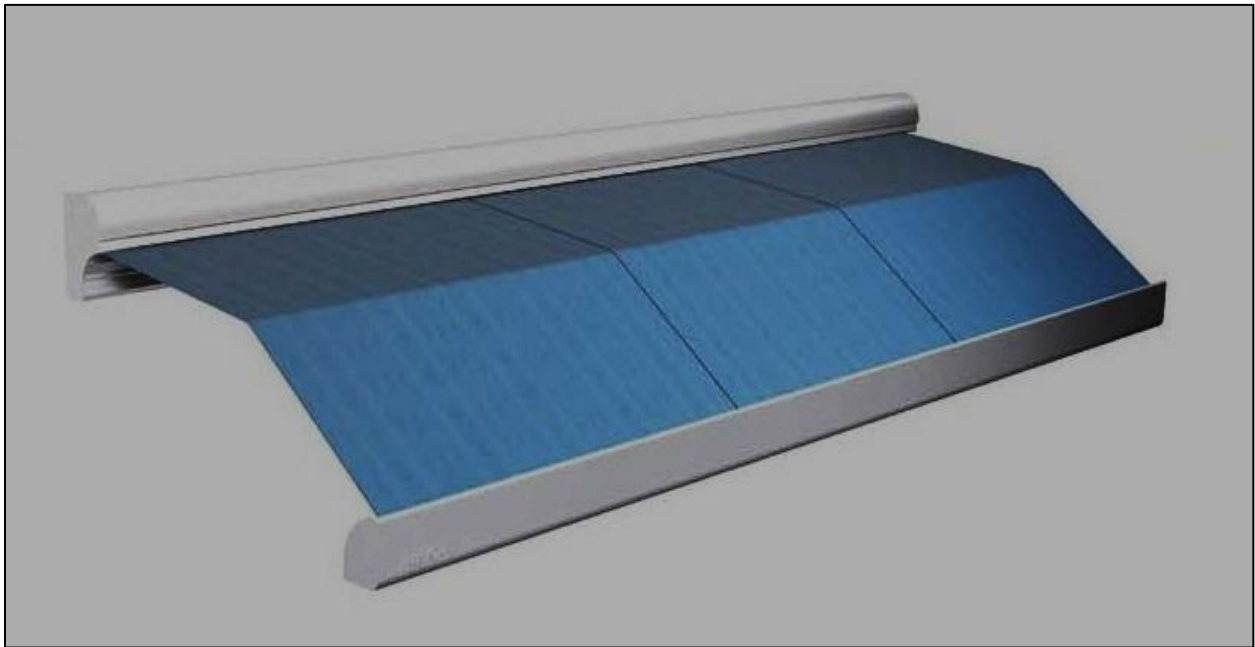


NOVA II PATIO AWNING

INSTALLATION SERVICE and REPAIR

MANUAL

REV 07282020



RV AWNING PRODUCTS

1361 CALLE AVANZADO, SAN CLEMENTE, CA 92673 (800) 382-8442 FAX (949)276-5500

www.girardrv.com



Intertek
5000791

	GIRARD SYSTEMS 1361 Calle Avanzado, San Clemente, CA 92673 Phone: (800) 982-8442 FAX: (949) 276-5600		MODEL: <u>XXXXXXXXXXXX</u>
INPUT: XX VAC XXAmps XX WattsXXHz		Intertek 5000791	SERIAL NO: <u>XXXXXXXXXX</u>
CAUTION: TO PREVENT THE MOTOR PROTECTOR FROM TRIPPING DO NOT EXCEED 2 MINUTES OF OPERATION PER HOUR.		DATE: <u>XXXXXX</u>	
ATTENTION: POUR EVITER LA SURCHARGE DU MOTEUR, NE PAS UTILISER PLUS DE DEUX MINUTES PAR HEURE			
Conforms to UL STD 325 Certified to CSA STD C22.2 No. 247			

AWNINGS FITTED TO THIS VEHICLE;

MODEL _____	SERIAL No. _____
MODEL _____	SERIAL No. _____
MODEL _____	SERIAL No. _____
MODEL _____	SERIAL No. _____



WARNING

“To reduce the risk of electric shock the operator power is to be provided from a weatherproof junction box in the case of permanent wiring, as per 314.15 of the National Electrical Code, NFPA 70.”

To prevent the motor protector from tripping do not exceed 2 minutes of operation per hour.

ALL ELECTRICAL WORK MUST BE CARRIED OUT BY QUALIFIED PERSONNEL AND CONFORM TO APPLICABLE ELECTRICAL CODES AND STANDARDS.

- Turn off power before beginning any electrical work.
- Please consult your RV's wiring diagram to locate any wiring prior to any drilling or any installation procedures.
- Ensure that placement of controls, cables, and wires are not in any way obstructed. This can damage the components and obstruct electrical current.
- Use only certified components.



Girard Systems awnings may be operated in light wind and rain conditions. When periods of heavy rain and or high wind are expected the awning must be closed. Never leave the awning open and unattended.

Damage caused by wind and rain is not covered by warranty.

All awnings must be closed prior to moving the vehicle for any reason. As an extra safety precaution a visual check that every awning is fully closed is required.

Damage caused by failure to comply with these instructions is not covered by warranty.

Before using your awning, ensure that the area into which the awning will be deployed is free of obstructions (Trees, walls, pillars, posts, other vehicles etc.)

Damage caused by collisions with any of the above or similar is not covered by warranty.

Before using your awning make sure that all of your electrical circuits are operating correctly. Recreational Vehicles can generate AC power from three separate sources. The electrical system transfer switch in your vehicle will select power for the awning as follows:

Shore Power – if connected;

Generator Power – if the generator is running;

Inverter Power – batteries must be charged for inverter operation.

Girard Systems awnings are supplied with an electric motor appropriate to the product.



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THE G-LINK SYSTEM

The G-Link motors and control modules provided by Girard Systems communicate by use of RF signals on a frequency of 433.92 MHZ. This eliminates the need for wiring and the drilling of holes in the vehicle. These components must be electronically matched, programmed or paired before use. This is usually done at the Girard Systems factory. Should the need arise for the user to pair a device with the motor controller they must refer to the appropriate manual for the devices applicable to their particular installation.



BASIC SYSTEM OVERVIEW

The NOVA II Awning consists of three main components:

1. **Mechanical system** – consisting of:
 - The enclosure (or cassette) protects the awning while closed.
 - The roller tube which is mounted within the cassette.
 - The top cover or fabric rolled onto the roller tube and connected to the lead rail that extends from the enclosure when the awning is opened.
 - The folding arms that supports the lead rail and the fabric.
 - The tubular motor which is mounted inside of the roller tube that controls the extension and retraction of the awning.
2. **Electronic controls** – to power and operate the motor
 - Motion Sensor – 98GC779, which enables automatic retraction of the awning during periods of high wind that may damage the awning system.
 - Ignition retract and lock module – GC 1102 for 110v systems, GC946G for 12v systems. This will send a retract signal to all extended awnings on the vehicle as soon as the ignition is turned on, then all power is removed from the awning motors after 60 seconds to ensure that the awnings cannot be deployed while the vehicle is in motion.
 - Motor Control module – Various, depending upon the product purchased. This works in conjunction with the other electronic controls and the user controls included in the installation to extend and retract the awning as required.
3. **User Controls** – Hand held remote controllers and wall mounted remote switches will differ according to the individual customer's needs, single or multi-channel handsets, with or without LED switching facility, and wall switches will differ depending upon how many awnings they are required to control.
 - DC104 – single channel awning remote control
 - DC105A – 5 channel awning remote control.
 - DC106 – 9 channel awning remote control.
 - DC107 – 15 Channel awning remote control.
 - 98GC1063 – Single channel with LED switching facility.
 - 98GC1029 – 5 channel with LED switching facility.
 - 98GC229 – Single channel remote wall switch.
 - 98GC230 – Dual channel remote wall switch.
 - GC661B – Multi channel remote wall switch with LED function.



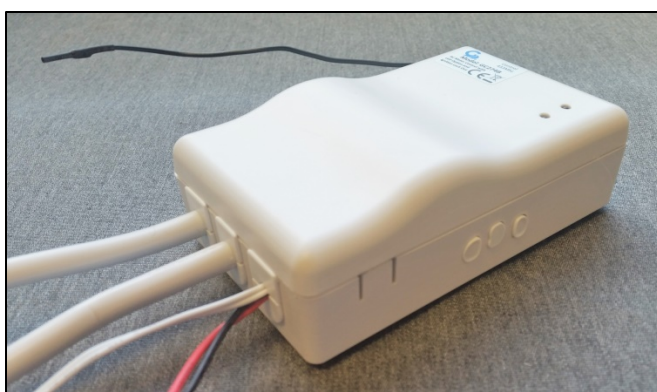
98GC779



GC946G



GC136



GC274B



GC274C



GC104



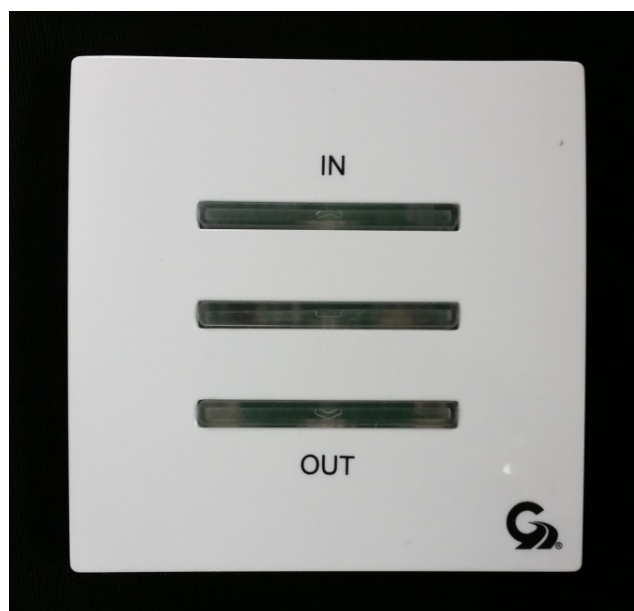
DC105A
DC106 / DC107



98GC1063

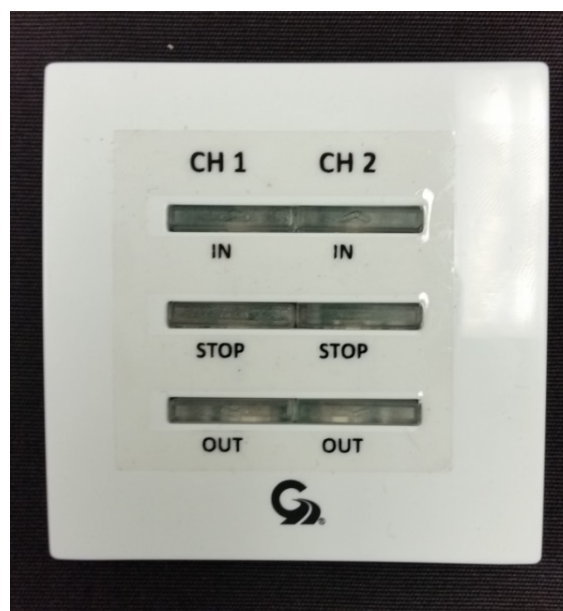


98GC1029



98GC229

Single channel Remote wall switch.



98GC230

Dual channel Remote wall switch.



GC661B

Multi channel remote wall switch with LED function.



INSTALLATION MANUAL

FOR PERSONAL SAFETY AND QUALITY OF INSTALLATION, TWO INSTALLERS ARE RECOMMENDED FOR THIS PRODUCT.



WARNING

**“To reduce the risk of electric shock the operator power is to be provided from a weatherproof junction box In the case of permanent wiring, as per 314.15 of the National Electrical Code, NFPA 70.”
To prevent the motor protector from tripping do not exceed 2 minutes of operation per hour.**

PRODUCT DESCRIPTION

The NOVA II dual pitch awning system provides protection from the sun at a touch of a button. The NOVA II awning is built to your specifications with the highest quality materials available, your unit features:

- A standard motor that operates with a wireless motor control, or a wireless motor that operates with an integrated motor control.
- Motion Sensor that will retract the awning to prevent damage from the wind.
- A hand held Remote Control
- A wall mounted Remote Switch
- Options include; electronic automation controls to ensure proper closing at all times, a control to retract all awnings when the vehicles' motor is started, and more....

The NOVA II awning controls use an RF (radio frequency) link to communicate with each other. This simplifies the installation and maintenance by removing the need for extensive wiring. This RF network is called the G-Link system. For more information please refer to the G-Link manual that was included with your awning. All necessary power cables are supplied with this product.



