



BY LIPPERT



# Universal Hardware

## Manual Awning to Solera 4000 Series 18V Power Awning

(For Aftermarket Applications)

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Solera 18V Power Awning Kits	
Part #	Description
<a href="#">434729</a>	Solera Power 18V 69" Kit, Black
<a href="#">434730</a>	Solera Power 18V 69" Kit, White



## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

### Introduction

The Solera® 18V Power Awning features a unique, rechargeable battery that fits right inside the awning arm and comes with everything you need to connect to the awning motor wire.

**NOTE:** The Lippert Solera Universal Hardware kit for a manual to power conversion will **ONLY** fit Dometic and Carefree awnings.

#### Tall Arm (69")

Solera 18V Tall Arm (69") requires:

- 69" of unobstructed area from the awning rail straight down.
- Minimum clearance of 2 1/2" between the awning rail and the top of the entry door.

Additional information about Lippert products can be obtained from [support.lci1.com](https://support.lci1.com) or by downloading the free LippertNOW app. The app is available on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.

App Store®, iPhone®, and iPad® are registered trademarks of Apple Inc. Google Play™ and Android™ are trademarks of Google Inc.

For additional support on this product, scan this QR code or go to: <https://support.lci1.com/solera-4000-series-18v-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 Information

Warning, Caution and Danger symbols indicate that an installation procedure has a safety risk involved and may cause death, serious injury or property damage if not performed safely and within the parameters set forth in this manual.

Manual awnings that contain springs use tension for ease of operation and can be harmful to the end user should the stored tension come unbound. Cotter pins, travel locks and cam locks are installed and **MUST** be used to contain the tension when the system is being serviced.

#### ⚠ WARNING

FAILURE TO USE THE INSTALLED SAFETY FEATURES MAY RESULT IN DEATH, SERIOUS INJURY, DAMAGE TO THE UNIT AND/OR VOIDING A WARRANTY.

#### ⚠ CAUTION

MOVING PARTS CAN PINCH, CRUSH OR CUT. KEEP CLEAR AND USE CAUTION.

#### ⚠ WARNING

IMPACT OR CRUSH HAZARD - PITCH MUST BE SET TO LOWER ONE SIDE OF THE AWNING AFTER THE AWNING IS EXTENDED. FAILURE TO SET PITCH COULD LEAD TO WATER, SNOW OR DEBRIS ACCUMULATING ON THE AWNING FABRIC, WHICH COULD CAUSE THE AWNING TO MOVE UNPREDICTABLY, BECOME UNSTABLE, AND BEND OR COLLAPSE CAUSING DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE.

#### ⚠ WARNING

IMPACT OR CRUSH HAZARD - DO NOT ADJUST PITCH MANUALLY IF THERE IS ALREADY POOLING WATER, SNOW OR DEBRIS ON THE AWNING FABRIC. KEEP THE AWNING ARM AREA CLEAR OF PEOPLE AND OBJECTS WHEN IN OPERATION. FAILURE TO HEED THESE WARNINGS COULD CAUSE SEVERE PERSONAL INJURY AND /OR PROPERTY DAMAGE.

#### ⚠ CAUTION

THE AWNING MUST BE RETRACTED COMPLETELY DURING INCIDENTS OF HIGH WIND, HEAVY RAIN AND/OR DURING ANY EXTENDED TIME AWAY FROM THE UNIT. FAILURE TO RETRACT THE AWNING IN THOSE INSTANCES COULD CAUSE EXTENSIVE DAMAGE TO THE AWNING AND UNIT.



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## Universal Hardware

### Manual Awning to Solera 4000 Series 18V Power Awning

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## Parts List

**NOTE:** Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

Callout	PN	Solera Power 18V 69" Kit 434729 Black	Qty
A	<a href="#">276611</a>	Screw, #8 - 18 x 1/2" Pan Head	6
B	<a href="#">281154</a>	Support Arm Assembly	1
C	<a href="#">656484</a>	Support Arm Assembly - Battery Pack	1
D	<a href="#">360575</a>	Wax Screw, #8-32 x1/2" Pan Head (Blk)	2
E	<a href="#">384965</a>	Bracket, Upper Solera Power 2.500"	2
F	<a href="#">423751</a>	End Cap	2
G	<a href="#">346891</a>	Rivet, 3/16" x .450"	1
H	672050	Drive Head Assembly Regal Awning ( <b>OBSOLETE - Use <a href="#">2023009670</a></b> )	1
I	<a href="#">672052</a>	Idler Head Assembly Regal Awning	1

Callout	PN	Solera Power 18V 69" Kit 434730 White	Qty
A	<a href="#">675906</a>	Screw, #8 - 18 x 1/2" Pan Head	6
B	<a href="#">281152</a>	Support Arm Assembly	1
C	<a href="#">656483</a>	Support Arm Assembly - Battery Pack	1
D	<a href="#">299630</a>	Wax Screw, #8-32 x1/2" Pan Head (Silver)	2
E	<a href="#">384964</a>	Bracket, Upper Solera Power 2.500"	2
F	<a href="#">423750</a>	End Cap	2
G	<a href="#">346890</a>	Rivet, 3/16" x .450"	1
H	<a href="#">672049</a>	Drive Head Assembly Regal Awning	1
I	<a href="#">672051</a>	Idler Head Assembly Regal Awning	1

Callout	PN	Solera Power 18V 69" Kit Common Parts	Qty
J	<a href="#">237315</a>	Rivet, 3/16" x 1.3"	8
K	<a href="#">281079</a>	Screw, #6-20 x 1/2" Self-Drilling Hex Washer	2
L	<a href="#">298760</a>	Hairpin Cotter Pin, 0.093" x 2 - 5/16"	4
M	<a href="#">347119</a>	Cotter Pin, 1/8" x 3"	2
N	<a href="#">384905</a>	Screw, #10 - 32 x 2 1/2" Stainless Steel Pan Head	2
O	<a href="#">384906</a>	Nylon Locking Nut, #10 - 32	2
P	<a href="#">438247</a>	Nylon Cable Tie, Standard - 30	2



## Resources Required

- 1-2 people, depending on task
- Cordless or electric drill or screw gun
- Appropriate drive and drill bits
- Socket wrench
- 3/8" Socket
- Rivet gun
- Locking pliers
- Ladder
- Appropriate sealant (butyl tape, silicone sealant or closedcell PVC foam tape)
- Non-permanent method of marking

## Optional Upper Mounting Bracket Installation

This procedure is **ONLY** needed if replacing support arm assemblies that had upper mounting brackets. This will avoid making additional holes in the unit. If upper brackets are **NOT** needed, proceed to the Conversion section.

If replacing support arm assemblies that had upper mounting brackets (Fig.1A) that straddled the awning rail (Fig.1B), exchange the angle bracket already attached to the new support arm assembly with the new provided upper mounting bracket, bolt and nylon locking nut.

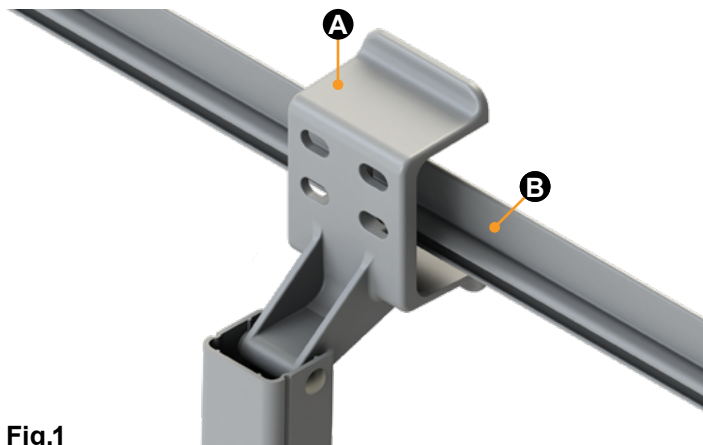


Fig.1

1. On the new power awning support arm assembly, drill out the four rivets holding the original upper mounting bracket supports to the support arm assembly (Fig.2A). Set the two upper mounting brackets aside.



Fig.2

2. Align the new upper mounting bracket bolt guide (Fig.3A) at the top set of holes of the support arm assembly (Fig.3B).

