



SERVICE INSTRUCTIONS

AWNING GEAR DRIVE CONVERSION KIT 3316546.XXX

FOR USE WITH UNIVERSAL HARDWARE
8273000



Read these instructions carefully. These instructions **MUST** stay with this product.

REVISION A

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INTRODUCTION

These instructions apply to manual type patio awnings (hereinafter referred to as “awning,” or “product”). The Fabric Roller Tube Assembly (hereinafter referred to as “FRTA”) consists of a vinyl or acrylic fabric, roller tube, and two torsion assemblies. Some FRTA models may also include a weathershield.

Read these instructions and highlight the appropriate steps for your particular procedure BEFORE starting the replacement. Replacements can be performed by one person with brief help from additional personnel. Use these instructions to ensure correct installation, function, and operation of product.

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DOCUMENT SYMBOLS



Indicates additional information that is **NOT** related to physical injury.



Indicates step-by-step instructions.

IMPORTANT SAFETY INSTRUCTIONS

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

A. Recognize Safety Information



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

B. Understand Signal Words

A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.

⚠ WARNING indicates a hazardous situation that, if **NOT** avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation that, if **NOT** avoided, could result in minor or moderate injury.

NOTICE is used to address practices **NOT** related to physical injury.

C. Supplemental Directives



Read and follow all safety information and instructions to avoid possible injury or death.

Read and understand these instructions before [installing / using / servicing / performing maintenance on] this product.

Incorrect [installation / operation / servicing / maintaining] of this product can lead to serious injury. Follow all instructions.



The installation **MUST** comply with all applicable local and national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code

CANADA

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

D. General Safety Messages



⚠ WARNING Failure to obey the following warnings could result in death or serious injury:

- This product **MUST** be [installed / serviced] by a qualified service technician.
- Do **NOT** modify this product in any way. Modification can be extremely hazardous.
- Do **NOT** modify this product beyond the scope of these service instructions. Modification (beyond these service instructions) can be extremely hazardous.
- **IMPACT OR CRUSH HAZARD.** This product should be installed in a controlled environment (inside). Do **NOT** install the product during windy conditions, or when wind is expected. Otherwise, the product could move unpredictably, become unstable, and could [detach / bend / collapse].

GENERAL INFORMATION

A. Required Kits

- Fabric, fabric roller tube, and torsion replacement:
- (1) 3308334.006U Torsion Crank Assembly

CONVERT THE TORSION ASSEMBLIES

A. Pinning The Torsions

This subsection applies to all replacement procedures.

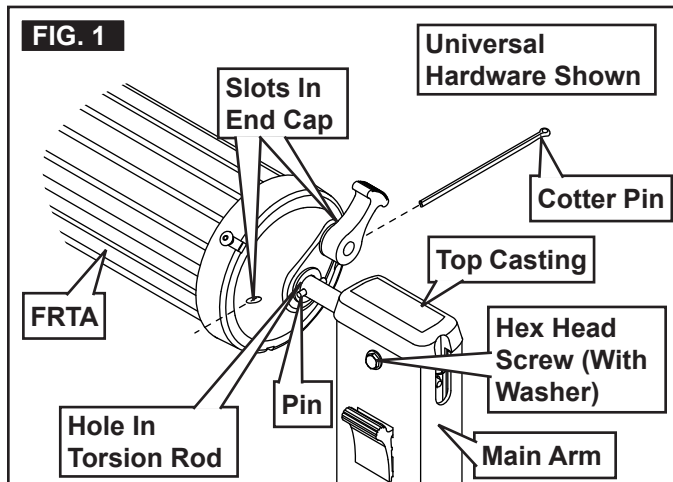
i If an awning is installed on an RV, this procedure **MUST** be performed:

- with the FRTA extended 2 revolutions (turns) from the awning rail.

Pin both torsions to prevent uncontrolled unwinding of the spring, or unintended awning movement.

1. Extend the awning two revolutions from the awning rail.
2. Rotate the FRTA (by hand) until the pin near the top casting is parallel with the two slots in the end cap. See FIG. 1.

i The hole in the torsion rod **MUST** align with the slots in the end cap.