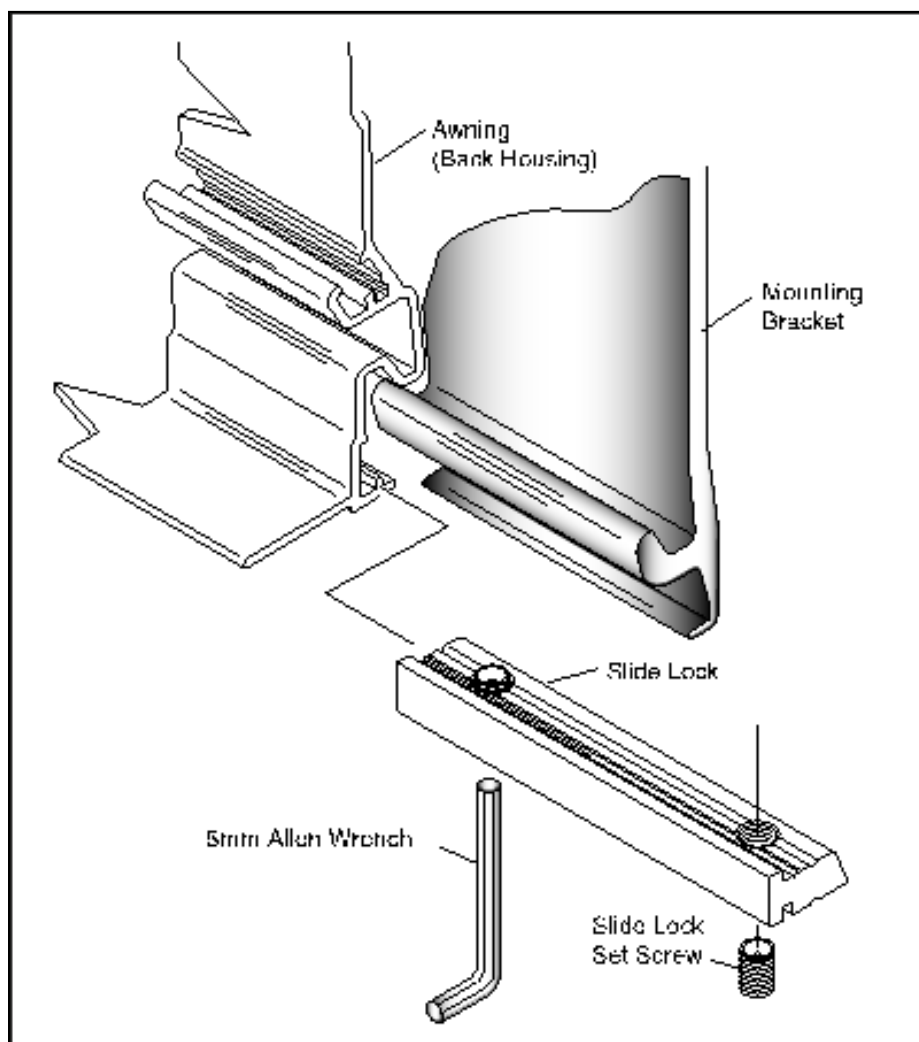
GETTING STARTED

Tools required:

- Electric Drill
- Tape measure
- (2) ladders
- Socket wrench: 7/16" deep socket
- Chalk line
- Flat head screwdriver (small)
- Phillips screwdriver
- Caulking gun
- (2) tubes silicone caulking
- Drill bits: 1/8", 3/8", and 7/16"
- Allen wrenches: 5mm and 4mm
- Open-end wrenches: 10mm, 19mm
- Keyhole saw

A. UNPACKING

1. Before starting any of the installation procedures unpack the awning and inspect the product for any possible damage that may have occurred during shipping.
2. Before starting any of the installation procedures ensure that the length and motor placement of your awning are correct.
3. When you have determined that the product is to your satisfaction, remove the mounting brackets and place the awning in a safe location while preparing the RV.
 - a. To remove the brackets locate the slide lock that retains the bracket to the housing. (Figure 1)
 - b. Using a 5mm Allen wrench, loosen the set screws on the slide locks.
 - c. Once the set screws have been loosened the slide locks should slide freely, clear the slide lock away from the bracket.
 - d. You should now be able to remove the bracket.
4. If you have discovered any damage or missing parts please contact your supplier.



(FIGURE 1)

B. LAYOUT AND MOUNTING THE BRACKETS

1. **ROOFMOUNT APPLICATION – NOTE:** The clearance needed for roofmount application of the NOVA varies by manufacturer. The shape of the roof, the depth of installation, type of roofmount bracket used and all other factors should be taken into consideration when installing this product. Please consult Girard Systems if there are any questions regarding your installation.
 - a. When using the roofmount application, roofmount brackets can be ordered through Girard Systems or you may have your own fabricated. These brackets will be used in conjunction with the mounting brackets supplied with your awning.
 - b. Determine the exact position for the final installation of the awning.



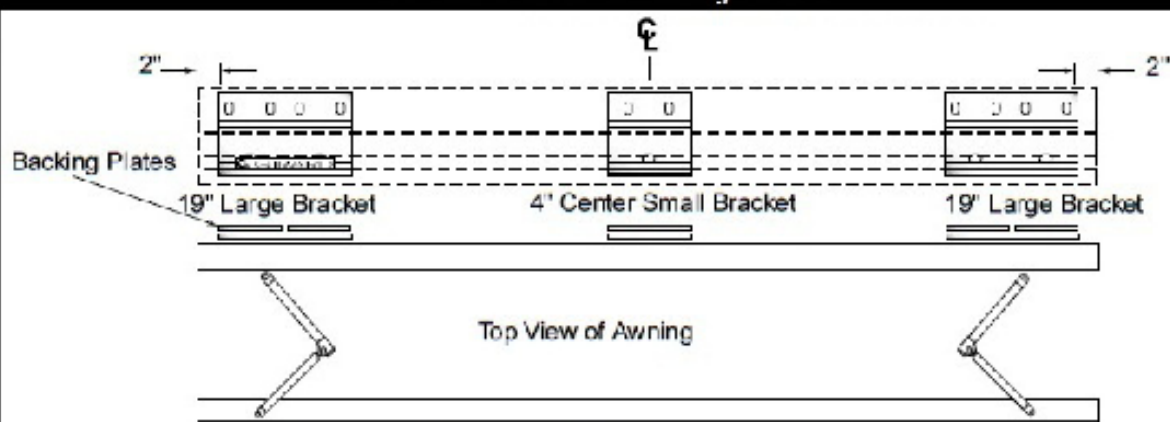
- c. Roofmount brackets must be installed within 2 inches of the ends of the awning. Once you have determined the location of the two end brackets snap a chalk line between the two points to ensure alignment of the installation. You will be able to reference this line to install the smaller middle bracket at a later time.
- d. To find the location of the smaller middle bracket please refer to the chart on the following page. **NOTE: The location of the middle bracket must fall directly centered behind the shoulder of the middle arm. Failure to follow these instructions will void the warranty of this product.**
- e. Now that you have determined the bracket locations, using the bracket as your template, mark the holes for mounting the bracket. **NOTE: It is up to the installer to find adequate structure to securely fasten the roofmount brackets to. All caution must be taken to weather seal all installation perforations. Failure to do these items could result in damage to the vehicle.**
- f. With the roofmount brackets now correctly fitted you may now install the awnings' mounting brackets. Using the hardware kit (7/16" carriage bolts) supplied with your awning, fix the mounting bracket to the roofmount brackets through the pre-aligned holes.
- g. Before installation of the awning, determine the position of the motor and calculate the best place to make the 7/16 inch hole for the motor power supply cable.

NOTE: Please consult your RV's wiring diagram to ensure that no wiring will be damaged while drilling the hole.

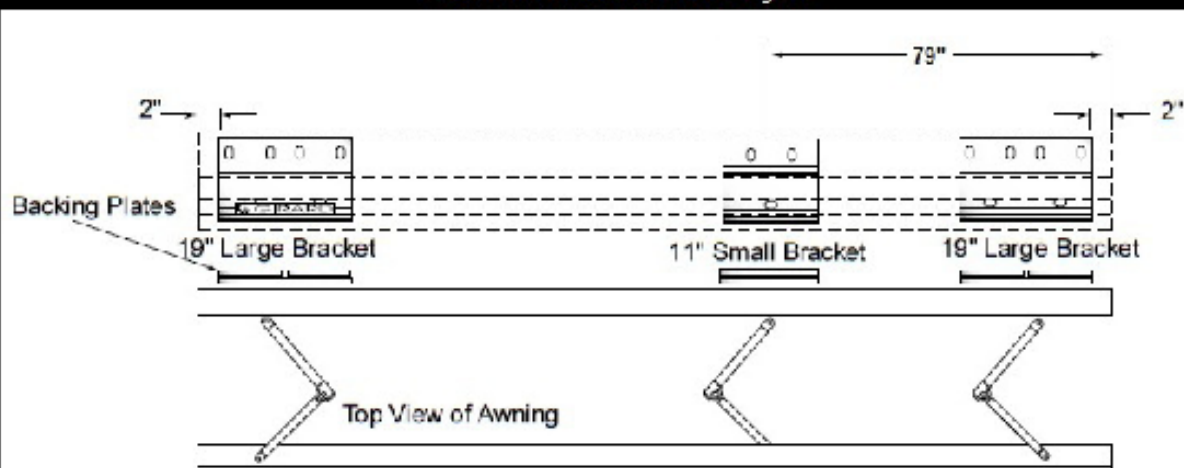
2. SIDEWALL APPLICATION – NOTE: Please take into consideration all possible clearances, and obstacles before installing this awning. Items such as slide rooms, etc. vary from one manufacturer to another. Please consult Girard Systems if there are any questions regarding your installation.

- a. The mounting brackets and hardware used for this application are included with your awning.
- b. Determine the location for the final installation position of the awning, including height to be installed.
- c. Mounting brackets must be installed within 2 inches of the ends of the awning. Once you have determined the location of the two end brackets snap a chalk line between the two points to ensure alignment of the installation. You will be able to use this reference line to install the smaller center bracket at a later time.

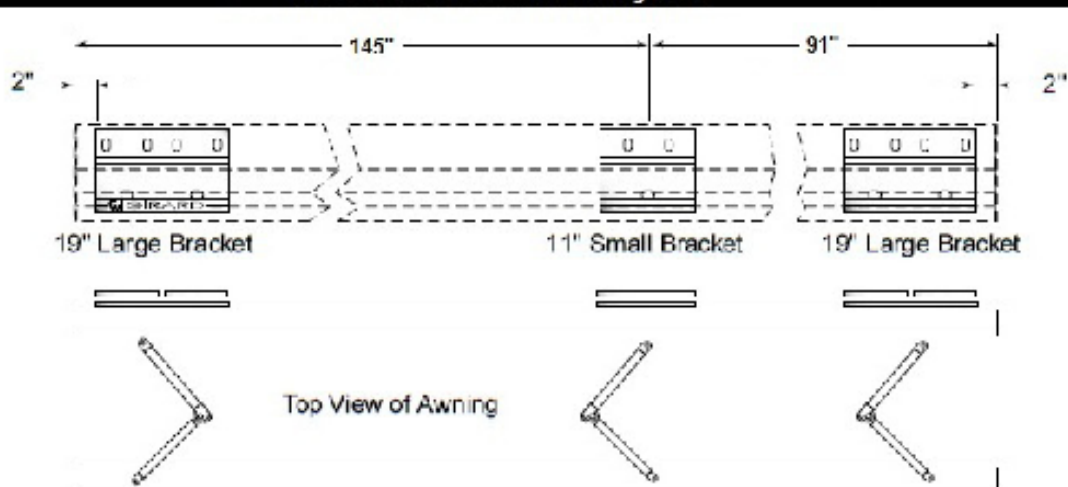
Placement of Brackets for Awnings under 11'



Placement of Brackets for Awnings 11' 8"

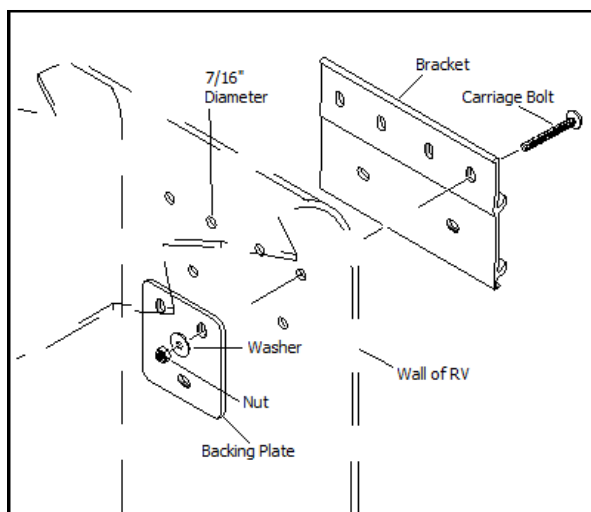


Placement of Brackets for Awnings 19' 8"





