



# *Service Manual*

## **APEX 2 Stage**

Product style codes: ZJ, Z2

**RV**

*with Direct Response Electronics*



Read this manual before installing or servicing this product. Failure to follow the instructions and safety precautions in this manual can result in personal injury and/or cause the product to not operate properly.



# TABLE OF CONTENTS

<b>Product Overview</b> .....	<b>1</b>
Apex Patio Awning Specifications .....	1
<b>Standard System Adjustments</b> .....	<b>2</b>
Motor Limit Switches.....	2
Adjusting the OUT Limit Switch .....	2
Adjusting the IN Limit Switch .....	2
Adjusting the Pitch.....	3
Manual Override .....	3
Standard Maintenance.....	4
Fabric Care .....	5
Mildew.....	5
Pooling .....	5
Arm Care.....	5
Motor Maintenance .....	5
<b>Canopy Replacement</b> .....	<b>6</b>
<b>Motor Replacement</b> .....	<b>7</b>
<b>Spring Arm Replacement</b> .....	<b>8</b>
<b>Replacing the Motion Sensor</b> .....	<b>10</b>
<b>Removing the Awning</b> .....	<b>11</b>
<b>Diagnostics/Troubleshooting</b> .....	<b>12</b>
<b>Illustrated Parts Listings</b> .....	<b>13</b>
Serial Number Location .....	13
Awning Components.....	13

## PROPRIETARY STATEMENT

The Apex 2-Stage Patio Awning is a product of Carefree of Colorado, located in Broomfield, Colorado, USA. The information contained in or disclosed in this document is considered proprietary to Carefree of Colorado. Every effort has been made to ensure that the information presented in the document is accurate and complete. However, Carefree of Colorado assumes no liability for errors or for any damages that result from the use of this document.

The information contained in this manual pertains to the current configuration of the models listed on the title page. Earlier model configurations may differ from the information given. Carefree of Colorado reserves the right to cancel, change, alter or add any parts and assemblies, described in this manual, without prior notice.

Carefree of Colorado agrees to allow the reproduction of this document for use with Carefree of Colorado products only. Any other reproduction or translation of this document in whole or part is strictly prohibited without prior written approval from Carefree of Colorado.

## SAFETY INFORMATION



This is the safety alert symbol. It is used to alert individuals to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible personal injury or death.



Indicates a hazardous situation, which if not avoided, could result in death or serious bodily injury.



Indicates a hazardous situation, which if not avoided, may result in minor or moderate bodily injury.



Indicates a situation that may result in equipment-related damage.

### General Safety:



This product can expose you to chemicals including Di-isodecyl phthalate (DIDP), Vinyl Chloride and Formaldehyde, which are known to the state of California to cause cancer or birth defects or other reproductive harm. For more information visit [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)



Shock Hazard. Always disconnect battery or power source before working on or around the electrical system.



Always wear appropriate safety equipment (i.e. goggles).



Always use appropriate lifting devices and/or helpers when lifting or holding heavy objects.



When using fasteners, do not over tighten. Soft materials such as fiberglass and aluminum can be "stripped out" and lose the ability to grip and hold.

Electric components in this product have been tested by the following agencies:



**Motor:** UL Recognized (USA)  
CSA Approved (Canada)

**Controls:** UL Listed (USA & Canada)





## PRODUCT OVERVIEW

The Apex 2-Stage Patio Awning offers the coach owner an awning system that provides as much or as little shade as required. The canopies are housed in an aluminum case that easily blends in with the coach roof. The awning extends to a maximum of 10 feet from the side wall. The canopy is made from Acrylic fabric.

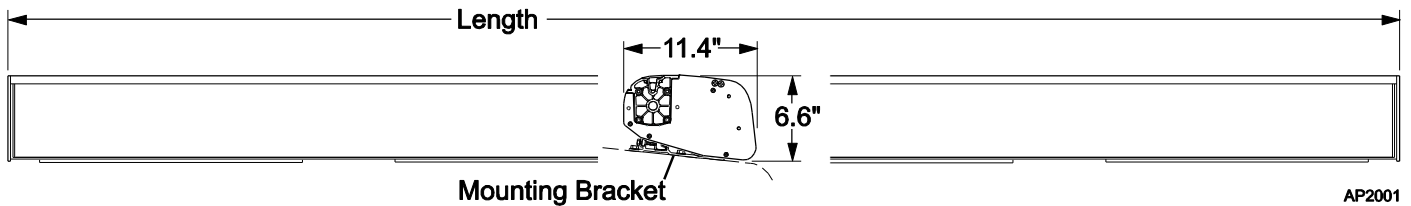
Each unit is equipped with lateral support arms that are the strongest available on the market. No vertical arms interfere with coach sidewalls or equipment that may be mounted on the roof. These arms can also be adjusted to vary the canopy pitch up to 3 feet (it is strongly recommended that service and adjustments be performed by trained technicians).

The DR110 Awning Control System provides flexibility for 110V awning controls for a single patio awning or for multiple awnings including 12V window and door (OtD) awnings.

The Carefree mobile app uses BLUETOOTH® enabled controls. The app provides awning control, adjustable white and RGB LED control and adjustable sensitivity for auto-retract. The app provides individual controls for each awning and allows awnings and lights to be grouped to operate simultaneously.

### Apex Patio Awning Specifications

The following information is for reference only. Specific information is detailed in the installation instructions.



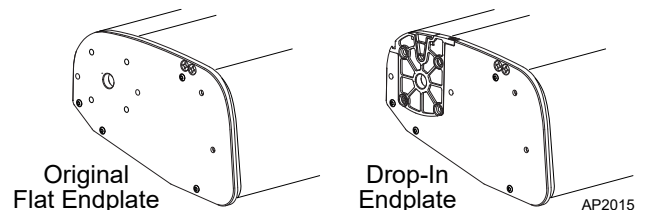
<b>LENGTHS:</b>	12' – 21'	
<b>EXTENSION:</b>	10'	
<b>FUNCTION CONTROLS:</b>	Direct Response with qa single master control and single remote for all awnings	
<b>MOTOR SPECIFICATIONS:</b>	Available in LH or RH configurations	
Type:	Tubular Motor	
Power:	120V, 60HZ, 2.5A	
Torque:	60 nm	
Speed:	14 RPM	
Cycle:	40 Sec ON / 1 Min OFF	
<b>COLORS AVAILABLE:</b>	Case:	Black
	Fabric:	Woven Acrylic Fabric refer to order form for available colors

- Notes:
1. The Apex awning measurement is end of case to end of case.
  2. The awning uses 4 mounting brackets that are 7" wide and 24" long.

