Solera®

BY LIPPERT™

3000 Series 12V Power Awning

TROUBLESHOOTING AND SERVICE MANUAL

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System and Safety Information

The Solera® Power Awning features an internal motor to steadily operate the awning. Additionally, the pitch arm allows for adjustable pitch features, and there is no rafter arm to lock in place. The pitch arm also provides added stability.

For information on the assembly or individual components of this product, please visit: https://support.lci1.com/solera-3000-series-12v-power-awning

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e. the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited 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.

⚠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

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.

Basic Troubleshooting

1. Awning won't open or close.
   - **A.** If optional travel locks are installed, ensure that they have been unlocked.
   - **B.** Verify the fuse is good.
   - **C.** Check for power at the motor when the switch is in the extended or retracted position.
2. Awning pitch won't stay in the flat position.
   - **A.** Check for bad gas strut.
   - **B.** Check pitch arm bolt for proper tension. High winds can cause the pitch arm to deviate from the flat position due to the built-in safety feature of the awning.
   - **C.** Make sure all the pitch arm fasteners are in proper location of the pitch arm (Fig. 1).

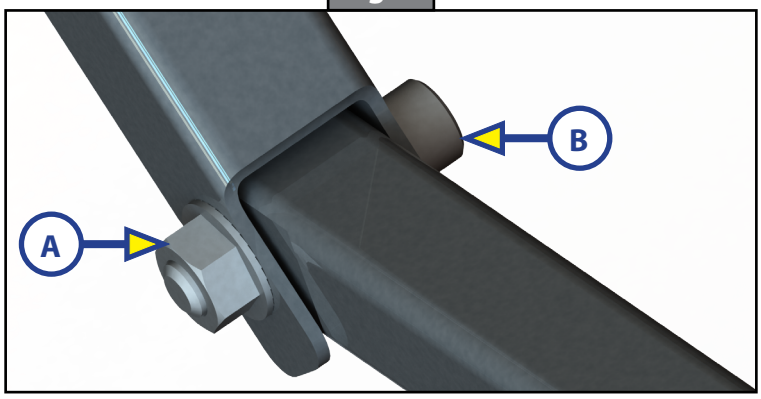
Adjusting Pitch Arm Fasteners

If the pitch arm does not hold position, it can be tightened by adjusting the bolt (Fig. 1B) in the center of the pitch arm.

1. Use a 1/2" wrench to tighten the nut (Fig. 1A) while holding the bolt (Fig. 1B) on the other side of the pitch arm with a 1/4" hex wrench.

NOTE: When tightening the nut do not tighten more than ¼ turn at a time and do not tighten to the point of crushing the pitch arm.

Fig. 1



NOTE: Existing bolt, Belleville washers and nut are installed in a specific orientation for tensioning. Removal of these components or modification of the orientation will cause adverse effects on the pitch arm functionality.

3. Awning doesn't close all the way.
   - **A.** The awning is considered completely closed as long as the outer arm is overlapping the mount arm. This overlap can vary.
   - **B.** Ensure there are no obstructions in the support arm assemblies preventing the awning from closing.
   - **C.** Verify the fabric is square from unit to roll tube and is rolling up straight on the roll tube.
4. Awning runs slow.
   - **A.** The awning will run slower during retract than extend. Retract is approximately 35 seconds while extend is approximately 27 seconds on a fully-charged battery.
   - **B.** Ensure there are a minimum of 11 volts where the unit wire meets the awning wire during retract.
   - **C.** Ensure the pitch arms are not bent in an upward direction.
   - **D.** Ensure the ground wire before the switch has a good connection to the battery or chassis.
5. Lights won't work.
   - **A.** There is a resettable fuse that can take up to 30 seconds to reset.
   - **B.** Make sure to have 12 volts to the red wire on the light.
6. Awning seems to wobble when extending or retracting.
   - **A.** Ensure the bolts that hold the head to the support arm assemblies are tight.
   - **B.** Ensure the end caps are seated properly on the roll tube.
   - **C.** Ensure the shaft coming out of the head going to the end cap isn't bent.

D. Ensure the wall mount is properly secured to the wall.
E. Ensure no part of the support arm assemblies are bent.
F. Ensure the wear collar spacers are all properly located in the support arm assemblies.

7. Awning works in opposite direction of what switch shows.
A. Wires going to awning have been reversed or switched. Reverse the wires.