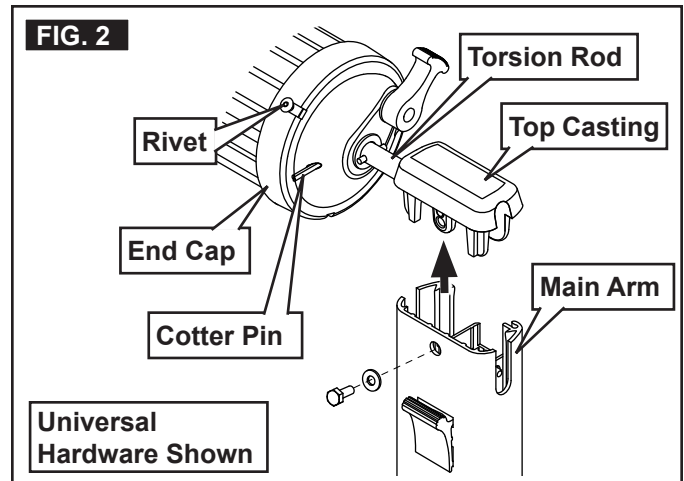
3. Insert a 7/64" X 2-3/4" cotter pin through the end cap and torsion rod. Then tape the head of the cotter pin to the end cap to secure in place. See FIG. 1.
4. Repeat steps (2) through (3) for the opposite side.

B. Unwinding The Torsion(s)

1. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove top casting from [main arm / front channel] until torsion (rod) is securely pinned at end cap. Otherwise, rapid casting spin off will occur. Spring tension will attempt to spin the top casting and/or fabric roller tube quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

With the torsion securely pinned, remove the hex head screw (and washer) that secures the top casting to the main arm / front channel. Save for reinstallation later. See FIG. 1.

2. Separate (lift) the top casting from the main arm / front channel. See FIG. 2.



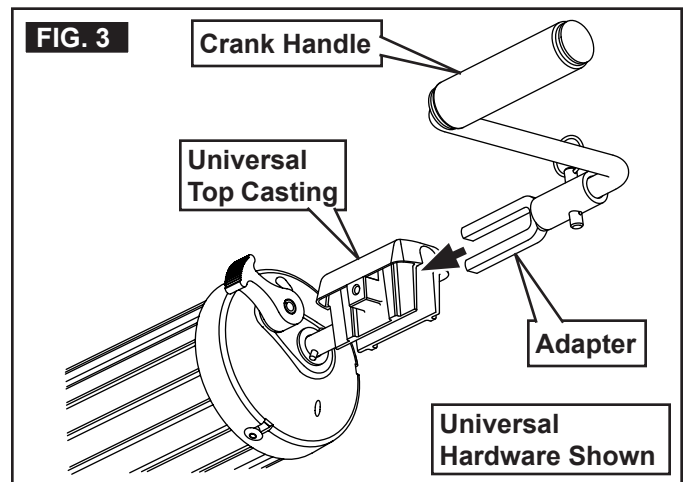
3. Attach the correct adapter to the crank handle. Then secure the crank assembly to the top casting.

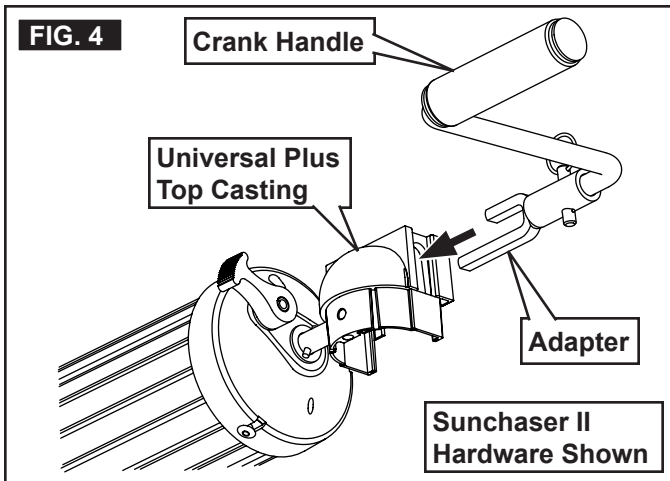
i The adapter to use, and procedure to follow (below) depends on the awning model (top casting style).

See subsection, "A. Required Kits" on page (3) for torsion crank assembly.

