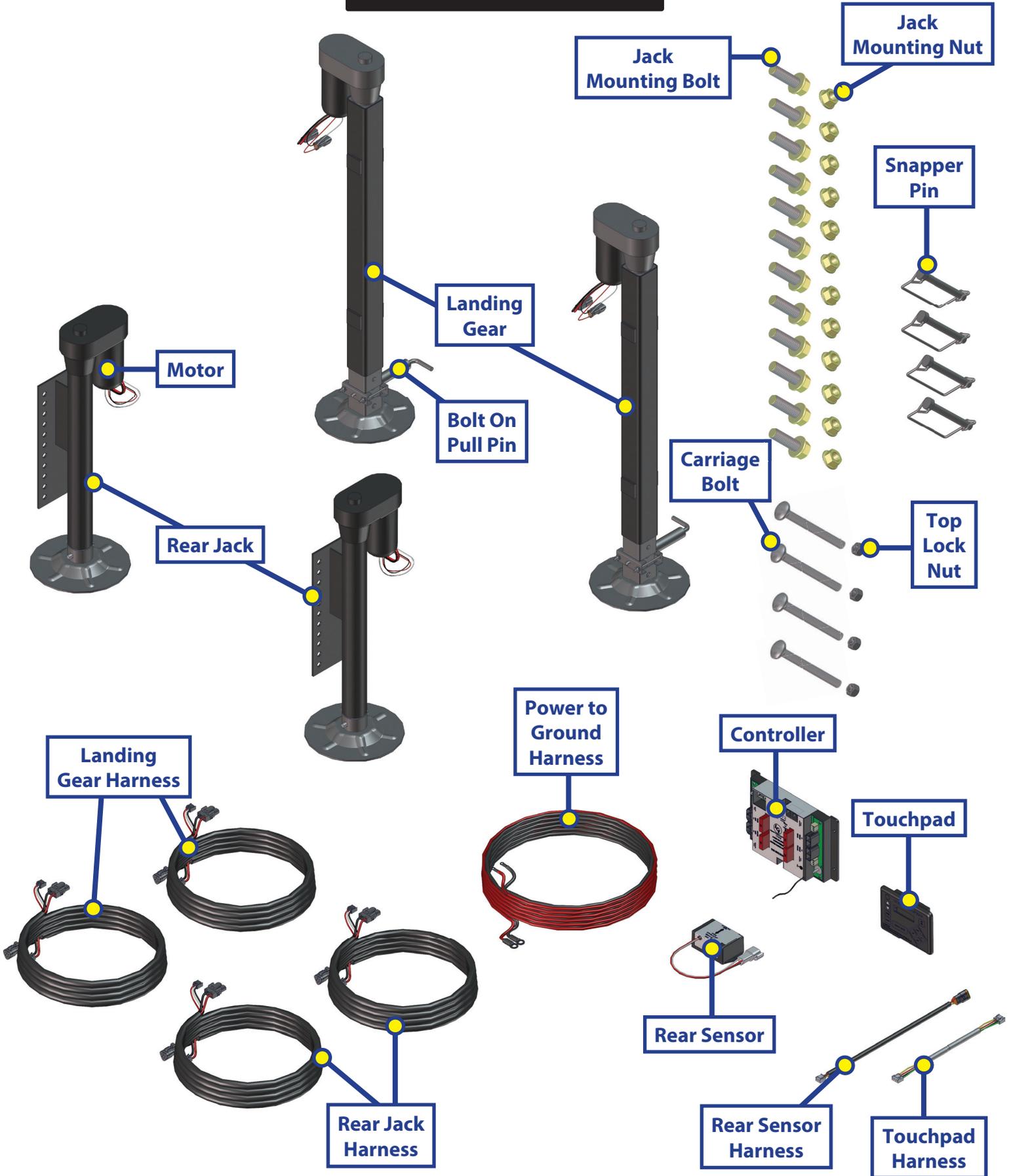
NOTE: For callouts refer to the components list beginning on Page 12.