8. Awning rolls up backwards.
A. The awning fabric should always be above the roll tube. However, if the extend switch is engaged too long or extend is hit inadvertently instead of retract, the awning will roll up backward. This is not a defect. To correct the fabric orientation, press the retract button. The awning will then extend to its correct orientation and normal operation can resume.

Support Arm assembly Replacement

NOTE: For awnings exceeding 22 feet in length, a center support bracket must be installed. Locate the center of the awning (between the perpendicular marks previously made corresponding with the center of the support arm assemblies) and make a mark. Once the awning has been installed, refer to TI-303 Solera® Awning Center Support for detailed instructions covering center support installation.

Resources Required

- 1-3 people (depending on task)
- Cordless or Electric Drill or Screw Gun
- Appropriate Drive Bits
- Zip Ties

⚠ CAUTION

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

1. Run awning out to almost full extension in order to allow access to the fasteners that secure support arm assembly to the wall of the unit. If the motor is inoperable, use the Manual Override procedure on page 6 to extend the awning.
2. Remove the bottom 2 and middle 2 fasteners from the support arm assembly (Fig. 2 and Fig. 3).
3. Disconnect the wires in the support arm assembly from the wires in the unit.

NOTE: If the unit is equipped with:

A. LED in the awning roll tube: The LED wires will be in the motor side support arm assembly, along with the motor wires.
B. Wall mounted LED or fabric LED: All wires will be in the drive side support arm assembly.
C. Speakers in the drive/idler head: The wires will be in both support arm assemblies.

4. Use a cordless battery from a screw gun to retract the outer arm to within 12" of being closed:
A. Take the red and white wires from the motor and connect them to the positive and negative posts on a cordless screw gun battery.
B. If the awning does not extend/retract in the correct direction, reverse the wires.

5. Secure both support arm assemblies by securing a zip tie around the outer arm and around the pin on the top of the mount arm where the mount arm and inner arm connect (Fig. 4).

6. Remove the drive head or idler head assembly retaining bolt from the outer arm.
7. Support the roll tube and remove the head assembly from the outer arm on the side being replaced.

Fig. 2

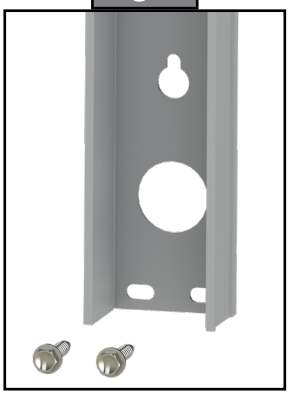


Fig. 3

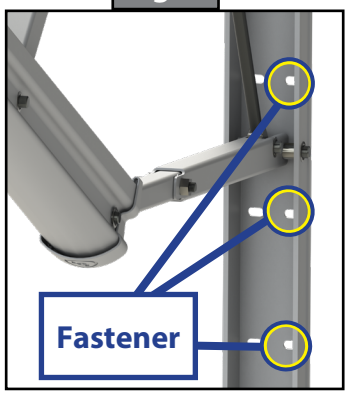


Fig. 4

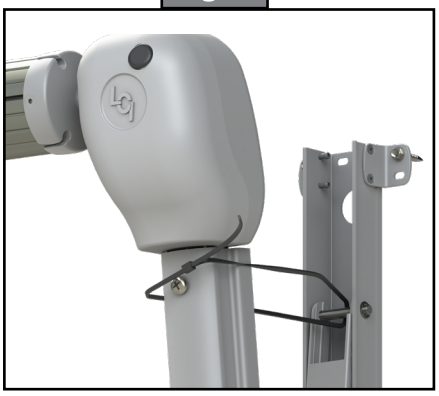


Fig. 5

8. Remove the fasteners (2 or 4) from the angle bracket at the top of the support arm assembly. These are the last of the fasteners holding the assembly to the unit (Fig 5).
9. Unplug the motor and remove the support arm assembly from the unit. It should be completely free now and can be removed from the working area. Remove the harness from the support arm assembly if the harness is going to be reused.

⚠ CAUTION

Make sure the roll tube is adequately supported before removing the support arm assembly. Failure to do so may result in serious personal injury or property damage.

