

RECORD THIS U	<b>JNIT INFORMATION FOR</b>
FUTURE REFER	ENCE:
Model Number	
Serial Number	
Date Purchased	

# Weather Pro



### WeatherPro Hardware

8551201.400(X) Basement Hardware 8551202.400(X) Standard Hardware 8551203.400(X) 5th Wheel Basement Hardware 8551204.400(X) 5th Wheel Standard Hardware FOR

905(XX)(XX.XX)(X)(X) 8(X)5(XX)(XX.XX)(X)(X) Fabric Roller Tube Assembly

#### **A**WARNING

This manual must be read and understood before installation, adjustment, service, or maintenance is performed. This unit must be installed by a qualified service technician. Modification of this product can be extremely hazardous and could result in personal injury or property damage.

#### 

Lire et comprendre ce manuel avant de procéder à l'installation, à des réglages, de l'entretien ou des réparations. L'installation de cet appareil doit être effectuée par un réparateur qualifié. Toute modification de cet appareil peut être extrêmement dangereuse et entraîner des blessures ou dommages matériels.

### INSTALLATION INSTRUCTIONS

MODEL 905(XX)(XX.XX)(X)(X)FRTA 8(X)5(XX)(XX.XX)(X)(X)FRTA 855120(X).400(X) Hardware

REVISION A Form No. 3309523.052 10/16 ©2016 Dometic Corporation LaGrange, IN 46761

Important: These instructions must stay with unit. Owner read carefully.

#### USA

SERVICE OFFICE Dometic Corporation 1120 North Main Street Elkhart, IN 46514

#### CANADA

Dometic Corporation 46 Zatonski, Unit 3 Brantford, ON N3T 5L8 CANADA

#### SERVICE CENTER & DEALER LOCATIONS Please Visit: www.eDometic.com

#### SAFETY INSTRUCTIONS

This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries.

#### **RECOGNIZE SAFETY INFORMATION**



This is the safety-alert symbol. When you see this symbol in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating instructions.

#### UNDERSTAND SIGNAL WORDS

A signal word, WARNING OR CAUTION is used with the safety-alert symbol. They give the level of risk for potential injury.

A WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### CAUTION

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

#### CAUTION

used without the safety alert symbol indicates, a potentially hazardous situation which, if not avoided, may result in property damage.

Read and follow all safety information and instructions.

#### **GENERAL INFORMATION**

COVERED BY PATENT 5383346, 4941524, D366763, 6095221, 6230783, D414880, 6164883, 6276424, 6230786, D410192, D429894, 6273172 & 6798158 OTHER PATENTS PENDING

REQUIRED PARTS (Packed with each Hardware Assembly)

#### 8551201.400(X) & 8551202.400(X) Hardware

- (2) Top Mounting Bracket Cover
- (2) Bottom Bracket Cover
- (4) #14-10 x 2-3/4" Hex Head Screw
- (4) #14-10 x 2" Hex Head Screw
- (2) .25" Split Lock Washer
- (4) #10-16 x 3/4" Hex Washer Head Self Drilling Screw
- (4) 3/16" x 1" Oscar Rivets
- (2) #6-20 x .44" Hex Washer Head Self Drilling Screw
- (1) 1/4"- 20 x 3/4" Hex Head Bolt
- (1) 1/4"-20 x 1.25" SS Screw, Hex Cap
- (1) 1/4"-20 SS Lock Nut W/Insert
- (2) Spacer 25" ID X .5" OD X .125" Wide Curved
- (1) Spacer .265" ID X .5" OD X .187" Wide Flat

#### 8551203.400(X) & 8551204.400(X) Hardware

- (2) Bottom Bracket Cover
- (4) #14-10 x 1-1/2" Hex Head Screw
- (4) #14-10 x 2" Hex Head Screw
- (2) .25" Split Lock Washer
- (4) #10-16 x 3/4" Hex Washer Head Self Drilling Screw
- (4) 3/16" x 1" Oscar Rivets
- (2) #6-20 x .44" Hex Washer Head Self Drilling Screw
- (1) 1/4"- 20 x 3/4" Hex Head Bolt
- (1) 1/4"-20 x 1.25" SS Screw, Hex Cap
- (1) 1/4"-20 SS Lock Nut W/Insert
- (2) Spacer .25" ID X .5" OD X .125" Wide Curved
- (1) Spacer 265" ID X .5" OD X .187" Wide Flat

When Installing Electronic Control Kit Number 3310287.002 the following connectors, pins, and sockets are required and must be supplied by the installer. Additional wiring is also required and must be supplied by the installer.