- d. To find the location of the smaller center bracket please refer to chart on the previous page... **NOTE: The Center of the middle bracket must be directly aligned with the Center of the shoulder of the middle arm. Failure to follow these instructions will void the warranty of this product.**
- e. Now that you have determined the bracket locations, using the bracket as your template, mark the holes for fastening the bracket.
- f. Using a 1/8" bit (8" long), pilot drill the centers of the marked holes. Inside of the RV verify the locations of the backing plates. **NOTE: Please consult your RV's wiring diagram to ensure that no wiring will be damaged while drilling the hole.**
- g. Pre-drill six 7/16 inch holes per mounting bracket through the pilot holes.
- h. Apply a liberal amount of silicone caulking around each hole before installing the brackets.
- i. Install the 2 outer brackets, and then the middle bracket (if required) with six 7/16 inch carriage bolts, washers, lock nuts and 2 backing plates per bracket. (Figure 2)

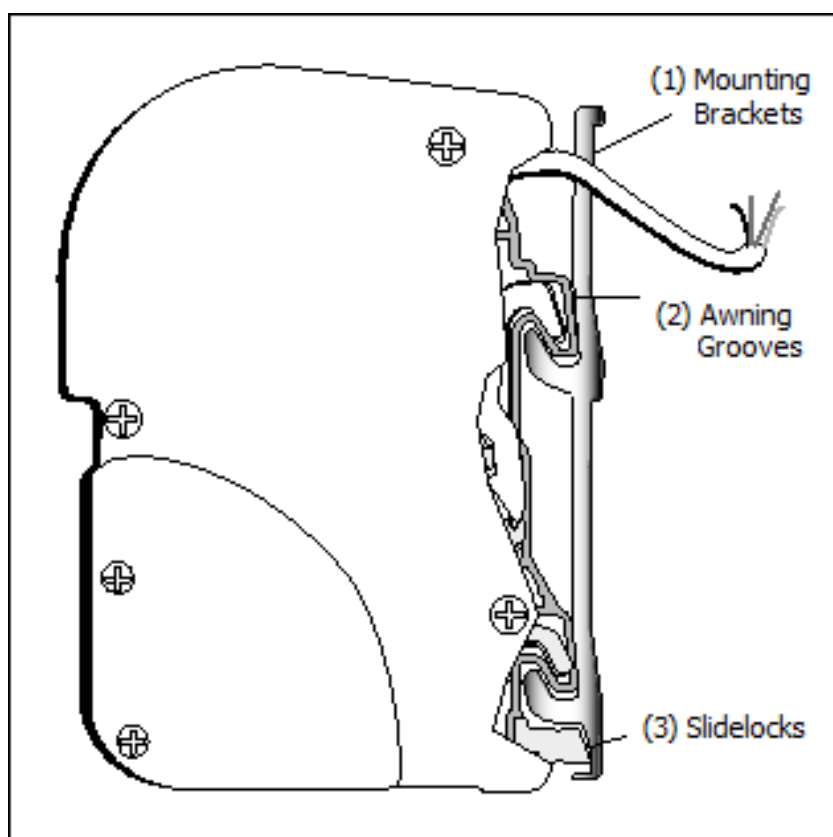


(FIGURE 2)

- j. Tighten bolts and then apply silicone caulking to the top edge and both sides of each bracket.
- k. On the motor side of the awning drill a 7/16 inch hole for the awning motor power cable to enter the RV near the electrical source. Position the hole 1 inch to the left or right of the bracket. Do not drill hole higher or lower than the bracket. This will ensure that it will not be seen after the awning is installed.
- l. Locate the white cable grommet supplied with the awning. Place a fine bead of silicone around the body of the grommet. Slide grommet into the 7/16 inch hole previously drilled for the motor power cable.

C. MOUNTING THE AWNING.

1. Lift the awning into position for fastening to the vehicle mounted brackets.
 - a. Ladders are usually sufficient; however, a scaffold or forklift may be used.
 - b. If using a forklift use all necessary caution to protect the surface of the awning. Lift from the center of the awning to maintain product balance while elevating.
2. Place the awning onto the brackets while feeding the motor power cable through the white grommet. A small amount of lubricant may aid the feeding of the cable. Make sure the grooves of the awning are securely engaged into the channels on the bracket. (Figure 3)



(FIGURE 3)

3. Secure the awning by moving the slide locks along the bottom awning track until they are located under their respective brackets. The final position of the slide lock should be directly under the shoulder of the arm.
4. Once the final location of the slide locks has been achieved, tighten both set screws on each slide lock with a 5mm Allen wrench.

5. One of the slide locks must have a grounding bolt fitted as shown in photo 1 below. This is to provide a safe passage to ground in the unlikely event of an electrical short between the motor and the awning cassette. The grounding bolt when tightened should be in contact with both the mounting bracket and the bottom of the awning cassette. The other part of the grounding circuit is an earth bonding lead which can be found by removing the end plate nearest the motor as shown in Photo 2 below.



Photo 1

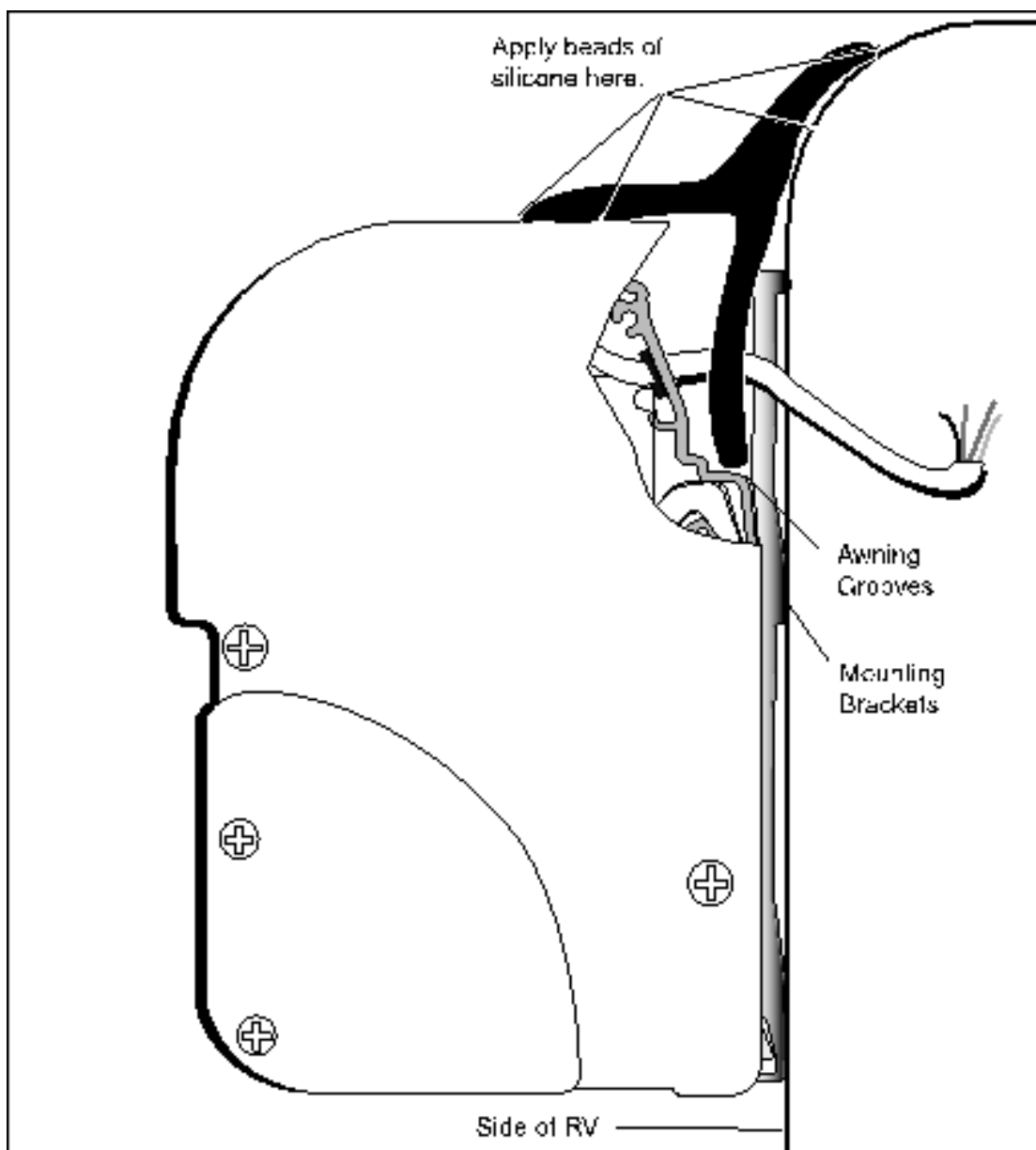


Photo 2

D. WEATHERSTRIPPING INSTALLATION

(SIDEWALL APPLICATION ONLY)

1. Trim weather stripping to the length of the awning and remove any overhang.
2. Make a small cut in the weather stripping to allow for the motor cord.
3. Apply generous beads of silicone where indicated in Figure 4.
4. Push weather stripping firmly into place.
5. Wipe off excess silicone.



(Figure 4)

E. MOTION SENSOR

NOTE: The Motion Sensor can be used in place of the Anemometer in your electronics system. The Motion Sensor requires a hard wired 12V. D.C. connection.

12v DC MOTION SENSOR (Hard wired)

The Motion Sensor will come from the factory pre-programmed and pre-installed. A hole must be drilled for the power cable.

1. Locate the cable at the back of the awning cassette.
2. Locate the nearest source of 12V. D.C. power.
3. Drill an appropriate sized hole, then feed the cable into the interior of the vehicle and connect to the 12V. D.C. source.
4. Refer to the Motion sensor manual for instructions to program the motion sensor.



Motion Sensor



TESTING AND ADJUSTMENTS

OVERVIEW

- A. Adjusting Motor-limit switches
- B. Adjusting Pitch and Elbow height
- C. Testing the Anemometer
- D. Adjusting Lead Rail

A. ADJUSTING MOTOR LIMIT SWITCHES

TOOLS REQUIRED

~~Black plastic key~~ provided with awning, or 4mm (5/32") Allen wrench.

NOTE: The motor limit switches have been adjusted to the correct positions at the factory prior to shipment. When fully retracted the awning motor is set to stop the exact moment the awning box closes. When fully extended the fabric should be taut and the arms should be slightly bent, exposing a gap of about ¼" at the elbows.

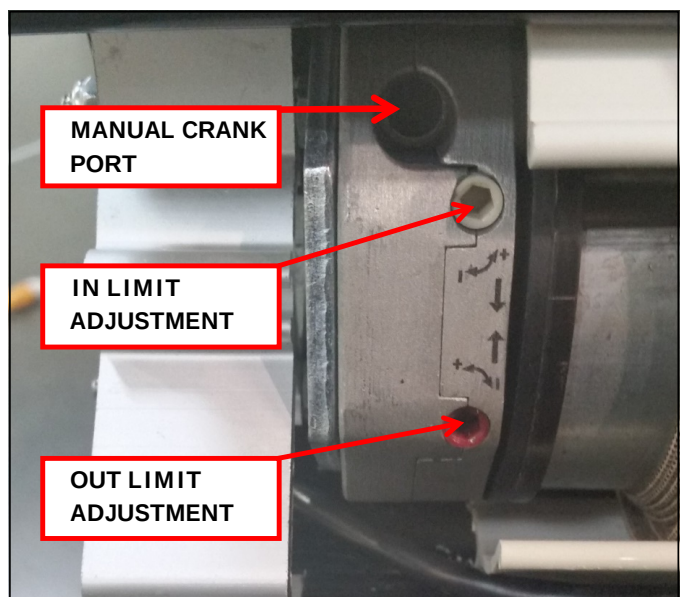
Always check the motor limits after installation to ensure that the awning opens and closes correctly. Awning fabric can stretch over time, this will require an adjustment of the IN and/or OUT limit switch.

IMPORTANT: EXTREME CARE SHOULD BE TAKEN TO ENSURE THAT THE MOTOR LIMIT TURNS OFF AT THE EXACT MOMENT THE AWNING BOX CLOSES. FAILURE TO DO SO WILL CAUSE THE MOTOR TO RUN WHEN THE AWNING IS CLOSED. THIS WILL SIGNIFICANTLY REDUCE THE LIFE OF THE MOTOR.