10. Mount the new support arm assembly to the wall using two fasteners similar to those removed from the old support arm assembly (Fig 2).
11. Slide the zip ties halfway down the support arm assembly to allow the arm to open a few inches.
12. Attach the wire harness to the motor and let it hang down, then attach head to the arm.
13. Cut the zip ties and run the arm open with a battery and then secure it the rest of the way and run the wire through the arm.

⚠ CAUTION

When cutting the zip tie, hold the outer arm so it does not kick open. Pressure from the gas strut can cause the outer arm to kick open, which could cause serious injury or unit damage.

14. Install the remaining fasteners (Fig. 3). There are six total fasteners: 2 at the top, 2 in the middle and 2 at the bottom of the support arm assembly (Fig. 2, Fig. 3 and Fig. 5).
15. Push the support arm assembly back toward the unit to align the head assembly with the support arm assembly. Install the head assembly back into the support arm assembly and secure with the head assembly retaining bolt.
16. Pull the wires from the unit through the support arm assembly. These wires may be located at the bottom or the top of the support arm assembly. Use a cordless battery and extend the awning fully.
17. Reconnect all wiring as previously connected.

NOTE: Check the switch. If the awning is running reverse of what the switch indicates, reverse the wires.

18. Seal all areas at this time.

Manual Override

In the event of power loss or motor failure, the awning can be extended or retracted manually. Perform the following procedure to manually extend or retract the awning.

NOTE: This procedure may also be performed to extend or retract the awning in the event of dry camping or camping without a battery.

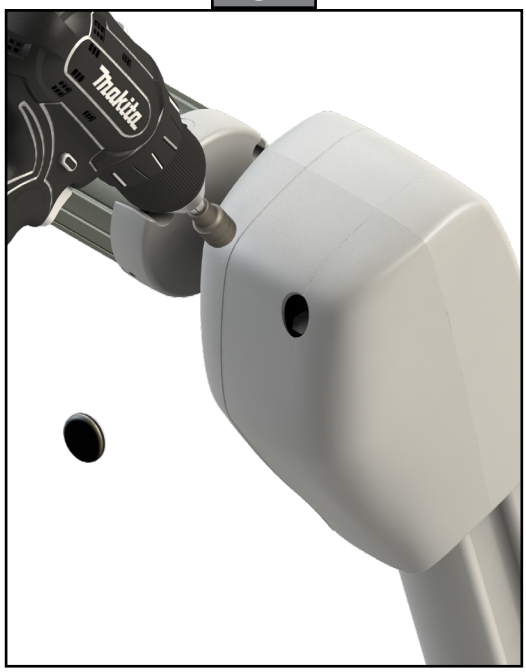
1. Remove the rubber grommet (Fig. 8A) from the drive head assembly, exposing the manual override nut on the motor.

NOTE: The drive head assembly is always located on the right side of the awning as it is viewed from outside of the unit.

2. Using a 7⁄16" socket and cordless power drill, spin the manual override nut clockwise to extend or counterclockwise to retract the awning. (Fig. 9).

Fig. 8

Fig. 9



NOTE: Use caution when extending or retracting the awning manually. The use of a step stool or ladder may be required to completely extend or retract the awning.

3. When the awning is completely extended or retracted, remove socket or drive device and replace the rubber grommet in the drive head assembly.

Changing (Remove Power) Head Assembly

Resources Required

- 1-3 people (depending on task)
- Cordless or Electric Drill or Screw Gun
- Appropriate Drive Bits
- Zip Ties

1. Extend the awning about 12" away from the unit. If the motor is inoperable, use the Manual Override procedure on page 6 to extend the awning.
2. Secure both support arm assemblies by running a zip tie around the outer arm and around the pin on the top of the mount arm where the mount arm and inner arm connect (Fig. 4).

⚠CAUTION

Failure to secure the outer arms may result in serious personal injury or property damage. Pressure from the gas strut can cause the outer arm to kick open, which could cause serious injury or unit damage.

3. While one person is securely holding the roll tube, have the second person remove the hairpin. Make sure you have a secure hold on the awning head and tube before removing the hairpin or the head could spin freely. Now release the tension by rotating the drive side head assembly in a clockwise motion (with awning lock in the "roll in" position).
4. Remove shaft from drive head assembly.

⚠WARNING

Failure to support the roll tube, fabric and drive/idler head assemblies during removal may result in serious injury or property damage.

