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by  Lippert Components®



Solera® Universal Hardware

Manual Awning to Solera® Classic Manual Awning

(For Aftermarket Applications)

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Introduction

System Information

The Solera® Classic Manual Awning is designed for use on most recreational vehicle units and is available in a variety of sizes to fit even the largest unit.

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

Additional Information Sources

Additional information about this product can be obtained from www.lci1.com/support or by using the myLCI app. Replacement components can be ordered from <https://store.lci1.com/> or by using the myLCI app. The myLCI app is available for free on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.

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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.

⚠ CAUTION

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

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.

Parts List



Universal Kit No.	Description
434717	Solera Classic Standard Kit - Black
434718	Solera Classic Standard Kit - White



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Preparation

Resources Required

- Additional Qualified Assistant
- Cordless or Electric Drill or Screw Gun
- Appropriate Drive and Drill Bits
- Socket Wrench
- 3/8" Socket
- Rivet Gun
- Locking Pliers
- Ladder
- Silicone Sealant
- Non-permanent Method of Marking

Conversion

Dometic Manual Awning to Solera Classic Manual Awning

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.

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.

1. With the awning fully retracted, make a non-permanent marking on the roll tube (**Fig.1A**) indicating the position of the cam lock (**Fig.1B**).

NOTE: This mark will assist in positioning the cam lock on the Solera Classic Manual Awning.

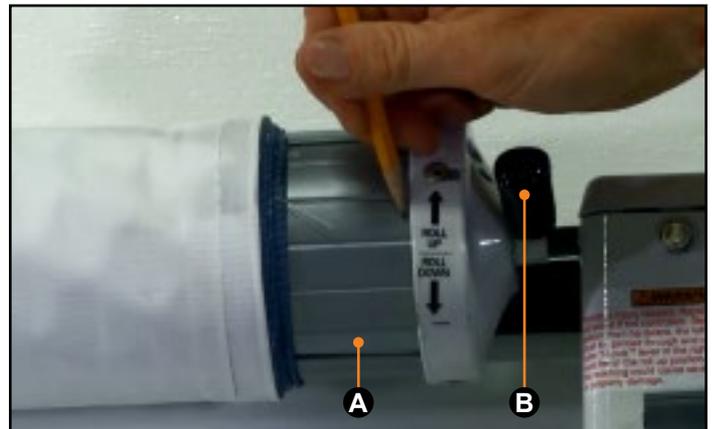


Fig.1



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2. Unlock the travel locks, move the cam lock to the roll out position and fully extend the awning.
3. Insert a cotter pin (**Fig.2C**) into the end cap (**Fig.2A**) at each end of the awning.
4. Pull the idler and drive side rafter arms (**Fig.2B**) up and lock it into the head of the support arm (**Fig.2D**).

NOTE: Be sure to tighten the tension knob (**Fig.3B**) on the idler and drive rafter arms before moving on.

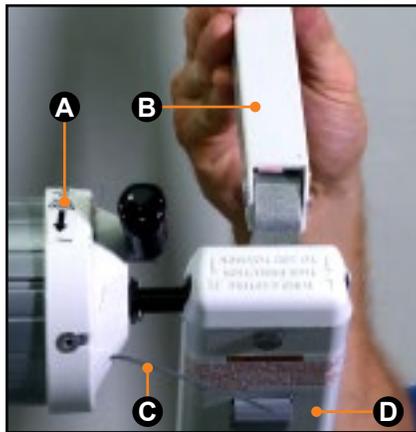


Fig.2

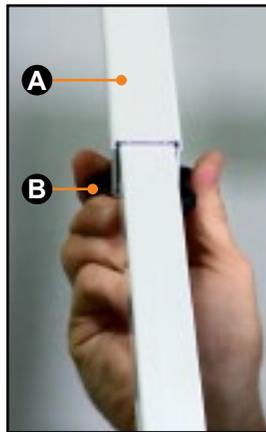


Fig.3

5. On the drive side of the awning, release the rafter arm. With the rafter arm lowered and out of way, have an assistant hold the roll tube and use a 3/8" socket to remove the bolt securing the drive head (**Fig.4A**) to the support arm (**Fig.4B**).

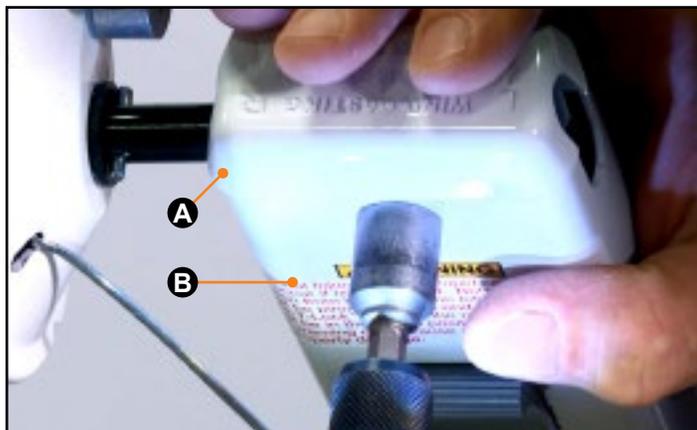


Fig.4

6. Separate the drive head from the support arm and secure the support arm to the unit in the travel position.
7. With an assistant holding the roll tube, firmly take hold of the drive head with a pair of locking pliers (**Fig.5**). 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 scratching components.