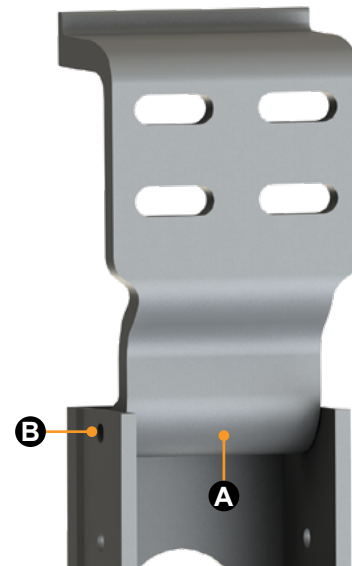


Fig.3

3. Insert the provided #10 - 32 x 2 1/2" screw (Fig.4A) through the support arm assembly, through the upper mounting bracket bolt guide and into the other side of the support arm assembly.

4. Attach the provided #10 - 32 Nylon Locking nut to the bolt to hold the bracket in place (Fig.4B).

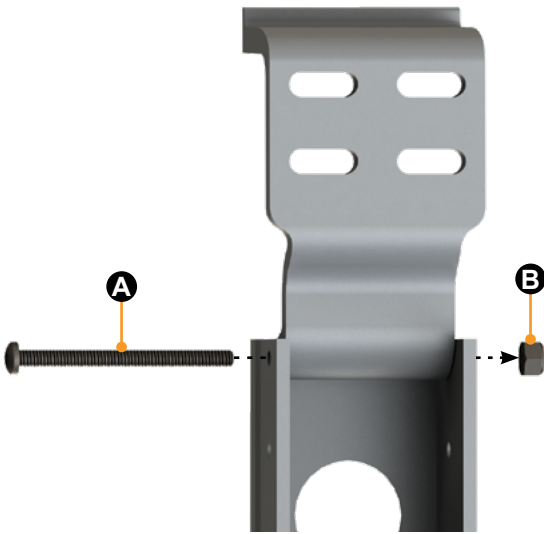


Fig.4

5. Repeat steps 1-4 for the other support arm assembly.

6. Set the support arm assemblies aside and proceed with the Conversion section.

**NOTE:** Once the support arm assemblies with the new upper mounting brackets are ready to be installed, use the same holes located in the unit wall that were left when removing the old arm assemblies.

## Conversion

### Dometic Manual Awning to Solera 18V Power Awning

**NOTE:** All screws supporting the awning assembly must have a backer within the structure of the wall of the unit.

**NOTE:** This manual will refer to the "drive side" and "idler side" throughout for various instructions. The "drive side" is the right hand side of the awning when facing the awning from the exterior of the unit. The "idler side" is the left hand side of the awning when facing the awning from the exterior of the unit.

**NOTE:** The following procedure may require 1-3 persons.

When converting a Dometic Manual Awning to a Solera 18V Power Awning, the converted awning will be approximately 2" wider than the initial awning. Be sure there are no obstructions that may interfere with the installation of the support arm assemblies **PRIOR** to beginning the conversion process.

1. Unlock the travel locks, move the cam lock to the roll out position and extend the awning approximately 12".

2. Insert a cotter pin (Fig.5C) into the end cap (Fig.5A) at each end of the awning.

3. On the drive side of the awning, and with an assistant holding the roll tube, use a 7/16" socket to remove the bolt securing the drive head (Fig.5B) to the support arm (Fig.5D).

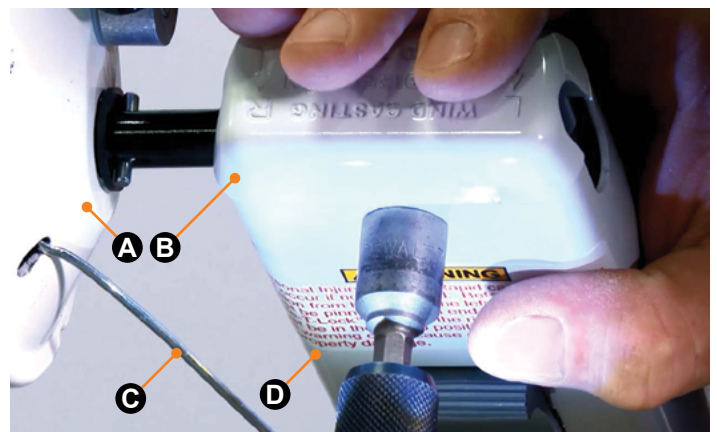


Fig.5

## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

4. Separate the drive head from the support arm and secure the support arm to the unit in the travel position.
5. Remove the fasteners from the upper mounting bracket (**Fig.6A**) of the support arm assembly.
6. Detach the support arm assembly from the lower mounting bracket. Discard the mounting bracket.
7. Remove the fasteners from the lower mounting bracket (**Fig.7A**) of the support arm assembly.



Fig.6



Fig.7

8. Firmly take hold of the drive head with a pair of locking pliers (**Fig.8**). Remove the cotter pin from the end cap and move the cam lock to the roll up position.

**NOTE:** Padding the locking pliers will prevent the scratching of components.

### **⚠ WARNING**

THE SPRING IS UNDER EXTREME TENSION.  
IMPROPER HANDLING COULD CAUSE DEATH,  
SERIOUS INJURY OR PROPERTY DAMAGE.



Fig.8

9. Slowly release all of the tension by rotating the drive head with the locking pliers.
10. Using an appropriately-sized drill bit, drill out the rivets securing the end cap to the roll tube.
11. Remove the end cap and spring assembly (**Fig.9B**) from the roll tube (**Fig.9A**).

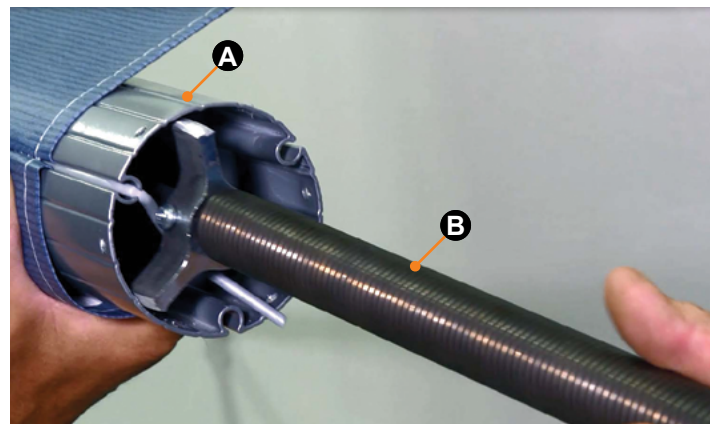


Fig.9

**Universal Hardware**  
**Manual Awning to Solera 4000 Series**  
**18V Power Awning**  
(For Aftermarket Applications)

12. Place the Solera end cap (**Fig.10B**) on the end of the roll tube (**Fig.10A**), making sure it is properly seated and the roll tube channel is aligned with the channel on the end cap.