Optional factory installed 12V LED lighting (mounted in the lead rail) is available for the Apex awning. LED lighting requires a separate 12V control switch.

Starting in 2020, a new case endplate assembly will be used for production units. The new endplate has removable drop-in plates to simplify roller tube access for canopy replacement and motor replacement.

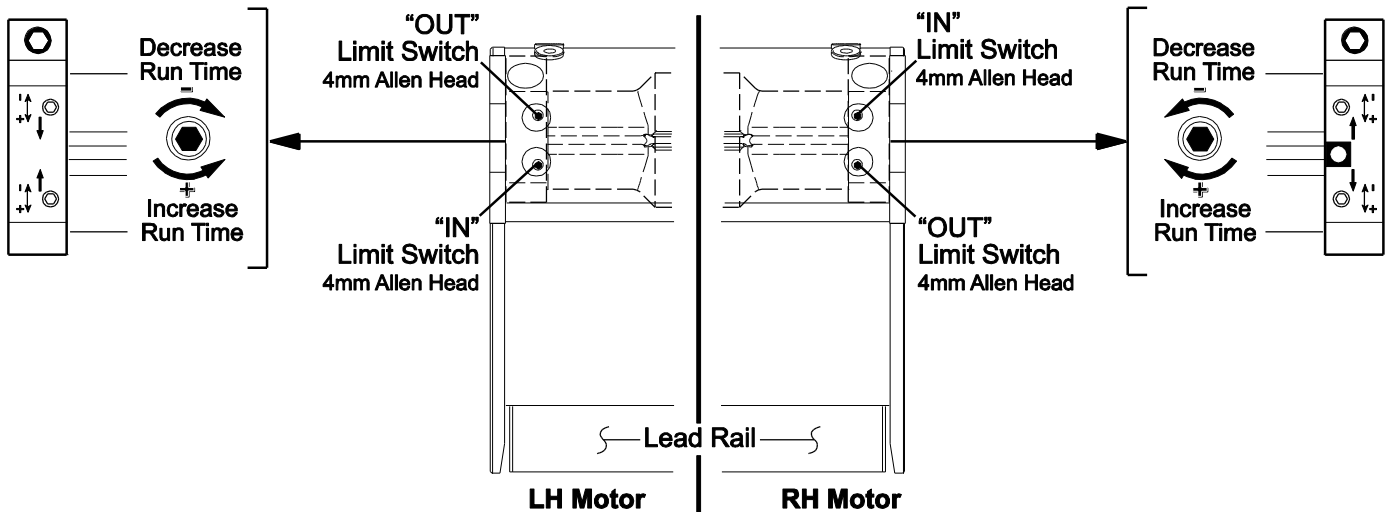
The new endplates will be available for replacements and upgrades starting in 2020.



## STANDARD SYSTEM ADJUSTMENTS

### MOTOR LIMIT SWITCHES

The motor limit switches are preset at the factory for best operation. The "OUT" limit switch is used to stop the motor when the awning is fully extended. The "IN" limit is NOT USED with the *Direct Response* system.



The limit switches are located inside the case, near the end plate. To access the switches, remove the rubber plugs on top of the case next to the end plate.

AP2005

### Adjusting the OUT Limit Switch

**NOTE:** During normal operation, the awning will extend out then roll back slightly to tension the fabric.

1. Extend the awning out completely.
2. Confirm that the arms are fully extended. The motor should stop and the fabric should be tight. If the motor continues to run, the fabric will sag; or, if the motor quits before the arms are fully extended, it will be necessary to adjust the "OUT" limit switch.

**NOTE:** It is best to make the adjustments in increments of a single turn. 3 full turns of the screw equals approximately 2" of fabric extension.

3. If the fabric sags:
  - 3.1. Retract the awning until the fabric is tight then retract an addition 10"-12".
  - 3.2. Using a 4mm Allen wrench turn the "OUT" limit switch COUNTERCLOCKWISE to reduce the time the motor runs.
  - 3.3. Extend to confirm that the adjustment is correct.
  - 3.4. Repeat the procedure until the awning extends correctly.
4. If the arms do not extend completely:
  - 4.1. Retract the awning approximately 10"-12".
  - 4.2. Using a 4mm Allen wrench turn the "OUT" limit switch CLOCKWISE to increase the time the motor runs.
  - 4.3. Extend to confirm that the adjustment is correct.
  - 4.4. Repeat the procedure until the awning extends correctly.

### Adjusting the IN Limit Switch

**NOTE:** The "IN" limit switch is not adjusted with the Direct Response system. The system electronics monitors the motor and shuts the motor off when the awning is fully retracted.

If the IN limit switch is accidentally adjusted, the motor may shut off before the awning is fully closed. If this occurs, turn the "IN" adjustment screw to INCREASE the motor run time. It is not necessary that the screw matches the closed position.

**NOTE:** It is normal for the lead rail to slightly relax after the awning closes completely.

## ADJUSTING THE PITCH

The awning is factory set with minimum pitch. The amount of adjustment for increasing pitch may be limited by the mounting height above a door opening.

**NOTICE** During installation or when the pitch of the awning is adjusted, it is important that the lead rail is parallel to the awning housing.

1. Extend the awning fully.

*To Lower the Pitch:*

2. SLIGHTLY loosen the M12 hex screw on the side of the knuckle.
3. On the front of arm knuckle turn the M12 hex screw COUNTERCLOCKWISE to lower the pitch.
4. Tighten the M12 setscrew until snug.