Fig.5

⚠ WARNING

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

8. Slowly release all of the tension by rotating the drive head with the locking pliers.
9. Using an appropriately sized drill bit, drill out the rivets attaching the end cap to the roll tube.



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10. Remove the spring assembly (Fig.6B) from the roll tube (Fig.6A).

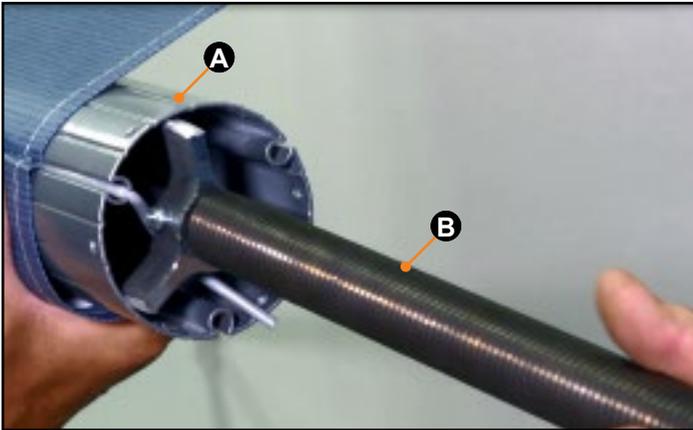


Fig.6

11. Locate the cam lock marking applied in Step 1 and slide the Solera spring assembly into the roll tube so that the cam lock lines up with the cam lock marking.

12. Place the Solera end cap onto the roll tube, making sure it is properly seated.

13. Secure the Solera end cap (Fig.7C) to the roll tube (Fig.7A) with the provided rivets (Fig.7B).

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

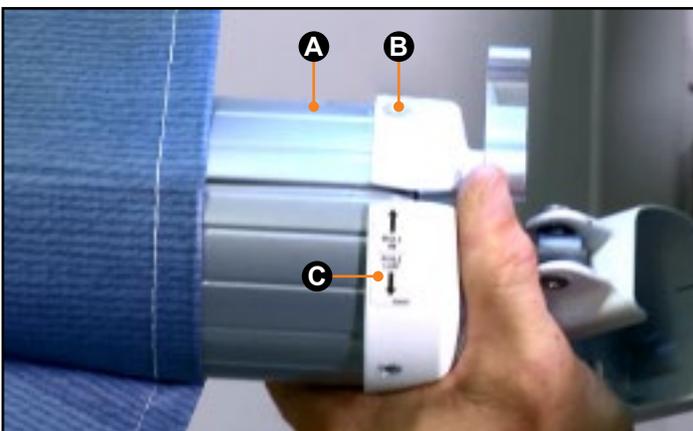


Fig.7

14. Remove the cotter pin from the Solera end cap and move the cam lock to the roll out position.

15. Apply tension to the spring assembly by turning the drive head in a counterclockwise direction. The number of turns is determined by the position and size of the awning.

Awning Size	Number of Turns	
	Retracted	Extended
6' - 10'	5	13
11' - 14'	6	14
15' - 18'	7	15
19' and up	10	18

NOTE: If the awning is in the extended position the springs will require more turns to set proper tension.

16. Insert a cotter pin into the end cap (Fig.8A) once the proper amount of tension has been set.

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

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

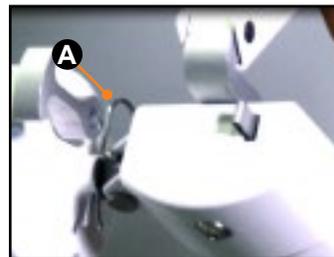


Fig.8



Fig.9

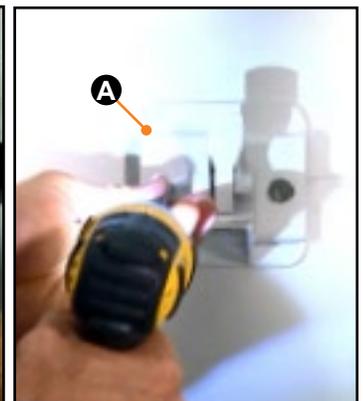


Fig.10



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19. Remove the fasteners from the lower mounting bracket (Fig.10A) of the support arm assembly.

20. Using the provided #10 - 32 x 2 1/2" screws, secure the Solera lower mounting bracket to the same location as the previous bracket and using the same holes.

NOTE: If for any reason the previous holes do not line up with the pre-drilled holes in the Solera lower mounting bracket, slide the provided spacer block between the wall of the unit and the lower mounting bracket before securing. This will help cover the holes and ensure a secure mounting surface.