5. Remove the wax screw from the end cap that attaches to the shaft on the drive head assembly.
6. Support the roll tube to prevent the fabric from pulling out of the awning rail on the side of the unit.
7. Remove the drive head assembly retaining bolt from the outer arm.
8. Disconnect the wires.
9. Remove the old drive head assembly from the unit and set aside.
10. Connect the new drive head assembly shaft to the roll tube end cap.
11. Replace the wax screw in the roll tube end cap, securely attaching it to the drive head assembly shaft.
12. Connect the 2-pin wiring plug and slide it into the outer arm. Be careful not to pinch the wiring between the drive head assembly and the outer arm.
13. Secure the drive head assembly in the outer arm with the drive head assembly retaining bolt.

Awning Fabric Replacement

Resources Required

- Two People
- Cordless or Electric Drill or Screw Gun
- Appropriate Drive Bits
- Zip Ties

Removal

1. Remove the drip cap (if equipped) from the end the fabric will be removed from.
2. Extend awning out approximately 12".
3. Secure both support arm assemblies by running a zip tie around the outer arm and around the pin on the top of the mount arm where the mount arm and inner arm connect (Fig. 4).
4. Remove the screws holding the polycords in place on each end of roll tube and awning rail.
5. Remove the wax screws holding the end caps onto the drive and idler head shafts.
6. Refer to steps 6-8 of Changing Power Head Assembly.

NOTE: If awning is equipped with an LED light strip, unplug the LED light strip from the idler head assembly.

⚠WARNING

Failure to support the roll tube, fabric and drive/idler head assemblies during removal may result in serious injury or property damage.

7. Working together, remove the roll tube and fabric from the awning rail and support arm assemblies.
8. Place the roll tube and fabric onto a level area.
9. Remove the end cap from the end of the roll tube from which that fabric will be removed.
10. Mark location of polycords on roll tube for when you replace fabric.
11. With one person holding the end of the fabric that gets attached to the awning rail on the unit, another can rotate the roll tube to unroll the fabric until only the polycords are left on the roll tube.
12. To remove the fabric, gently pull the roll tube from one end, while another person holds the fabric in place.

Installation

1. Unroll the replacement fabric so that the polycords are parallel with the roll tube.

NOTE: We recommend laying out the new fabric on top of the old fabric to prevent scratching the surface.

2. Gently slide the roll tube on to the two polycords of the fabric, making sure that the proper side is touching the roll tube (Fig. 6).
3. Center the fabric on the roll tube.
4. Apply the screws that were holding the polycords in place on the roll tube. Install the screws directly into the polycord of fabric.
5. Roll fabric onto roll tube (Fig. 7). Make sure the fabric stays snug and flat to the roll tube with the top side facing away.

Fig. 6

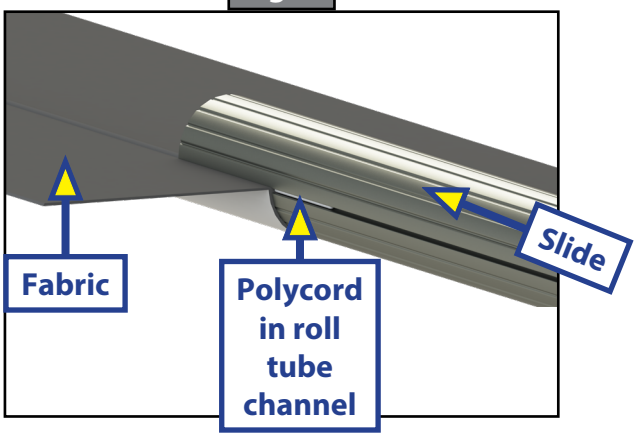
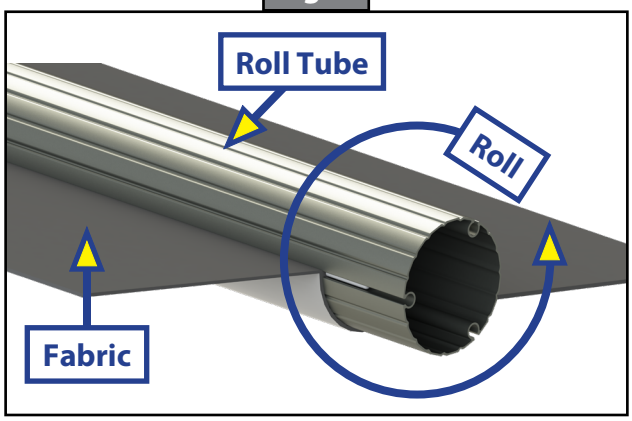