*To Raise the Pitch:*

5. SLIGHTLY loosen the M12 hex screw on the side of the knuckle.

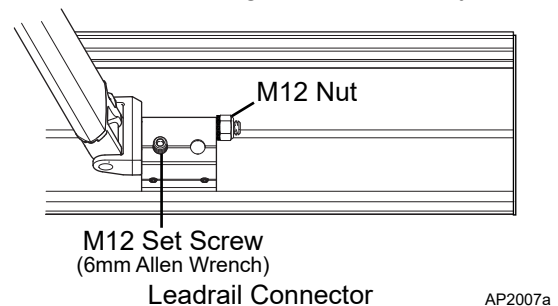
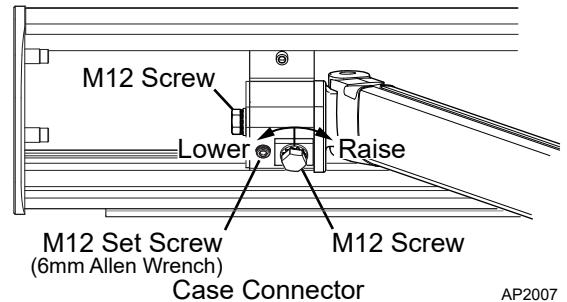
6. Loosen the M12 set screw several rotations.
7. On the front of arm knuckle turn the M12 hex screw CLOCKWISE to raise the pitch.

**NOTE:** When raising the pitch, it is helpful to have a second person lift up on the lead rail.

8. Tighten the M12 set screw until snug.
9. Repeat steps 5 through 8 for the other end.
10. When the pitch adjustments are completed, tighten the M12 screws on the side of the knuckle.

When the pitch is adjusted, it is necessary to adjust the angle of the lead rail for the awning to close correctly.

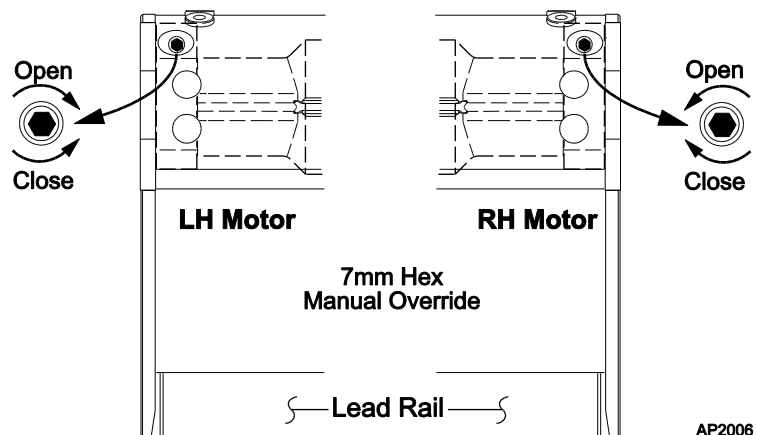
11. SLIGHTLY loosen the M12 nut on the side of each arm knuckle on the lead rail.
12. Turn the M12 setscrews of each knuckle to increase or decrease the angle of the lead rail. The bottom of the lead rail should be parallel with the ground.
13. When the lead rail adjustments are completed, tighten the nut on the side of the knuckles.



## MANUAL OVERRIDE

If 110V power is not available to the coach, the Apex awning can still be safely retracted using the manual override.

1. The bypass is located inside the case, near the end cap. Remove the large rubber plug located toward the rear of the case on the motor side of the awning.
2. Chuck the 7mm hex key into a 3/8" battery powered drill.
3. Insert the hex key into the manual override on the awning.
4. Operate the drill in the direction shown in the diagram to close the awning. Reverse the drill to open the awning.
5. When done, reinsert the rubber plug.



## PROGRAMMING THE RF RECEIVER FOR A REMOTE

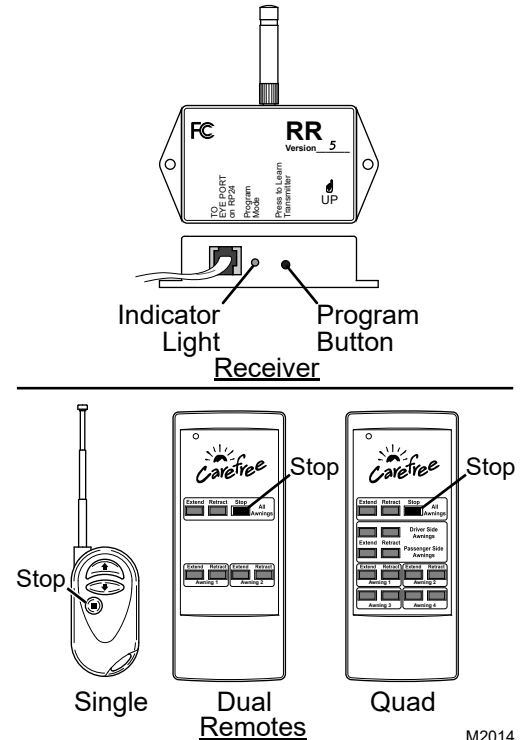
When adding or replacing a remote control or receiver, it is necessary to program the transmitter and receiver.

1. Power to the control box must be on.
2. Locate the receiver box.
3. Press and release the “Press to Learn Transmitter” button on the bottom of the receiver. The receiver is in program mode when the red light comes on.
4. For Single Awning Key FOBS: Press and release the STOP button on the remote. The red light will go out after the receiver learns the remote signal.

**NOTE:** Pressing the stop button will cause the blue up arrow button to default as the open (extend) function.

If a function button is pressed to train the receiver, it will be programmed as the open (extend) button. Example: Pressing the bottom button will program the bottom button for extend and the top button as retract.

5. For Multiple Awning Remotes: Press and release the ANY button on the remote. It is recommended to use the STOP button. The red light will go out after the receiver learns the remote signal.