21. Connect the bottom of the Solera support arm (Fig.11A) to the lower mounting bracket (Fig.11B).

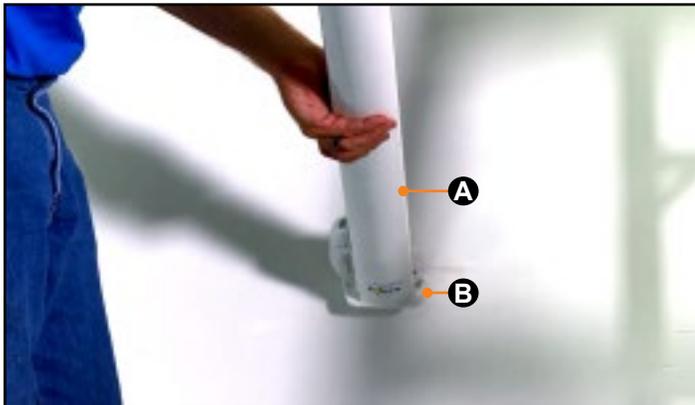


Fig.11

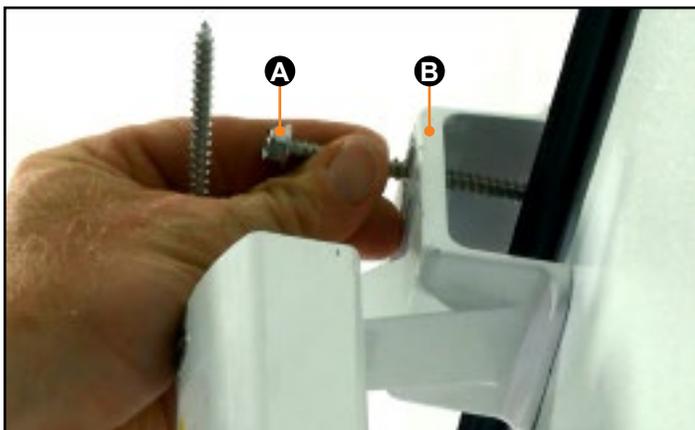


Fig.12

22. Using the provided #10 - 32 x 3 1/2" screws (Fig.12A), secure the Solera upper mounting bracket (Fig.12B) to the same location as the previous bracket and using the same holes.

23. Release the travel lock, extend the support arm and insert the top of the arm into the drive head, being sure to align the holes.

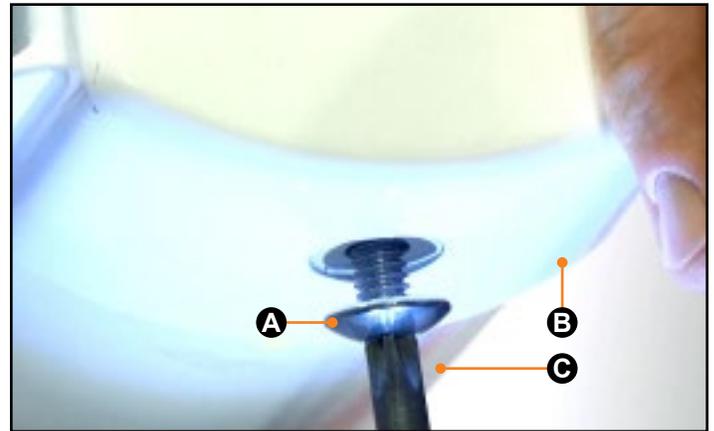


Fig.13

24. Secure the drive head (Fig.13B) to the support arm (Fig.13C) with the provided 1/4 - 20 x 1/2" screw (Fig.13A).

25. Pull the rafter arm (Fig.14A) up and lock it into the drive head (Fig.14B) on the support arm assembly.

26. Remove the slack from the fabric and secure the awning by tightening the tension knob (Fig.15B) on the rafter arm (Fig.15A).

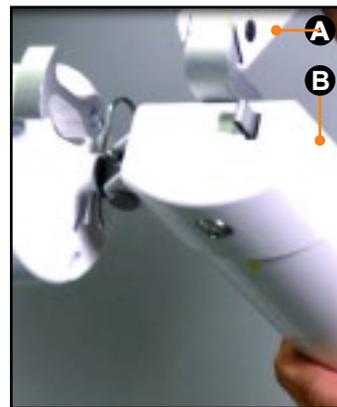


Fig.14

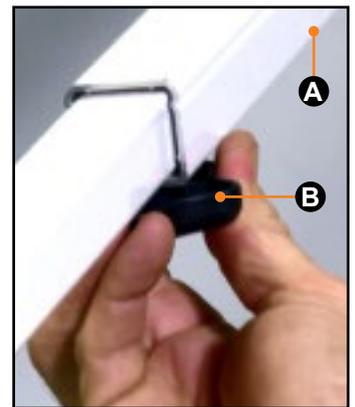


Fig.15



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27. Repeat Steps 5-26 for the idler side of the awning, skipping all cam lock instructions.

NOTE: The idler head does **NOT** have a cam lock, therefore the cotter pin is holding all the tension of the spring assembly. Make sure to have a firm hold with pliers prior to removing the cotter pin.

NOTE: The drive side cam lock **MUST** be in the roll out position.

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

NOTE: Make sure the idler head is facing the same direction at the same angle as the drive head when sliding the idler head into the roll tube (with cotter pin in the idler head).

28. Once the drive and idler side conversions are complete, remove the cotter pins from each end of the roll tube.

29. Adjust the height of the roll tube using the support arm lever (**Fig.16A**) so that the center of the roll tube is even with or slightly higher than the awning rail.

