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FRTA Model Number _____
FRTA Serial Number _____
Hardware Model Number _____
Hardware Serial Number _____
Date Purchased _____
Retailer / Qualified Installer _____

SERVICE INSTRUCTIONS

**WEATHERPRO,
9100 POWER PATIO,
SPORT
FABRIC ROLLER TUBE ASSEMBLY
(FRTA)**

REPLACEMENT INSTRUCTIONS

- FABRIC ■ WEATHERSHIELD ■ TORSION
- DRIVE ASSEMBLY ■ FABRIC ROLLER TUBE



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

REVISION B
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INTRODUCTION

These instructions apply to power 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, fabric roller tube, LH torsion assembly, and RH drive (motor) assembly. Some FRTA models may also include a weathershield.

The Awning Hardware (hereinafter referred to as “HDWR”) consists of two arm assemblies (one LH, and one RH). An arm assembly typically includes a back channel, front channel, top arm, adjustable pitch arm, top mounting bracket, and gas strut. However, components may vary depending on awning model.

READ THESE INSTRUCTIONS AND HIGHLIGHT THE APPROPRIATE STEPS FOR YOUR PARTICULAR PROCEDURE BEFORE STARTING THE REPLACEMENT. Some graphics may show different awning models, but they will still illustrate the correct procedure.

Replacements can be performed by one person with brief help from additional personnel. Use these instructions to ensure correct installation of replacement item, and correct function of product.

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

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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

IMPORTANT SAFETY INSTRUCTIONS

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 product during windy conditions, or when wind is expected. Otherwise, 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

- Fabric and fabric roller tube replacement:
 - (1) 3109976.005 (End Cap) Fabric Guide

PREPARE AWNING

A. Stage Awning For All Procedures

Open (extend) awning two revolutions (turns) of FRTA.

i See “Open Awning” in Operating Instructions (or User’s Guide) for complete instructions.

B. Pin LH Torsion

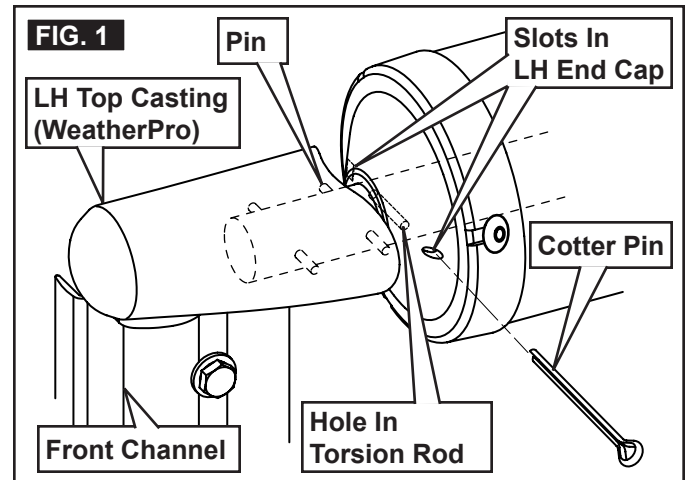
This subsection applies to all replacement procedures.

Pin LH torsion to prevent uncontrolled unwinding of spring, or unintended awning movement.

- i** This procedure **MUST** be performed:
- with FRTA extended 2 revolutions (turns) from awning rail, and
 - while on a stepladder.

1. Rotate FRTA until pin near LH top casting is parallel with the two slots in LH end cap. See (FIG. 1).

- i** Power to awning is required to turn FRTA with awning motor.
- Hole in torsion rod **MUST** align with slots in LH end cap.



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

C. Disconnect Wind Sensor (If Equipped)

This subsection applies to drive assembly, awning fabric, and fabric roller tube replacement **ONLY** if:

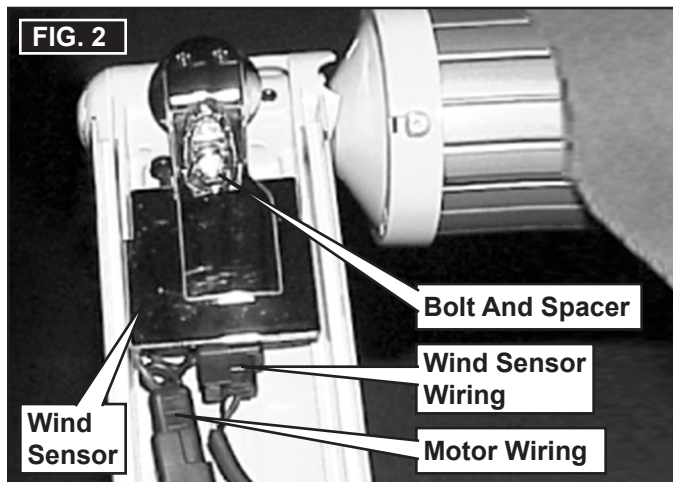
- awning model is WeatherPro, **AND**
 - wind sensor is mounted on awning hardware.
- i** To replace weathershield or torsion only, or if wind sensor is mounted on RV (**NOT** on awning hardware), it is **NOT** necessary to disconnect wind sensor. Skip to subsection, “D. Disconnect Awning Motor (Drive Assembly)” on page (5).

PREPARE AWNING

1. **NOTICE** Disconnect the positive (+) 12 Vdc terminal from supply battery. Otherwise, damage to unit could occur.
2. Disconnect wind sensor.
 - a. Press and hold red tab on wind sensor wiring connector. Then pull connector from wind sensor to disconnect. See (FIG. 2).
 - b. If awning will be removed for awning fabric or fabric roller tube replacement:

Disconnect wind sensor wiring from electronic control kit wiring harness.

i Connections will be at wiring hole (through RV) in RH back channel. It may be necessary to remove silicone sealant (from hole) to access connections.



D. Disconnect Awning Motor (Drive Assembly)

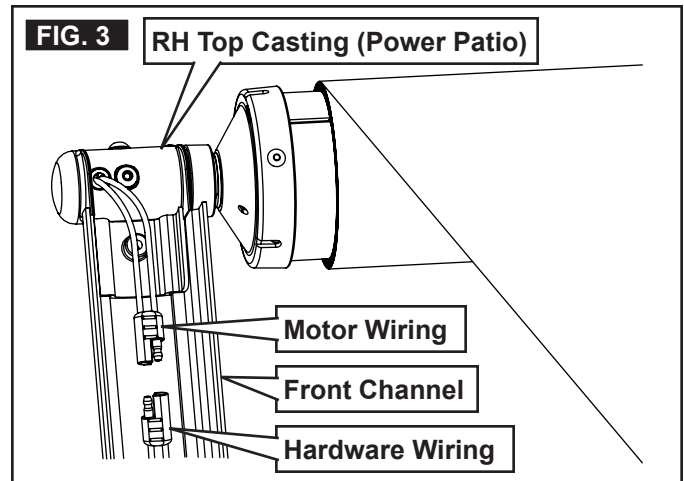
This subsection applies to drive assembly, awning fabric, and fabric roller tube replacement.

i To replace weathershield or torsion only, it is **NOT** necessary to disconnect awning motor. Skip to section, "Remove Torsion" on page (8).

1. Disconnect awning motor from hardware wiring harness (inside front channel). See (FIG. 2) & (FIG. 3).
2. If awning will be removed for awning fabric or fabric roller tube replacement:

Disconnect awning motor wiring from electronic control kit wiring harness.

i Connections will be at wiring hole (through RV) in RH back channel. It may be necessary to remove silicone sealant (from hole) to access connections.