**CAUTION** When the receiver learns the transmitter signal, the system will perform the operation of the button pressed. Example: Pressing an "Extend" button during the learning phase will cause the awning to extend when the receiver learns the signal. Use caution to avoid unexpected movement by the awning.

6. Repeat for each additional remote.

### Operational Notes:

- The transmitter and receiver operate on a frequency of 433MHz.
- The receiver exits the program mode after ten seconds.
- If the light does not come on in step 2, the memory is full and must be cleared. If the light still does not come on, check the continuity of the cord between the boxes and repair or replace as required. Pin 1 of the 1<sup>st</sup> connector goes to pin 1 of the 2<sup>nd</sup> connector etc.
- If the light does not go out above, the receiver knows the transmitter signal or the battery in the Remote needs to be replaced.
- To clear the memory: PRESS AND HOLD the receiver learn button. While holding the button, the indicator light should be OFF for the full 5 seconds then come on.
- The receiver may be programmed for up to 5 remotes. Additional remotes may be ordered separately.

### Remote Batteries

The Key FOB remote w/ antenna uses a battery (Radio Shack p/n 23-279 or equivalent) that should provide a long period of service. To access: Remove the small screw from the back of the case and carefully snap off the back. Lift the old battery out and insert the new battery.

Multiple awning remotes use two standard AAA Batteries that should provide a long period of service. To access: open the access cover on the back of the case.

Batteries are available through local battery outlets.

Battery life is dependent on frequency of use, environmental conditions and condition of remote.

## STANDARD MAINTENANCE

Maintaining the Carefree APEX Awning is easy. Just follow these basic steps:

- Always operate the awning according to the instructions.
- Periodically check that the fasteners are tight. Tighten if necessary.
- Keep the awning fabric and arms clean.

### ***Fabric Care***

**NOTICE** Do not use oil based cleaners or any caustic, granulated, or abrasive type cleaners on your Carefree product.

1. One of the best ways to keep the fabric looking good and to delay the need for deep or vigorous cleanings is to hose fabrics off on a monthly basis with clear water. This practice will help prevent dirt from becoming deeply imbedded in the fabric. In most environments, a thorough cleaning will be needed every two to three years.
2. When it's time for a thorough cleaning, the fabric can be cleaned while still on an awning frame.
  - For Vinyl Fabric – Use a soft brush and warm water with soap.
  - For Acrylic Fabric – Use a stiff brush and warm water with soap.
3. When cleaning the fabric, it is important to observe the following:
  - Always use a natural soap, never detergent.
  - Water should be cold to lukewarm, never more than 100°F.
  - Air-dry only. Never apply heat to the fabric.
  - Always allow the fabric to dry thoroughly before rolling up the awning.

### ***Mildew***

Mildew is a fungus growth that looks like dirt. Vinyl coated polyester fabrics are mildew resistant because of a chemical biocide in the vinyl coating. Under ordinary conditions, mildew will not appear. However, in areas where high temperature and humidity are common, mildew can be a problem and required the material to be washed more frequently. Thoroughly rinse the fabric with clean water and allow to air dry completely before rolling up the awning.

### ***Pooling***

When water collects on the top of the fabric, this is known as "pooling". This can occur during inclement weather or if a running air conditioner discharges over the awning. The water is dumped when the awning is retracted. It is recommended that if water accumulates on the top; retract the awning in steps (8"-12") to dump the water. This will help prevent the fabric from stretching or distorting.

**The effects of wind and rain on an awning are unpredictable. Severe damage to the awning and the vehicle may result. IF WIND OR EXTENDED PERIODS OF RAIN ARE EXPECTED, ROLL UP THE AWNING AND SECURE FOR TRAVEL.**

### ***Arm Care***

The best method of keeping the arms and braces operating smoothly is to clean them. Dirt and debris can cause the channels not to slide easily.

**NOTE:** Avoid introducing water into the motorized housings.

Periodically wash out the channels with running water (i.e. a hose) to keep them clean. If the channels still do not slide easily, lightly spray the joints with a dry silicone lubricant after the arms have been cleaned and dried thoroughly.

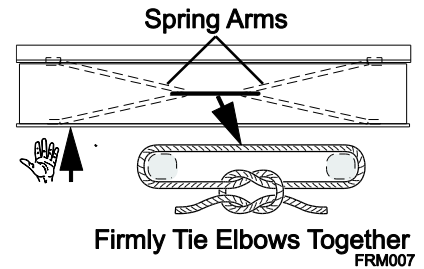
### ***Motor Maintenance***

- Check all wiring and connections for wear. Repair when needed.

# CANOPY REPLACEMENT

During the following instructions, use the manual override procedure on page 3 to open and close the awning.

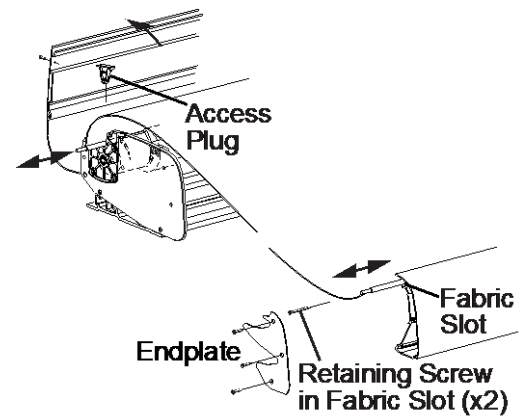
1. Disconnect power to the awning.
2. Using the manual override (page 3), open the awning 18"-24".
3. Push the lead rail toward the case so that the arms collapse and the fabric is slack. Firmly tie the elbows of the spring arms together. Use a minimum 1/2" rope - do not use bungee cords. When tying the rope, use a non-slip knot such as a square knot or equivalent.



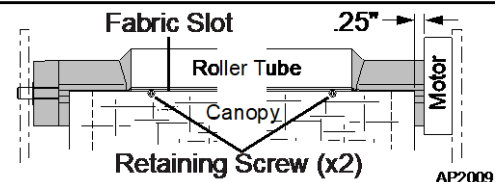
**CAUTION** Failure to secure the lead rail as described will allow the spring arms to extend out possibly causing personal injury and damage to the awning.