30. Locate the nearest hole on the lower arm and make a non-permanent marking for the stop bolt location.

31. Extend the support arm (**Fig.16B**) to gain full access to the hole marked for the stop bolt (**Fig.16C**).

32. Insert the bolt into the marked hole from the inside of the support arm (**Fig.16B**) and secure it with a lock washer and acorn nut.

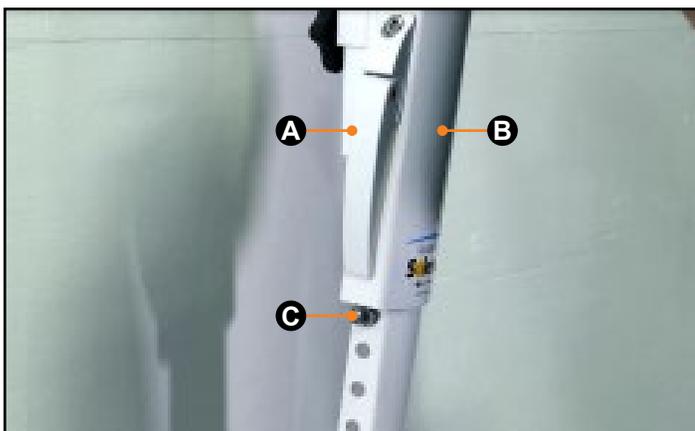


Fig.16

Carefree Manual Awning to Solera Classic Manual 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.

1. With the awning fully retracted, make a non-permanent marking on the roll tube (**Fig.17A**) indicating the position of the cam lock (**Fig.17B**).

NOTE: This mark will assist in positioning the cam lock on the Solera Classic Manual Awning.

NOTE: If this is a remote lock system the cam lock may be located on the back side of the roll tube. If this is the case, mark the front side of the roll tube where the cam lock would be convenient to place.

2. Unlock the remote and travel locks, move the cam lock to the roll out position and fully extend the awning.

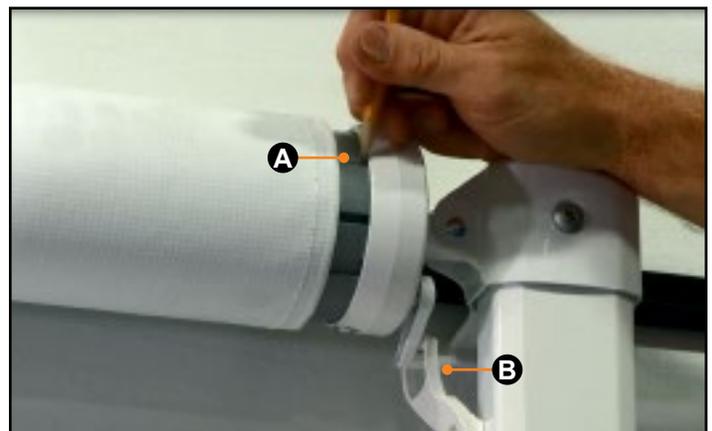


Fig.17



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3. Insert a cotter pin (**Fig.18A**) into the end cap (**Fig.18B**) at each end of the awning.

NOTE: Some 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.

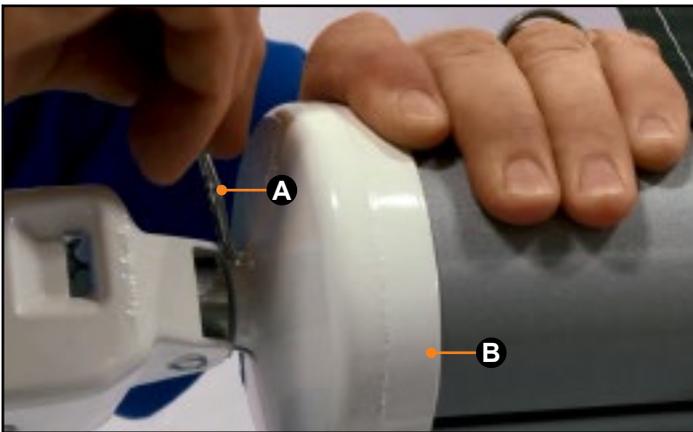


Fig.18

4. At the idler side of the awning, slide the rafter arm (**Fig.19A**) up and lock it into the head of the support arm (**Fig.19C**).

NOTE: Be sure to tighten the tension knob (**Fig.19B**) on the idler side of the awning before moving on to the drive side of the awning.

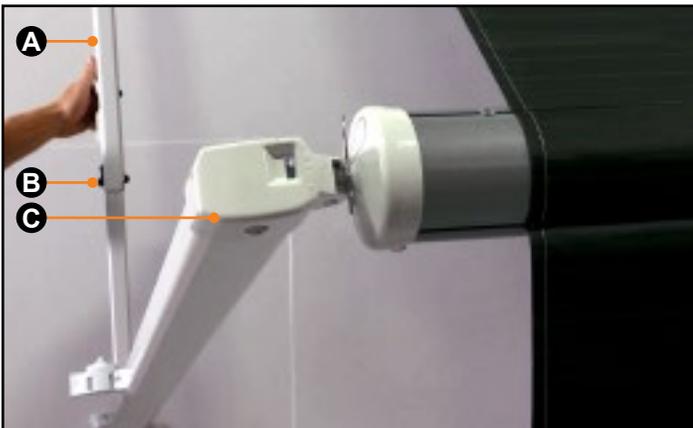


Fig.19

5. On the drive side of the awning, if equipped, remove the cam lock assist (**Fig.20B**) from the lock pin (**Fig.20A**), making sure the cam lock remains in the roll out position.