(4)	350766-1	Plug (3 position)
(4)	350777-1	Plug (2 position)
(1)	350779-1	Plug (4 position)
(6)	350689-1	Socket (18-24 gauge)
(1)	350550-1	Socket (14-20 gauge)
(2)	640310-1	Socket (10-12 gauge)
(14)	350547-1	Pin (14-20 gauge)

When Installing Electronic Control Kit Number 3310287.010 the following Wire Harness Kit is supplied. Additional wiring is required and must be supplied by installer.

- (2) 3309726.010 Wire Harness, Patio Motor
- (2) 3309726.028 Wire Harness, Door Motor
- (2) 3309726.036 Wire Harness, Wind Sensor
- (1) 3309726.044 Wire Harness, Patio Remote Switch
- (1) 3309726.051 Wire Harness, Door Remote Switch
- (1) 3309726.067 Wire Harness, 12 VDC Power

#### Important: Read and understand ALL of the following steps before beginning installation.

#### Application

The Dometic Corporation awning is designed and intended for use on Motorhomes, Travel Trailers, and Fifth Wheels with straight sides.

**Important:** Structural backing is required where mounting screws /oscar rivets will be installed through side wall for securing top mounting brackets and back channels.

**Important:** Follow the Minimum distance dimensions requirements from awning rail to door. Mounting height depends on awning type and length. Insure sufficient room is available before starting installation. If a slide out room is under the canopy, contact your Dometic Sales Representative.

MINIMUM DIMENSION AWNING RAIL TO DOOR		
Hardware Model	Metal Weather Shield	
8551201.400(X)	12"	
8551202.400(X)	7"	
8551203.400(X)	12"	
8551204.400(X)	7"	

When the door falls in the center of the awning, add 2" to these distances.

**Installation Height:** This is the center to center distance of mounting holes in the top mounting bracket and the back channel. See Specification Chart below, items "B" and "C" and Figs. 1, 2, 3, and 4.

Dometic Corporation reserves the right to modify appearances and specifications without notice.

	Specification Chart				
	8551201.400(X) Fig. 2	8551202.400(X) Fig. 1	8551203.400(X) Fig. 3	8551204.400(X) Fig. 4	
А	66"	69-1/2"	63-3/4"	67-1/4"	
В	62-1/64"	65-3/8"	59-13/16"	63-11/64"	
С	62-33/64"	65-7/8"	60-37/64"	63-15/16"	
D	1/2"	1/2"	3/4"	3/4"	
Е	64-1/4"	67-3/4"	62"	65-1/2"	
F	62"	65-1/2"	62"	65-1/2"	
G	1-1/64"	1-5/32"	1-1/64"	1-5/32"	
Н	1-3/4"	1-3/4"	1-3/4"	1-3/4"	
J	5/8"	5/8"	13/32"	13/32"	

A = Overall length of hardware.

B = Minimum mounting distance center to center on mounting holes.

- C = Maximum mounting distance center to center on mounting holes.
- D = Distance between mounting holes in bracket.

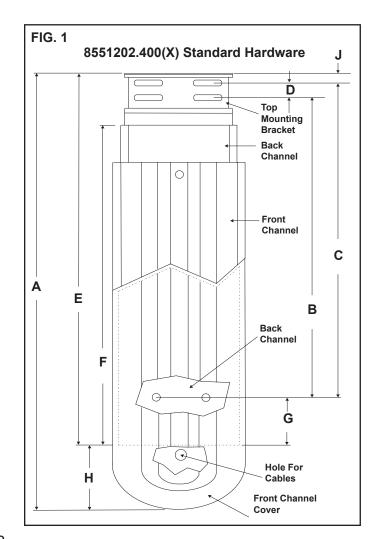
E = Location of hole for wire harness.