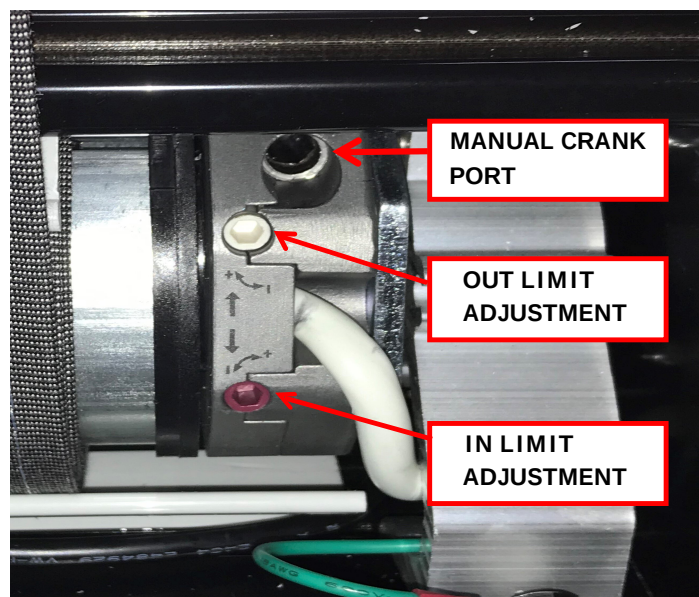
1. The AC motors used in Girard Systems awnings are reversible. Pay special attention to verify your motor location before any attempted adjustment.
2. The motor has limit settings for both OUT (extension) and IN (retraction).
3. The limit switches can be adjusted by use of the black key provided with the awning, or you may use a 4mm (5/32") Allen wrench.

4. Extend the awning a few feet to gain access to the motor. Locate the motor (standard installation is on the right hand side of the awning). The limit adjustment pots are located on the head of the motor. Using the symbols printed next to the adjustment pots, turn the black key (or 4mm Allen wrench) to make the necessary adjustments. Typically, the motors are labeled with a + or a -.

Left Hand Motor Location



Right Hand Motor Location



5. Approximately $\frac{1}{4}$ turn of the adjustment pot represents about 1" of awning movement. NEVER set outward limits so that the fabric is slack with full arm extension. For proper adjustment set limit switch to stop the motor just before the arms lock. This will expose about a $\frac{1}{4}$ " gap at the elbow.



B. ADJUSTING PITCH and ELBOW HEIGHT

NOTE; Adjustment of the Elbow height and pitch, will affect the height of the awning lead rail when it is fully deployed. Ensure that when making any of these adjustments the final height of the lead rail is no less than 7' (84").

This adjustment is usually required after an arm replacement. Also, if the elbow of the arm hits the bottom of the casing as the lead rail closes.

Tools Required

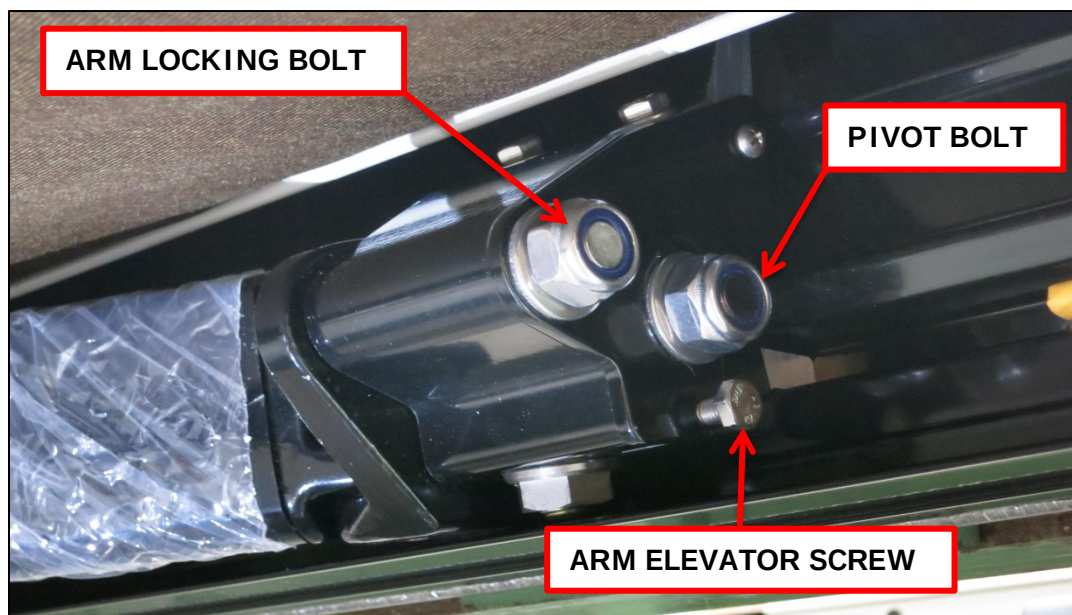
- 19mm (3/4") open-end wrench
- 10mm (3/8") open-end wrench

1. ELBOW HEIGHT

- Extend the awning about 18"
- On the selected arm, loosen the 2 lock nuts on the side of the shoulder assembly, using a 19mm open-end wrench.
- Locate the Arm elevator screw located directly below the rear lock nut loosened in step #2. (Figure 6) Using a 10mm open-end wrench, rotate the bolt clockwise to TIGHTEN and raise the arm position inside the cassette. Rotate the bolt counter-clockwise to LOOSEN or lower the arm position inside the cassette.

NOTE: After retightening the lock nuts, the arms will raise slightly.

- Tighten the 2 lock nuts located on the side of the shoulder assembly.
- Close the awning completely to ensure smooth operation and that the lead rail lies flush and square along the length of the cassette.



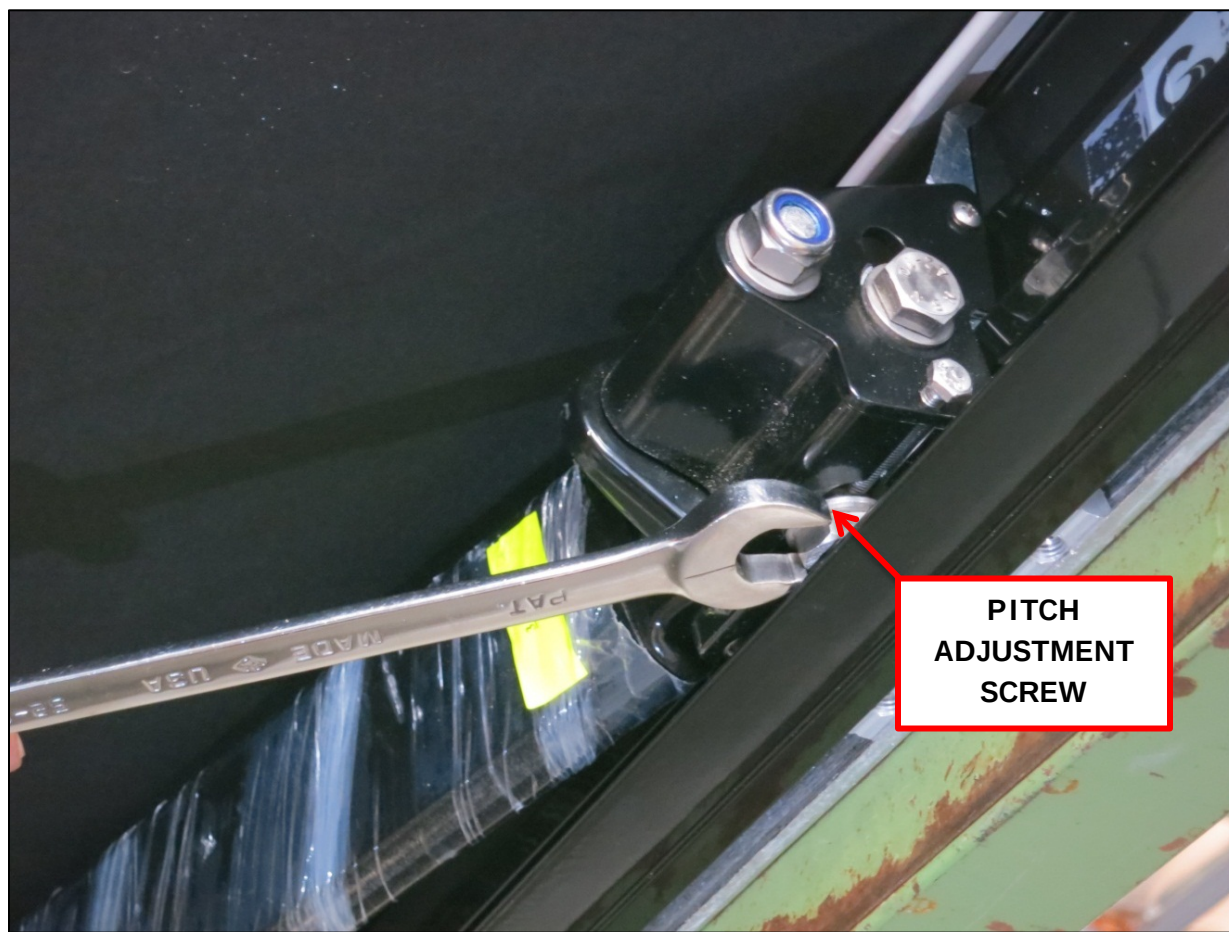
(Figure 6)

2. ADJUSTING PITCH

- a. Extend the awning about 18".
- b. On the arm selected, loosen the 2 lock nuts on the side of the shoulder assembly using a 19mm open-end wrench.
- c. Locate the adjustment bolt located on the bottom of the shoulder assembly (Figure 7). Using a 19mm open-end wrench rotate the bolt **counter-clockwise** to **lower** the pitch or **clockwise** to **raise** the pitch.

DO NOT OVERTIGHTEN AS THIS WILL RESULT IN DAMAGE TO THE AWNING.

- d. Tighten the 2 lock nuts located on the side of the upper arm connection.
- e. Close the awning completely to ensure smooth operation and that the lead rail lies flush and square along the length of the cassette.



(Figure 7)



C. TESTING THE ANEMOMETER (Wind Sensor)

1. Partially extend the awning.
2. Physically activate the anemometer by blowing on the cups or by spinning them.
3. At this point the awning should retract; if not, check the electrical connections to the selected power source.

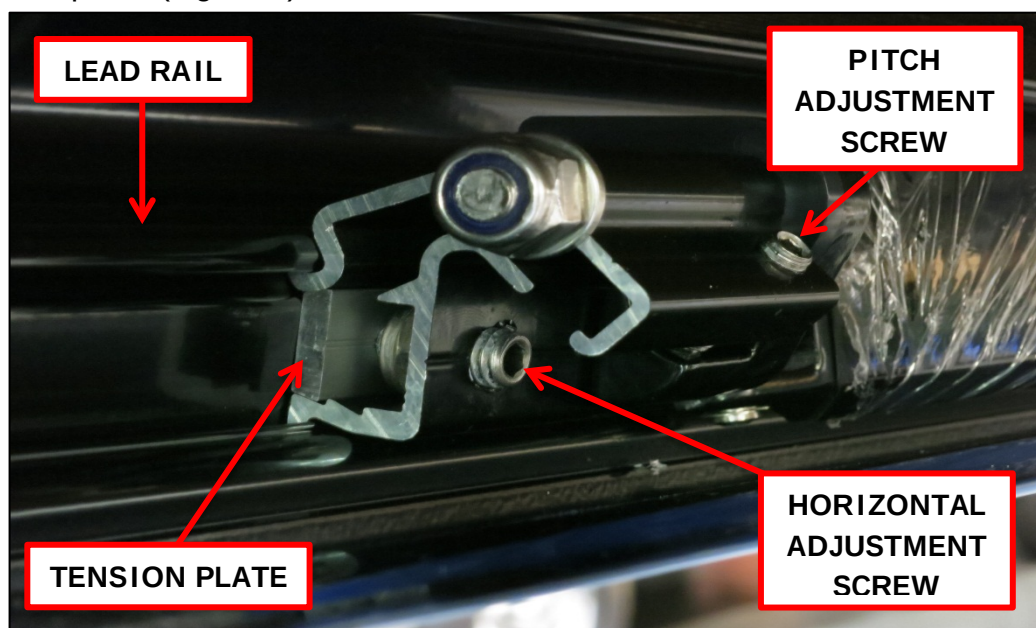
NOTE: The Anemometer will send a retract signal to all of the awnings installed on the RV. The power system of the vehicle must be able to withstand the resulting surge of current. The surge will be the greatest when the awnings are fully extended. When testing the system verify all of the awnings will close when fully extended.