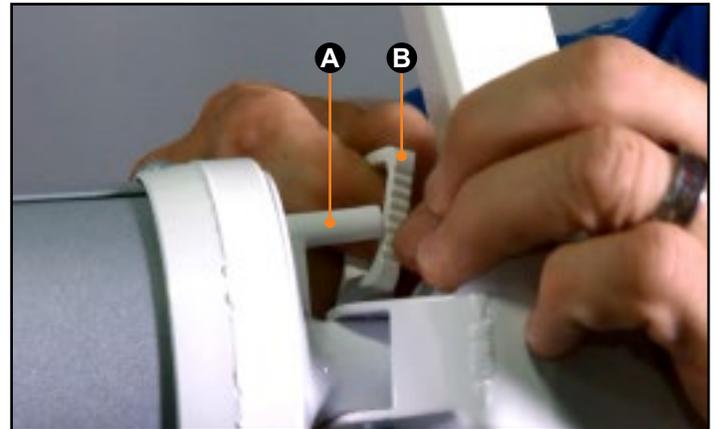


Fig.20

6. With an assistant holding the roll tube (**Fig.21A**), remove the fastener securing the drive head (**Fig.21B**) to the support arm.

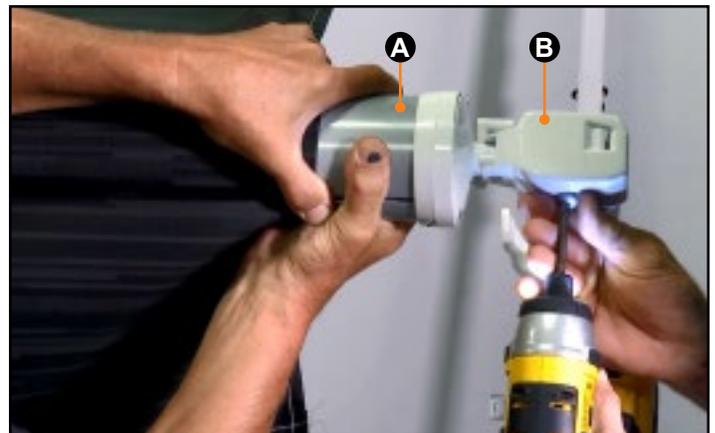


Fig.21



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

⚠ WARNING

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

8. With an assistant holding the roll tube, firmly take hold of the drive head with a pair of locking pliers (Fig.5). Remove the cotter pin from the end cap and move the cam lock to the roll up position. Slowly release the tension by rotating the drive head with the locking pliers.

NOTE: Padding the locking pliers will prevent scratching components.

9. Remove the 3 screws securing the end cap (Fig.22B) to the roll tube (Fig.22A).

10. Remove the end cap (Fig.23C) and spring assembly (Fig.23B) from the roll tube (Fig.23A).

11. Locate the cam lock marking applied in Step 1 and slide the Solera spring assembly into the roll tube so that the cam lock lines up with the cam lock marking.

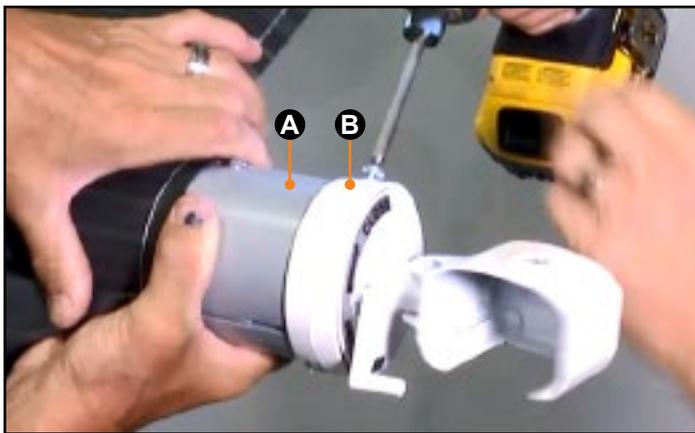


Fig.22

12. Place the Solera end cap onto the roll tube, making sure it is properly seated.

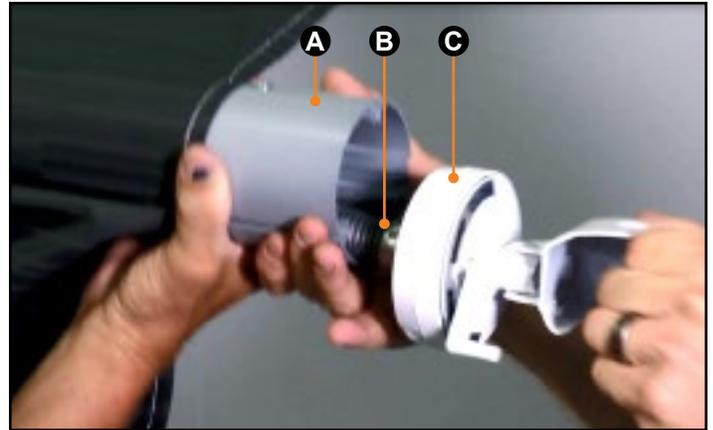


Fig.23

13. Secure the Solera end cap (Fig.24C) to the roll tube (Fig.24A) with the provided rivets (Fig.24B).

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

14. Remove the cotter pin from the end cap and move the cam lock to the roll out position.

15. Apply tension to the spring assembly by turning the drive head in a counterclockwise direction. The number of turns is determined by the position and size of the awning.