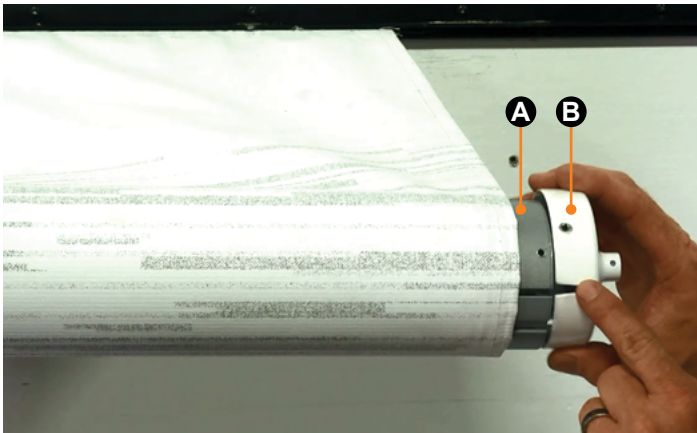


Fig.10

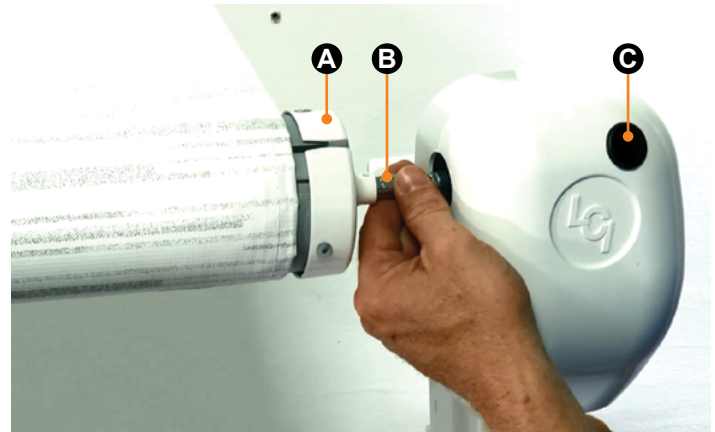


Fig.11

16. Align the holes in the shaft and end cap and secure with the provided #8 - 32 x 1/2" wax screw (**Fig.12A**).

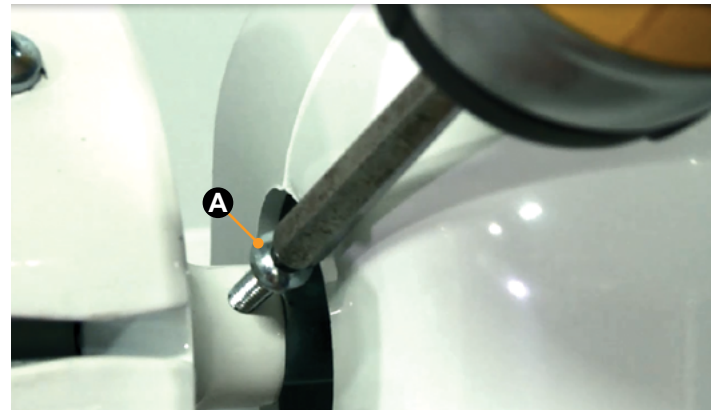


Fig.12

**NOTE:** Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.

13. Secure the Solera end cap to the roll tube with the provided rivets.

**NOTE:** It may be necessary to drill out the previous holes in order to accommodate the larger-sized rivets.

14. Pull the cotter pin from the idler side end cap, making sure to keep a firm hold on the roll tube to avoid injury or damage to the unit. (Pulling the cotter pin allows the roll tube to turn for installation of the drive head).

15. Insert the Solera drive head assembly shaft (**Fig.11B**) into the end cap (**Fig.11A**).

**NOTE:** When identifying the drive head assembly from the idler head assembly, the drive head assembly will have an override plug (**Fig.11C**). The idler head assembly will not.

17. Place the drive support arm assembly directly under the awning rail so the top of the mount arm is touching the bottom of the rail.

18. Slide the drive support arm assembly outward to align below the holes of the awning previously removed before securing the upper bracket.

## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

19. To secure the drive support arm assembly:

**A.** If using the original angle bracket on the new support arm assembly, secure the upper section of the drive mount arm to the unit with two of the provided #14 - 10 x 1 ¼" screws (**Fig.13**).

**B.** If using the upper mounting bracket, attach the upper mounting bracket (**Fig.14A**) of the assembled support arm assembly, using the previously removed screws. Go through the top holes of the upper mounting bracket and into the pre-existing holes in the wall of the unit. All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.



Fig.13

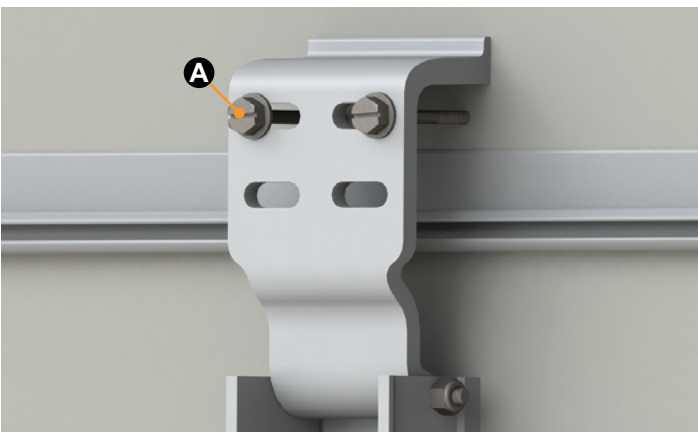


Fig.14

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** Do **NOT** install fasteners to the lower and middle sections of the wall mount arm at this time.

20. Re-install the cotter pin to the idler side end cap. To properly align the hole for the cotter pin, it may be necessary to slightly move the awning in or out using the extend/retract switch. See Operation section in this manual.

21. Repeat Steps 3-19 for the idler side of the awning, skipping all cam lock instructions.

**NOTE:** Because the converted awning is approximately 2" wider than the previous awning, the support arm assembly on the idler side will **NOT** align with the previous holes. It is the customer's responsibility to fill in/seal any and all holes left on the unit after installation.

**NOTE:** The idler head does **NOT** have a cam lock. The cotter pin is holding all the tension of the spring assembly.

**NOTE:** Be sure to handle the assembly with care and always have a secure hold of the idler head.

22. Once the drive and idler side conversions are complete, cut the nylon ties containing the support arm assemblies.

23. Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. See Operation section of this manual.

24. Remove the manual pull strap from the roll tube.

**NOTE:** If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. See Charging the Battery section in this manual. The awning should become operational within five minutes after being plugged in.

25. Remove the wire covers on the drive support arm assembly to expose the lower and middle sections of the mount arm.



## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

26. Secure the lower (**Fig.15**) and middle (**Fig.16**) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure the arm is square on the unit wall. There will be two screws in the lower holes and two screws in the middle holes.

**NOTE:** For units with fiberglass sidewalls, Lippert requires the use of rivets for securing the lower and middle sections of the mount arm.

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

27. Repeat Steps 25-26 for the idler mount arm.

28. Replace the wire covers.

### Carefree Manual Awning to Solera 18V Power Awning

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**NOTE:** This manual will refer to the "drive side" and "idler side" throughout for various instructions. The "drive side" is the right hand side of the awning when facing the awning from the exterior of the unit. The "idler side" is the left hand side of the awning when facing the awning from the exterior of the unit.

**NOTE:** This procedure requires 1-3 people.

1. Unlock the travel locks, move the cam lock to the roll out position and extend the awning approximately 12".

2. Insert a cotter pin (**Fig.17A**) into the end cap (**Fig.17B**) at each end of the awning.

**NOTE:** Some Carefree systems do not have a hole on the drive end cap for the cotter pin. In this instance, the cam lock **MUST** remain in the roll out position until it is time to release the tension in the springs.



Fig.15



Fig.16

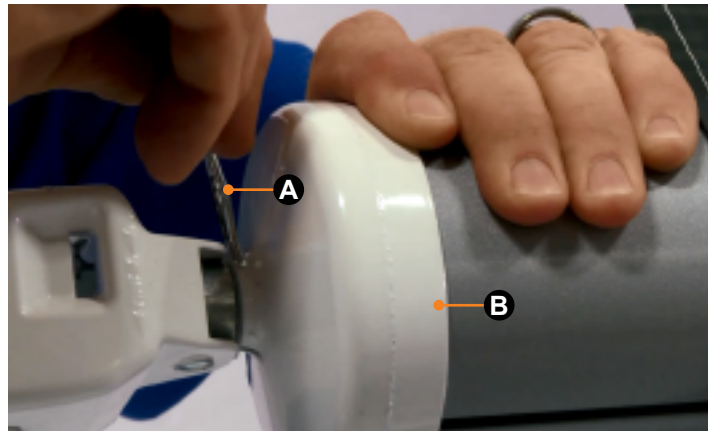
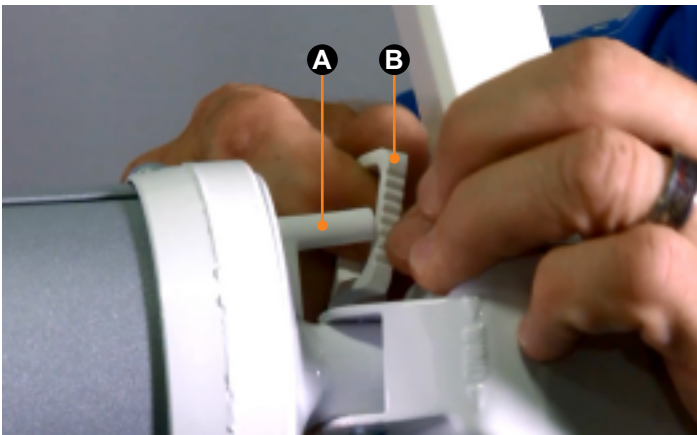


Fig.17

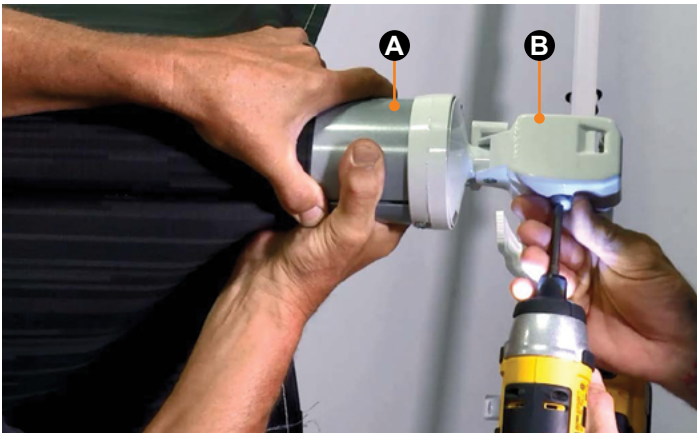
## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

**NOTE:** Some Carefree systems are equipped with a cam lock assist on the drive side of the awning. If equipped, remove the cam lock assist (**Fig.18B**) from the lock pin (**Fig.18A**), making sure the cam lock remains in the roll out position.