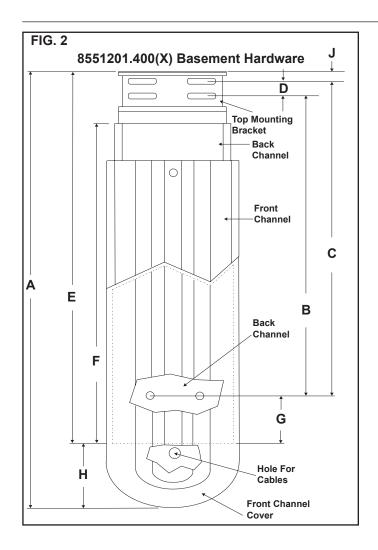
F = Back channel length.

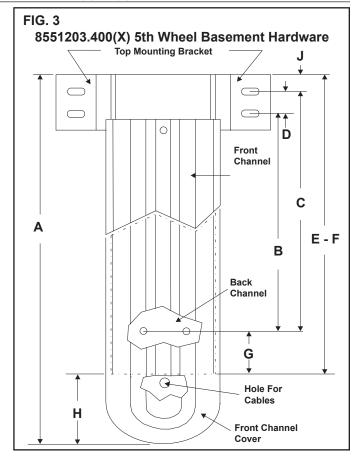
G= Distance between bottom of back channel and center of mounting hole.

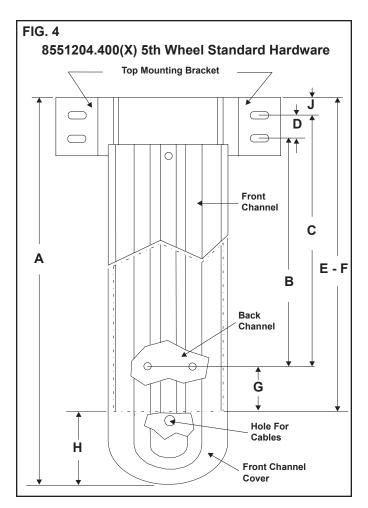
H = Distance front channel cover extends past back channel.

J = Distance from top edge of top bracket and center of the upper mounting hole.









#### **INSTALLATION INSTRUCTIONS**

Installation of Dometic Corporation awnings will briefly require three people. Use the following procedure to assure a properly installed and properly functioning awning.

#### A. Secure FRTA to Hardware

 Carefully lay the fabric roller tube assembly on a clean, well padded "V" trough to prevent fabric and/or roller cover damage. Remove the hardware from the packaging and place the arm prewired for the motor on the right side. The left arm has a spring loaded bottom arm and is not prewired for the motor.

#### 

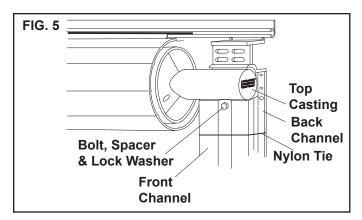
Personal Injury hazard. Rapid casting spin off will occur if not controlled. Do not remove cotter pin in end cap until top casting is secured to hardware. Failure to heed this warning could cause serious personal injury.

#### 

Personal injury hazard. Hardware arms are spring loaded. Rapid arm extension will occur if tie is removed before top casting is secured to hardware. Failure to heed this warning could cause serious personal injury or property damage.

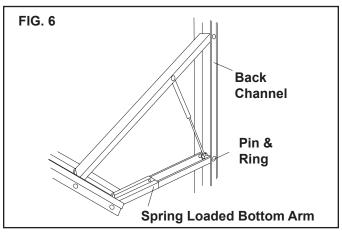
2. Secure each front channel to top casting of the FRTA. See FIG. 5. Slide top nylon ties down arm approximately 24 inches from top of front channel to allow hardware to open far enough to insert top casting into front channel. Do Not remove nylon ties at this time. The gas shocks on arm assemblies are pressurized and will spring open if not controlled.

Note: One hardware arm assembly is pre-wired for awning motor. This arm goes on the right side of the FRTA.



Note: One hardware arm assembly has a rainshed bottom arm. This arm goes on the left side of FRTA. See FIG. 6. (Hardware shown in open position for clarity)

- Using one (1) 1/4"-20 x 3/4" hex head bolt, one (1) spacer and one (1) 0.25 split lock washer secure the left side top casting to the left side channel. See FIG. 5. The right side is secured with one (1) 1/4"-20 x 1-1/4" hex head bolt, one (1) spacer and one (1) 0.25 split lock washer.
- 4. Remove cotter pin from left side end cap.