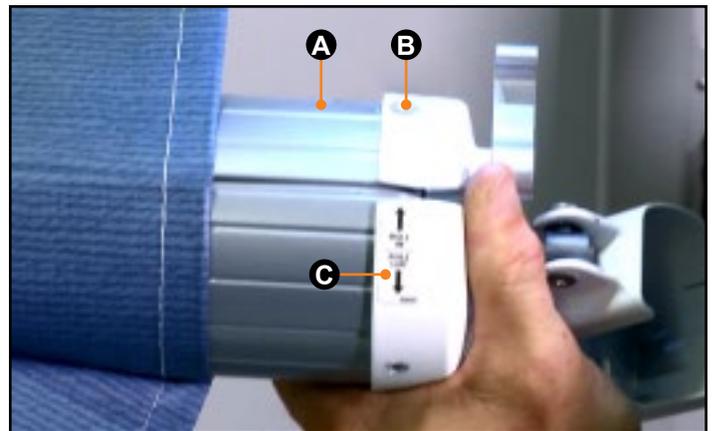


Fig.24



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16. Insert a cotter pin into the end cap once the proper amount of tension has been set.

17. Remove the fasteners from the upper mounting bracket of the support arm assembly (Fig.25).

Awning Size	Number of Turns	
	Retracted	Extended
6' - 10'	5	13
11' - 14'	6	14
15' - 18'	7	15
19' and up	10	18

NOTE: If the awning is in the extended position the springs will require more turns to set proper tension.

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



Fig.25

19. Remove the fasteners from the lower mounting bracket of the support arm assembly (Fig.26).

20. Using the provided #10 - 32 x 2 1/2" screws, secure the Solera lower mounting bracket to the same location as the previous bracket and using the same holes.



Fig.26

NOTE: If for any reason the previous holes do not line up with the pre-drilled holes in the Solera lower mounting bracket, slide the included spacer block between the wall of the unit and the lower mounting bracket before securing. This will help cover the holes and ensure a secure mounting surface.

21. Connect the bottom of the Solera support arm (Fig.27A) to the lower mounting bracket (Fig.27B).

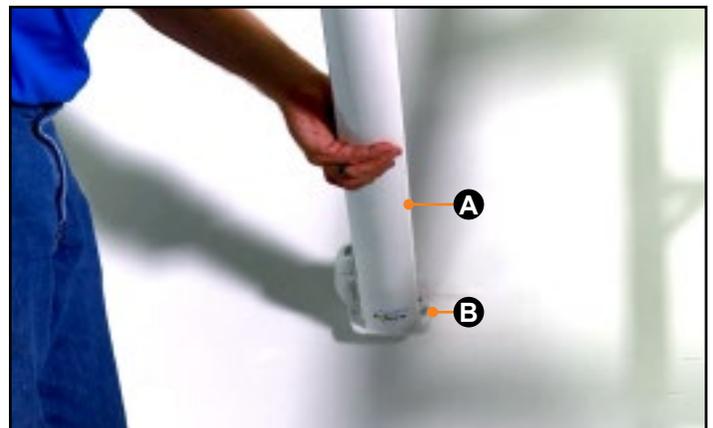


Fig.27



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22. Using the provided #10 - 32 x 3 1/2" screws (Fig.28A), secure the Solera upper mounting bracket (Fig.28B) to the same location as the previous bracket and using the same holes.

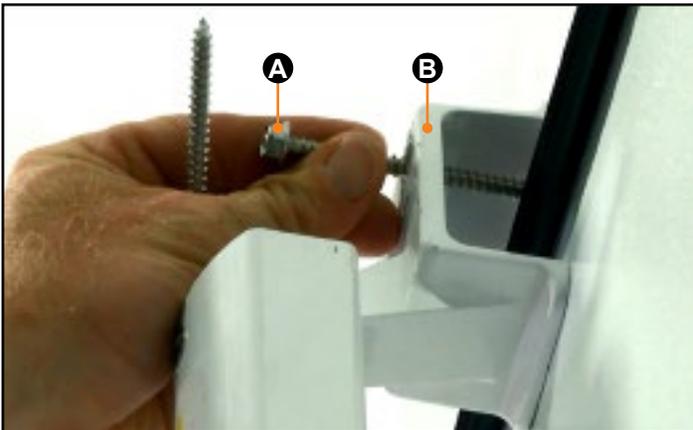


Fig.28

23. Release the travel lock, extend the support arm and insert the top of the arm into the drive head, being sure to align the holes.