**Fig.18**

3. With an assistant holding the roll tube (**Fig.19A**), remove the fastener securing the drive head (**Fig.19B**) to the support arm.



**Fig.19**

4. Separate the drive head from the support arm and secure the support arm to the unit in the travel position.

5. Remove the fasteners from the upper mounting bracket (**Fig.20**) of the support arm assembly.

6. Detach the support arm assembly from the lower mounting bracket.

7. Remove the fasteners from the lower mounting bracket (**Fig.21**) of the support arm assembly. Discard the mounting bracket.



**Fig.20**



**Fig.21**

8. Firmly take hold of the drive head with a pair of locking pliers (**Fig.22**). Remove the cotter pin, if equipped, from the end cap and move the cam lock to the roll up position.

**NOTE:** Padding the locking pliers will prevent the scratching of components.

### **⚠ WARNING**

**THE SPRING IS UNDER EXTREME TENSION.  
IMPROPER HANDLING COULD CAUSE DEATH,  
SERIOUS INJURY OR PROPERTY DAMAGE.**

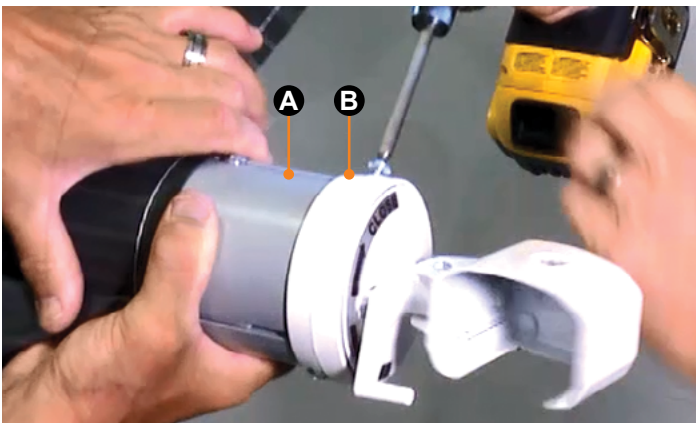
## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)



**Fig.22**

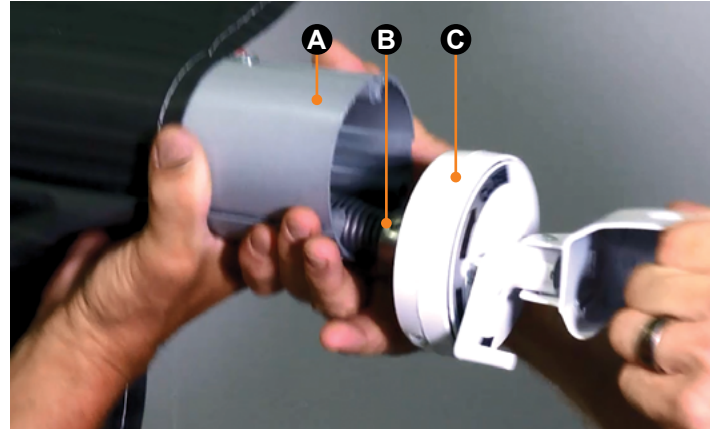
9. Slowly release all of the tension by rotating the drive head with the locking pliers.

10. Remove the three screws securing the end cap (Fig.23B) to the roll tube (Fig.23A).



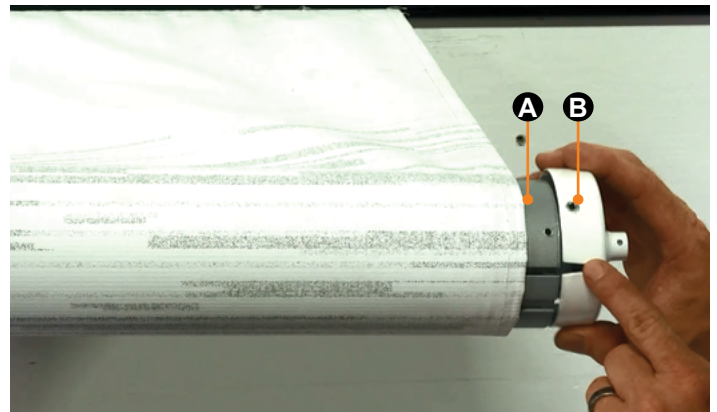
**Fig.23**

11. Remove the end cap (Fig.24C) and spring assembly (Fig.24B) from the roll tube (Fig.24A).



**Fig.24**

12. Place the Solera end cap (Fig.25B) on the end of the roll tube (Fig.25A), making sure it is properly seated and the roll tube channel is aligned with the channel on the end cap.



**Fig.25**

13. Secure the Solera end cap to the roll tube with the provided rivets.

**NOTE:** It may be necessary to drill out the previous holes in order to accommodate the larger sized rivets.

14. Pull the cotter pin from the idler side end cap, making sure to keep a firm hold on the roll tube to avoid injury or damage to the unit. Pulling the cotter pin allows the roll tube to turn for installation of the drive head.

## Universal Hardware

### Manual Awning to Solera 4000 Series 18V Power Awning

(For Aftermarket Applications)

## ⚠ WARNING

**FAILURE MAINTAIN CONTROL OF THE ROLL TUBE AND HEAD MAY RESULT IN DEATH, SERIOUS INJURY, DAMAGE TO THE UNIT AND/OR VOIDING A WARRANTY.**

15. Insert the Solera drive head assembly shaft (Fig.26B) into the end cap (Fig.26A).

**NOTE:** When determining the drive head assembly from the idler head assembly, the drive head assembly will have an override plug (Fig.26C), while the idler head assembly will not.

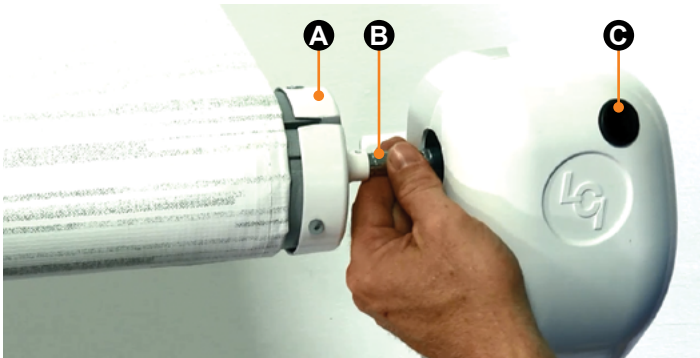


Fig.26

16. Align the holes from the shaft on the head to the end cap and secure with the provided #8 - 32 x 1/2" wax screw (Fig.27A).

**NOTE:** Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.

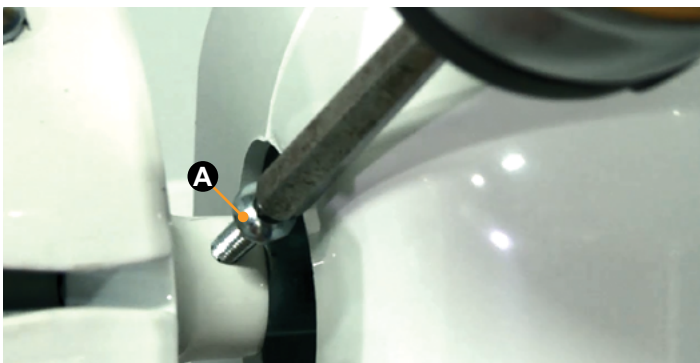


Fig.27

17. To secure the drive support arm assembly:

**A.** If using the original angle bracket on the new support arm assembly, place the drive support arm assembly directly under the awning rail so the top of the mount arm is touching the bottom of the rail. Secure the upper section of the drive mount arm to the unit with the provided #14 x 1 1/4" screws, aligned directly below the holes of the awning removed (Fig.28).