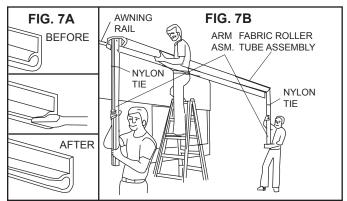


#### 

Personal injury hazard. Rapid casting spin off will occur if not controlled. Before separating torsion from hardware, the left hand torsion must be repined through end cap. Failure to heed this warning could cause serious personal injury or property damage.

#### B. Install Fabric in Awning Rail

- 1. Prepare the awning rail to accept the awning fabric.
  - a. Select the end from which the awning shall be fed, then widen that end with a flat screwdriver and file off any sharp edges. See FIG. 7A.



2. Unwind fabric one revolution before feeding awning fabric into awning rail. This will allow enough space between side wall and awning hardware to connect wires in Step C-1-c.  With one person grasping each arm assembly, carefully lift the entire assembly to an upright position.

## **Important:** Keep the two arm assemblies parallel to each other to avoid excessive twisting and possible damage to the assembly.

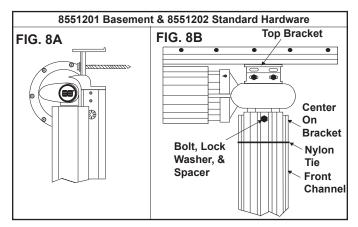
4. Walk the awning to the end where the awning rail was prepared. A third person is now required to feed the fabric into the awning rail. The other two will walk the entire awning assembly forward and into the desired position. See FIG. 7B.C. Top Mounting Bracket Installation

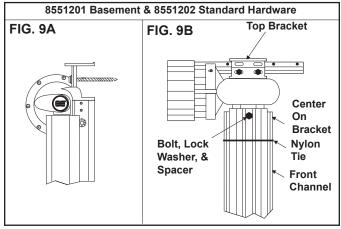
#### C. Top Mounting Bracket Installation

- 1. (8551201 Basement & 8551202 Standard Hardware) Secure Top Mounting Brackets.
  - a. After the complete awning assembly has been threaded into the awning rail, check that its position allows for solid mounting of the top mounting brackets and the back channels. Also insure that the back channels are in the desired location (not restricting use of doors, access doors, windows, etc.).

### **Important:** Structural backing is required where mounting screws will be installed through side wall for securing top mounting brackets.

Note: Awning rails with rain gutters may not allow the FRTA to close all the way. It may be necessary to lower the top bracket position to ensure the FRTA will close properly. See FIG. 8B.





Note: Awning rails with rain gutters may require a spacer kit to prevent the FRTA from closing against the rain gutter, causing fabric damage and/or improper operation. These 3308059.XXX(X) and 3309390.XXX(X) back channel spacer kits can be obtained through Dometic.

b. Place both top brackets in position over or directly under the awning rail as shown in FIG. 8B & 9B. The motorized arm assembly is always installed on the right side of the awning.

Top mounting brackets must be installed parallel with awning rail. Mark the hole position for the top brackets and slide the assembly out of the way. Pre-drill two holes for each bracket using a 3/16" drill bit (use a 7/32" drill bit if in steel). Install each top bracket with two (2) #14-10 x 2-3/4" hex head screws. Seal where the screws enter the RV side wall with clear silicon sealer. At this point the arm assemblies can support themselves.

#### CAUTION

The arm assemblies must be controlled while the top mounting brackets are being installed. When the weight of the FRTA is no longer supported, the downward force could cause the arm assembly to swing side ways and may damage the side wall if not controlled.

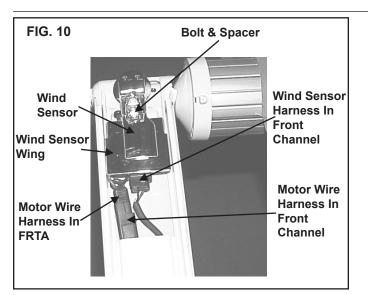
- c. Motor connection
  - Remove nylon ties wrapped around front and back channels. See FIG. 5.
  - Grasp the right side front channel and slowly pull it away from the side wall.
  - Connect the factory pre-wired motor wire harness in the front channel to the factory pre-wired motor wire harness in the FRTA. See FIG. 10.