24. Secure the drive head (Fig.29B) to the support arm (Fig.29C) with the provided 1/4 - 20 x 1/2" screw (Fig.29A).

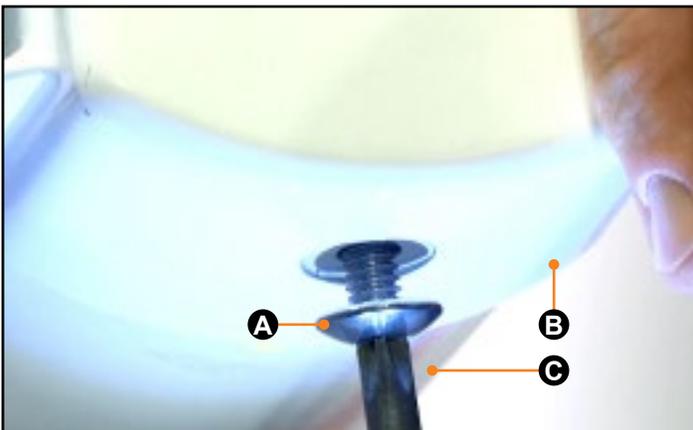


Fig.29

25. Pull the rafter arm (Fig.30A) up and lock it into drive head (Fig.30B) on the support arm assembly.

26. Remove the slack from the fabric and secure the awning by tightening the tension knob (Fig.31B) on the rafter arm (Fig.31A).

27. Repeat Steps 6-26 for the idler side of the awning, skipping all cam lock instructions.

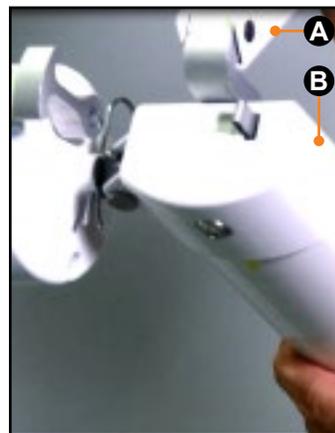


Fig.30

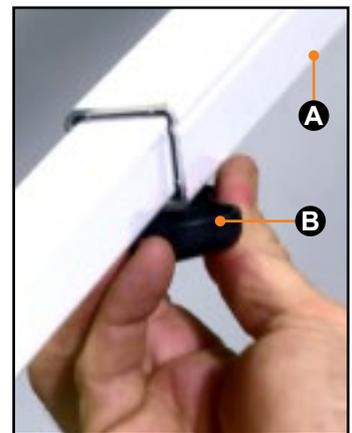


Fig.31

NOTE: The idler head does **NOT** have a cam lock, and therefore, the cotter pin is holding all the tension of the spring assembly. Make sure to have a firm hold with pliers prior to removing the cotter pin.

NOTE: The drive side cam lock **MUST** be in the roll out position.

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

NOTE: Make sure the idler head is facing the same direction at the same angle as the drive head when sliding the idler head into the roll tube (with cotter pin in the idler head).

28. Once the drive and idler side conversions are complete, remove the cotter pins from each end of the roll tube and retract the awning.

29. Adjust the height of the roll tube using the support arm lever (Fig.31A) so that the center of the roll tube is even with or slightly higher than the awning rail.



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30. Locate the nearest hole on the lower channel and make a non permanent marking for the stop bolt location.

31. Extend the awning 12".

32. Extend the support arm (Fig.32B) to gain full access to the hole marked for the stop bolt (Fig.32C).

33. Insert the bolt into the marked hole from the inside of the support arm (Fig.32B) and secure it with a lock washer and acorn nut.

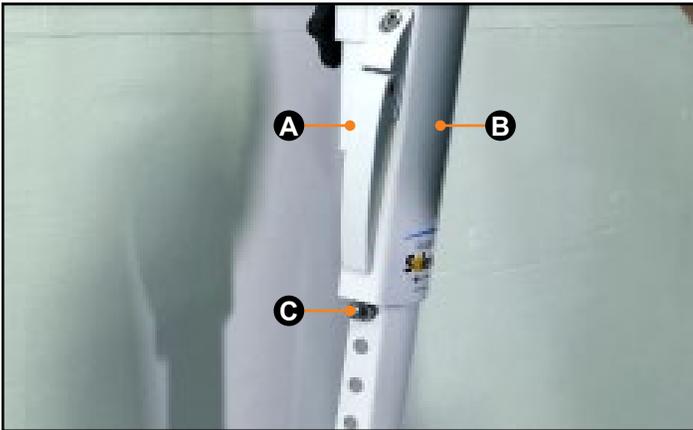


Fig.32

Operation

Extending the Awning

1. Make sure the black locking knobs (Fig.33C) on the rafter arm upper channel (Fig.33B) are loosened and pinch the travel locks together to release the outer arm (Fig.33A and Fig.33E) from the rafter arm (Fig.33B and Fig.33D).

2. Flip cam lock down to the roll out position.

3. Using the pull rod, start pulling the awning outward until full extension is complete.

4. Slide the rafter arms (Fig.33B and Fig.33D) all the way to the top of the outer arm (Fig.33A and Fig.33E) and make sure they lock into place.

5. Pull on the rafter arm (Fig.33B and Fig.33D) to ensure the fabric is taut and tighten the black locking knob (Fig.33C) to lock it into place.