**B.** If using the upper mounting bracket, attach the upper mounting bracket (Fig.29A) of the assembled support arm assembly, using the previously removed screws. Go through the top holes of the upper mounting bracket and into the pre-existing holes in the wall of the unit. All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

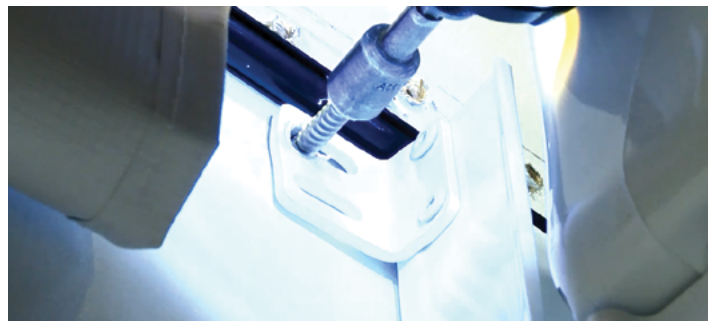


Fig.28

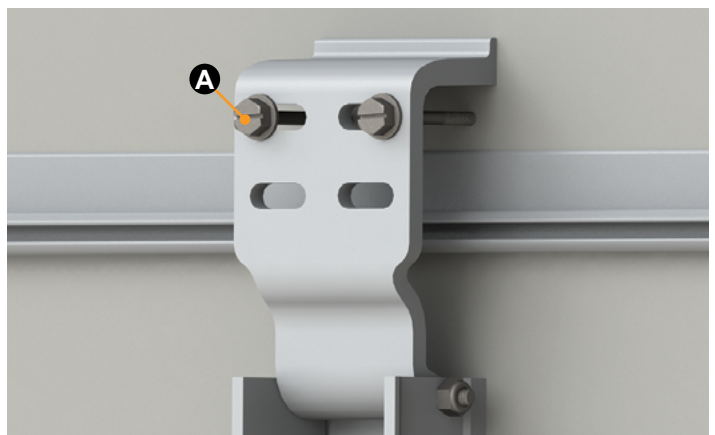


Fig.29



## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** Do **NOT** install fasteners to the lower and middle sections of the wall mount arm at this time.

**18.** Re-install the cotter pin to the idler side end cap. To properly align the hole for the cotter pin, it may be necessary to slightly move the awning in or out using the extend/retract switch. See Operation section in this manual.

**19.** Repeat Steps 3-17 for the idler side of the awning, skipping all cam lock instructions.

**NOTE:** The idler head does **NOT** have a cam lock, and therefore, the cotter pin is holding all the tension of the spring assembly.

**NOTE:** Be sure to handle with care and always have a secure hold of the idler head.

**20.** Once the drive and idler side conversions are complete, cut the nylon ties restraining the support arm assemblies.

**21.** Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. See Operation section of this manual.

**22.** Remove the manual pull strap from the roll tube.

**NOTE:** If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. See Charging the Battery section in this manual. The awning should become operational within five minutes after being plugged in.

**23.** Remove the wire covers to expose the lower and middle sections of the mount arm.

**24.** Secure the lower (**Fig.30**) and middle (**Fig.31**) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure arms are square to the unit. There will be two screws in the lower holes and two screws in the middle holes.



**Fig.30**



**Fig.31**

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** For units with fiberglass sidewalls, Lippert requires the use of rivets for securing the lower and middle sections of the mount arm.

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**25.** Repeat Steps 23-24 for the idler mount arm.

**26.** Replace the wire covers.

## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

### Lippert Manual Awning (Classic) to Solera 18V Power Awning

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**NOTE:** This manual will refer to the “drive side” and “idler side” throughout for various instructions. The “drive side” is the right hand side of the awning when facing the awning from the exterior of the unit. The “idler side” is the left hand side of the awning when facing the awning from the exterior of the unit.

**NOTE:** This procedure requires 1-3 people.

1. Unlock the travel locks, move the cam lock to the roll out position and extend the awning approximately 12".

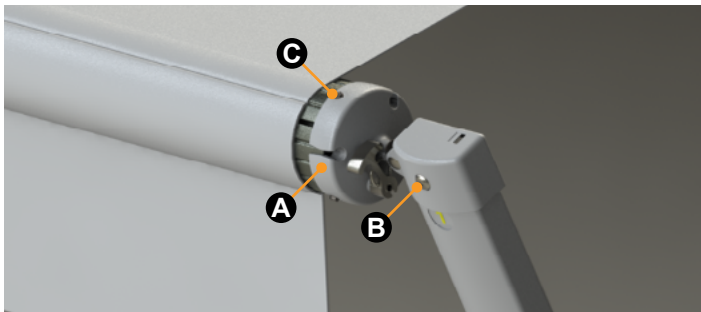


Fig.32

### **CAUTION**

**FAILURE TO PROPERLY SUPPORT THE ROLL TUBE, IDLER AND DRIVE HEADS MAY RESULT IN PERSONAL INJURY, DAMAGE TO THE UNIT AND/OR VOIDING WARRANTY.**

2. Insert hairpin cotter pins through both end caps and drive shaft.

**NOTE:** It may be necessary to rotate roll tube slightly to insert cotter pins.

3. With an assistant holding the roll tube, remove the fastener securing the drive head to the support arm (Fig.32B).

4. Separate the drive head from the support arm.

5. Firmly take hold of the drive head with a pair of locking pliers. Remove the cotter pin, if equipped, from the end cap and move the cam lock to the roll up position.

**NOTE:** Padding the locking pliers will prevent the scratching of components.

6. Slowly, while under control, allow the locking pliers to rotate in the direction that will release spring tension for the drive head assembly.

7. After all spring tension has been released from the drive head assembly, remove the three screws (Fig.32C) securing the end cap to the roll tube.

8. Remove the drive head end cap and spring assembly from the roll tube.

9. Remove the fasteners (Fig.33A) from the upper mounting bracket (Fig.33B) of the support arm assembly.

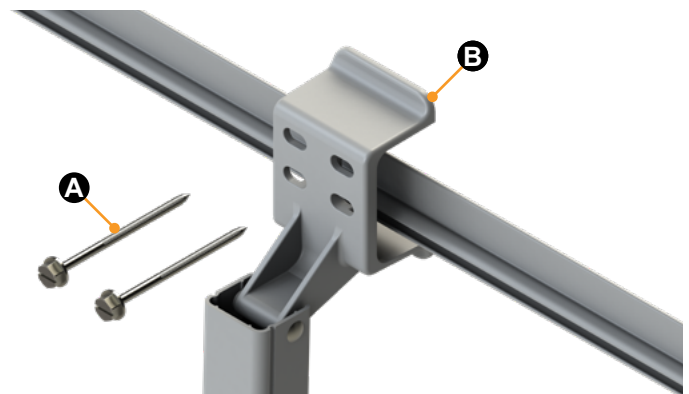


Fig.33

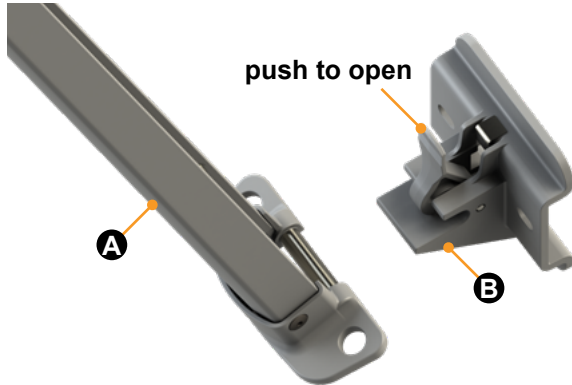
## Universal Hardware

### Manual Awning to Solera 4000 Series

### 18V Power Awning

(For Aftermarket Applications)

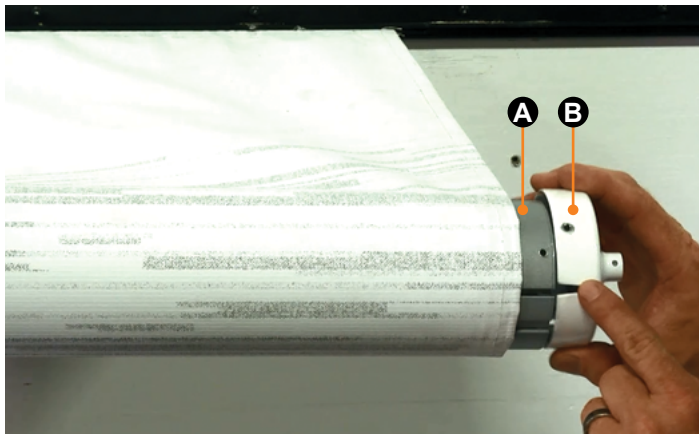
10. Detach the support arm assembly (**Fig.34A**) from the lower mounting bracket (**Fig.34B**).