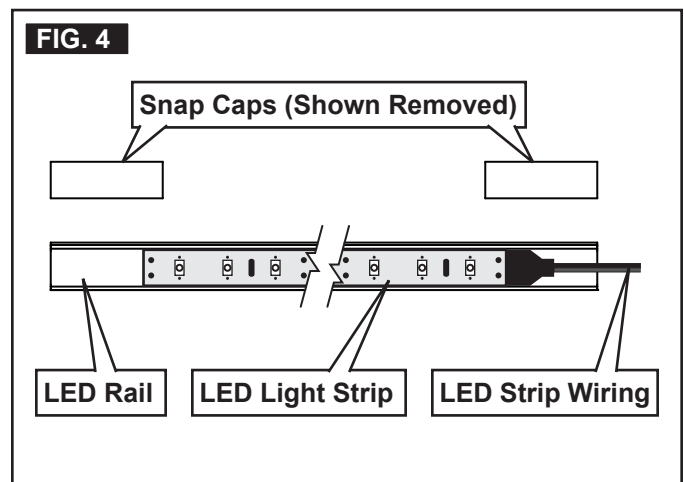
E. Disconnect LED Light Strip (If Equipped)

This subsection applies to awning fabric and fabric roller tube replacement.

i To replace weathershield, drive assembly, or torsion only, it is **NOT** necessary to disconnect LED light strip. Skip to section, "Remove Torsion" on page (8).

1. **NOTICE** Verify the positive (+) 12 Vdc terminal is disconnected from supply battery. Otherwise, damage to unit could occur.
2. Disconnect LED strip wiring from switch wiring (inside RV). Then pull LED strip wiring through wiring hole (outside RV). See (FIG. 4).

i Wiring from RV switch may vary. See RV manufacturer's instructions and wiring diagram for connection and location details.



PREPARE AWNING

F. Prepare For Awning Removal

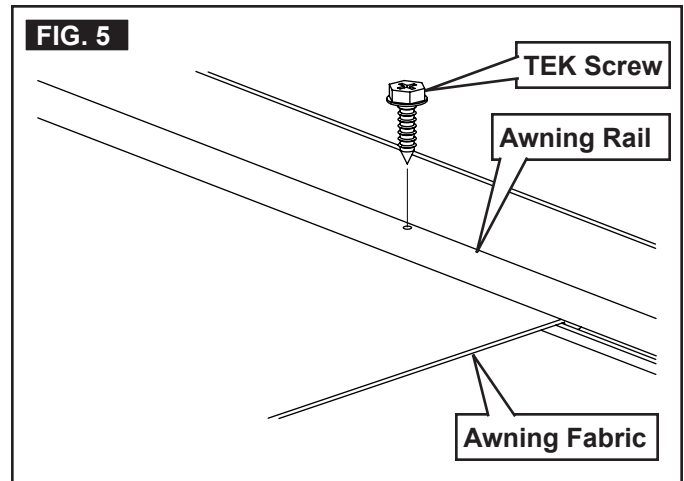
This subsection applies to awning fabric and fabric roller tube replacement.

i To replace weathershield, drive assembly, or torsion only, it is **NOT** necessary to remove awning from RV. Skip to section, "Remove Torsion" on page (8).

1. Prepare an area large enough for FRTA and unrolled awning fabric.

i Area **MUST** be smooth, clean, and clear of debris to prevent fabric damage. It is **NOT** necessary to unroll awning fabric to replace weathershield.

2. Remove TEK screws securing awning fabric at both ends of awning rail. Save for reinstallation later. See (FIG. 5).



REMOVE AWNING

This entire section applies to awning fabric and fabric roller tube replacement.

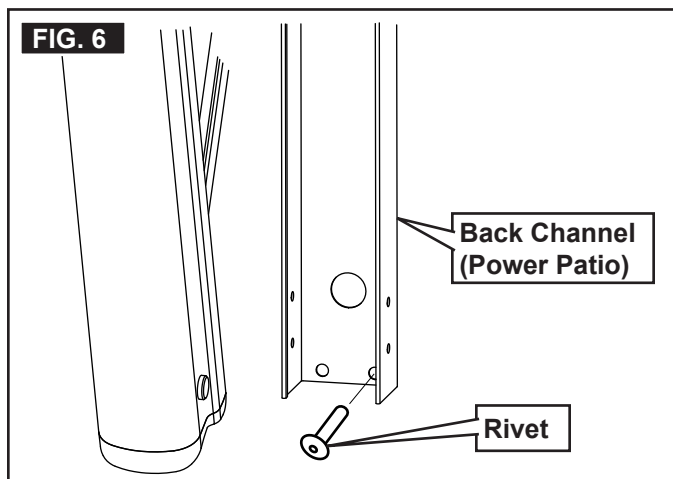
i To replace weathershield, torsion, or drive assembly only, it is **NOT** necessary to remove awning from RV. Skip to section, "Remove Torsion" on page (8).

A. Detach Arm Assemblies

1. Remove all rivets securing back channels (both ends of awning) to RV. See (FIG. 6).

i If hex head screws were used instead of rivets, remove screws from back channels. (Do **NOT** remove the two screws at **TOP** of back channel if HDWR is **NOT** equipped with top mounting brackets.) Save screws for reinstallation later.

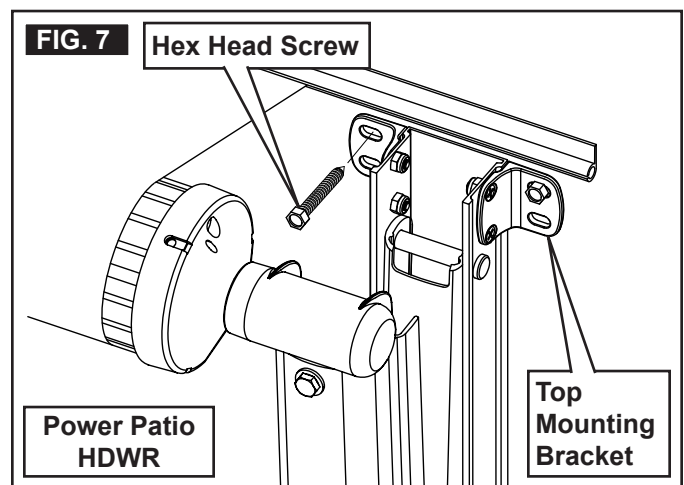
- a. Drill a 3/16" diameter hole through center of rivet.
- b. Remove rivet (with debris) and discard.
- c. Repeat steps (a) through (b) for each rivet securing back channel to RV.