If the system does not operate correctly under these conditions you may:

- a. Provide sufficient power from your panel.
- b. Replace the anemometer with a Motion Sensor.

D. ADJUSTING THE LEAD RAIL

The lead rail on your awning has been preset at +/- 3 degrees. This allows the lead rail to rest firmly into the cassette and also creates a weather resistant seal for travel. To increase or decrease the pitch angle insert a 5mm Allen wrench into the Pitch adjustment screw. Turn clockwise to increase the pitch and turn counterclockwise to decrease the pitch. (Figure 8)



(Figure 8)

TROUBLESHOOTING GUIDE

PROBLEM:

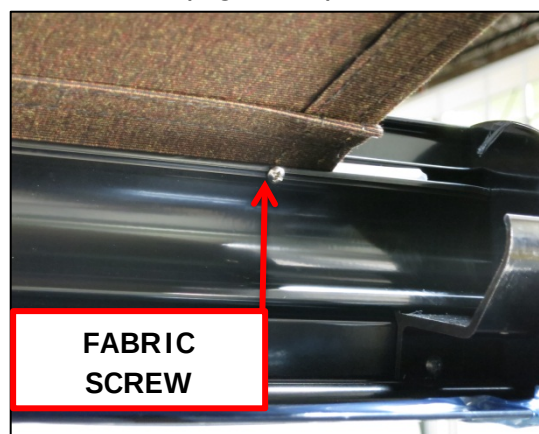
The lead rail is binding on the side of the awning casing; i.e. the rail is offset from housing.

SOLUTION:

- Open the awning about 3 feet.
- Loosen the lead rail adjustment screws on all arms.
- Locate and remove the two fabric set screws that are on each end of the lead rail. The lead rail is now ready to be shifted.
- Retract the awning until the lead rail is about 4 inches from the fully closed position.
- Using a rubber mallet, tap the end of the lead rail to move it into the correct position.
- When proper alignment has been achieved tighten the lead rail adjustment screws (Figure 9), and then replace the fabric screws. (Figure 10)



(FIGURE 9)



(FIGURE 10)

PROBLEM:

The motor side of the awning closes when the awning is retracted but the opposite end does not.

SOLUTION:

Refer to “Adjusting the Lead Rail” on page 20. If this does not solve the issue please call the Girard Systems service line at (949)259-4000 or toll free at (800)382-8442.

PROBLEM:

Motor will not operate.

SOLUTION:

- Check that all of the GFI switches in the vehicle are turned on.



- If your vehicle has an Awnings Power Main Switch, locate that switch and make sure it is in the ON position.
- Check that the motor's thermal protection circuit breaker has not tripped. The 110V AC motor supplied in your NOVA II Awning is designed for intermittent use and may cut out temporarily if it has overheated. When this occurs you must allow the motor to cool so that the internal circuit breaker can reset. This may take up to an hour depending on the outside temperature. You may use a manual crank during this period.
- If this does not solve the issue please call the Girard Systems service line at (949)259-4000 or toll free at (800)382-8442.

PROBLEM:

The motor will operate for 10-12" and then stop.

SOLUTION:

The motor may not be receiving enough power to operate correctly.

- Check to ensure that you have a minimum of 10 amps, if not switch on your generator or connect to shore power.
- If this does not solve the issue please call the Girard Systems service line at (949)259-4000 or toll free at (800)382-8442.

PROBLEM:

The fabric is loose when the awning is fully extended; i.e. the roller keeps turning after the awning arms have locked open.

SOLUTION:

The motor's OUT limits must be reset to factory standards. Please refer to the "Adjusting the Motors Limit Switches" section on page 16-17.

PROBLEM:

The motor stops before the lead rail has closed completely into the awning cassette on either or both sides. There is no apparent binding of the awning components.

SOLUTION:

The NOVA II Awning is equipped with a manual override motor which has manual limit settings. The IN limit may need to be adjusted to allow the box to be closed tighter. Refer to the "Adjusting the Motors Limit Switches" section on page 16-17.

PROBLEM:

As the awning is closing, the elbow of one or more of the arms is hanging down preventing the case from closing.

SOLUTION:

Please refer to the "Adjusting pitch and Arm (Elbow) Height on page 18-19.



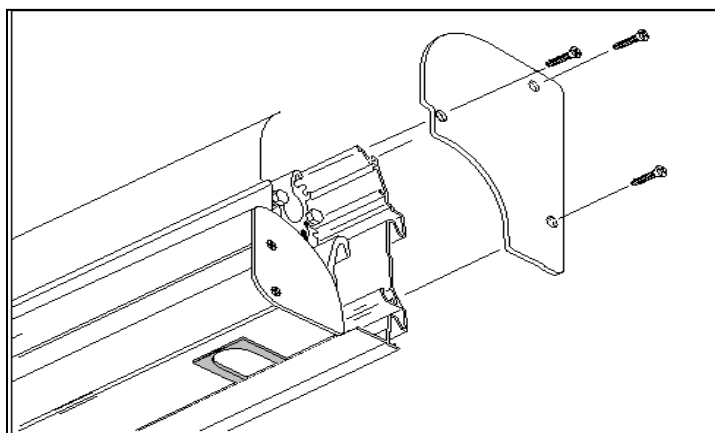
COMMON REPAIR PROCEDURES

MOTOR REPLACEMENT

NOTE: Replacement procedures vary due to motor styles, placement, factory installation methods, and preferences of different vehicle manufacturers. These variations primarily effect how the motors are accessed; replacement operations are generally the same for any situation.

A. REMOVING THE OLD MOTOR

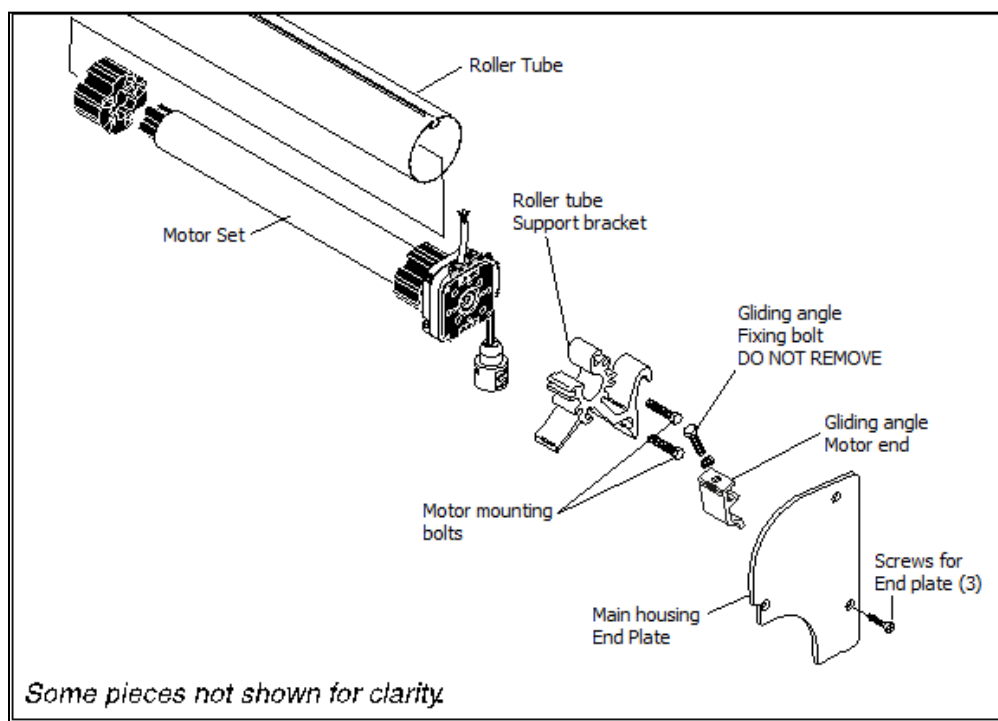
1. Fully extend the awning with the manual crank until the fabric is hanging directly from the bottom of the roller tube.
2. Remove the right-hand awning end plate by removing the three screws that secure it to the awning case. (Figure 11)



(Figure 11)

3. Remove both of the motor bolts that fasten the motor to the end bracket. Mark the slots from which the bolts were removed.
4. Loosen the small bolt that secures the roller tube support to the main housing. **DO NOT OVER-LOOSEN OR ATTEMPT TO REMOVE THIS BOLT.** Slide motor support out of main housing.
5. From inside of the vehicle locate the motor cable. Find the termination point of the cable. (This may be located in a junction box used for the awnings, or an electrical junction box. These are typically located in an upper cabinet. The motor cable is white with four wires. Make note of the points that each of the motor wires connect to. Disconnect all four motor cable wires.

6. Fasten a long “pigtail” extension to the motor cable (string, rope, a small wire, etc. can be used). This will allow you to pull through the new motor cable. Exit the vehicle and pull the motor cable completely through the wall.
7. Remove the screw that fastens the fabric to the roller tube. This screw is located along the edge of the roller tube near the head of the motor.
8. Carefully pull the old motor out of the awning roller tube. (Figure 12) Pull motor cable out of the hole in the back of the awning leaving the pigtail for the new installation.

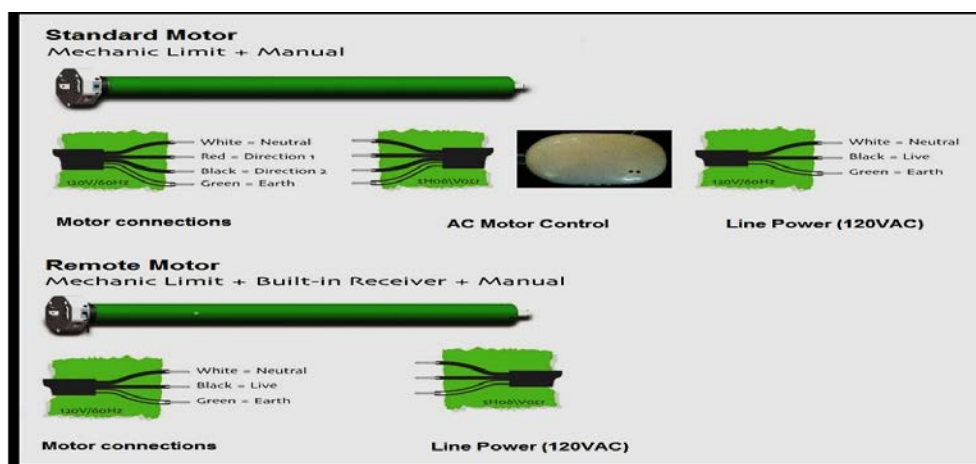


(Figure 12)

B. INSTALLING THE NEW MOTOR

1. With the new motor in hand, align the notch in the black drive-disk (at the far end of the motor) with the indentation in the awning roller tube. Slide the motor all the way in. Turn the motor until its notch also lines up with the roller tube indentation.
2. Feed motor cable completely through strain relief in the back of the awning casing. Fasten the motor cable to the “pigtail” that was previously left.
3. Make sure the awning roller tube is still seated and connected into the roller tube support bracket at the opposite end of the awning.

4. Rotate the motor and roller tube assembly until the motor-limit switches are accessible. They will be at an approximate 6 o'clock position; the manual overdrive mechanism must have proper downward clearance.
5. Slide the roller tube bracket back into the cassette and then tighten the small bolt that secures the two brackets together.
6. Adjust the roller tube/motor assembly until the threaded holes in the motor bracket line up with the two 2 holes that were marked previously. **IMPORTANT NOTE: DO NOT USE THE CENTER HOLE OF THE MOTOR CASING TO PRY, ALIGN, OR REPLACE MOTOR BOLTS. THIS WILL DAMAGE THE LIMIT SWITCHES. PRY FROM THE OUTER PART OF THE MOTOR CASING ONLY.**
7. Insert the 2 motor bolts through the end bracket and the threaded plate of the motor. Tighten bolts securely.
8. Replace the end cap.
9. From the interior of the vehicle pull the motor cable all the way into the unit.
10. Connect the new motor as shown in Figure 13, according to the type of motor.
11. Test for the proper function of the new motor by using the Remote Control or the wall switch.
12. Manually activate the anemometer by blowing on the cups or by spinning them. Awning must retract, if not check motor connections for correct polarity. If your electronics system is equipped with a Motion Sensor, while extended, push up on the lead rail about 12" and let it drop. Awning must retract.
13. After the motor has been replaced, the motors' limit switches must be adjusted. Please refer to the "ADJUSTING MOTOR LIMIT SWITCHES" section of this manual.