- a. Universal or Sunchaser II style:

Insert the adapter of the torsion crank assembly into the top casting until it is securely in place. See FIG. 3 & FIG. 4.





4. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove cotter pin from torsion rod (at end cap) until top casting is securely held. Otherwise, rapid casting spin off will occur. Spring tension will attempt to spin the top casting and/or fabric roller tube quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

While keeping a tight, secure hold on the crank handle, pull the cotter pin from the torsion rod at the end cap. See FIG. 2, FIG. 3 & FIG. 4.

5. **⚠ WARNING** IMPACT OR PINCH HAZARD. Use extreme care when [winding / unwinding] top casting. If **NOT** controlled, rapid casting spin off will occur. Spring tension will attempt to spin the top casting and/or fabric roller tube quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

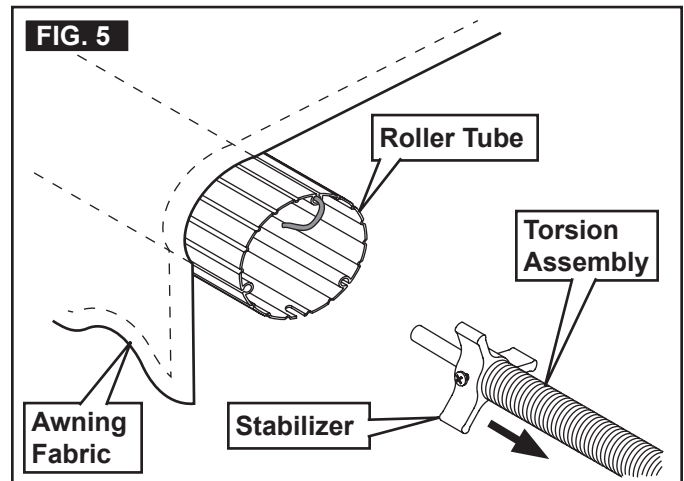
Carefully and slowly unwind the torsion (top casting) until all torsion spring tension is relaxed. Then remove the crank assembly from the top casting.

6. Repeat steps (1) through (5) for the opposite side (if applicable).

1. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove torsion from fabric roller tube until spring tension is released (unwound). If torsion rod is also **NOT** pinned at end cap, the rapid casting spin off will occur. Spring tension will attempt to spin the top casting and/or end cap quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

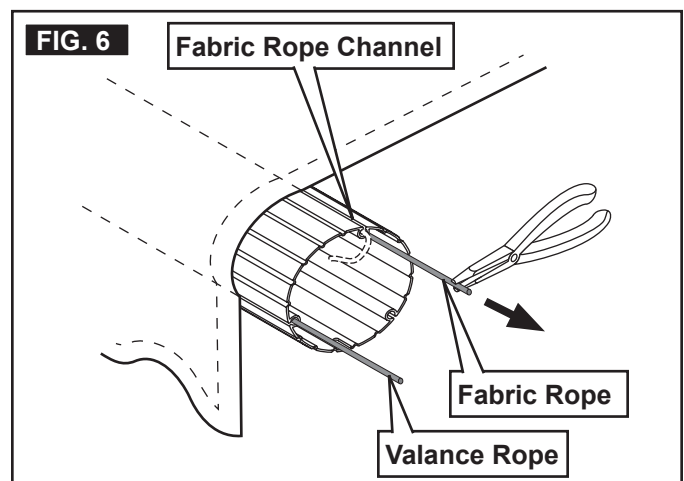
With the torsion spring tension released (unwound), remove the (3) rivets securing the end cap to the roller tube. See FIG. 2.

- Drill a 3/16" diameter hole through the center of the rivet.
 - Remove the rivet (with debris) and discard.
 - Repeat steps (a) through (b) for each rivet securing the end cap to the roller tube.
2. Slide the torsion (assembly) out from the roller tube. See FIG. 5.



- Remove burrs, and discard any rivet bodies and debris from the roller tube. See FIG. 5.
- Repeat steps (1) through (3) for the opposite side (if applicable).

1. Verify the awning fabric is centered on the fabric roller tube.
2. Pull / stretch the fabric rope and bend the rope over toward the center of the roller tube. See FIG. 6.
- i** Make sure the fabric rope locks securely into the notch (if applicable) at the end of the fabric rope slot.