6. Raise the outer arms (Fig.33A and Fig.33E) to the desired height by releasing the support arm assembly handle and allow the outer arm upper channel (Fig.33A) to slide on the outer arm lower channel (Fig.33E). Once to the desired height, let go of the support arm assembly handle to lock the arm at this position.

7. Slide the pull strap to one end or the other and wrap it around the arm to get it out of the way.

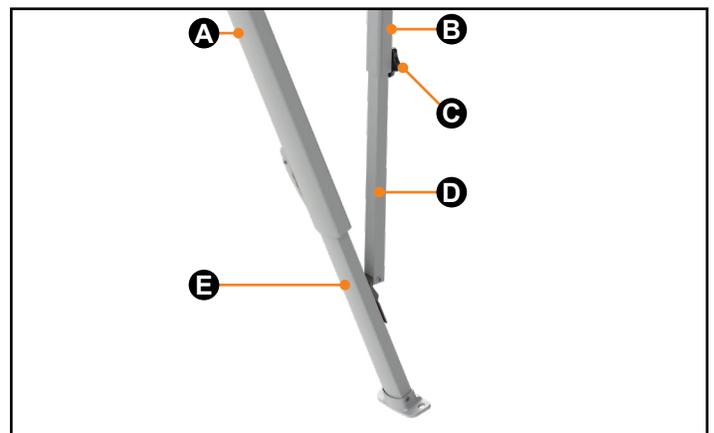


Fig.33



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Optional Carport Position

1. Once all the above steps are complete, remove the outer arm (**Fig.33A and Fig.33E**) from the side of the unit by releasing the lever on the lower mounting bracket.
2. Walk the awning out until the outer arm (**Fig.33A and Fig.33E**) is straight up and down and let it set on the ground.
3. Make sure to secure the foot of the outer arm (**Fig.33A and Fig.33E**) to the ground with the provided stakes.

Retracting the Awning

1. If in carport mode, remove the stakes from the foot of the outer arm (**Fig.33A and Fig.33E**). Then walk the outer arm back to the unit and secure it to the lower mounting bracket on the sidewall of the unit. Do this for both ends.
2. Take the awning pull strap and return it to the center of the awning roll tube.
3. Lower the roll tube by holding the outer arm (**Fig.33A and Fig.33E**) and releasing the support arm assembly handle on the side. Let the outer arm upper channel (**Fig.33A**) slide down the outer arm lower channel (**Fig.33E**) until it rests on the acorn nut. Repeat this for the other end.
4. Loosen the black locking knob (**Fig.33C**) and unlock the rafter arm (**Fig.33B and Fig.33D**) by releasing the spring clip from the top of the head assembly. Allow the rafter arm to slide all the way down toward the bottom of the outer arm (**Fig.33A and Fig.33E**). Repeat this for both ends.
5. Take a firm hold on the awning strap and release the tension on the springs by flipping the cam lock up to the roll in position.
6. Walk the awning in toward the unit. Hook the pull rod into the pull strap before the strap gets too high. Using the pull rod, walk the awning to the fully-closed position.
7. Lock the arms for travel mode by compressing the outer arm (**Fig.33A and Fig.33E**) and rafter arm (**Fig.33B and Fig.33D**) together until the red tab disappears. Then tighten the black locking knob (**Fig.33C**).

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

Solera Classic Awning Troubleshooting

What's Happening?	What Should Be Done?
Awning will not extend.	Check position of the cam lock (roll out).
	Ensure that the travel locks have been released from the outer arm.
	Make sure the locking knob for the rafters has been loosened.
	Check to see if the outer arm is resting on the mount/rafter arm. If so, the outer arm height adjustment is not set properly.
Awning will not retract or only retracts part way.	Make sure the mount/rafter arms have been put in the stored position and the locking knob has not been tightened.
	Check position of cam lock (roll in).
	Ensure the outer arms have been placed in the closed/stored position.
	Ensure the awning has the proper tension on it.
Fabric is loose or sags on the edges and middle.	Make sure that the mount/rafter arm has been pulled tight and the locking knob is secured.
	Check that the fabric is square on the unit and with the roll tube.
	Make sure the fabric is properly secured to the awning rail on the unit.
	Make sure roll tube is not bent.
Locking knob will not tighten.	The nut for this is a thread part that tightens the arms together. Open the awning and check when turning the knob that the nut is not stripped out. If it is not stripped, it would require replacing both parts.
Mount/rafter arm will not extend.	Make sure the locking knob has been loosened.
	Make sure there is no debris in the track the arm slides in.
	Make sure arm is not bent.
Awning will not roll up straight.	Check to make sure fabric is centered on roll tube and also centered between the arms attached to the unit.
	If the fabric is not centered, remove the screws on both ends of the awning and shift the fabric accordingly.
	Make sure there are screws at both ends of the fabric securing it to the roll tube and at the awning rail. If there is only one screw at one end and not the other, the awning may not roll up correctly.
	Make sure the legs are square and straight.
Awning will not stay in the rolled out position.	Check the cam lock. Signs of a faulty cam lock include: The absence of a clicking noise when the awning is rolled out. The awning rolling back up after it is placed in the stop position.