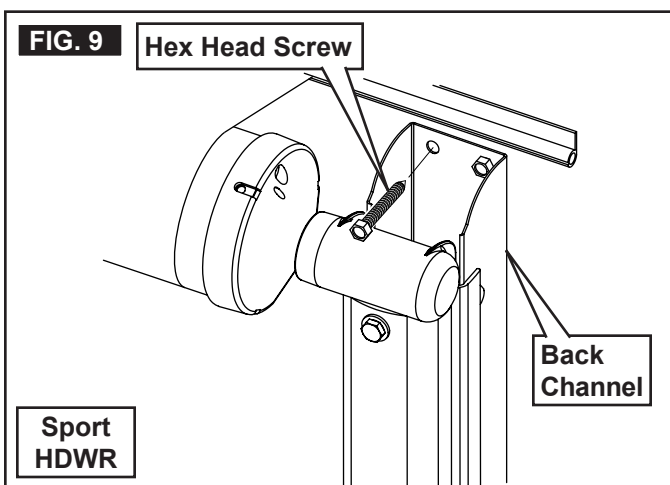
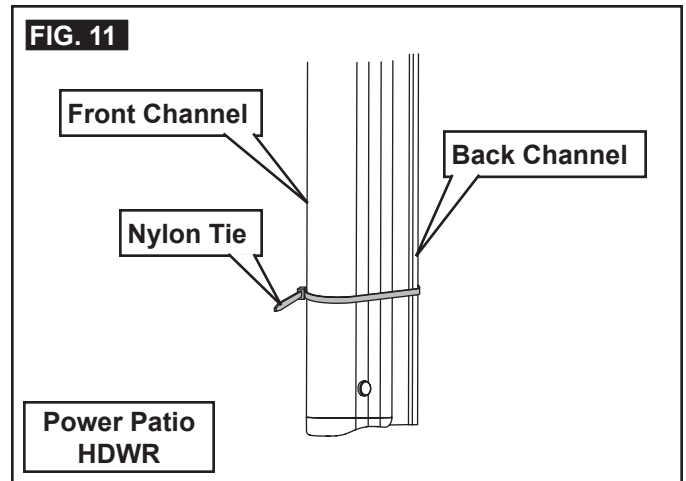
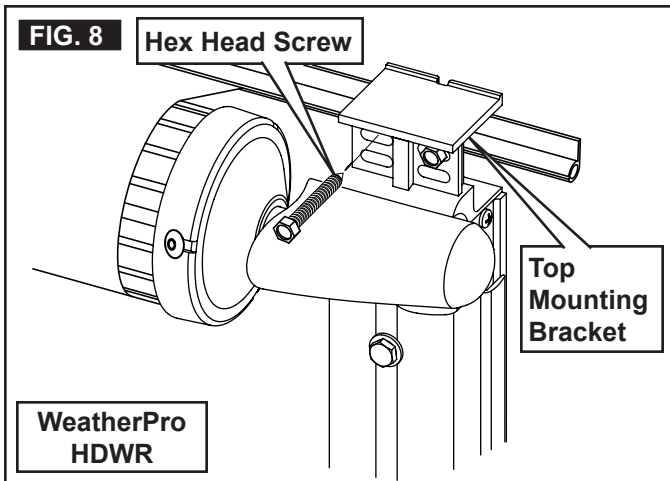
2. NOTICE Control arm assemblies while removing top screws. When weight of FRTA is **NOT** supported, downward force could cause arm assemblies to swing sideways and damage RV.

With one person grasping each arm assembly, remove hex head screws (from inside slot) securing top mounting brackets (both ends of awning) to RV. Save for reinstallation later. See (FIG. 7).

i Some awning models do **NOT** have top mounting brackets. On these models, hex head screws are secured through holes in top of back channel. See (FIG. 9).



REMOVE AWNING



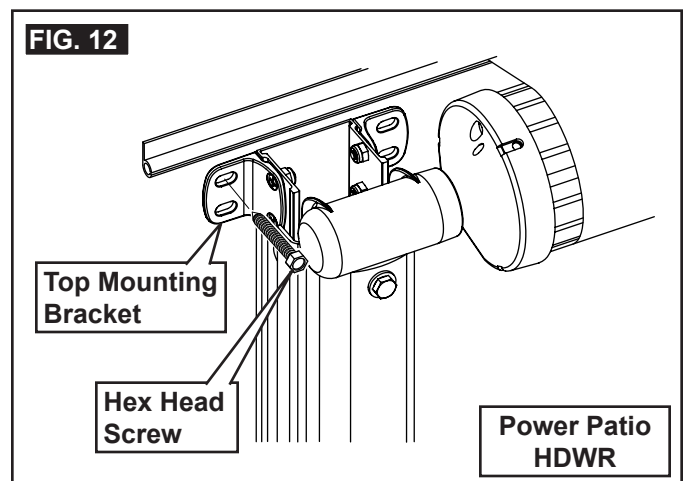
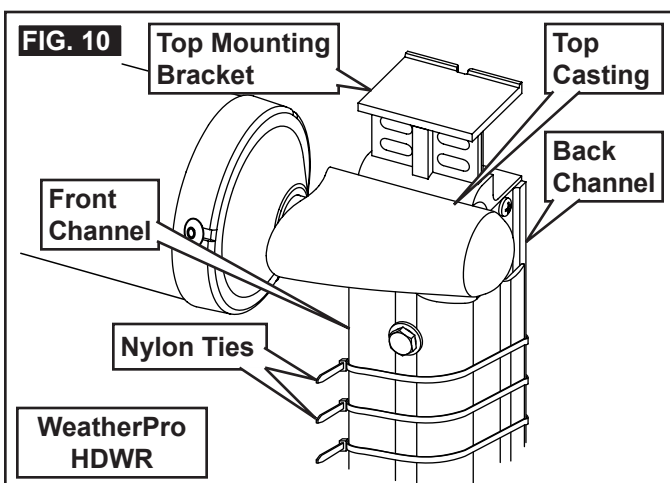
6. Repeat steps (3) through (5) for opposite side.
7. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** detach awning from RV until ties are wrapped around each arm assembly. Arm assemblies are under tension from gas strut. Detaching awning without these ties could allow arms to extend quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

IMPACT OR CRUSH HAZARD. Control arm assemblies while removing top screws. When weight of FRTA is **NOT** supported, downward force could cause awning to [detach / bend / collapse]. Failure to obey this warning could result in death or serious injury.

With one person grasping each arm assembly, remove hex head screws (from outside slot) securing top mounting brackets (both ends of awning) to RV. Save for reinstallation later. See (FIG. 12).

i Some awning models do **NOT** have top mounting brackets. On these models, hex head screws are secured through holes in top of back channel. See (FIG. 9).


3. Push front channel to close against back channel, and hold in place.
4. Wrap at least (2) nylon ties around front and back channel near top casting, and tape in place. See (FIG. 10).



5. Wrap at least (1) nylon tie around front and back channel near bottom of arm assembly, and tape in place. See (FIG. 11).

REMOVE AWNING

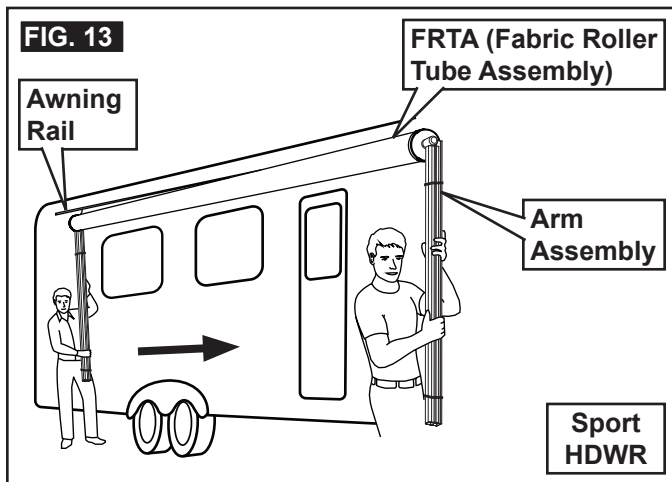
B. Remove Awning From RV

-  1. **CAUTION** LIFTING HAZARD. Use proper lifting technique and control when lifting product. Failure to obey this caution could result in injury.

NOTICE Keep both arm assemblies parallel to each other to avoid twisting.


With one person grasping each arm assembly, carefully lift entire awning assembly upright. See (FIG. 13).

2. Carefully move (carry) awning assembly forward until awning fabric (with awning roller cover, if equipped) slides free from awning rail (on RV). See (FIG. 13).
3. Carefully place FRTA on a clean, well padded "V" trough (or other well protected surface) to prevent fabric damage.



REMOVE TORSION


This section applies to awning fabric, fabric roller tube, and torsion replacement.


-  To replace weathershield or drive assembly only, it is **NOT** necessary to unwind or remove torsion. Skip to section, "Remove Drive Assembly" on page (10).


If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

A. Secure LH arm assembly


-  If awning is removed from RV and LH arm assembly is already secured with nylon ties, skip to subsection, "B. Unwind Torsion" on page (8).

-  1. Push front channel to close against back channel.

 Allow enough room between front channel and back channel to remove top casting (from front channel).

2. Wrap at least (2) nylon ties around front and back channel near top mounting bracket, and tape in place. See (FIG. 10).

B. Unwind Torsion

-  1. Verify all safety precautions are in place before proceeding.