(Figure 13)



FABRIC REPLACEMENT

IMPORTANT NOTE: THESE PROCEDURES REQUIRE THE USE OF A MANUAL CRANK. IF NO MANUAL CRANK IS AVAILABLE THE MOTOR LIMIT SWITCHES MUST BE USED TO CREATE THE SETTINGS. PLEASE REFER TO THE “ADJUSTING MOTOR LIMIT SWITCHES”. USE THE MOTOR SPARINGLY TO PREVENT OVERHEATING.

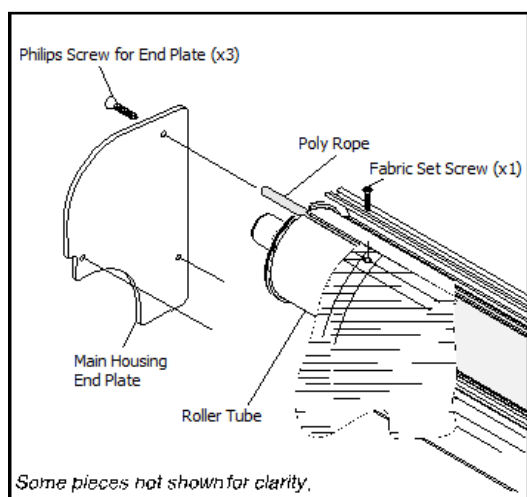
A. FABRIC REPLACEMENT PROCEDURE

This procedure is recommended for all patio awnings that have been surface or recess mounted to the vehicles sidewall, as well as roofmount applications. In all cases the old fabric can be removed without having to remove the entire awning or the roller tube. All awning components will remain in position.

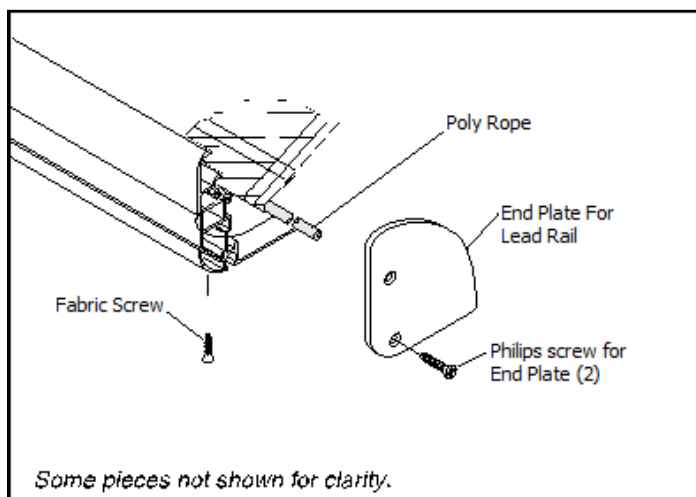
B. REMOVING THE OLD FABRIC

1. Open the awning to full extension. Use the manual crank to continue rotating the roller tube until all of the fabric is unrolled and the C-shape channel of the roller tube is accessible. If no manual crank is available use the motor limit switches to adjust the OUT limit until the C-shaped channel is accessible
2. Remove all 3 fabric set screws. There are 2 on the lead rail and there is 1 on the roller tube on the opposite end to which the motor is fitted.
3. Remove the corresponding lead rail end cap and housing end plate.

Figure 14 and 15



(Figure 14)



(Figure 15)



4. Carefully slide out the entire fabric from the left end of the roller tube and lead rail. Make sure the polyrope clears the support bracket. **NOTE: FOR PERSONAL SAFETY, AND BEST RESULTS IT IS RECOMMENDED THAT TWO TECHNICIANS PERFORM THIS FUNCTION.**

C. INSTALLING THE NEW FABRIC

IMPORTANT: REPLACEMENT FABRICS ARE ROLLED FOR SHIPMENT. THE SEAMS MUST FACE DOWNWARDS AS THE FABRIC IS INSTALLED. THERE IS A SMALL WHITE POLY (POLYESTER) ROPE INSERTED IN THE FABRIC THAT WILL SLIDE INTO THE ROLLER TUBE.

1. Apply masking tape to the sharp edges of the lead rail's C-shaped fabric channel, and all sharp edges of the awning cassette and the roller tube support bracket. This will allow the fabric to enter the channel freely without snagging or tearing.
2. Insert the leading edges of the fabric into the C-shaped channel in the lead rail and roller tube on the side where the end caps have been removed. This function is the safest and most easily achieved with four people. Carefully slide the new fabric into the lead rail and roller tube simultaneously. Two people can pull the fabric through the channels while two others support the excess fabric and feed the fabric into the lead rail and roller tube.
3. Center the fabric on the roller tube and then smooth all of the wrinkles out at the lead rail. Insert a self-tapping screw into the roller tube on the side opposite the motor location. The fabric will center itself on the lead rail. (Figure 10).
4. Using the manual crank, slowly begin rolling the fabric onto the roller tube. Roll the fabric from the bottom of the roller tube.
5. Start retracting the awning using the remote control or the wall switch. Using two people carefully stretch the fabric from end to end during the first couple of revolutions of the roller tube. This will ensure that the fabric is rolling onto the tube straight. Continue to slowly roll the fabric onto the tube until the fabric is taut against the lead rail. Continue to roll the fabric onto the tube. Make sure the fabric rolls straight and the awning closes completely.



6. Open the awning about 18" and replace both fabric set screws on the lead rail.
NOTE: These screws should be located no more than $\frac{3}{4}$ " from the edge of the fabric. If necessary, re-drill the fabric set screw holes using a $\frac{1}{8}$ " drill bit to maintain this distance.

7. Reinstall both the lead rail and main housing end caps.

8. After the fabric replacement it may be necessary to make minor adjustments to the motor limit switches. The awning motor needs to stop the exact moment when the awning box is fully closed. Likewise, it is important that the awning motor stops just before the arms become fully locked in the extended position. (The fabric will be taut, the elbows slightly bent exposing about $\frac{1}{4}$ ' of gap.) Please refer to the "ADJUSTING MOTOR LIMIT SWITCHES" section of this manual.

IMPORTANT NOTE: THE HIGH-TORQUE MOTOR SUPPLIED WITH YOUR NOVA Awning IS DESIGNED TO RUN FOR ONLY FOUR MINUTES PER HOUR. THE MOTOR HAS A BUILT-IN CIRCUIT BREAKER WHICH IS DESIGNED TO ACTIVATE IF THE MOTOR OVERHEATS. COOL DOWN TIME CAN BE UP TO AN HOUR DEPENDING ON THE OUTSIDE TEMPERATURE.

ARM REPLACEMENT

Follow this procedure when a damaged, spring loaded arm needs to be replaced. There are no repairable parts inside of the arm, if the elbow joint has broken the entire arm must be replaced.

TOOLS REQUIRED:

- 19mm (3/4") open-end wrench
- 17mm (11/16") open-end wrench
- 5mm (3/16") Allen wrench



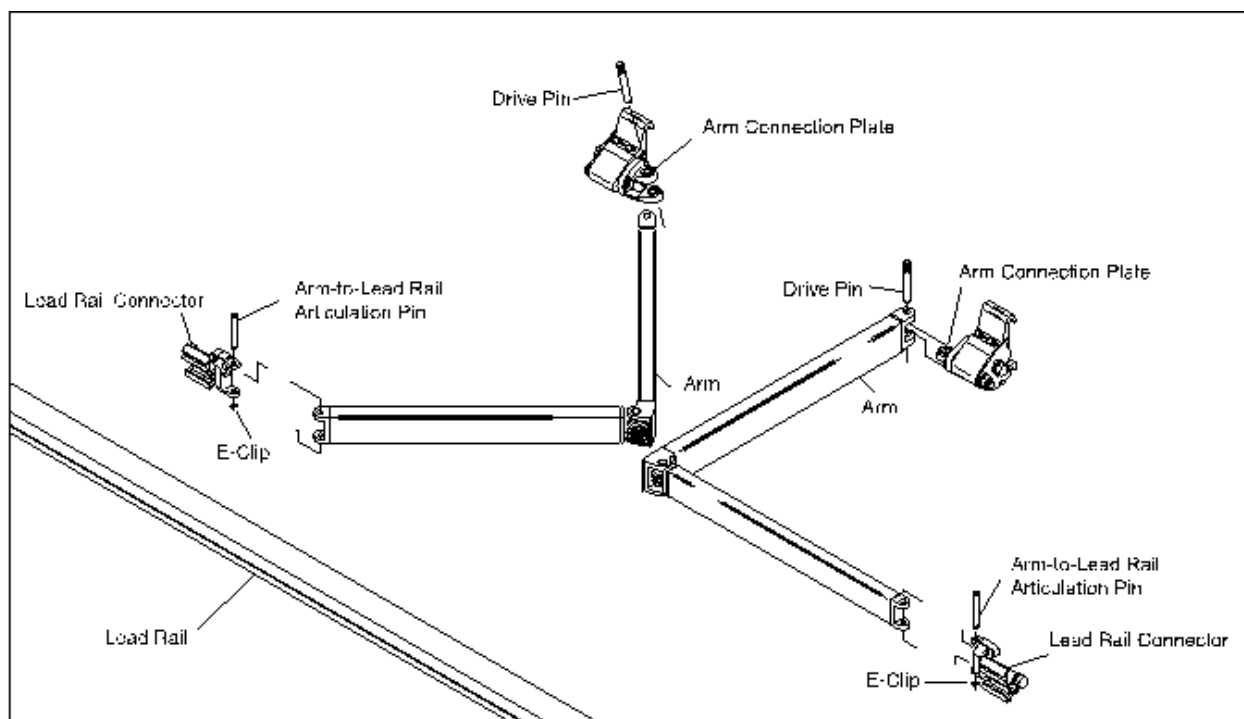
WARNING

- Follow installation instructions carefully.
- Awning arms are packaged under heavy spring tension.
- To avoid serious personal injury do not remove protective wrapping until directed to do so.

1. Support the lead rail and carefully open the awning a few feet. If the elbow is open tie a large rag around it to protect the fabric from the elbow.
2. Cut the stainless steel cable at the elbow to release the spring tension, then proceed with arm removal. If leaving the arm under tension, remove the 17mm nut at the lead rail connection, fold and tape the arm very carefully, then proceed with arm removal.
3. On the lead rail side of the arm remove the 17mm nut and washer, set them aside to later connect the new arm.



4. At the shoulder assembly of the arm, in the cassette, remove both 19mm lock nuts and washers, or the bolt and nut.
5. Remove the forward most bolt from the arm and shoulder connection. Use this bolt for the new arm installation if new hardware is not provided. Hold the bottom pitch adjustment block with your thumb to keep it from falling. When removing the arm from the shoulder pay special attention to the parts located in the shoulder washer-square tube pitch adjustment screw and block.
6. Carefully slide the arm and remaining bolt away from the shoulder.
7. Do not unband new arm until it has been fastened to the shoulder inside of the cassette.
8. If the arm you are replacing has a fixed bolt: Insert the arm into the shoulder, ensure that the fixed bolt on the arm goes through the pitch adjustment assembly, the spacer bushing, and the washer. (These are the components inside of the shoulder) Insert the previously removed bolt and nut. If the arm you are replacing does not have a fixed bolt: Use the bolt supplied with the arm, slide through the spacer bushing for shoulder support, the pitch - adjustment assembly, and the arm connection plate. Insert the previously removed bolt and nut.
9. With the awning open about 18", unband the high tension arm very carefully. Slowly guide it into position on the lead rail and fasten with the 17mm nut and bolt.
10. Attach the front of the arm to its connection point at the lead rail by replacing the pivot pin from the top and securing it with the retaining ring (F-clip). (Figure 17) Then slide into the lead rail connection and replace the nut and washer. At the shoulder assembly of the arm, tighten both lock nuts until they are one turn from being tight. Adjust the arms' pitch angle to match the others by rotating the head of the pitch-adjustment screw as follows; rotate in a clockwise direction to lower the arm, or rotate counterclockwise to raise it. Fully tighten both lock nuts on the shoulder assembly. Please refer to the "ADJUSTING THE PITCH ANGLE" section of this manual.