**Fig.34**

11. Remove the fasteners (**Fig.34A**) from the lower mounting bracket of the support arm assembly. Discard the mounting bracket.

12. Place the Solera end cap (**Fig.35B**) on the end of the roll tube (**Fig.35A**), making sure it is properly seated and the roll tube channel is aligned with the channel on the end cap.



**Fig.35**

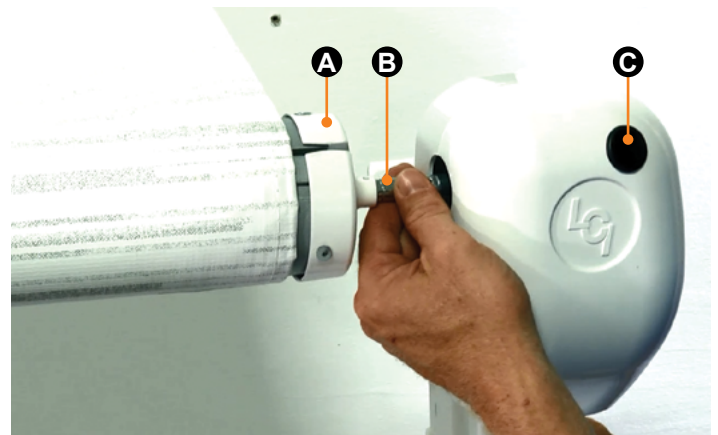
13. Secure the Solera end cap to the roll tube with the provided rivets.

**NOTE:** It may be necessary to drill out the previous holes in order to accommodate the larger sized rivets.

14. Pull the cotter pin from the idler side end cap, making sure to keep a firm hold on the roll tube to avoid injury or damage to the unit. Pulling the cotter pin allows the roll tube to turn for installation of the drive head.

15. Insert the Solera drive head assembly shaft (**Fig.36B**) into the end cap (**Fig.36A**).

**NOTE:** When determining the drive head assembly from the idler head assembly, the drive head assembly will have an override plug (**Fig.36C**), while the idler head assembly will not.



**Fig.36**

16. Align the holes from the shaft on the head to the end cap and secure with the provided #8 - 32 x 1/2" wax screw (**Fig.37A**).

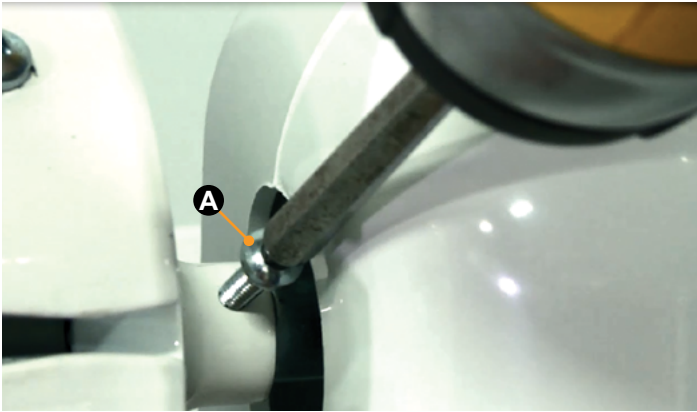
**NOTE:** Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.

## **⚠ WARNING**

FAILURE MAINTAIN CONTROL OF THE ROLL TUBE AND HEAD MAY RESULT IN DEATH, SERIOUS INJURY, DAMAGE TO THE UNIT AND/OR VOIDING A WARRANTY.

## Universal Hardware

### Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)



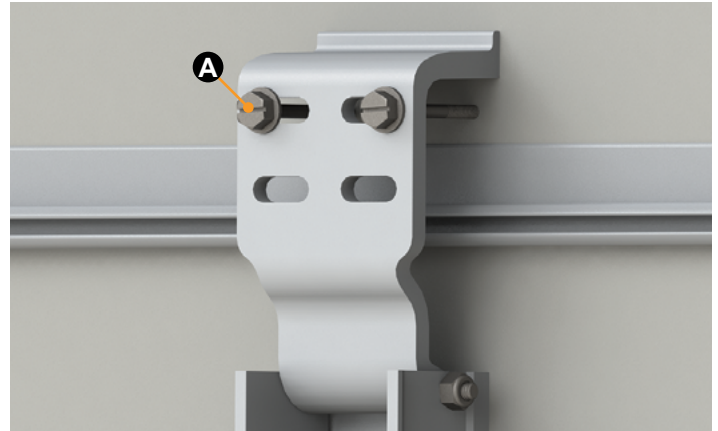
**Fig.37**

17. To secure the drive support arm assembly:

**A.** If using the original angle bracket on the new support arm assembly, place the drive support arm assembly directly under the awning rail so the top of the mount arm is touching the bottom of the rail. Secure the upper section of the drive mount arm to the unit with the provided #14 x 1 ¼" screws, aligned directly below the holes of the awning removed (**Fig.38**).



**Fig.38**



**Fig.39**

**B.** If using the upper mounting bracket, attach the upper mounting bracket (**Fig.39A**) of the assembled support arm assembly, using the previously removed screws. Go through the top holes of the upper mounting bracket and into the pre-existing holes in the wall of the unit. All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** Do **NOT** install fasteners to the lower and middle sections of the wall mount arm at this time.

18. Re-install the cotter pin to the idler side end cap. To properly align the hole for the cotter pin, it may be necessary to slightly move the awning in or out using the extend/retract switch. See Operation section in this manual.

19. Repeat Steps 3-17 for the idler side of the awning, skipping all cam lock instructions.

**NOTE:** The idler head does **NOT** have a cam lock, and therefore, the cotter pin is holding all the tension of the spring assembly.

**NOTE:** Be sure to handle with care and always have a secure hold of the idler head.



## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

**20.** Once the drive and idler side conversions are complete, cut the nylon ties restraining the support arm assemblies.

**21.** Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. See Operation section of this manual.

**22.** Remove the manual pull strap from the roll tube.

**NOTE:** If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. See Charging the Battery section in this manual. The awning should become operational within five minutes after being plugged in.

**23.** Remove the wire covers to expose the lower and middle sections of the mount arm.

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**25.** Repeat Steps 23-24 for the idler mount arm.

**26.** Replace the wire covers.

### Lippert Hybrid Awning to Solera 18V Power Awning

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

**NOTE:** This manual will refer to the "drive side" and "idler side" throughout for various instructions. The "drive side" is the right hand side of the awning when facing the awning from the exterior of the unit. The "idler side" is the left hand side of the awning when facing the awning from the exterior of the unit.

**NOTE:** This procedure requires 1-3 people.



Fig.40



Fig.41

**24.** Secure the lower (**Fig.40**) and middle (**Fig.41**) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure arms are square to the unit. There will be two screws in the lower holes and two screws in the middle holes.

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** For units with fiberglass sidewalls, Lippert requires the use of rivets for securing the lower and middle sections of the mount arm.



Fig.42

**1.** If equipped, unlock the locking latch before extending the awning. Insert the hook end of the crank handle into the eye bolt (**Fig.43A**) on the drive head.

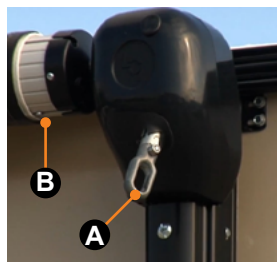


Fig.43

## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

2. Turn the crank handle so the eye bolt rotates in a clockwise direction to extend the awning about 12" away from the unit (**Fig.44**).



**Fig.44**

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.

4. Support the roll tube to prevent it from falling and damaging the side of the unit.

5. With assistance holding the roll tube, remove the bolt holding the drive head assembly onto the support arm. Separate the drive head from the support arm.