- a. **WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove top casting from 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.

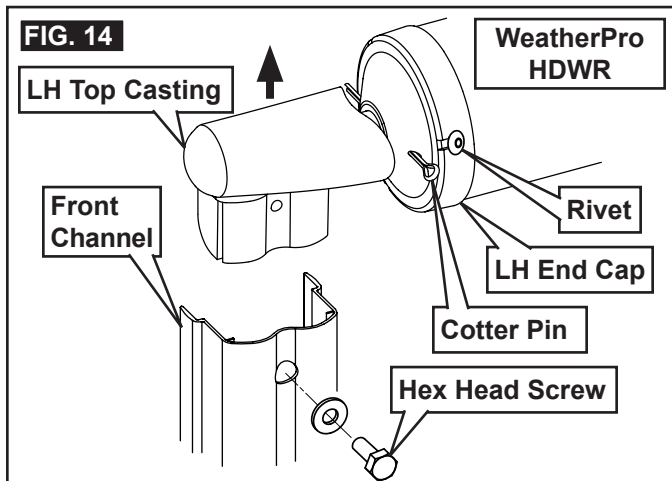
Make sure LH torsion is securely pinned. See subsection, "B. Pin LH Torsion" on page (4).

- b. **WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove top casting from front channel until ties are wrapped securely around each arm assembly. Arm assemblies are under tension from gas strut. Removing these ties could allow arms to extend quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.


Make sure LH arm assembly is securely held with nylon ties.

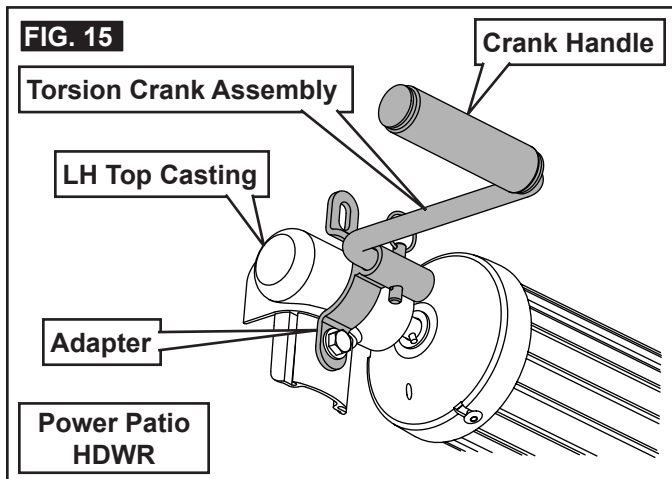
REMOVE TORSION

2. Remove hex head screw (and washer) securing LH top casting to front channel. Save for reinstallation later. See (FIG. 14).



3. Separate (lift) LH top casting from front channel. See (FIG. 14).
4. Place correct (torsion crank assembly) adapter over LH top casting. Then place and tighten hex head screw through adapter and into top casting. See (FIG. 15).

 See subsection, "A. Required Kits" on page (4) for torsion crank assembly.



5. **⚠ 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 firm hold on crank handle, pull cotter pin from torsion rod at LH end cap. See (FIG. 1) & (FIG. 15).

6. **⚠ 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 torsion (top casting) until all torsion spring tension is relaxed. Then remove crank assembly from LH top casting. See (FIG. 15).

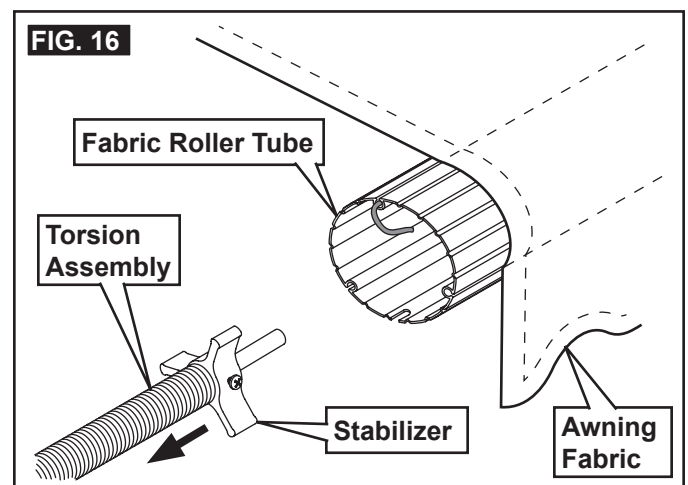
C. Remove OLD Torsion

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, 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 torsion spring tension released (unwound), remove the (3) rivets securing LH end cap to fabric roller tube. See (FIG. 14).

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

 Discard torsion if defective. Otherwise, save for reinstallation later.



3. Remove burrs, and discard any rivet bodies and debris from fabric roller tube. See (FIG. 16).

 Skip this step if discarding fabric roller tube.

REMOVE DRIVE ASSEMBLY

This section applies to awning fabric, fabric roller tube, and drive assembly replacement.

i To replace weathershield or torsion only, it is **NOT** necessary to remove drive assembly. Skip to section, "Remove Weathershield" on page (10).

If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

A. Secure arm assemblies

i If awning is removed from RV and RH arm assembly is already secured with nylon ties, skip to subsection, "B. Remove OLD Drive Assembly" on page (10).

i 1. Push front channel to close against back channel.

i Allow enough room between front channel and back channel to remove top casting (from front channel).

2. Wrap at least (2) nylon ties around front and back channel near top mounting bracket, and tape in place. See (FIG. 10).
3. Repeat steps (1) through (2) for opposite side.

B. Remove OLD Drive Assembly

i 1. Verify all safety precautions are in place before proceeding.

a. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove top casting from 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.

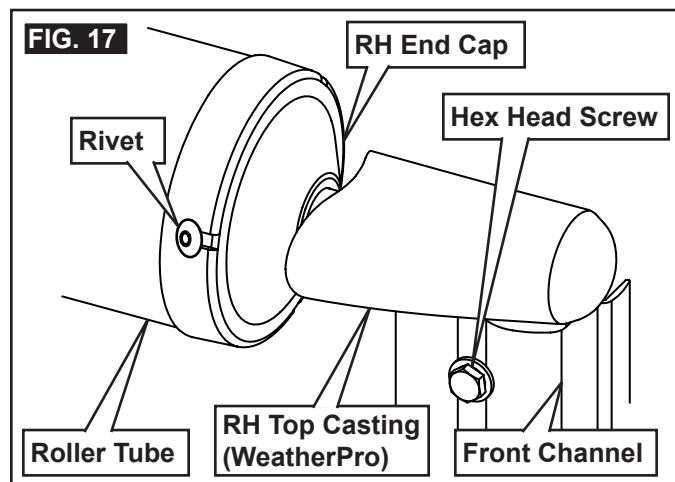
Make sure LH torsion is securely pinned. See subsection, "B. Pin LH Torsion" on page (4).

i Skip this step if LH torsion was removed from FRTA.

b. **⚠ WARNING** IMPACT OR PINCH HAZARD. Do **NOT** remove top casting from front channel until ties are wrapped securely around each arm assembly. Arm assemblies are under tension from gas strut. Removing these ties could allow arms to extend quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

Make sure **BOTH** arm assemblies are securely held with nylon ties.

2. Remove the (3) rivets securing RH end cap to roller tube. See (FIG. 17).
 - a. Drill a 3/16" diameter hole through center of rivet.
 - b. Remove rivet (with debris) and discard.
 - c. Repeat steps (a) through (b) for each rivet securing end cap to roller tube.



3. Remove hex head screw (and washer) securing RH top casting to front channel. Save for reinstallation later. See (FIG. 17).
4. Lift RH top casting out from front channel. See (FIG. 17).
5. Slide drive assembly out from fabric roller tube.
 - i** Discard drive assembly if defective. Otherwise, save for reinstallation later.
6. Remove burrs, and discard any rivet bodies and debris from roller tube.
 - i** Skip this step if discarding fabric roller tube.