#### **Important:** Dielectric grease must be placed on all exposed pins.

 Next, plug the factory pre-wired wind sensor harness in the front channel into the wind sensor. Make sure it is pushed on all the way.

**Important:** Once plug has snapped into position, do not pull on plug to remove without depressing the red tab to disengage catch. Damage to the plug and/ or the wind sensor could occur if not disconnected properly.

• Place wind sensor over screw protruding from back side of top casting. Tuck any excess wire from the motor harness and wind sensor harness underneath the wing of the sensor as shown. See FIG. 10.



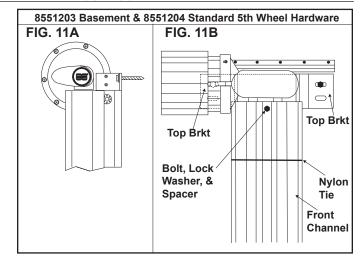
- Secure the wind sensor with supplied 1/4"-20 lock nut w-insert and 3/16" nylon spacer. Tighten nut until wind sensor seats against back of top casting. Do not overtighten nut; wind sensor housing could be damaged if nut is over tightened.
- 2. (8551203 Basement & 8551204 Standard 5th Wheel Hardware) Secure Top Mounting Brackets.
  - a. After the complete awning assembly has been threaded into the awning rail, check that its position allows for solid mounting of the top mounting brackets and the back channels. Also insure that the back channels are in the desired location (not restricting use of doors, access doors, windows, etc.).

### **Important:** Structural backing is required where mounting screws will be installed through side wall for securing top mounting brackets.

 Place both top brackets in position directly under the awning rail as shown in FIG. 11B. The motorized arm assembly is always installed on the right side of the awning.

Note: Awning rails with rain gutters may require a spacer kit to prevent the FRTA from closing against the rain gutter, causing fabric damage and/or improper operation. These 3308059.XXX(X) and 3309390.XXX(X) back channel spacer kits can be obtained through Dometic.

Top bracket must be installed parallel with the awning rail. Make sure arms are located in the correct position and using the outside bracket hole as a guide pre-drill a 3/16" hole for mounting screw. Drill a 7/32" hole if drilling into steel. Install outside top mounting bracket using one (1) #14-10 x 1-1/2" hex head screw. Seal where the screw enters the RV side wall with clear silicon sealer. Repeat this procedure for opposite side.



#### CAUTION

The arm assemblies must be controlled while the top mounting brackets are being installed. When the weight of the FRTA is no longer supported, the downward force could cause the arm assembly to swing side ways and may damage the side wall if not controlled.

- c. To install screws on the inside top mounting brackets it will be necessary to pull the FRTA away from the side wall approximately 12". Remove nylon ties wrapped around the front and back channels. See FIG. 11B. Grasp the front channel and slowly pull it away from the side wall. Again make sure arms are in the correct position and pre-drill hole as in previous step and install one (1) #14-10 x 1-1/2" hex head screw. Repeat this procedure for opposite side. Seal where screw enters the RV side wall with clear silicon sealer.
- d. Motor connection
  - Connect the factory pre-wired motor wire harness in the front channel to the factory pre-wired motor wire harness in the FRTA. See FIG. 10.

**Important:** Dielectric grease must be placed on all exposed pins.

 Next, plug the factory pre-wired wind sensor harness in the front channel into the wind sensor. Make sure it is pushed on all the way.

**Important:** Once plug has snapped into position, do not pull on plug to remove without depressing the red tab to disengage catch. Damage to the plug and/ or the wind sensor could occur if not disconnected properly.

- Place wind sensor over screw protruding from back side of top casting. Tuck any excess wire from the motor harness and wind sensor harness underneath the wing of the sensor as shown. See FIG. 10.
- Secure the wind sensor with supplied 1/4"-20 lock nut w/insert. Tighten nut until wind sensor seats against back of top casting. Do not over-tighten nut; wind sensor housing could be damaged if nut is over tightened.

#### D. Electronic Control Kit, Awning Motor, Wind Sensor, and Remote Switch Installation

Important: Follow the wiring sequence below. Harnesses should not be connected to the control box until after all wiring to the awning hardware has been fully completed. The 12V/Ignition harness must be the last in the sequence to be connected to the control box. Do not attempt to re-wire, splice, or cut any wires while the 12V/Ignition harness is connected to the control box. Failure to follow these instructions may result in accidental grounding of "hot" wires, which will cause the internal fuse to blow. See Section E for instructions on replacing internal fuse.