6. Remove old mount arm assembly.

7. Remove the wire covers to expose the lower and middle sections of the mount arm.

8. Secure the lower (**Fig.45**) and middle (**Fig.46**) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure arms are square to the unit. There will be two screws in the lower holes and two screws in the middle holes. Remove the three screws holding the drive head end cap onto the roll tube.



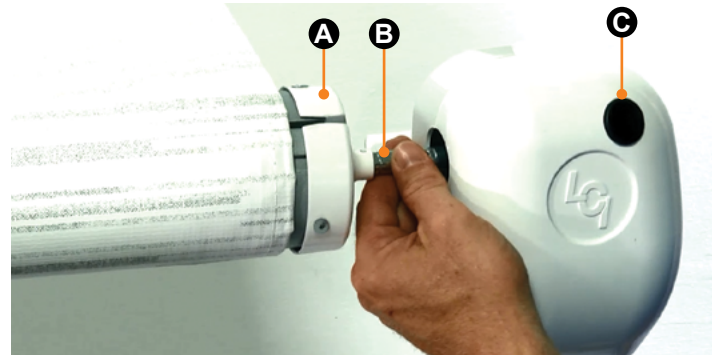
**Fig.45**



**Fig.46**

9. Insert the Solera drive head assembly shaft (**Fig.47B**) into the end cap (**Fig.47A**).

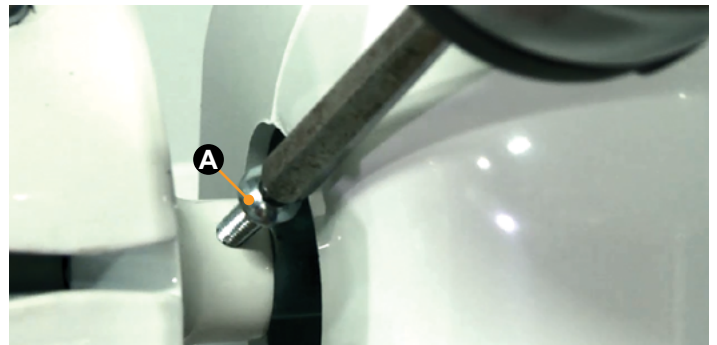
**NOTE:** When determining the drive head assembly from the idler head assembly, the drive head assembly will have an override plug (**Fig.47C**), while the idler head assembly will not.



**Fig.47**

10. Align the holes from the shaft on the head to the end cap and secure with the provided #8 - 32 x 1/2" wax screw (**Fig.48A**).

**NOTE:** Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.



**Fig.48**

11. Once the drive and idler side conversions are complete, cut the nylon ties restraining the support arm assemblies.

12. Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. See Operation section of this manual.

13. Remove the manual pull strap from the roll tube.

**NOTE:** If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. See Charging the Battery section in this manual.

## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

The awning should become operational within five minutes after being plugged in.

**NOTE:** Silicone sealant **MUST** be used on all screws and holes to prevent water from infiltrating the unit.

**NOTE:** For units with fiberglass sidewalls, Lippert requires the use of rivets for securing the lower and middle sections of the mount arm.

**NOTE:** All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

14. Repeat Steps 23-24 for the idler mount arm.

15. Replace the wire covers.

## Charging the Battery

### ⚠ CAUTION

**ONLY THE BATTERY CHARGING STEPS OUTLINED IN THIS MANUAL SHOULD BE USED TO CHARGE THE BATTERY. FAILURE TO FOLLOW THE PROCEDURE AS OUTLINED OR PLUGGING THE CHARGER INTO ANY CONNECTOR OTHER THAN THE ONE SPECIFIED MAY RESULT IN PERSONAL INJURY, DAMAGE TO THE RECREATIONAL VEHICLE UNIT OR THE AWNING ASSEMBLY AS WELL AS VOIDING THE LIPPERT COMPONENTS LIMITED WARRANTY.**

**NOTE:** The battery for the Solera 18V Power Pack is located inside the drive arm. The awning will operate 22 to 25 times before needing to be recharged.

1. Locate the charging port connector (**Fig.49A**) stored inside the bottom of the drive arm. The wires will be affixed with hook and loop material.

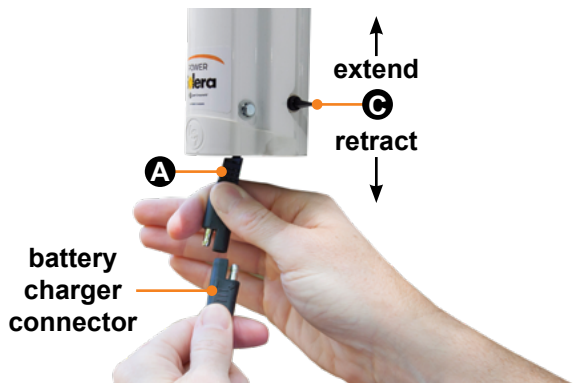


Fig.49

2. Plug the connector end of the battery charger (**Fig.50**) to the charging port connector as shown in (**Fig.49**).

3. Plug the charger (**Fig.50**) into a 110V outlet.



Fig.50

4. When the battery within the arm is fully charged, a green light will illuminate on the charger. A red light indicates the battery is still charging.

## Universal Hardware

### Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

## Operating the Awning

### Extending the Awning and Setting Pitch

#### **⚠️ WARNING**

IMPACT OR CRUSH HAZARD - PITCH MUST BE SET TO LOWER ONE SIDE OF THE AWNING AFTER THE AWNING IS EXTENDED. FAILURE TO SET PITCH COULD LEAD TO WATER, SNOW OR DEBRIS ACCUMULATING ON THE AWNING FABRIC, WHICH COULD CAUSE THE AWNING TO MOVE UNPREDICTABLY, BECOME UNSTABLE, AND BEND OR COLLAPSE CAUSING DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE.

#### **⚠️ WARNING**

IMPACT OR CRUSH HAZARD - DO NOT ADJUST PITCH MANUALLY IF THERE IS ALREADY POOLING WATER, SNOW OR DEBRIS ON THE AWNING FABRIC. KEEP THE AWNING ARM AREA CLEAR OF PEOPLE AND OBJECTS WHEN IN OPERATION. FAILURE TO HEED THESE WARNINGS COULD CAUSE SEVERE PERSONAL INJURY AND /OR PROPERTY DAMAGE.

#### **⚠️ CAUTION**

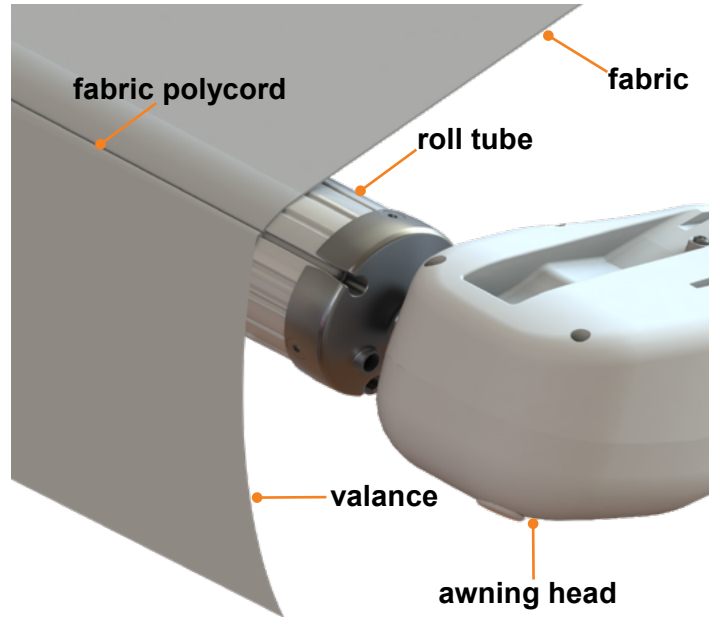
TYING DOWN THE ROLL TUBE ONCE THE AWNING IS EXTENDED WILL NOT ALLOW THE FREE-FLOATING SUPPORT ARMS TO WORK AS DESIGNED AND MAY CAUSE DAMAGE TO THE AWNING OR UNIT.

**NOTE:** The operating switch for extending and retracting the awning is located at the bottom of the drive arm (**Fig.49C**).

1. Verify the battery is fully charged.
2. To extend the awning, press and hold the operating switch (**Fig.49C**) up until the awning is extended completely.

**NOTE:** 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 operating switch down. The awning will then extend to its correct orientation and normal operation can resume.

Extension is considered complete when the fabric is completely unrolled, the valance is hanging down from the roll tube and a section of the roll tube is exposed (**Fig.51**).