REMOVE WEATHERSHIELD

This section applies to awnings equipped with weathershield.

i If replacement does **NOT** involve weathershield or if **BOTH** weathershield and awning fabric will be replaced, skip to section, "Replace Awning Fabric / Fabric Roller Tube" on page (12).

If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

REMOVE WEATHERSHIELD

A. Remove Metal Weathershield

This subsection applies to awnings equipped with a metal weathershield.

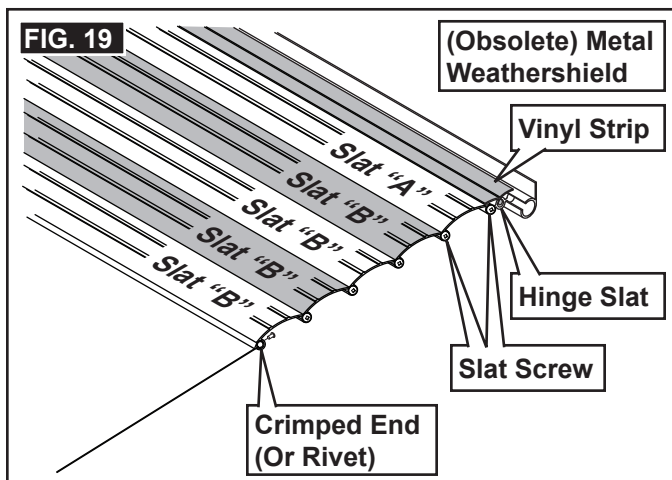
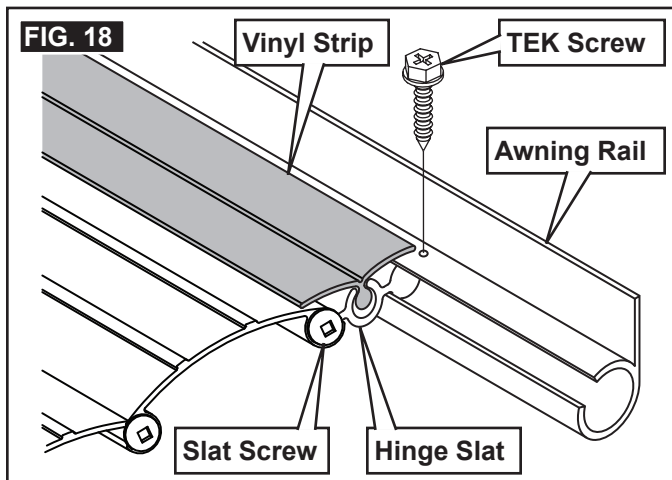
1. Remove metal hinge slat (if equipped) connecting weathershield to awning rail. See (FIG. 18) & (FIG. 19).

i Skip to step (2) if metal weathershield is **NOT** equipped with hinge slat.

- a. Remove the (2) TEK screws (one at each end) securing hinge slat to awning rail. Save for reinstallation later.

i Skip this step if awning is removed from RV.

- b. Remove the (2) slat screws (one at each end) securing weathershield to hinge slat. Save for reinstallation later.
- c. Slide hinge slat with vinyl strip from slat "A" (and from awning rail), and discard.



2. Unfasten weathershield from awning fabric. See (FIG. 19) & (FIG. 20).

- a. Disconnect bottom slat "B" from awning fabric using one of the following procedures.

i The procedure to follow (below) depends on the method used to attach slat ends.

- I. Set screw fastened ends:

Remove the (2) set screws (one at each end) securing slat to awning fabric and discard.

i If keeping old weathershield, save set screws for reinstallation later.

- II. Riveted ends:

- Drill a 1/8" diameter hole through center of the (2) rivets (one at each end) of slat.

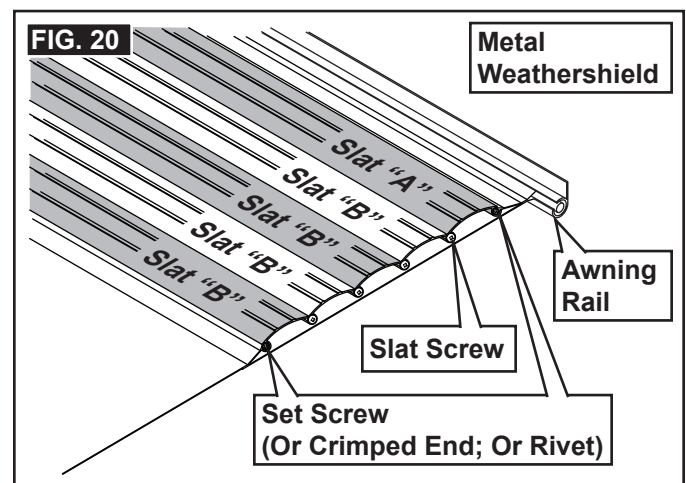
- Remove rivets (with debris) and discard.

- III. Crimped ends:

Using a screwdriver, spread open the (2) crimped ends (one at each end) securing slat to awning fabric.

- b. Repeat appropriate procedure under step (a) to disconnect top slat "A" from awning fabric.

i Skip to step (3) if metal weathershield was equipped with hinge slat. See (FIG. 18).



3. Remove weathershield from awning fabric. See (FIG. 19) & (FIG. 20).

- a. Slide weathershield from awning fabric.

i Discard weathershield if damaged. Otherwise, save for reinstallation later.

- b. Carefully place on a clean, well padded "V" trough (or other well protected surface) to prevent damage.

i Skip this step if discarding weathershield.

REMOVE WEATHERSHIELD

B. Remove Vinyl Weathershield

This subsection applies to awnings equipped with a vinyl weathershield.

1. Remove the (2) set screws (one at each end) securing top hinge to awning fabric and discard. See (FIG. 21).

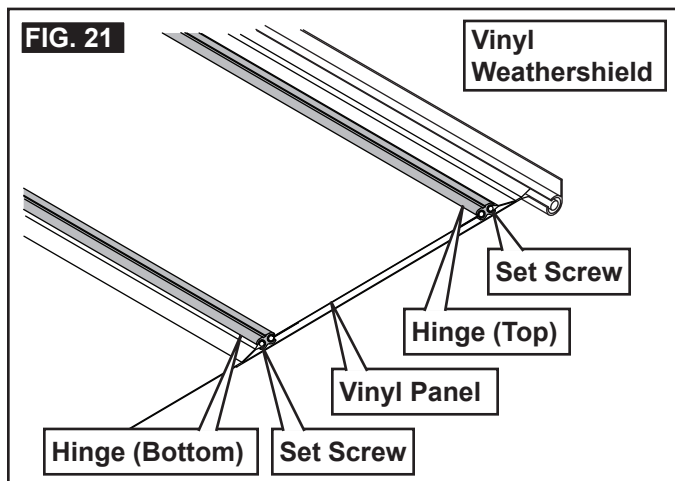
i If keeping old weathershield, save set screws for reinstallation later.

2. Remove the (2) set screws (one at each end) securing bottom hinge to awning fabric and discard. See (FIG. 21).

i If keeping old weathershield, save set screws for reinstallation later.

3. Slide weathershield from awning fabric.

i Discard weathershield if damaged. Otherwise, save for reinstallation later.



REPLACE AWNING FABRIC / FABRIC ROLLER TUBE

This section applies to awning fabric and fabric roller tube replacement.

i To replace weathershield, torsion, or drive assembly only, skip to section, "Replace Weathershield" on page (13).

A. Prepare Work Area

NOTICE Prepare a clean and smooth work area (large enough for unfurled awning fabric) before servicing awning. This will help prevent damage to awning fabric during replacement.