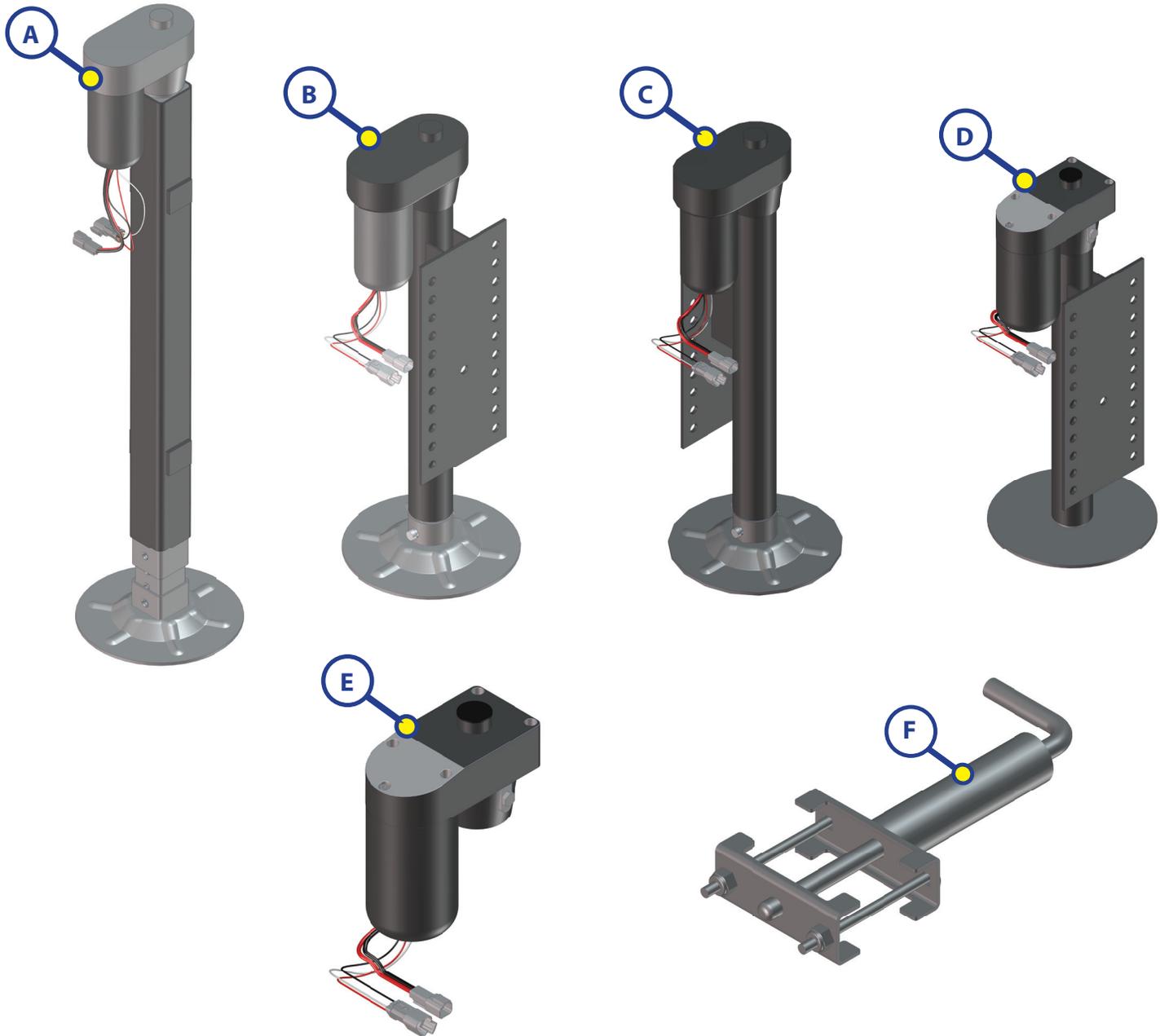


GROUND CONTROL 3.0 ASSEMBLY

LEVELING AND STABILIZATION



LEVELING AND STABILIZATION



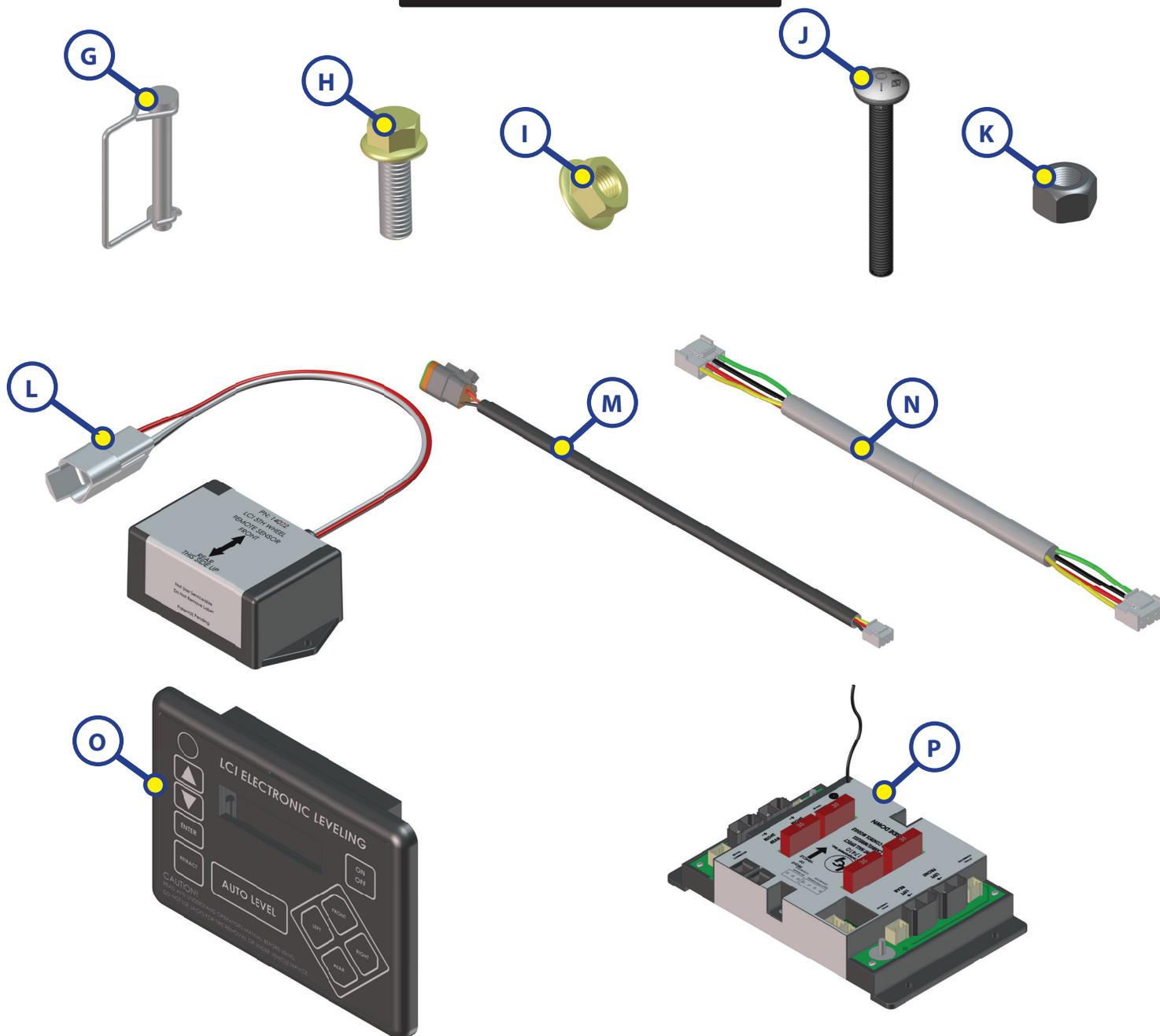
Callout	Part #	Description
A	305340	Hall Effect Landing Gear; Front Stroke 19.8125"
B	305339	Hall Effect Jack; Rear Left 12.5" Stroke
C	344792	Hall Effect Jack; Rear Right 12.5" Stroke
D	342610	Hall Effect Jack; Rear Short 10.5" Stroke
E	343758	Hall Effect Jack Motor
F	119113	Bolt On Pull Pin