**Fig.51**

3. Set pitch using pitch arms with gas strut (**Fig.12A**). Scan the QR Code below to watch the video on How to Correctly Pitch a Lippert Awning.



**A.** Choose the side of the awning for optimum shade or convenient water runoff. Pitch **MUST** be set by adjusting the articulating arm to tip one side of the awning to allow water runoff.

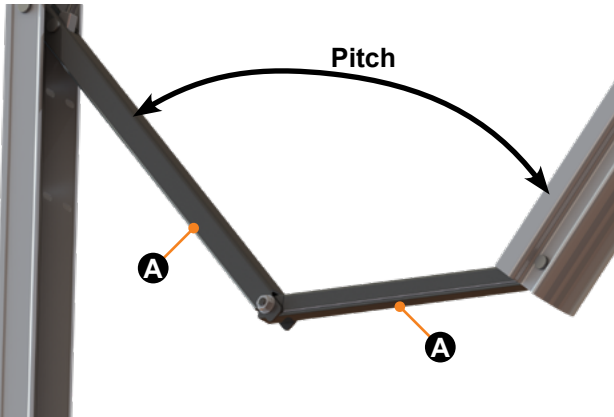
**NOTE:** Before manually adjusting pitch, make sure there is no water or snow pooling or debris present on top of the awning fabric. Use a long-handled tool that will not puncture the fabric (e.g. a broom) to push up on the awning fabric to drain off the water, snow or debris.

## Universal Hardware

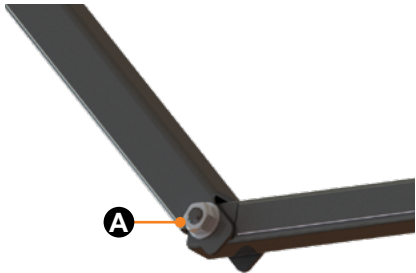
### Manual Awning to Solera 4000 Series 18V Power Awning

(For Aftermarket Applications)

**B.** Pull downward on the joint of the pitch arm until desired pitch is set (**Fig.52**). A bolt, Belleville washers and nut (**Fig.53A**) allow the joint to remain in the position set by the operator. If pitch arm does not hold position, see "Adjusting Pitch Arm Fasteners" in the Troubleshooting section of this manual.

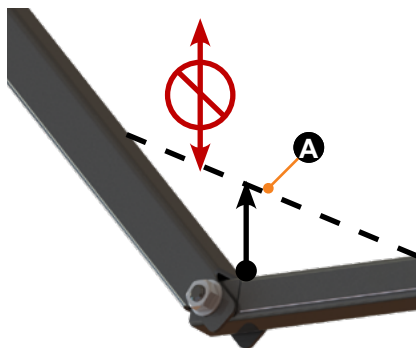


**Fig.52**



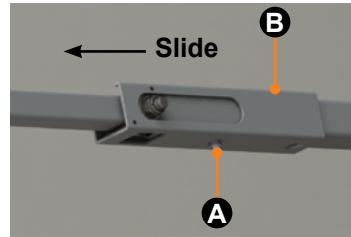
**Fig.53**

**NOTE:** Do not push the joints of the articulating arms up past a straight line (**Fig.54A**). This will put tension on the gas strut, which can cause the strut to break.



**Fig.54**

**NOTE:** Some awnings are equipped with a 2-position pitch arm (**Fig.55**). The 2-position arm can be set in the pitch position or snapped into a straight position by pushing the release button (**Fig.55A**) and sliding the sleeve (**Fig.55B**).



**Fig.55**

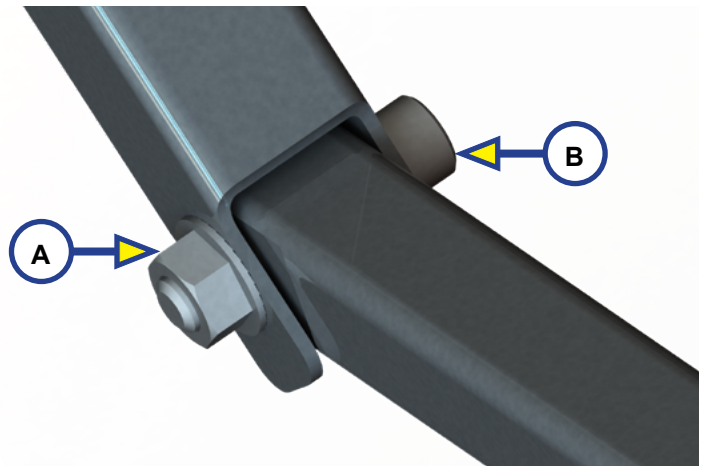
#### Adjusting the Pitch Arm Fasteners

If the pitch arm does not hold position, it can be tightened by adjusting the bolt (**Fig.56A**) in the center of the pitch arm.

1. Use a 1/2" wrench to tighten the nut (**Fig.56A**) while holding the bolt (**Fig.56B**) on the other side of the pitch arm with a 1/4" hex wrench.

**NOTE:** When tightening the nut do not tighten more than 1/4 turn at a time and do not tighten to the point of crushing the pitch arm.

**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.



**Fig.56**



## Universal Hardware Manual Awning to Solera 4000 Series 18V Power Awning (For Aftermarket Applications)

### Retracting the Awning

**NOTE:** The awning can be retracted without resetting the pitch.

1. Hold the switch (**Fig.49C**) down until the awning is retracted completely.

### **CAUTION**

THE AWNING MUST BE RETRACTED COMPLETELY DURING INCIDENTS OF HIGH WIND, HEAVY RAIN AND/OR DURING ANY EXTENDED TIME AWAY FROM THE UNIT. FAILURE TO RETRACT THE AWNING IN THOSE INSTANCES COULD CAUSE EXTENSIVE DAMAGE TO THE AWNING AND UNIT.

## Maintenance

### Fabric Care

**NOTE:** 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.

## Troubleshooting

### Manual Override

In the event of power loss or motor failure, the awning can be extended and retracted manually. Perform the following procedure to manually 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.57A**) from the drive head assembly, exposing the manual override nut on the motor.



**Fig.57**

2. Using a 7/16" socket and a cordless or electric drill or screw gun, spin the manual override nut counterclockwise to retract the awning (**Fig.58**).



**Fig.58**



**Universal Hardware**  
**Manual Awning to Solera 4000 Series**  
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**NOTE:** Use caution when retracting the awning manually. The use of a step stool or ladder may be required to completely retract the awning.

**3.** When the awning is completely retracted, replace the rubber grommet in the drive head assembly.

**NOTE:** The motor's internal drive system prevents the awning from moving (extend or retract) on its own. If the motor is damaged or disabled, be sure to secure the awning in the retracted position with a strap around both the outer arm and the mount arm (**Fig.59A**) before the manual override nut is released.



Fig.59

**⚠ CAUTION**

**DURING INCIDENTS OF HIGH WIND, HEAVY RAIN OR EXTENDED TIME AWAY FROM THE UNIT, IT IS ADVISABLE TO RETRACT THE AWNING COMPLETELY TO PREVENT DAMAGE TO THE AWNING AND THE UNIT.**

What's Happening?	What Should Be Done?
Awning won't open or close.	If optional travel locks are installed, ensure that they have been unlocked.
	Verify the fuse is good.
	Check for power at the motor when the switch is in the extended or retracted position.
	Ensure battery is charged.
Awning pitch won't stay in the flat position.	Check for bad gas strut.
	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.
	Make sure all three washers are in the proper location of the pitch arm.



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What's Happening?	What Should Be Done?
Awning doesn't close all the way.	The awning is considered completely closed as long as the outer arm is overlapping the mount arm. This overlap can vary.
	Ensure there are no obstructions in the support arm assemblies preventing the awning from closing.
	Verify the fabric is square from unit to roll tube and is rolling up straight on the roll tube.
Awning runs slowly.	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.
	Ensure battery is charged.
	Ensure the pitch arms are not bent in an upward direction.
Awning seems to wobble when extending or retracting.	Ensure the bolts that hold the head to the support arm assemblies are tight.
	Ensure the end caps are seated properly on the roll tube.
	Ensure the shaft coming out of the head going to the end cap isn't bent.
	Ensure the wall mount is properly secured to the wall.
	Ensure no part of the support arm assemblies are bent.
	Ensure the wear collar spacers are all properly located in the support arm assemblies.
Awning rolls up backward.	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.



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