B. Remove Awning Fabric / Fabric Roller Tube

1. Carefully place FRTA on a clean and smooth work surface (prepared earlier).
2. Unroll awning fabric until completely unfurled on prepared work surface.
3. With awning fabric laying flat, slide fabric roller tube from fabric to remove.

i Discard fabric roller tube if damaged. Otherwise, save for reinstallation later.

If replacing awning fabric, leave old fabric on work surface for added protection (of new fabric) during installation procedure.

C. Prepare New Awning Fabric

This subsection applies to awning fabric replacement.

i To replace fabric roller tube only, skip to subsection, "D. Install Awning Fabric / Fabric Roller Tube" on page (13).

WARNING IMPACT OR CRUSH HAZARD. Do **NOT** remove LED rail from awning fabric (if equipped). Otherwise, awning fabric could separate from awning rail (on RV) and cause awning to extend quickly or [detach / bend / collapse]. Failure to obey this warning could result in death or serious injury.

i If LED light strip is **NOT** desired, standard fabric **MUST** be used. Otherwise, you may remove LED light strip from LED rail, and leave empty LED rail on fabric rope.

1. Unroll / unfold new awning fabric on top of old fabric (in prepared work area) with bottom side of fabric facing up.

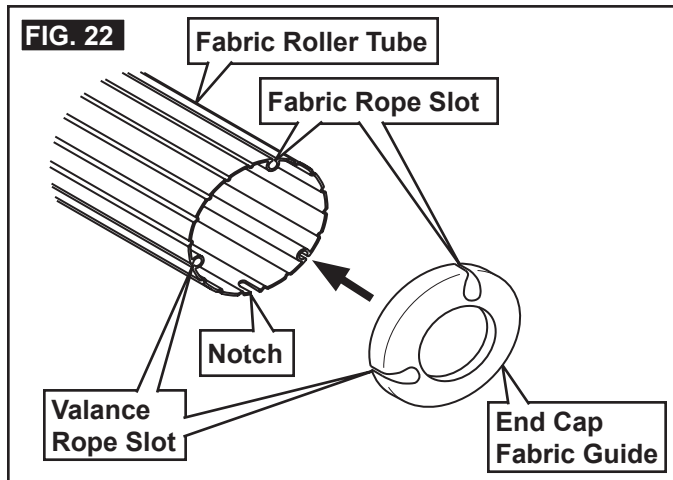
i Position new awning fabric in the same orientation as old fabric.

2. Verify new awning fabric size and color matches old fabric.

REPLACE AWNING FABRIC / FABRIC ROLLER TUBE

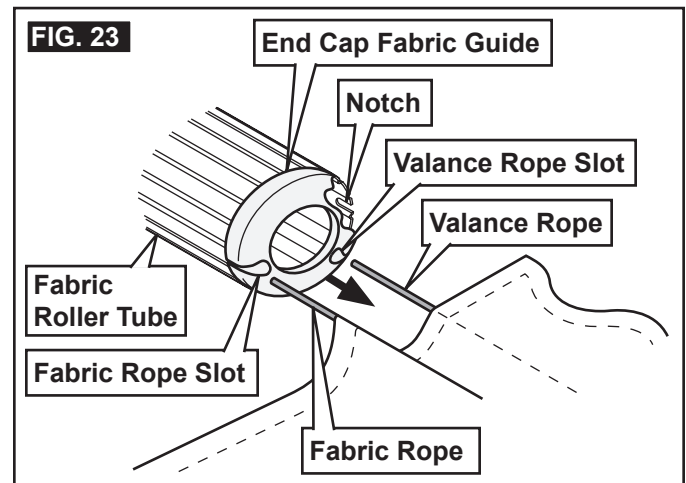
D. Install Awning Fabric / Fabric Roller Tube

1. **NOTICE** Do **NOT** install awning fabric on fabric roller tube without using a fabric guide. Otherwise, damage to awning fabric could occur.
- Align fabric rope and valance rope slots of end cap fabric guide to corresponding slots on fabric roller tube. Then place on open end of fabric roller tube. See (FIG. 22).



2. Insert fabric rope and valance rope of awning fabric into corresponding slots on fabric roller tube.

er tube (through end cap fabric guide). See (FIG. 23).



3. Slide (move) fabric roller tube forward until awning fabric is centered on tube. See (FIG. 23).
- i** Awning fabric will feed into fabric roller tube's slots while moving fabric roller tube forward.
- Awning fabric will be secured to fabric roller tube when torsion is reinstalled later.
4. Remove end cap fabric guide from fabric roller tube.
- i** Save end cap fabric guide in case further adjustments are required.

REPLACE WEATHERSHIELD

This section applies to awnings equipped with weathershield.

- i** If replacement does **NOT** involve weathershield or if weathershield is pre-installed on awning fabric, skip to section, "Prepare For Torsion / Drive Replacement" on page (15).

If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

A. Prepare Metal Weathershield

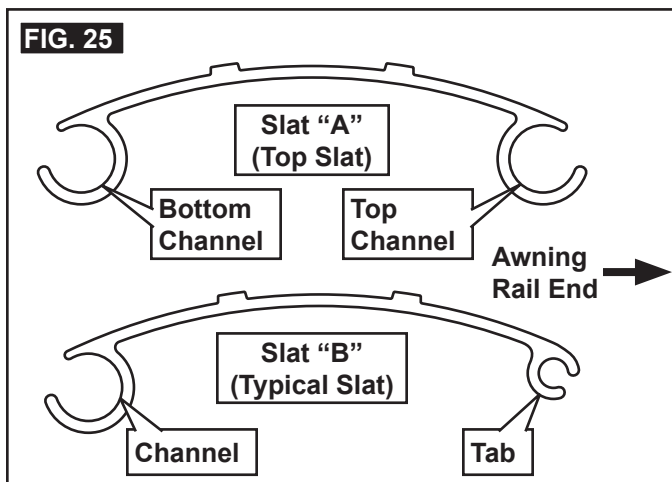
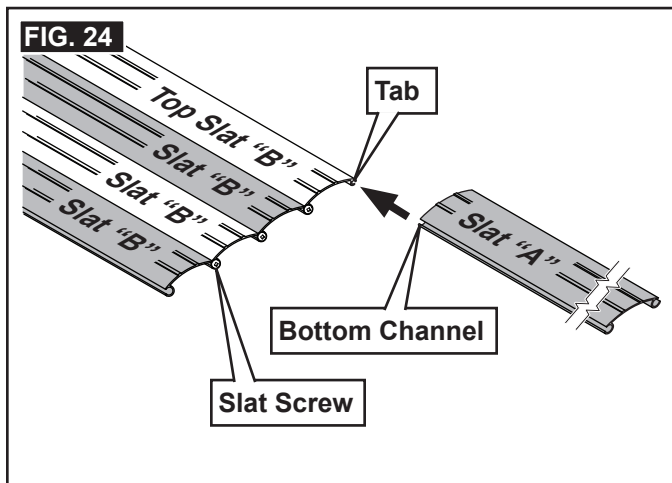
This subsection applies only if keeping old metal weathershield (that was equipped with hinge slat) for reinstallation onto new awning fabric. See (FIG. 18).

- i** Skip to subsection, "B. Install Metal Weathershield" on page (14) if old metal weathershield:
- will be discarded, or
 - has no more than (5) slats.

1. Remove slat "A" from weathershield. See (FIG. 20).
- Remove the (2) slat screws (one at each end) securing slat "A" to top slat "B" and discard.
 - Slide slat "A" from weathershield. Save for reinstallation later.
2. Remove extra slats from awning rail end of old weathershield. See (FIG. 20).
- Determine the number of extra slats to remove from old weathershield.
- i** Slat "A" is counted in the number of slats.
- If old weathershield has (7) slats, (2) "B" slats must be removed.
 - If old weathershield has (6) slats, (1) "B" slat must be removed.
- Remove the (2) slat screws (one at each end) securing extra "B" slat(s) to remaining weathershield slats. Save for reinstallation later.
 - Slide extra "B" slat(s) from weathershield and discard.