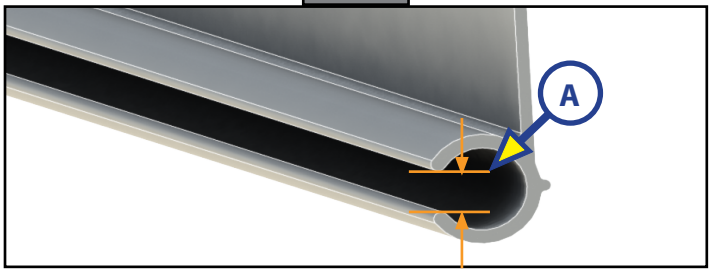
Fig. 7



6. Reinstall the end cap previously removed.
7. Working together, apply the roll tube and fabric to the awning rail and support arm assemblies, making sure the awning will unroll with the proper side of the fabric up.
8. Use a screwdriver to spread open either end of the awning rail channel on the installation side.

NOTE: Before installing the fabric, measure the awning rail, opening to make sure that the opening is no larger th an 3⁄16" (Fig. 8A). An opening that is too large could lead to fabric detachment from the unit.

Fig. 8



9. To protect the fabric from damage during installation, file any sharp edges or burrs from the awning channel.
10. Use silicone lubricant and spray the inside of the awning rail channel.
11. Working together, support the roll tube assembly and install the wax screws to each side to secure the roll tube end caps to the head assemblies.

⚠WARNING

Failure to support the roll tube, fabric and drive/idler head assemblies during removal may result in serious injury or property damage.

NOTE: Keep the head of the wax screw ⅛" from fastened to avoid compromising the structural integrity of the wax screw.

12. Extend and retract the awning several times to ensure that the fabric is square on the roll tube.
13. Secure the fabric in the awning rail 1" inside the edge of the fabric on both ends using a #6 x ½" hex head screw. Install the screw down through the awning rail into the fabric and the polycord.
14. Reinstall the drip cap if previously equipped.

NOTE: If awning is equipped with a LED light strip, plug the LED light strip back into the motor head assembly.

Securing the Fabric

Secure the fabric to the awning rail using **ONE** of the two options listed below. In option 1 the screw will go through the fabric, awning rail, and polycord, while in option 2, the screw will only go through the awning rail and polycord.

Option 1

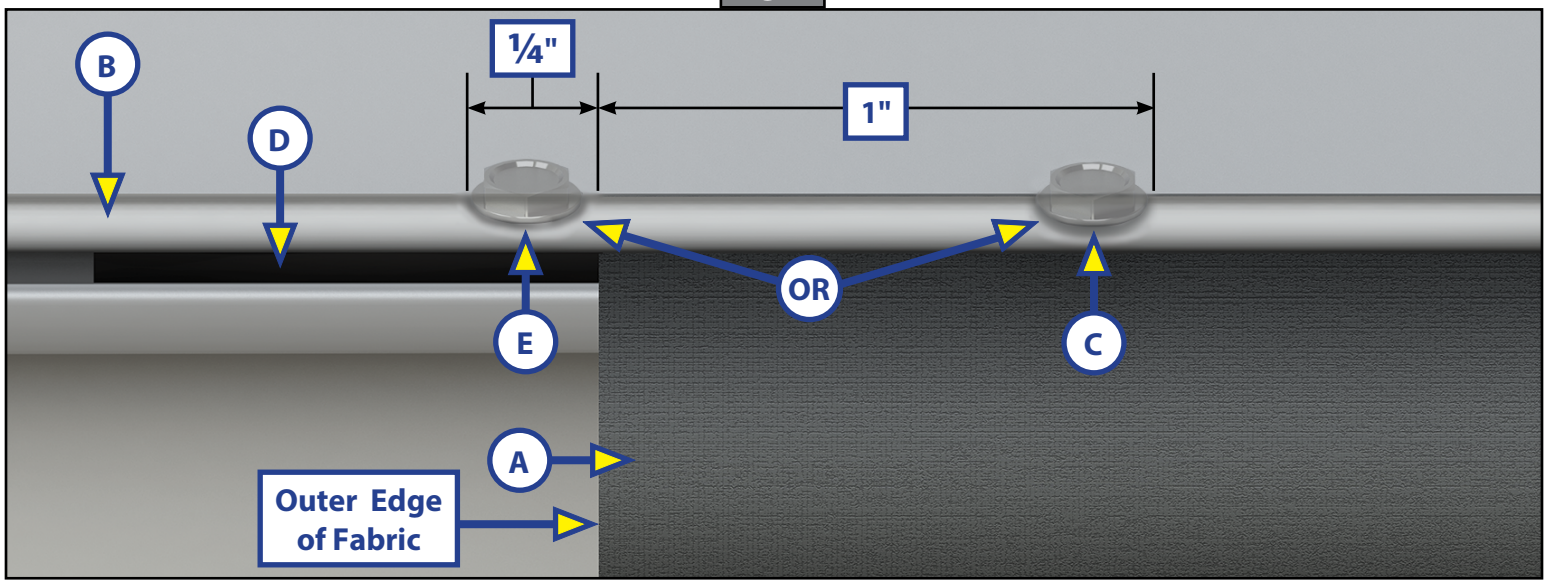
Secure the fabric (Fig. 9A) in the awning rail (Fig. 9B) no more than 1" inside the edge of the fabric on both ends using an OEM-supplied #6 x ½" hex head screw (Fig. 9C). Install the screw (Fig. 9C) down through the awning rail (Fig. 9B) into the fabric (Fig. 9A) and the polycord (Fig. 9D).