CONVERT THE TORSION ASSEMBLIES

- Trim the fabric rope length according to the appropriate procedure.



This helps prevent interference with torsion, and shifting of the awning fabric.

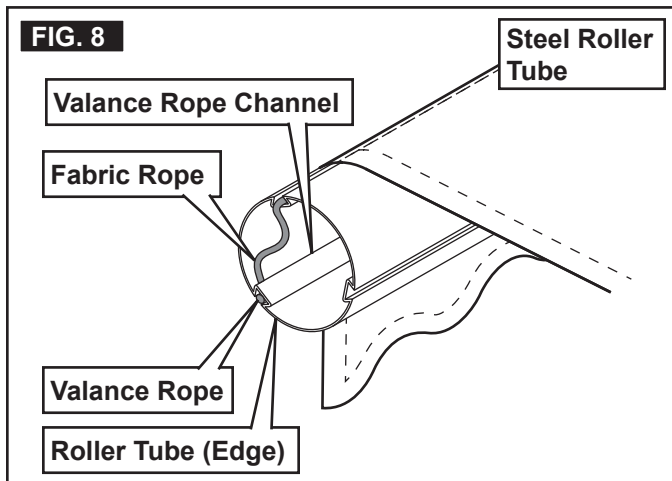
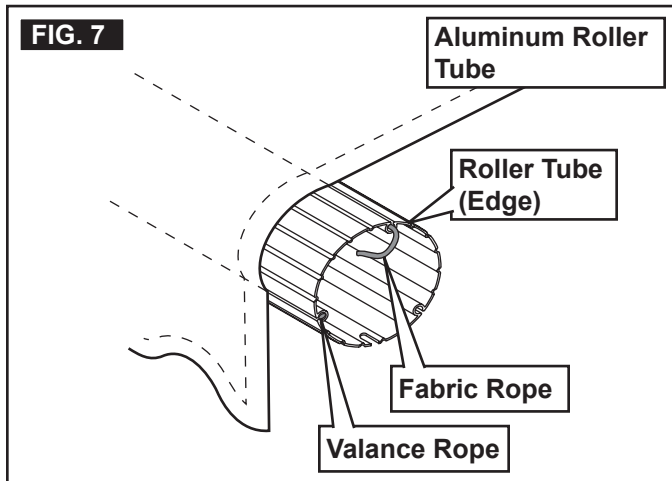
The procedure to follow (below) depends on the fabric roller tube material.

- ALUMINUM** roller tube:

Trim the fabric rope 2" (50 mm) below the edge of the roller tube. See FIG. 7.

- STEEL** roller tube:

Trim the fabric rope leaving enough length to wedge behind the valance rope channel (inside fabric roller tube). See FIG. 8.



- Trim the valance rope flush with the edge of the roller tube. See FIG. 7 & FIG. 8.



This helps prevent interference with torsion, and shifting of awning fabric.

- Repeat steps (2) through (4) for the opposite side.

E. Installing The End Cap Assemblies



- Make sure the fabric rope is secured properly inside the roller tube. See FIG. 7 & FIG. 8.



Do **NOT** cut fabric rope.

- Install the end cap assembly onto the roller tube.

- Align the end cap to the roller tube using one of the following procedures.



The procedure to follow (below) depends on whether the roller tube is notched.

- WITH NOTCH** (new roller tube):

Align alignment tabs on the end cap to notch in the roller tube. See FIG. 9.

- WITHOUT NOTCH** (old roller tube):

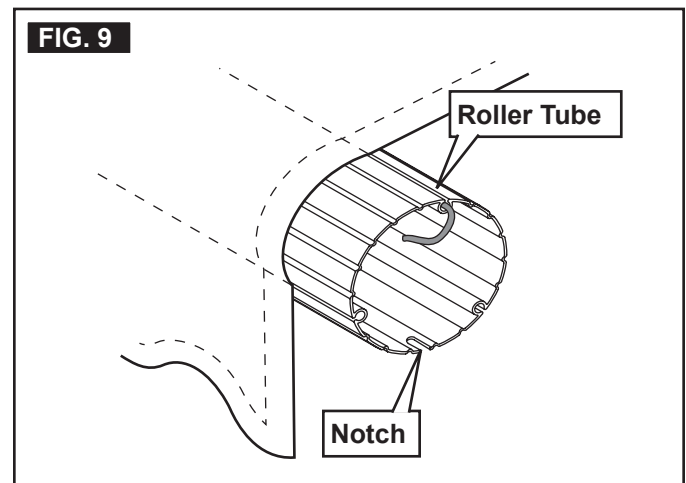
Align the hole in the end cap to the empty (auxiliary) channel in the roller tube. See FIG. 10.