REPLACE WEATHERSHIELD

3. Insert bottom channel of slat "A" onto tab of top slat "B". See (FIG. 24) & (FIG. 25).




4. Slide (move) slat "A" forward until it is centered on slat "B".
5. Reinstall the (2) slat screws (one at each end) to secure slat "A" to top slat "B". See (FIG. 20) & (FIG. 24).

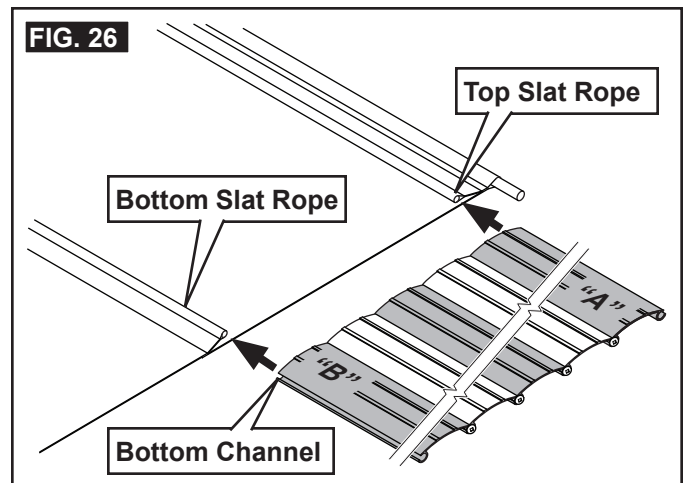
B. Install Metal Weathershield

This subsection applies to new metal weathershield installation onto old awning fabric, or replacement of old metal weathershield onto new awning fabric.

1. Remove (file) any sharp edges inside channels (both open ends) of bottom slat "B", and top slat "A". See (FIG. 20) & (FIG. 25).

 These channels will be attached to awning fabric.

2. Insert weathershield onto awning fabric. See (FIG. 26).
 - a. Bottom channel of slat "B" corresponds to bottom slat rope of awning fabric.
 - b. Top channel of slat "A" corresponds to top slat rope of awning fabric.

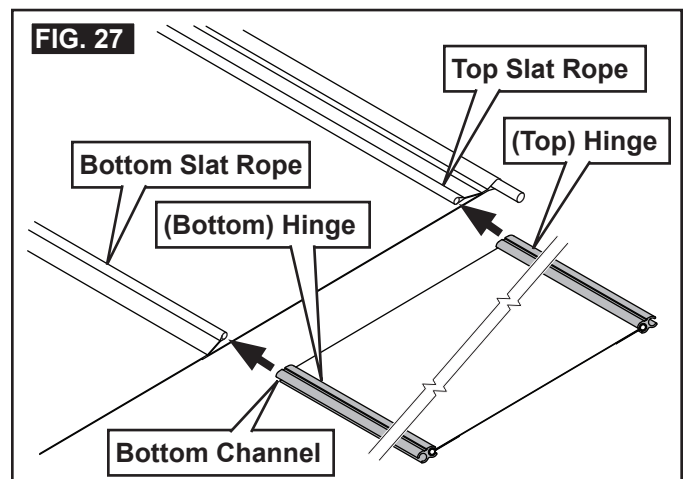


3. Slide (move) weathershield forward until it is centered on awning fabric. See (FIG. 26).
4. Secure weathershield to awning fabric. See (FIG. 20), (FIG. 25), & (FIG. 26).
 - a. Install the (2) set screws (one at each end) to secure top channel of slat "A" to top slat rope of awning fabric.
 - b. Install the (2) set screws (one at each end) to secure bottom channel of slat "B" to bottom slat rope of awning fabric.

C. Install Vinyl Weathershield

This subsection applies to new vinyl weathershield installation on old awning fabric, or replacement of old vinyl weathershield on new awning fabric.

1. Insert weathershield onto awning fabric. See (FIG. 27).
 - a. Bottom channel of (bottom) hinge corresponds to bottom slat rope of awning fabric.
 - b. Top channel of (top) hinge corresponds to top slat rope of awning fabric.



REPLACE WEATHERSHIELD

2. Slide (move) weathershield forward until it is centered on awning fabric. See (FIG. 27).
3. Secure weathershield to awning fabric. See (FIG. 21) & (FIG. 27).
 - a. Install the (2) set screws (one at each end) to

secure top channel of (top) hinge to top slat rope of awning fabric.

- b. Install the (2) set screws (one at each end) to secure bottom channel of (bottom) hinge to bottom slat rope of awning fabric.

PREPARE FOR TORSION / DRIVE REPLACEMENT

This section applies to awning fabric, fabric roller tube, torsion, and drive assembly replacement.

i If only weathershield was replaced, skip to section, "Finish Installation" on page (19).

If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

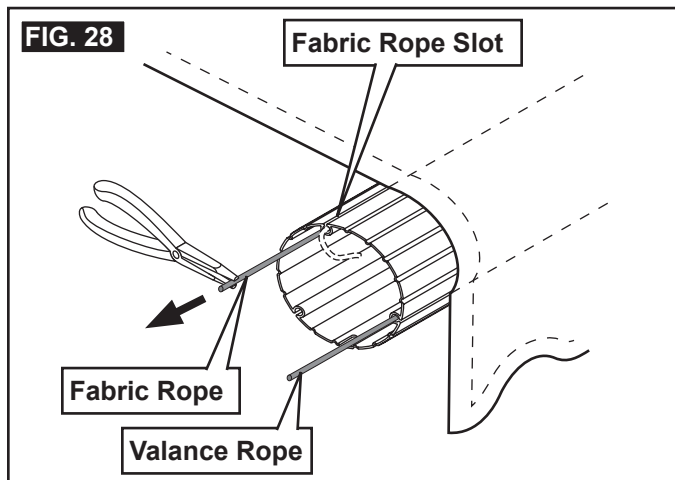
The following steps applies to both old and new awning fabric. However, the way these steps should be used is different:

- **NEW** awning fabric: The following steps **MUST** be performed to complete installation.
- **OLD** awning fabric: The following steps should be reviewed to verify installation is correct.

1. Verify awning fabric is centered on fabric roller tube. See (FIG. 22).

2. Pull / stretch fabric rope and bend rope over toward center of fabric roller tube. See (FIG. 28).

i Make sure fabric rope locks securely into notch (if applicable) at end of fabric rope slot.



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

i This helps prevent interference with torsion or drive assembly, and shifting of awning fabric.

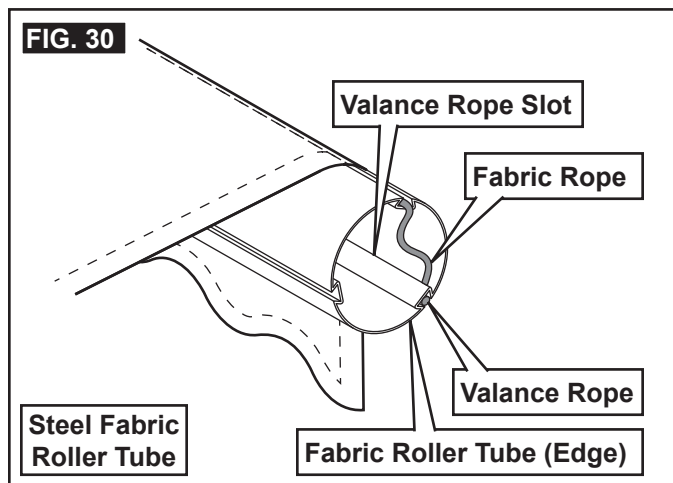
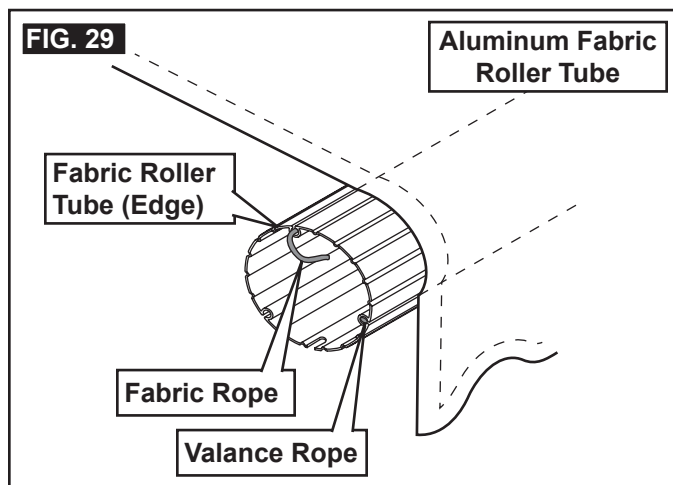
The procedure to follow (below) depends on fabric roller tube material.