(Figure 17)

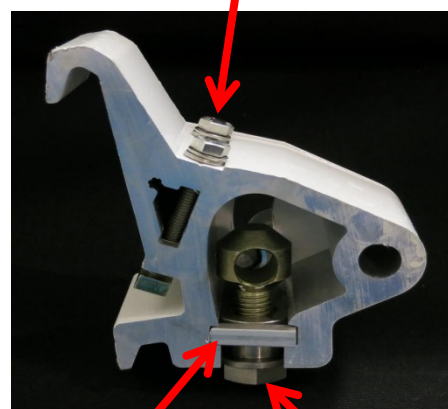
ARM LOCKING BOLT



**ARM ELEVATION
SCREW**

**PIVOT
BOLT**

SHOULDER LOCKING SCREWS



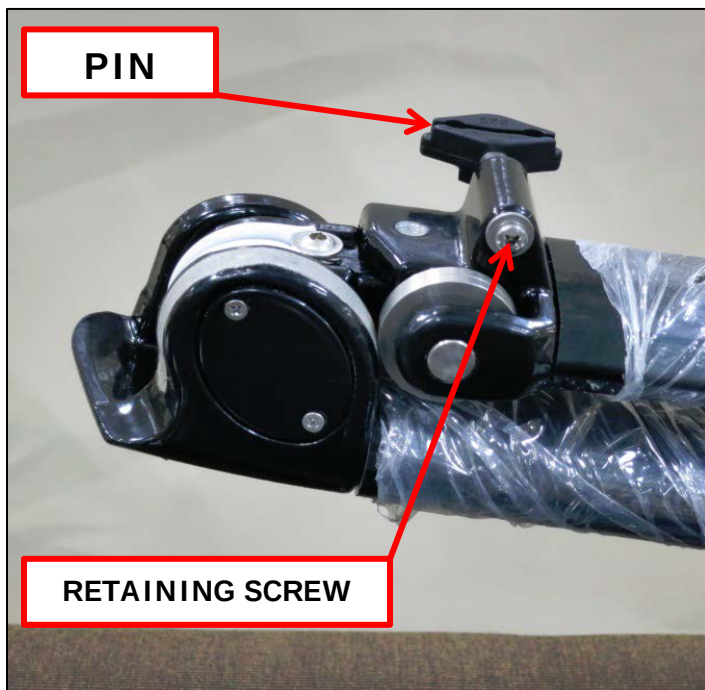
**SPACER
BUSHING**

**PITCH
ADJ. BOLT**

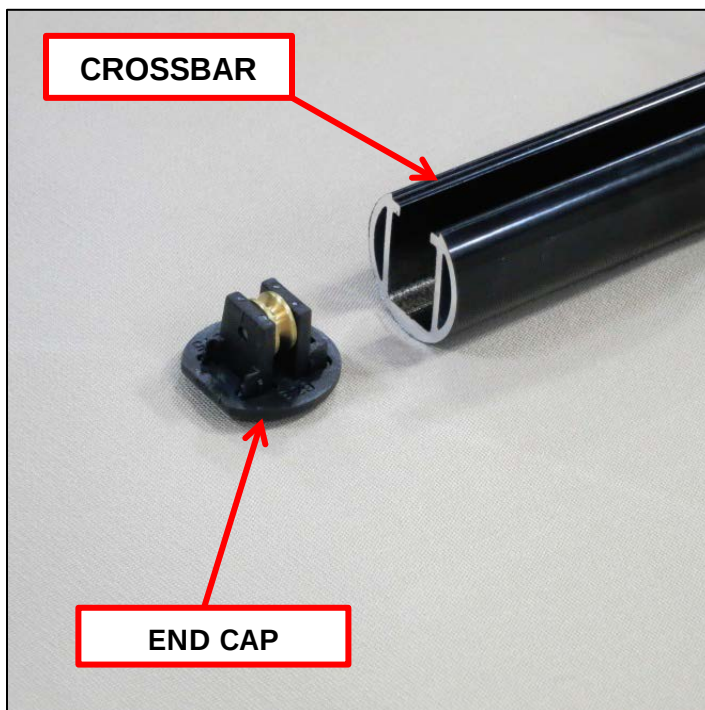
RESTRINGING THE CROSSBAR

This procedure is necessary in the event that the cord inside of the crossbar breaks for any reason.

1. Remove crossbar pin retaining screws, set aside for later use. Remove the crossbar.

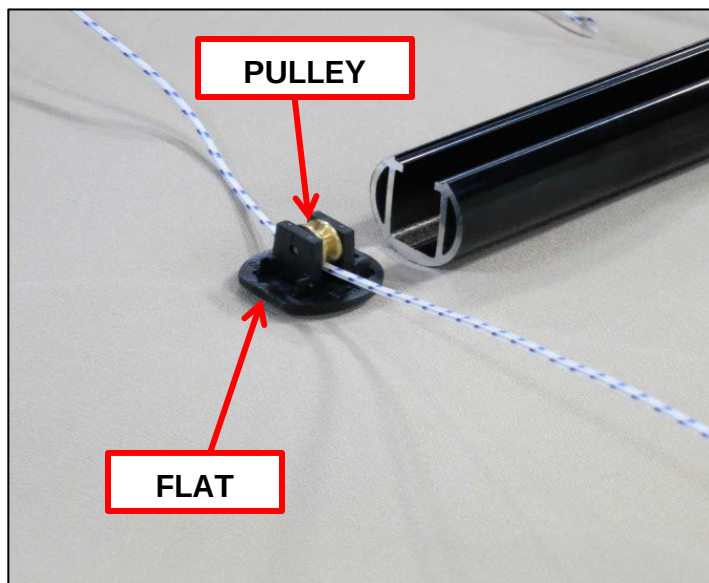


2. Remove the crossbar end caps and completely remove the broken or damaged cord. Ensure that you collect and put aside the pins and retaining screws to reuse later.

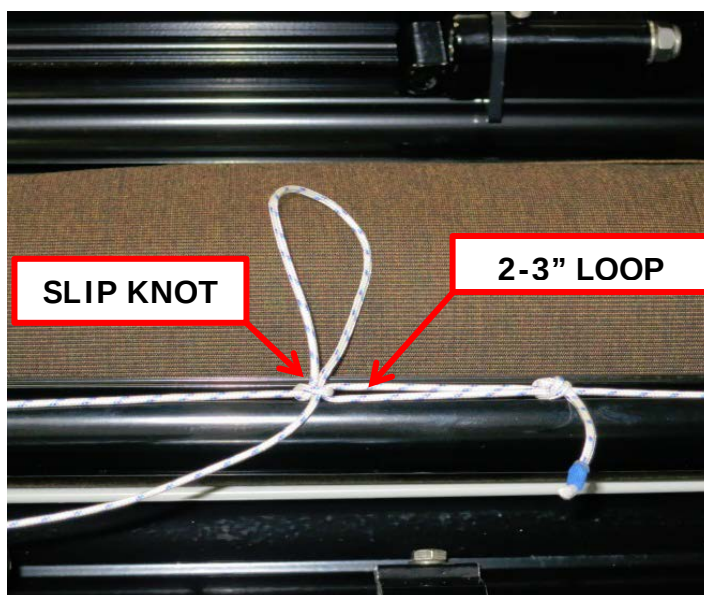


3. Check the length of your new cord. It should be twice as long as your crossbar, plus 6-8 inches.

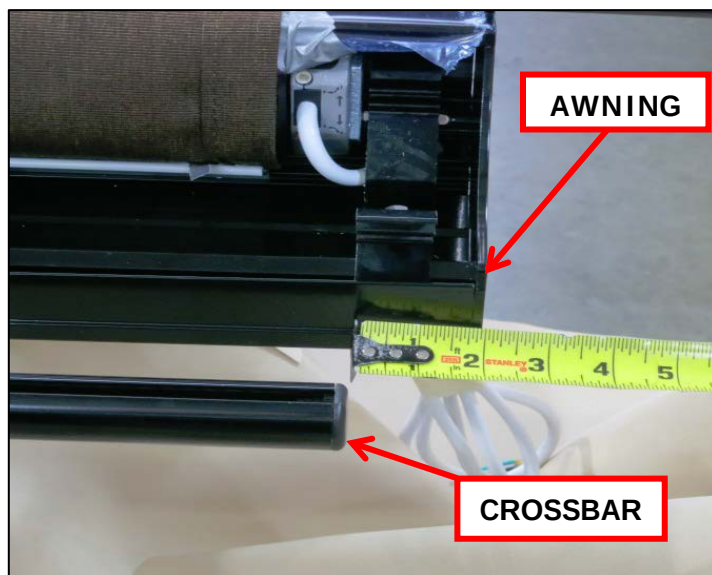
4. With the crossbar lying flat with the channel facing up begin threading the new cord through the pulley. Make sure that you have the flat side of the endcap oriented correctly, then replace the end cap.



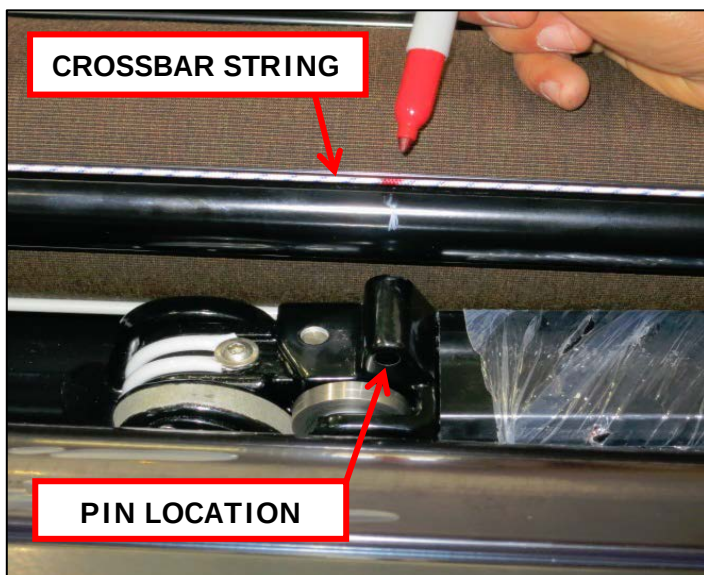
5. With the crossbar still laying in the same orientation thread the cord through the cap at the opposite end. Connect the two ends of the cord together by making a 2-3" loop and tying it in a square knot on right side, take the left side and attach it to the loop using a slip knot to hold it temporarily. Make the connection about 3' in from the left side. Make sure you have sufficient tension.



6. Open the awning about 4-6". Hold the crossbar up to the bottom of the cassette and measure 2 inches from the right side. While facing the awning, locate the knot that is in the rope 4-6" to the left of the right arms' pin location.

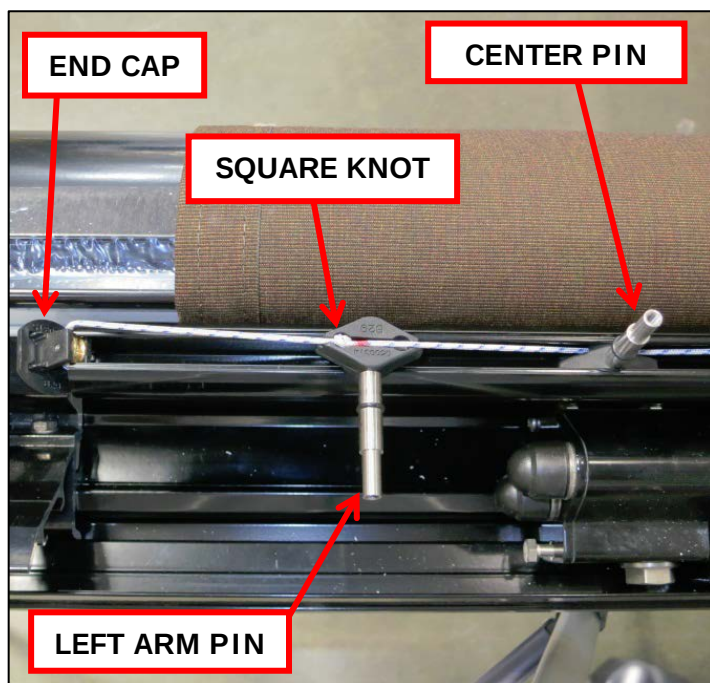


7. Holding that location, find the center lines of the arms' pin location on the two outer arms. Carefully transfer the center lines onto the cord with a marker. The left arms' mark will be the string closest to the awning cassette, the right arms' mark will be the string furthest from the awning cassette.