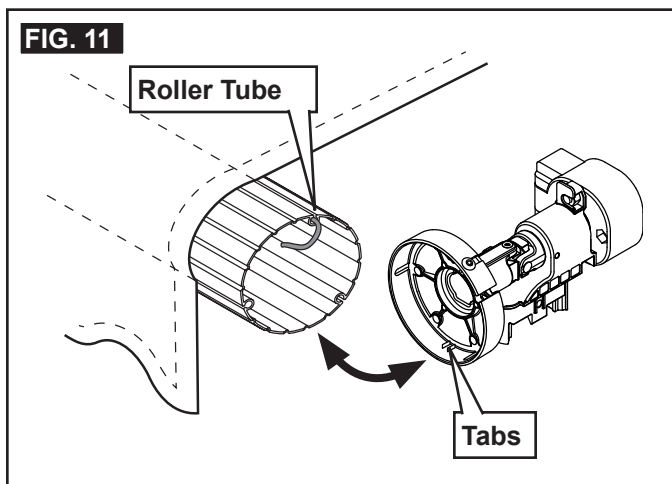
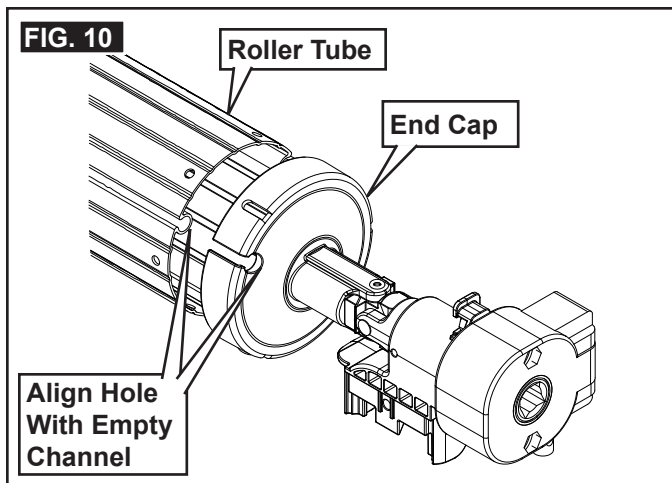
Rivet holes in the end cap and fabric roller tube **MUST** also align.

If a new torsion is being installed on an old roller tube (without notch), the tabs inside the end cap **MUST** be removed (broken off). See FIG. 11.

- Seat the end cap assembly onto the end of the tube.



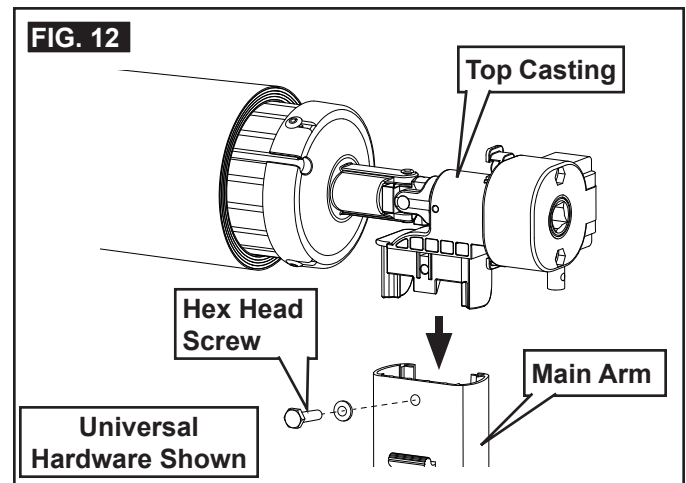
CONVERT THE TORSION ASSEMBLIES



3. Secure the end cap to the fabric roller tube. See FIG. 2 & FIG. 10.
 - a. Verify the end cap is aligned properly and fully seated on the roller tube.
 - b. If the roller tube has pre-drilled rivet holes, skip to step (d).
If the roller tube does **NOT** have pre-drilled rivet holes, proceed with step (c).
 - c. Drill 3/16" diameter holes into the roller tube using the rivet holes / slots in the end cap as a guide.
 - d. Insert 3/16" x 3/8" blind rivets through the rivet holes in the end cap and secure to the roller tube.
4. Repeat steps (1) through (3) for the opposite side (if applicable).