**Important:** Electronic Control is also pre-wired for installing a Dometic Corporation Oasis Elite awning. Unless a Dometic Corporation Oasis Elite awning is being installed at the same time only connectors designated for WeatherPro will be used.

**Important:** The Electronic Control & Remote Key FOB are programmed as a matched set. They must remain together.

 First, decide on a location for the Electronic Control. Recommended locations for the Electronic Control are compartments outside the living quarters such as one of the basement storage compartments. The Electronic Control must be installed at a location where it will not be close to steel framing or directly exposed to weather or extreme temperatures.

**Important:** Make sure channel is in proper position and drill a 1-1/4" hole through side wall for harness. See FIG. 1, 2, 3 & 4.

- 2. Connect Electronic Control to Awning Motor. See FIG. 14.
  - a. The installer will provide a wire harness using the proper plugs and pins or the supplied 3309726.010 Patio Motor Wire Harness, depending on the kit being installed. Connect one end of the harness to the two position cap extending from the bottom of the right side hardware arm. Route opposite end of harness through 1-1/4" hole and connect it to the Electronic Control connector marked "Patio Motor". See FIG. 14. To avoid voltage drop, follow wire length guide listed below.

Wire Length	Wire Size
10' & Under	14 Gauge
11' to 30'	12 Gauge
Over 30'	10 Gauge

**Important:** When routing harness, take precaution against wires rubbing on sharp edges and use a grommet (supplier installed) when going through walls. Harness should be routed so that when bottom bracket is installed it will cover hole where wire goes through wall. Seal any holes with clear silicon sealer. See FIG. 1, 2, 3 & 4.

- Connect Electronic Control To Wind Sensor. See FIG. 14.
  - a. The installer will provide a wire harness using the proper plugs and sockets or the supplied 3309726.036 Wind Sensor Wire Harness, depending on the kit being installed. Connect one end of the harness to the three position cap extending from bottom of the right side hardware arm. Route opposite end of harness through 1-1/4" hole and connect it to the Electronic Control connector marked **"Wind Sensor"**.
- 4. Connect Electronic Control To The Remote Switch. See FIG. 14.
  - a. Install the remote switch at a convenient location such as the door area.
  - b. The remote switch should not be in direct exposure to weather or extreme temperatures.
  - c. Cut hole in structure where switch is to be installed. Place decal on bezel and pop remote switch into bezel opening.

d. Route three (3) wires (installer supplied) from the Electronic Control to the remote switch. These wires should be brown, yellow and green 16 gauge wires. Install 1/4" insulated terminals on the remote switch end of wires. Connect wires to switch. See FIG. 14 for wire locations. Secure bezel with appropriate fasteners (not supplied). The Electronic Control end of wire will require a three position plug and pins (installer supplied) or supplied 3309726.044 Patio Switch Wire Harness, depending on the kit being installed. Plug this end of the harness into the Electronic Control connector marked "Patio Switch".

#### E. Connect Electronic Control To The 12 VDC Power Supply And Ignition Interlock

- 1. Connect the Electronic Control To the 12 VDC Power Supply. See FIG. 14 for wire positions.
  - Run two (2) wires (installer supplied) from the Electronic Control to the 12 VDC supply. It is recommended that these wires be (Red positive + and Black negative -) 12 gauge wires. This should be on a separate 15 amp circuit. The Electronic Control end of the 12 VDC supply wires will require a four position connector and sockets (installer supplied) or supplied 3309726.067 12 VDC Power Wire Harness, depending on the kit being installed.

**Important:** To ensure proper operation, the Electronic Control must have a minimum of 12.5 VDC at the Electronic Control during awning operation. It may be necessary to increase the wire size if voltage is below 12.5 VDC.

- 2. Connect Ignition Interlock Wire. See FIG. 14 for wire position.
  - a. When installed correctly the interlock connection prevents the awning from being extended when the vehicle ignition is "ON".
  - b. Run a 16 gauge wire (installer supplied) from the Ignition Isolator (+12 VDC) of vehicle to the Electronic Control . The Electronic Control end of wire will require a socket (installer supplied) or a proper size wire nut to connect it to the supplied 3309726.067 12 VDC Power Wire Harness, depending on the kit being installed. Plug this harness into the Electronic Control connector marked "Power 12 VDC".