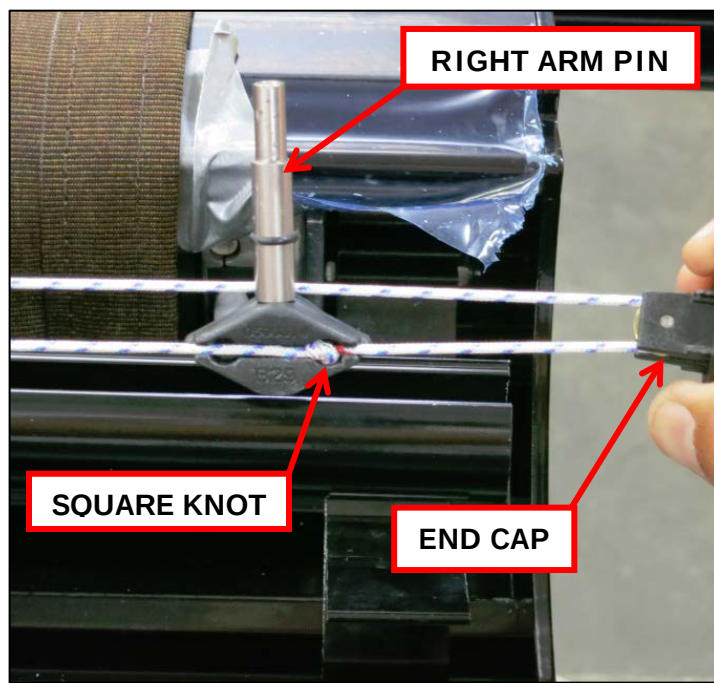


8. Take the crossbar down and place it on a level surface. Remove the slip knot and crossbars' end caps. Locate the pins and proceed to the next step.

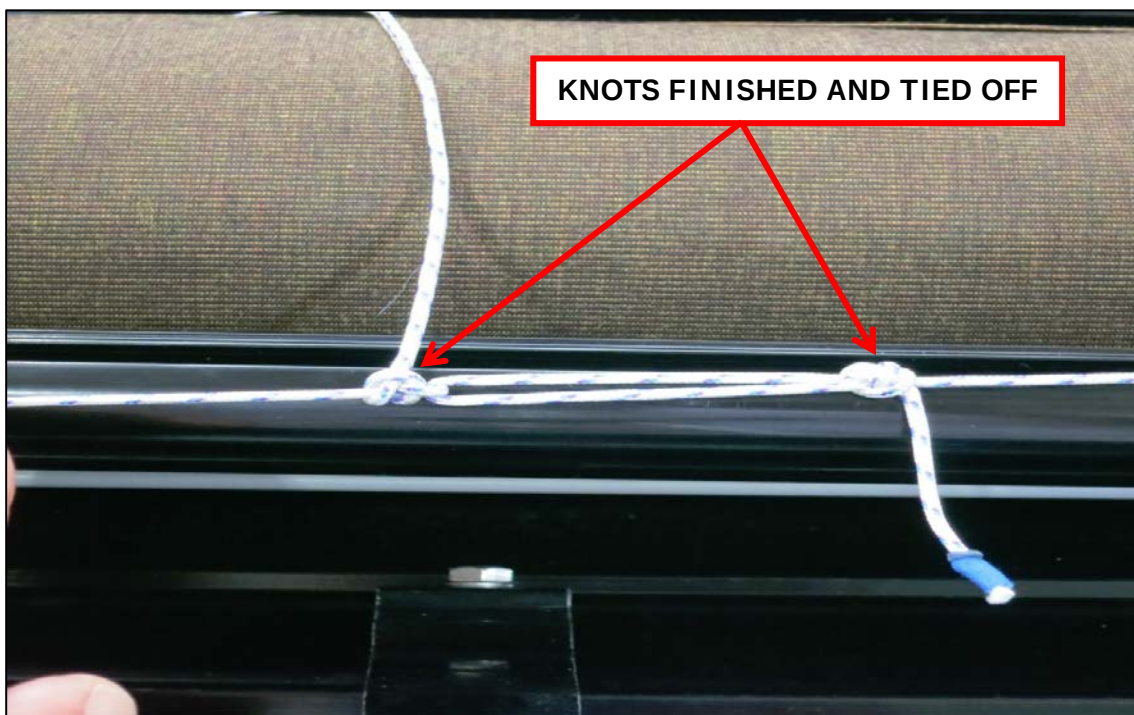
9. Thread the center pin onto the cord for the center arm and feed into the crossbar, no knot is necessary for the center pin. Locate the mark that was made for the left arm in step 7. Thread the cord thru the left sides' end cap pulley leaving that mark on the side that is furthest from you. Make a square knot as close as possible to the location of the mark. Take a pin and place the knot in the left hand location with the slot facing away from you. Make sure the knot fits into the hole on the pin tightly. Feed the left arms' pin into the left side of the crossbar and attach the left end cap.



10. Locate the mark that was made for the right arms' pin. Once again tie a square knot as close to the mark as possible. Thread the cord thru the right end caps' pulley and then place the pin on the cord with the knot on the left hand location with the slot facing towards you. Feed the left arms' pin into the crossbar and attach the right end cap.

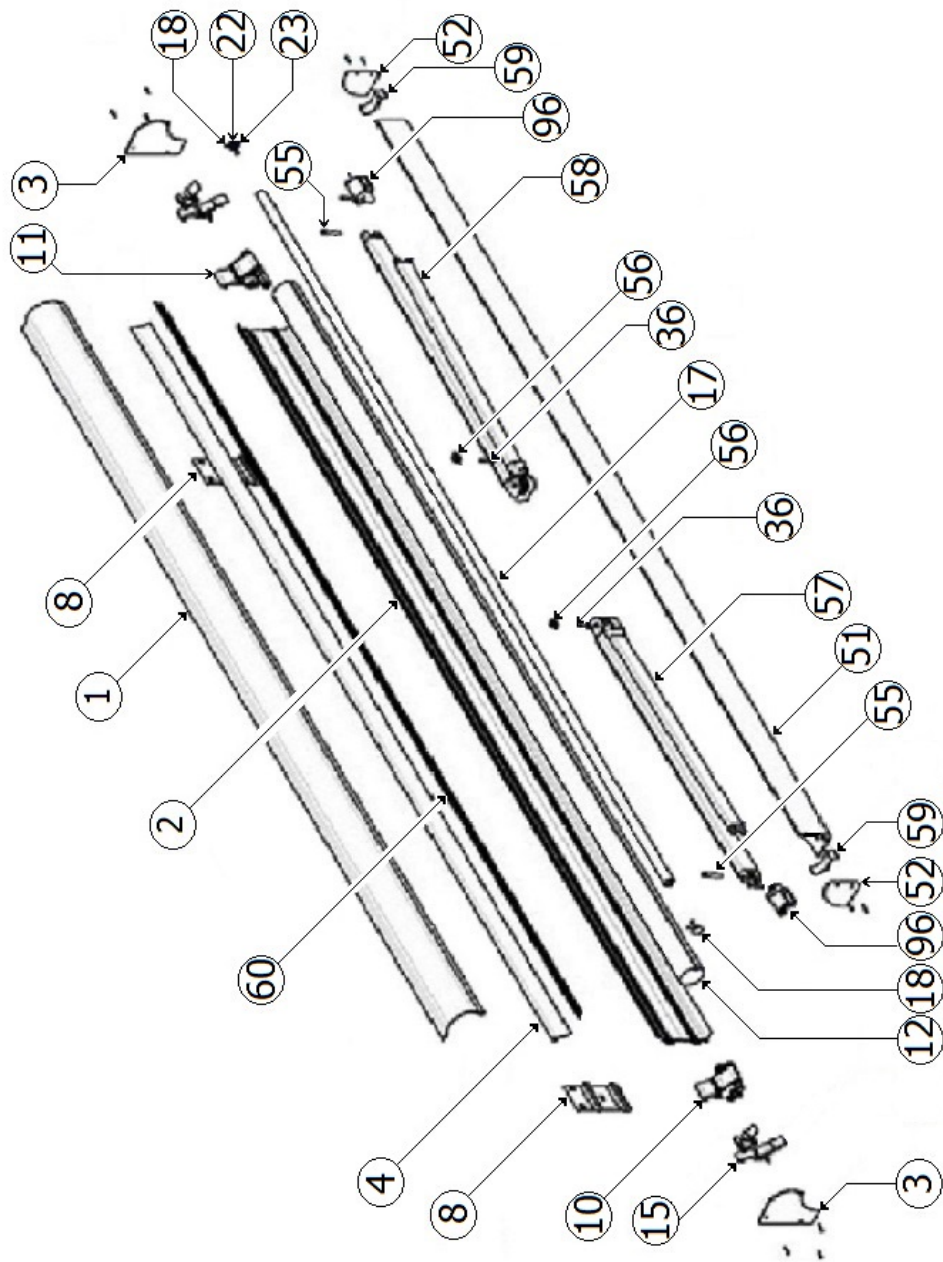


11. Both ends of the cord should be on the side closest to you. Locate the loop on the right side, thread the left sides' end through the loop, and create a good amount of tension on the cord. When properly tensioned tie the left side of the cord to the loop with a double knot.



12. Cut off the excess string behind the knots, add a dab of glue or a substance to prevent the cord from fraying.
13. With two people hold the crossbar up to the arms of the awning and make sure that both the left arms' pin and right arms' pin engage into their holes in the arm. Once the two outer arms' pins' are engaged the center pin should slide freely and engage the center arm.
14. Relocate the crossbar into the correct position. Engage the pins into the outer arms, slide the center pin to engage in the center arm. Fasten the pins into the arms by replacing the screws that were removed earlier.

Nova Exploded Diagram





NOVA II COMPONENT IDENTIFICATION

ITEM	DESCRIPTION	PART NUMBER
1	Main Housing Cover 14' BLK	2202714-B01
1	Main Housing Cover 16' BLK	2202716-B01
1	Main Housing Cover 18' BLK	2202718-B01
1	Main Housing Cover 19'8" BLK	2202719-B01
2	Back Housing 14' BLK	2202514-B02
2	Back Housing 16' BLK	2202516-B02
2	Back Housing 18' BLK	2202518-B02
2	Back Housing 19'8" BLK	2202519-B02
3	Main Housing End Plate LH BLK	2201132-B03
3	Main Housing End Plate RH BLK	2201133-B03
4	Back Housing Gutter 18' Plastic	1500549-04
4	Back Housing Gutter 19'8" Plastic	1500096-04
5	End Plate Screws	1500110-05
6	Mounting Bracket Slide Lock	1500111-06
7	Mounting Bracket Slide Lock Allen Screw	1500112-07
8	Mounting Bracket 11"	1500115-08
8	Mounting Bracket 19"	1500114-08
10	Shoulder Support LH BLK	2205133-B10
11	Shoulder Support RH BLK	2205133-B11
12	Roller Tube 14'	1500121-12
12	Roller Tube 16'	1500122-12
12	Roller Tube 18'	1500123-12
12	Roller Tube 19'8"	1500127-12
13	78mm Roller Gudgeon-All in One	1500142-13
15	Roller Tube Support Bracket	2202400-15
17	Cross Bar 14'	2202114-17
17	Cross Bar 16'	2202116-17
17	Cross Bar 18'	2202118-17
17	Cross Bar 19'8"	2202119-17
18	Cross Bar End Cap LH	2202162-18
18	Cross Bar End Cap RH	2202163-18
19	Cross Bar Support	2202160-19



20	Cross Bar Lift Bracket	2202160-20
21	Cross Bar Mounting Bracket Alum	2202160-21
22	Cross Bar Pulley	2202160-22
23	Cross Bar Support Bearing	2202160-23
36	Pin for Arm Connection Plate	1500168-36
49	Guide For Lead Rail	2202300-49
51	Lead Rail 14' BLK	2202314-B51
51	Lead Rail 16' BLK	2202316-B51
51	Lead Rail 18' BLK	2202318-B51
51	Lead Rail 19'8" BLK	2202319-B51
52	End Plate for Lead Rail - LH	2201122-B52
52	End Plate for Lead Rail - RH	2201123-B52
54	Plastic Cover for Motor Cut-out on Lead Rail	2200097-54
55	Arm/Lead Articulation Connector Pin	2205100-55
56	E Clip, Arm/Lead Rail Articulation Pin	2205100-56
57	Arm BLK 9'9" LH (3.0M)	2205030-B57
58	Arm BLK 9'9" RH (3.0M)	2205030-B58
59	Gliding Angle with Bolt and Nut	1500350-593
60	Main Housing Gutter 18' Plastic	1500549-60
72	Poly Rope 5.6 mm (@ Roller Tube)	1500372-00
96	Lead Rail Connector LH	2205122-96
96	Lead Rail Connector RH	2205123-96
	Girard Logo Plastic	3300504-002
	Rubber Seal for Flush Mount - BLK (per ft.)	1500501-99
Motor Assemblies		
14	Motor Assy 45-50 w/Manual Override	97GA45M-50
Fabric Assemblies		
	Fabric Assy 14' x 9'9" Nova-II	8000030-N14
	Fabric Assy 16' x 9'9" Nova-II	8000030-N16
	Fabric Assy 18' x 9'9" Nova-II	8000030-N18
	Fabric Assy 19'8" x 9'9" Nova-II	8000030-N198



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