F. Reattaching The Torsion Assemblies To Awning Hardware

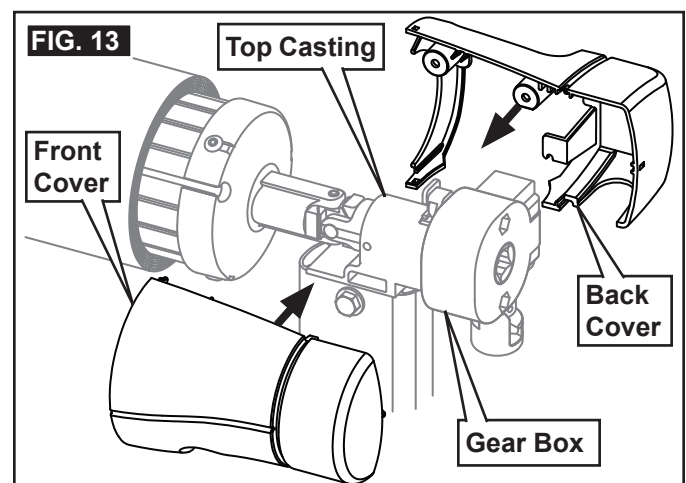
1. Insert each top casting into the corresponding main arm. See FIG. 12.



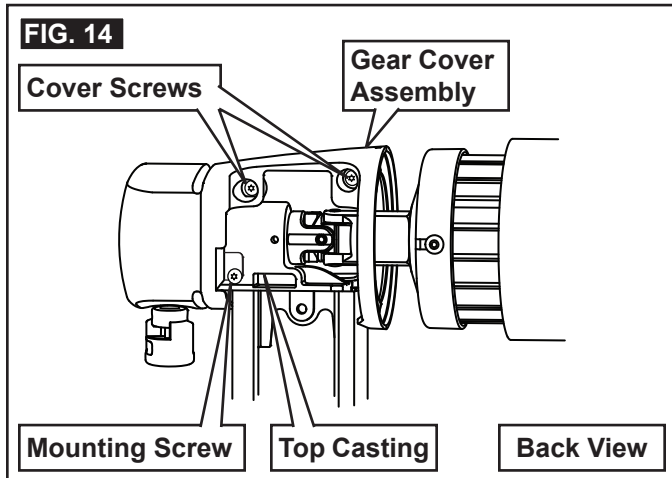
2. Reinstall the hex head screw (and lock washer) to secure the main arm to the top casting. See FIG. 12.

G. Installing The Gear Cover Assembly

1. Open the awning far enough for the cover to fit behind the top castings. See "Open Awning" in Operating Instructions.
2. Place the RH back cover against the RH top casting and gear box. See FIG. 13.



- Place the front cover against the back cover to enclose the top casting and gear box. Then push until tabs snap securely in place. See FIG. 13.
- Place and tighten the mounting screw through the back cover and into the top casting. See FIG. 14.

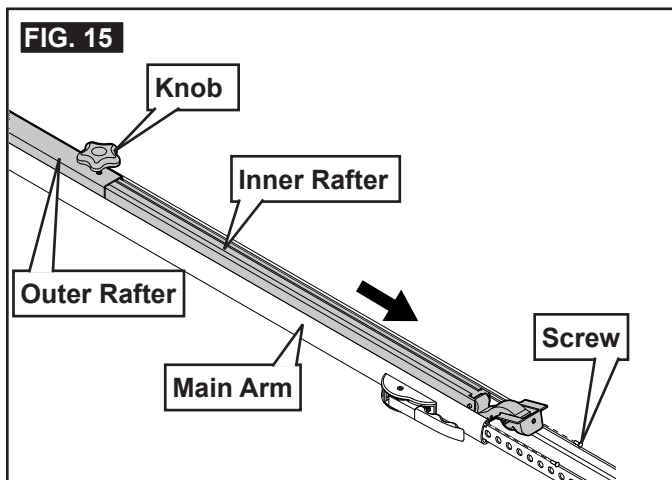


- OPTIONAL: Place and tighten cover screws through the back cover and into the front cover. See FIG. 14.