Option 2

Secure the fabric (Fig. 9A) in the awning rail (Fig. 9B) no more than ¼" outside the edge of the fabric on both ends using an OEM-supplied #6 x ½" hex head screw (Fig. 9E). Install the screw (Fig. 9E) down through the awning rail (Fig. 9B) and polycord (Fig. 9D).

NOTE: When choosing option 2 for installation, polycord MUST extend past the fabric more than ¼" to allow it to be secured by the screw, and screw must fully penetrate and secure polycord when installed.

Fig. 9



Fabric Care

If the awning is retracted while wet, extend the awning and let it dry as soon as conditions allow before retracting. This will help prevent the formation of mildew and add greatly to the life of the awning. Mildew does not form on the fabric itself, but on the accumulated dust, dirt and grime.

NOTE: Periodically clean vinyl or woven acrylic fabric using a mixture of ¼ cup of dish soap and 5 gallons of warm water. Liberally apply the mixture on the top of the fabric and retract the awning for 5 minutes. This will apply the mixture to the bottom of the fabric as well. Extend the awning and hose off with fresh water. Repeat if necessary. Allow to dry before retracting.

Light Replacement

Resources Required

- Silicone Sealant
- Silicone Lubricant

Wall Mount LED or Fabric LED

1. Fully extend the awning
2. Remove the wire cover that indicates where the wires go into the unit.
3. Disconnect the light wire from the unit wiring.
4. Remove the silicone sealant that holds the light in the light rail at both ends.
5. Slide the light out of the light rail.
6. Spray small amount of silicone lubricant into the light rail channel and slide the new light in.

NOTE: If the light is too long it can be cut at specific locations, which are marked on the light every 3 inches with copper dots.

7. Seal both ends with silicone sealant.
8. Connect the wiring back to the unit as originally wired.

NOTE: Stating at the motor, run the wire approximately halfway down the outer arm, then up the inner arm to the wall mount (holes for "top wire" and "bottom wire" options are provided in the wall mount extrusion). Install plastic wire covers to the outer arm, inner arm, and wall mount extrusions to secure/protect the power supply wire. Make sure the wire is placed outside of the pin that joins the steel tension arm to the wall mount to prevent damage to the wires.

Roll Tube LED

1. Fully extend the awning.
2. Find the plug at the idler head assembly where the light is connected and disconnect the plug.
3. Remove the silicone sealant that is holding the light in the roll tube at both ends.
4. Remove the old light and spray the roll tube channel with silicone lubricant.
5. Slide the new light into the roll tube channel.

NOTE: If the light is too long it can be cut at certain locations, which are marked on the light every 3 inches with copper dots.

6. Center the light in the roll tube channel and seal both ends with silicone sealant.
7. Connect light plug to the connector coming out of the idler head assembly.

Please recycle all obsolete materials.

For all concerns or questions, please contact Lippert
Ph: 432-LIPPERT (432-547-7378) | Web: lippert.com | Email: customerservice@lci1.com