**Important:** The awning should now be operational. Do not move vehicle until steps F and G are completed. If after completing all the preceding steps the awning is not operational (all LEDs are off), verify adequate voltage at control box. Check internal fuse and replace if necessary. See below for replacement instructions.

- If the control box is not operational (all LEDs on the front of the control box are off) even after adequate voltage supply has been verified, the internal fuse may have blown during installation and may need to be replaced.
  - a. Disconnect 12V/Ignition harness from control box.
  - b. Remove control box front cover. Use a flat screw driver to gently pry the three tabs on the edge of the cover past the corresponding snaps on the control box base. Be careful not to break the tabs. Gently pull the cover straight off the base. Alternately, you may remove the screws holding the control box to the wall and un-snap the tabs from behind.
  - c. Locate the fuse. Gently pull the fuse from the mounting clips and inspect for damage. If it is necessary to replace the fuse, make sure to replace it with a new part that conforms to the following specification:

0.5A, 250V, Fast Acting Fuse, 5mm X 20mm Glass Tube (Reference Cooper-Bussmann GMA-500mA or equivalent).

You may order replacement fuses from Dometic under the following kit numbers: 3312252.004 (single fuse) 3312253.002 (20-pak)

d. Replace control box cover. Connect 12V/Ignition harness to control box. Verify awning is operational.

**Important:** If the control box continues to blow fuses when power is restored, this is an indication of a short or some other fault in the electrical circuit. Go over all splices made to factory harnesses and verify all wiring is correct. You may troubleshoot each output by replacing the internal fuse (see above), and disconnecting all output harnesses before re-connecting the 12V/Ignition harness to the control box. Verify that at least the "ON" LED is on. Then connect each output harness, one at a time, until the fuse blows again.

#### F. Back Channel And Bottom Bracket Installation

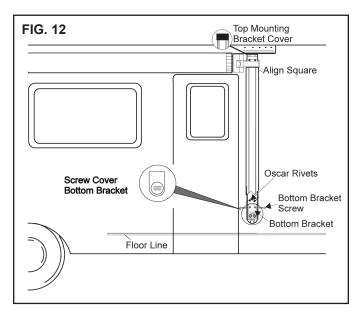
**Important:** Structural backing (metal) is required where oscar rivets will be installed through side wall for securing back channels.

- 1. Open awning as required to secure back channel and install bottom bracket.
- 2. Remove bottom bracket from inside back channel if installed.
- 3. Align the back channel so it is square with the vehicle and the FRTA. A door or window frame can be used to measure from. See FIG.12.
- 4. Drill two (2) 3/16" holes through the outside wall using the holes in the bottom of back channel as a guide. See FIG. 1, 2, 3 & 4.

 Secure back channel to wall with two (2) 3/16" x 1" Oscar rivets provided. See FIG. 12.

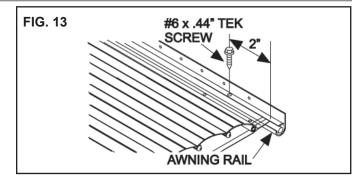
**Important:** Structural backing (metal) is required where oscar rivets will be installed through RV side wall for securing back channel.

- 6. Seal where the oscar rivets enter the RV side wall with clear silicon sealer.
- Slide bottom brackets back into position. While holding bottom bracket in position drive two (2) # 10-16 x 3/4" self drilling screws through hole in back channel and into bracket. See FIG. 12.



#### G. Initial Awning Adjustment

- Turn on the 12 VDC power supply and cycle the awning four or five times to check fabric alignment and to make sure the hardware is nesting properly. If there is a misalignment, adjust the arm by loosening the upper mounting bolts and move the bracket accordingly. Cycle the awning again to check the alignment. See User's Guide for opening and closing instructions.
- When satisfied with the alignment, secure fabric roller cover by driving a # 6-20 x .44" Tek screw through the rail and into the fabric rope. See FIG. 13 for screw location. Repeat on opposite side. Snap top and bottom screw covers in position. Top screw covers are only used on 8551201 & 8551202 hardware. See FIG. 12. The installation is now complete and ready for use.



#### H. Close and Secure Awning

1. If awning will not be used after installation, close and secure. See User's Guide for closing and securing instructions.