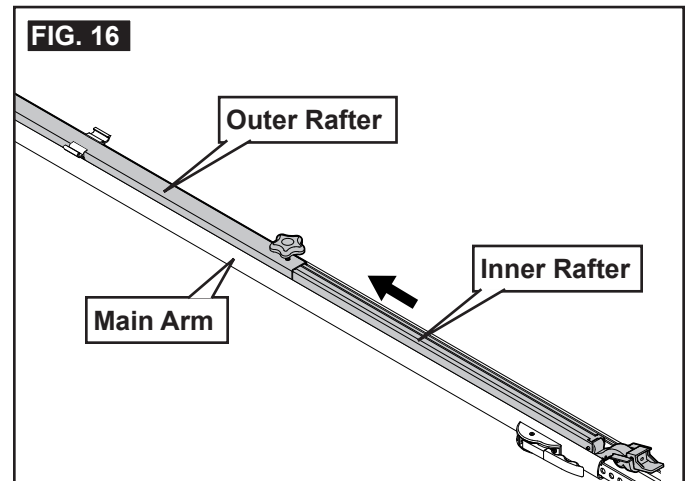
i If tabs break or will **NOT** securely snap in place, this step is mandatory.

- Repeat with the LH covers.

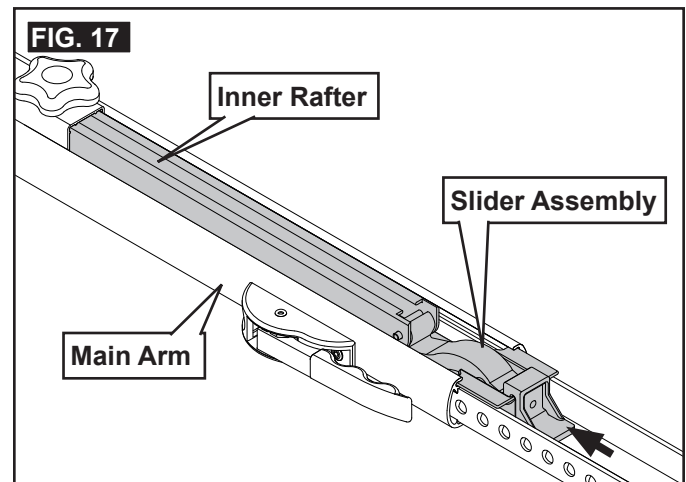
- Remove the screws from the bottom of the main arm and set aside for reinstallation.
- Ensure the knob is loose and slide the existing slider assembly out of the bottom of the main arm.
- Remove the inner rafter assembly from the main rafter assembly completely. See FIG. 15.



- Insert the new inner rafter assembly (supplied with upgrade kit) into the outer rafter. See FIG. 16.



- Insert the slider assembly into the grooves on the main arm. See FIG. 17.



- Reinstall the screws.
- Repeat for the other hardware arm.

FINISH INSTALLATION

This section applies to the awning fabric and the fabric roller tube replacement, or if the awning was removed from the RV.



Some additional procedures may need to be performed to complete the replacement. These procedures will vary in detail based on the awning model. See the latest Installation Instructions for your specific awning model.

Additional procedures may include:

- Secure the awning fabric to the awning rail.
- Secure the hardware to the RV.
- Connect the LED light (if equipped).
- Etc.

VERIFY INSTALLATION

A. Testing Operation

Operate the awning according to Operating Instructions (or User's Guide) to verify all parts are functioning correctly.

B. Securing The Awning For Travel



1. Fully close the awning. See "Close Awning" in Operating Instructions (or User's Guide).
2. Verify the awning is secure for travel. See "Prepare Awning For Travel" in Operating Instructions (or User's Guide).

C. Keeping The Literature

Keep these instructions with the awning.

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