1. Remove the lead rail endplate and fabric retainer screw from the fabric slot on both sides and set aside.
2. Remove the top screws holding the top cover. Rotate the top cover back and out of the way. If rotated back without obstructions, the top cover will disengage from the pivot rail and can be set aside.

3. Use the manual override (page 3) to unroll the canopy until the fabric slot is exposed on top of the roller tube.
4. Remove the fabric retaining screws from the roller tube.
5. Remove the access plug from the top of the idler endplate.
6. From the idler side, slide the old canopy out of the roller tube and lead rail.
7. Inspect the slots in the roll bar and lead rail. Clean and deburr as required. Lightly spraying the inside of the slot with a dry silicone lubricant will aid in sliding the new fabric in.



8. Slide the new canopy into the lead rail and roller. Both edges must be done at the same time. Orient the fabric so that the large polycord goes into the lead rail, the smaller polycord goes into the roll bar. The hem should be on the down side.
9. The canopy should be approximately .25" from the end of the motor crown.



10. On the motor side, stake the canopy with one (1) #8 x 1" flat head. The screw goes through the material, polyrod and roller tube in the fabric slot.
11. On the idler side, pull the fabric smooth in the roller tube then secure with a retaining screw through the material, polyrod and roller tube in the fabric slot.
12. Insert the access plug into the idler endplate.
13. Use the manual override to roll the canopy onto the roller tube, the material rolls over the top of the roll bar. Ensure the fabric rolls evenly onto the roller tube.
14. Once the fabric is snugly rolled up, remove the rope used to secure the arms previously.
15. Restore power to the awning.
16. Extend and retract the awning. Adjust the canopy in the lead rail as required.
17. Install the fabric retainer screws into the fabric slot of the lead rail. The screw should thread into the metal of the lead rail and the fabric/polyrod. Do this on both sides of the lead rail.
18. Attach the lead rail endplates.
19. It may be necessary to adjust the motor limits. Refer to page 2.
20. Install the top cover.

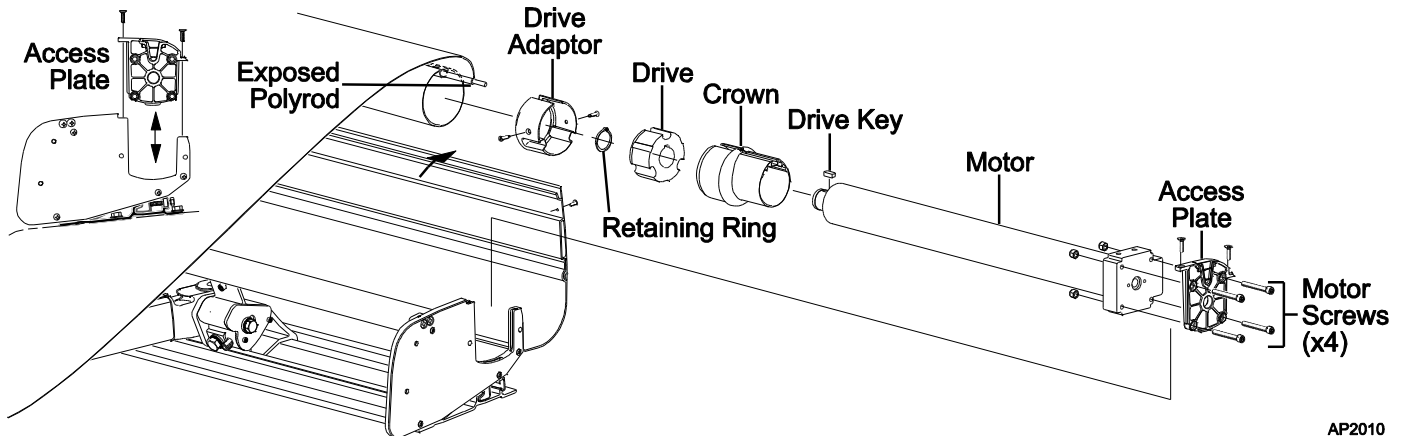
## MOTOR REPLACEMENT



**! WARNING** Shock Hazard. Always disconnect battery or power source before working on or around the electrical system.

This procedure requires a minimum of two people.

1. Disconnect power to the awning.
2. Disconnect the motor wires at the junction box or control box and pull the cable out.
3. Remove the cover screws holding the top cover. Rotate the top cover back and out of the way. If rotated back without obstructions, the top cover will disengage from the pivot rail and can be set aside.
4. Use the manual override (refer to page 3) to over extend the awning. The arms should be extended completely, the canopy should be relaxed and the fabric slot of the roller tube should point up.



AP2010

5. Remove the attaching screws for the access plates in both endplates. Carefully lift the roller tube assembly out of the awning case.
6. Remove the screws and nuts holding the motor to the access plate. Set the access plate aside. Note the orientation of the motor then pull the motor, crown and drive out of the roller tube.

**NOTE:** When the crown is removed, the canopy edge with the polyrod will extend past the roller tube.

7. Assemble the new motor:
  - 7.1. Slide the crown onto the motor.
  - 7.2. Place the drive key into the slot of the motor shaft and slide the new drive onto the shaft and drive key.
  - 7.3. Secure the drive using the supplied retaining ring.
  - 7.4. Attach the drive adaptor over the drive and secure with two (2) #8 x .75" self-drilling screws.
  - 7.5. Attach the access plate to the new motor with the screws and nuts removed previously.
8. Slide the motor into the roller tube. Ensure that the drive gear and crown are properly seated in the roller tube.

**NOTICE** When the crown is seated in the roller tube, the canopy edge with the polyrod must be in the fabric groove of the crown.

9. Set the roller tube with the access plates into the case endplates. Attach the access plates with the screws removed previously.