LIPPERT
COMPONENTS

GROUND CONTROL 3.0 COMPONENT LIST

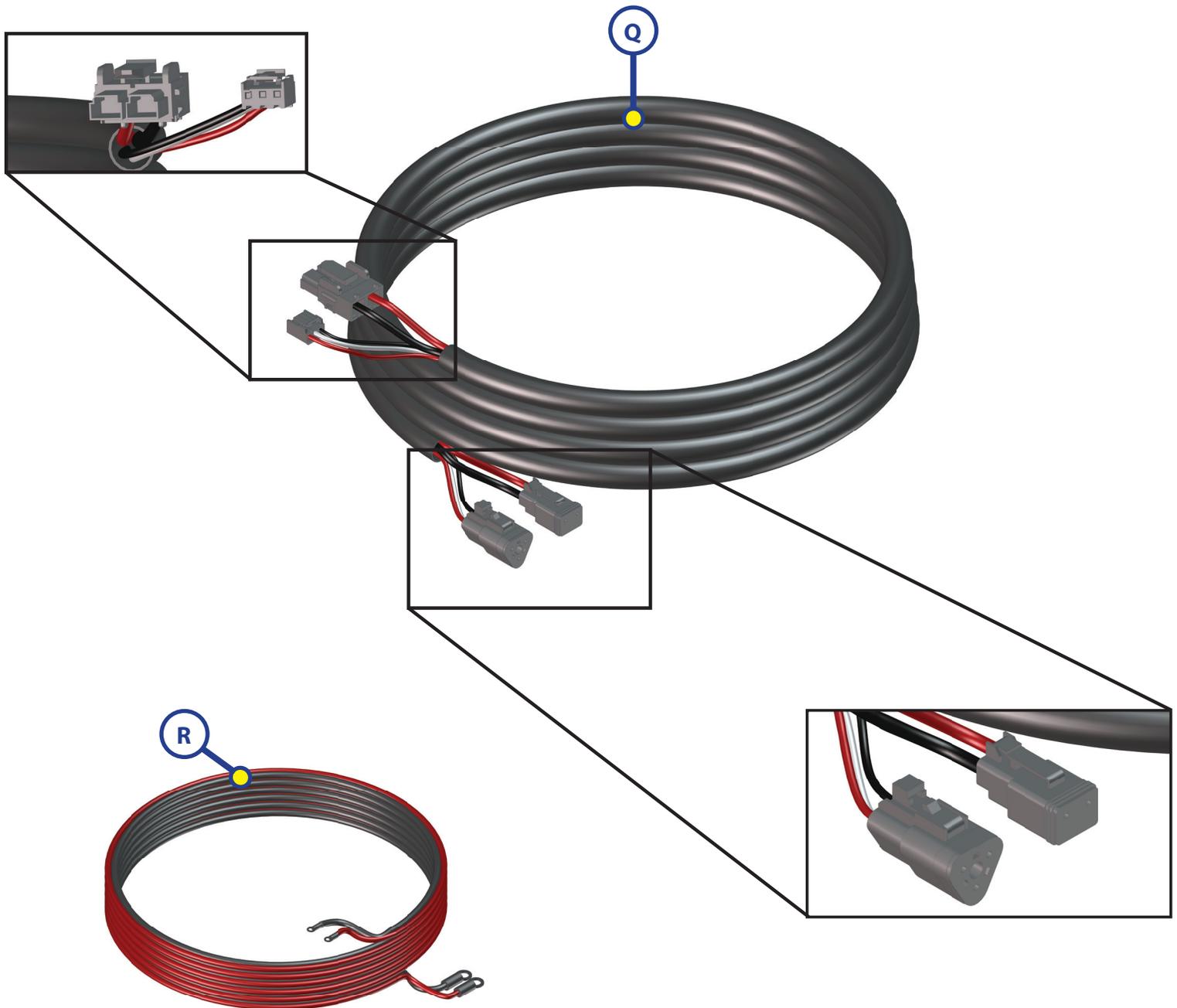
LEVELING AND STABILIZATION



Callout	Part #	Description
G	225598	Snapper Pin; 3/8 x 3"
H	118076	Jack Mounting Bolt; 1/2" - 20 x 1 1/2" Flange
I	178210	Jack Mounting Nut; 1/2" - 20 UNF Serrated Flange
J	125878	Carriage Bolt
K	119073	Top Lock Nut
L	232201	Rear Sensor
M	243688	Rear Sensor Harness
N	232937	Touchpad Harness
O	234802	Touchpad
P	304136	4 Point Hall Effect Canbus Wireless Ground Control Module (17410)

GROUND CONTROL 3.0 COMPONENT LIST

LEVELING AND STABILIZATION



Callout	Part #	Description
Q	305115	Hall Effect Right Rear Sensor Harness
	306298	Hall Effect Left Rear Sensor Harness
	307489	Hall Effect Right Front Sensor Harness
	307490	Hall Effect Left Front Sensor Harness
R	306176	Power and Ground Supply Harness



LIPPERT COMPONENTS™

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