**NOTE:** Ensure the roller tube idler plug is seated in the bearing of the idler access plate.

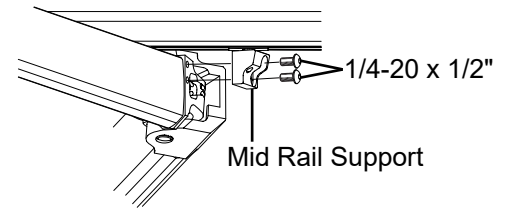
10. Route the motor cable through the access hole in the back of the case.
11. Use the manual override to begin rolling the canopy onto the roller tube, the material must roll over the top of the roller tube. Ensure the fabric rolls evenly onto the roller tube.
12. Route the new motor wire into the vehicle and attach at the junction box or control box (refer to wiring diagrams on page **Error! Bookmark not defined.** for the appropriate control system).
13. Restore power to the awning then extend and retract the awning.
14. It will be necessary to adjust the motor limits. Refer to page 2**Error! Bookmark not defined.**
15. Install the top cover.

# SPRING ARM REPLACEMENT

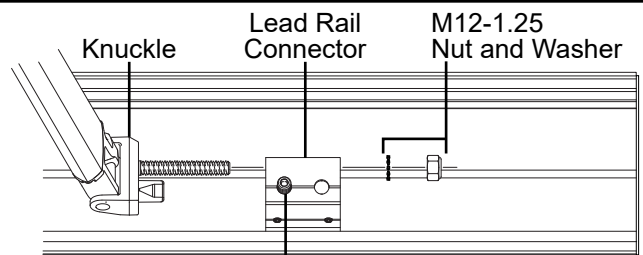
**CAUTION** The spring arm is under tension to open. Use extreme care to firmly hold the spring arms during assembly and disassembly to avoid any sudden or unexpected movement by the arm. Serious personal injury and/or property damage can occur.

It is recommended that the following procedure is done with two people.

1. Open the awning to the maximum extension or as wide as possible. This is to minimize the spring tension in the arms during this procedure.
2. Disconnect power to the awning.
3. Firmly support the lead rail and middle rail during disassembly and assembly.
4. For arms with the sensor cable mounted, carefully remove the cable from the wire channel on top of the arm. Use care to not bend, break or compromise the cable.
5. *(Detail A)* At the middle rail remove the two (2) 1/4-20 screws that attach the rail support to the arm. Do not discard screws.
6. *(Detail B)* At the lead rail, remove the M12-1.25 lock washer and nut from the arm and lead rail connector.
7. Slightly loosen the 6mm adjustment screw.
8. Firmly grasp the spring arm and slide the lead rail arm knuckle out of the lead rail connector. Allow the arm to extend to its maximum length outside the lead rail. Have a second person hold or otherwise support the unattached end.
9. *(Detail C)* Inside the case, remove the M12-1.25 x 25 bolt and washer from the side of the arm support. Remove the M12-1.25 x 40 bolt, washer and saddle from the front of the support.
10. Slightly loosen the 6mm locking screw.
11. Firmly grasp the spring arm and slide the case arm knuckle out of the arm support. Set the arm aside.
12. *(Details D & E)* Remove the set screws, rotation pins and knuckles from the old arm.
13. Attach the knuckles to the new arm as shown. Make sure that the orientation is the same as the old arm.

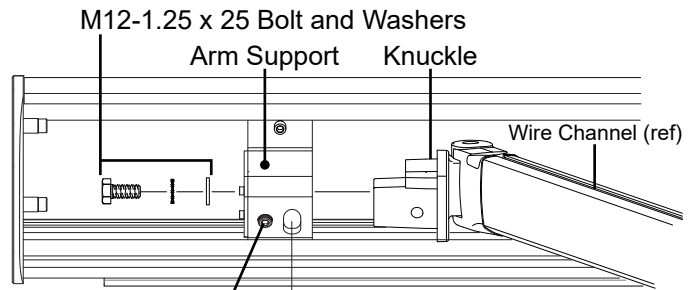


**Detail A (Mid Rail)**



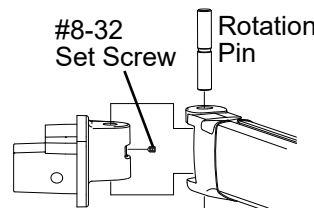
Adjustment Screw  
M12 Set Screw  
(6mm Hex Allen Head)

**Detail B (Lead Rail)**

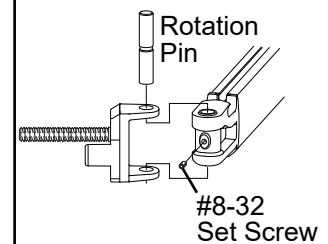


Adjustment Screw  
M12 Set Screw  
(6mm Hex Allen Head)  
Saddle  
M12-1.25 x 40 Bolt and Washers

**Detail C (Case)**



**Detail D (Case Knuckle)**



**Detail E (Lead Rail Knuckle)** AP2011

14. Firmly hold the new arm assembly and remove the shipping ties. Allow the arm to slowly open to its maximum extension.

*Tip: Use a floor or ground cover and place one knuckle and arm half on the ground. Have one person firmly hold the arm half on the ground while the second person carefully opens the other arm half.*

15. Lift the arm assembly into position.

16. *(Detail C)* Slide the case arm knuckle into the support inside the case and secure with 1 each M12-1.25 x 25 bolt and washer and 1 each M12-1.25 x 40 bolt, washer and saddle. Do not tighten at this time.

17. *(Detail B)* Insert the lead rail arm knuckle into the lead rail connector and secure with 1 each M12-1.25 bolt, washer and nut. Do not tighten at this time.

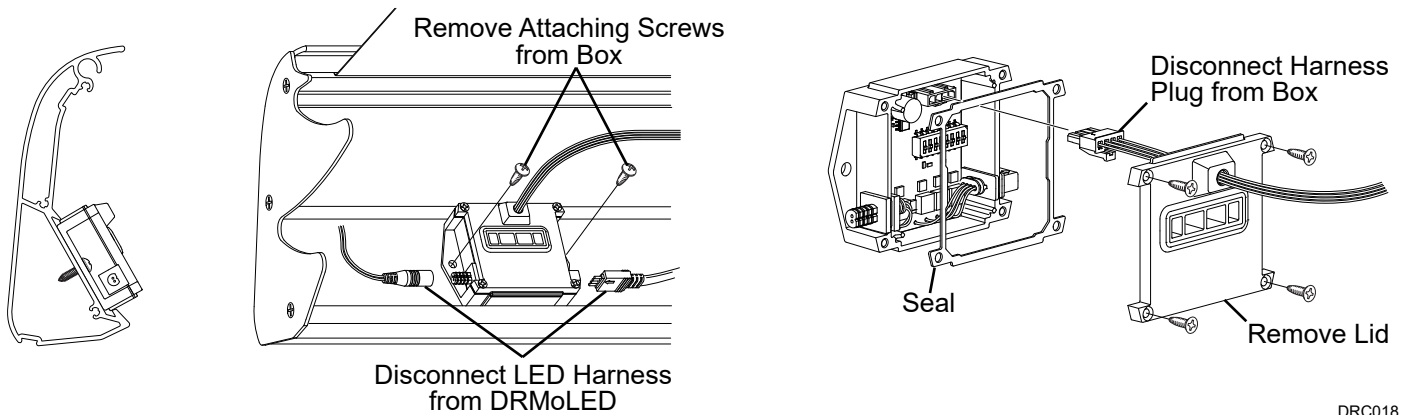
18. *(Detail A)* Reattach the arm to the mid rail support using the two (2) 1/4-20 screws removed previously.

19. *If the sensor cable is routed on the replacement arm:* Route the cable through the wire channel in the arm. At the arm joints, arch the cable slightly to avoid binding. Do not twist the cable.

20. Adjust the arm pitch as required. Follow the procedure for pitch adjustment on page 3. Tighten all screws as instructed.

## REPLACING THE MOTION SENSOR

1. Extend the awning out to access the DRMoLED sensor module.
2. Disconnect power to the awning.

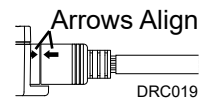


DRC018

3. Disconnect LED connectors.
4. Remove the attaching screws and box from the leadrail. Do not remove or cut the wires to the arm.
5. Remove the lid from the box and slide back along the wires. Save the screws to be reused.
6. Disconnect the harness connector from the old box. Set box aside.
7. Remove the lid from the new sensor box and disconnect the harness plug.
 

**NOTE:** Ensure that the seal is positioned on the new box correctly before assembly.
8. Attach the existing harness plug to the new box.
9. Slide the existing lid up the wires to the new box and attach using the screws removed previously.
10. Attach the new box to the lead rail with the screws removed previously.
11. Set the dip switch setting of the new DRMoLED module to match the old module.
12. Connect the LED connectors.

**NOTE:** For RGB lights ensure that the arrows on the box and LED cable lineup for proper operation.



DRC019

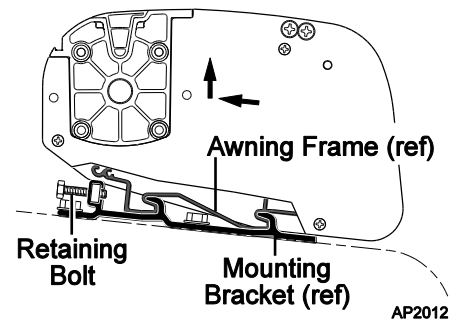
## REMOVING THE AWNING



**CAUTION** The Apex awning is extremely heavy. Moving and/or lifting the awning requires a minimum of 3 people. The use of a lifting device is strongly recommended.

1. Retract the awning completely.
2. Disconnect power to the awning.
3. Locate the junction box where the motor wires are routed. Disconnect the motor wires and remove from the junction box. Make note of the wire colors. Bundle the wire to the awning.
 

**NOTE:** Some installations use a waterproof junction box located on the top of the coach, others may have the junction box located inside the coach at or near the cable entry point.
4. Disconnect the sensor cable.
  - For installations with a junction box: Some installs may route the cable into a junction box with a cable coupler. Disconnect the cable from the awning and remove from the junction box. Bundle the cable to the awning.
  - For installations hardwired to the control box (option 1). Trace the cable to the control box. Disconnect the cable from the control box and remove from the coach. Bundle the cable to the awning.
  - For installations hardwired to the control box (option 2). If it is not possible to disconnect the cable from the control box and remove from the coach, locate the cable inside the coach and at a convenient point, cut the cable. Pull the cable out and bundle to the awning. If using this method, it will be necessary to order a cable coupler and two phone cable connectors when reinstalling the awning.
5. The awning is mounted using 4 mounting brackets attached to the roof of the coach. Each mounting bracket has a retaining bolt in the back side to hold the awning into the bracket. Loosen all 4 of the retaining bolts. It is not necessary to remove the bolts from the brackets.
6. Slide the awning back and up to remove the awning from the brackets.
7. To reinstall the awning, reverse the procedure above.



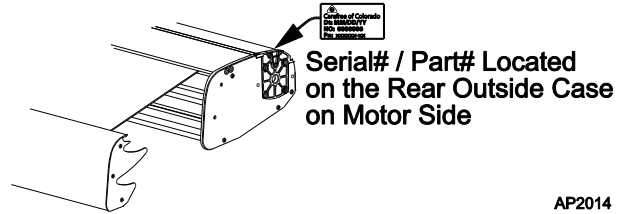
AP2012

### Special Notes:

- a) When attaching the motor wires ensure that the wire colors match the previous configuration. All wiring must conform to NEC (National Electrical Code) and local codes.
- b) If the sensor cable was cut to remove the awning, it is necessary to install a connector on each cut end of the cable. The connector must be attached as shown in the wiring diagrams on page **Error! Bookmark not defined.**

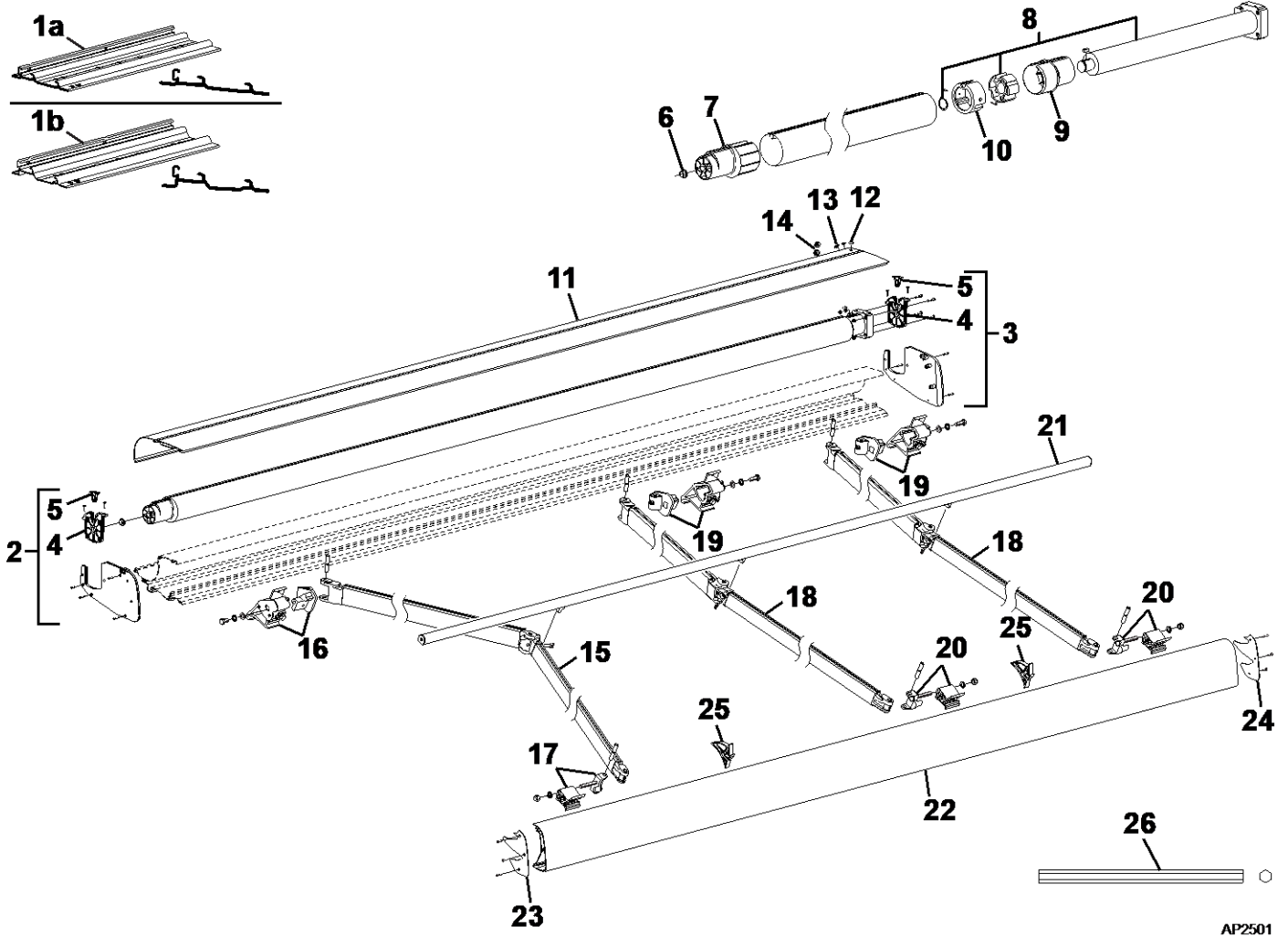
# **DIAGNOSTICS/TROUBLESHOOTING**

# ILLUSTRATED PARTS LISTINGS



## SERIAL NUMBER LOCATION

## AWNING COMPONENTS



Item	Part Number	Description	Notes
1a	GJ0001	Mounting Plate Kit, 0°	used on roofs with a pitch greater than 3°
1b	GJ0002	Mounting Plate Kit, 3°	used on roofs with a pitch from 0° to 3°
2	R001996	Endplate Assy, LH, Drop-In	2
3	R001997	Endplate Assy, RH, Drop-In	2
4	R001997	Motor Mount Plate, Drop In	
5	R001999	Canopy Access Plug	
6	R035310-002	Bushing, Idler	
7	R041581-001	End Plug, Idler	3.5" Roller Tube
8	R001853	Motor Assy, Orange Body	
9	R041580-001	Crown, Motor	3.5" Roller Tube
10	R001992-001	Drive Adaptor	3.5" Roller Tube
11	See Note 5	Top Cover	
12	R040665-001	Plug, .375	
13	R040665-002	Plug, .75	
14	R030721-001	Grommet, 5/16 ID	
15	R012598-JVL115	Spring Arm Assy, LH	
16	R002000	Knuckle, LH, Spring Arm	
17	R002002	Connector, LH, Lead Rail	
18	R012598-JVR115	Spring Arm Assy, RH and Center	4
19	R002001	Knuckle, RH, Spring Arm	
20	R002003	Connector, RH, Lead Rail	
21	See Note 5	Middle Rail Assy	
22	See Note 5	Lead Rail	
23	R001379	Endplate, Lead Rail, LH	
24	R001374	Endplate, Lead Rail, LH	
25	R002004	Midrail Ramp kit	
26	R030796-001	Hex Key, Manual Override	7mm
27		Canopy Replacement	See Canopy Order Form

- Notes:
1. XXX = Color; xxx = Length in inches.
  2. Endplates (items 2, 3) includes items 4 and 5.
  3. Motor assembly (item 8) includes drive and attaching hardware. It does not include crown (item 9) or drive adaptor (item 10).
  4. Center arm is used on units 18' and longer.
  5. The Top Cover (item 11), Middle Rail (item 21) and Lead Rail (item 22) are special order parts, contact Carefree customer service.