- a. **ALUMINUM** fabric roller tube:

Trim fabric rope 2" below edge of fabric roller tube. See (FIG. 29).

- b. **STEEL** fabric roller tube:

Trim fabric rope leaving enough length to wedge behind valance rope slot (inside fabric roller tube). See (FIG. 30).



4. Trim valance rope flush with edge of fabric roller tube. See (FIG. 29) & (FIG. 30).

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

5. Repeat steps (2) through (4) for opposite side (if applicable).

REPLACE TORSION

This section applies to awning fabric, fabric roller tube, and torsion replacement.

i To replace drive assembly only, skip to section, “Replace Drive Assembly” on page (18).

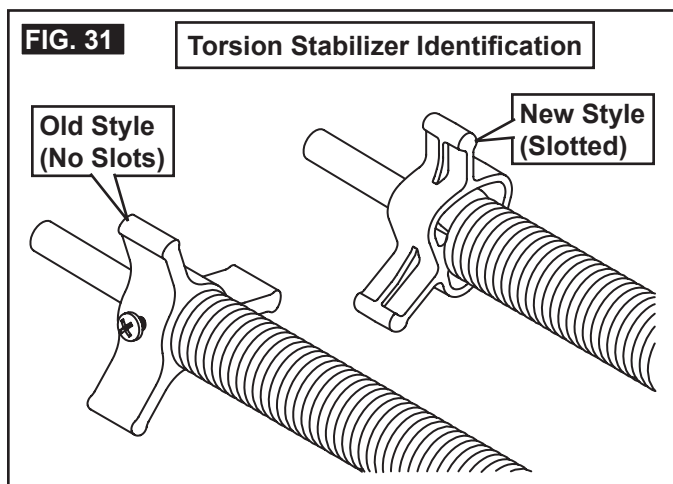
If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

A. Prepare Torsion

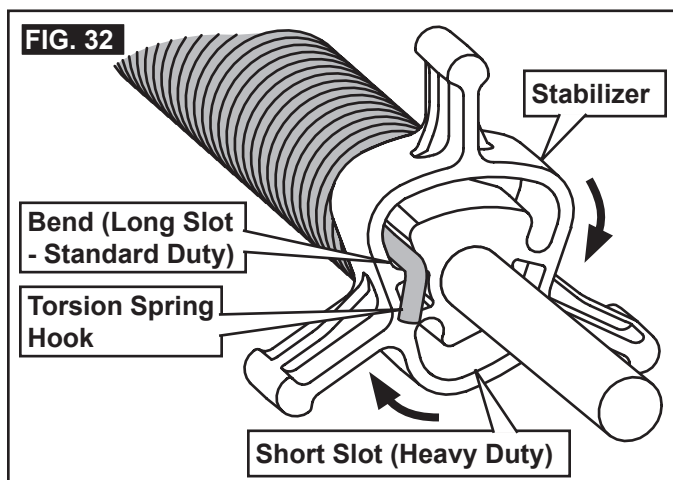
This subsection applies to torsions equipped with a slotted stabilizer. See (FIG. 31).

i If torsion is equipped with an older style stabilizer (without slots), skip to subsection, “B. Install Torsion” on page (16).

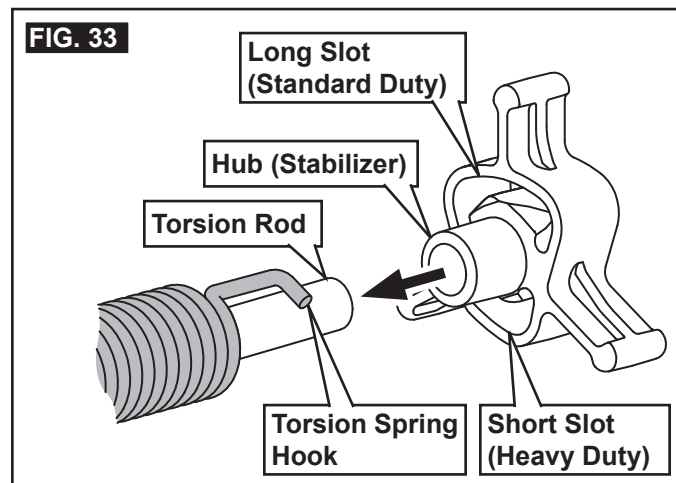


1. Verify slotted stabilizer is seated securely on new torsion assembly. See (FIG. 32).

i The torsion spring hook **MUST** protrude through stabilizer slot, and fully engage bend of slot.



2. If stabilizer is seated securely, skip to subsection, “B. Install Torsion” on page (16).
If stabilizer is loose, proceed with step (3).
3. Place stabilizer onto torsion rod with hub facing toward torsion. See (FIG. 33).



4. Slide stabilizer toward torsion until hub seats inside torsion spring, and torsion spring hook passes through long (standard duty) stabilizer slot. See (FIG. 32) & (FIG. 33).

i Do **NOT** use short slot. Short slot is reserved for manual awnings with heavy duty torsions.

5. Turn stabilizer toward point of torsion spring hook until hook snaps securely into bend of long (standard duty) stabilizer slot. See (FIG. 32).

B. Install Torsion

1. Make sure fabric rope is secured properly inside fabric roller tube. See (FIG. 29) & (FIG. 30).

i Do **NOT** cut fabric rope.

2. Insert torsion assembly into LH end of fabric roller tube. See (FIG. 34).

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

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

I. **WITH NOTCH** (new fabric roller tube):
Align alignment tabs on end cap to notch in fabric roller tube. See (FIG. 35).

II. **WITHOUT NOTCH** (old fabric roller tube):
Align hole in end cap to empty (auxiliary) slot in fabric roller tube. See (FIG. 36).

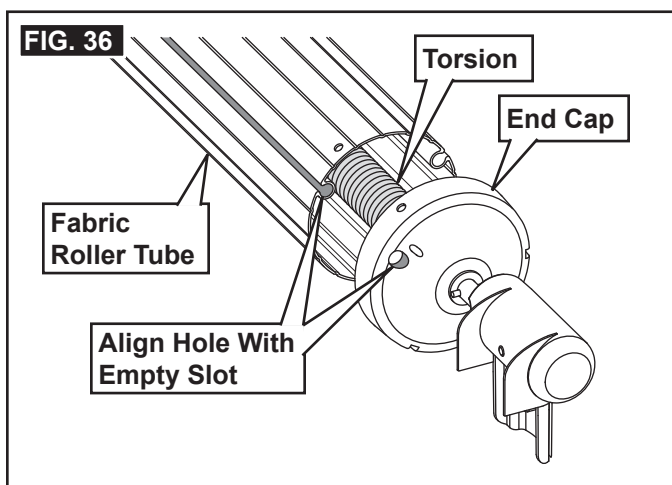
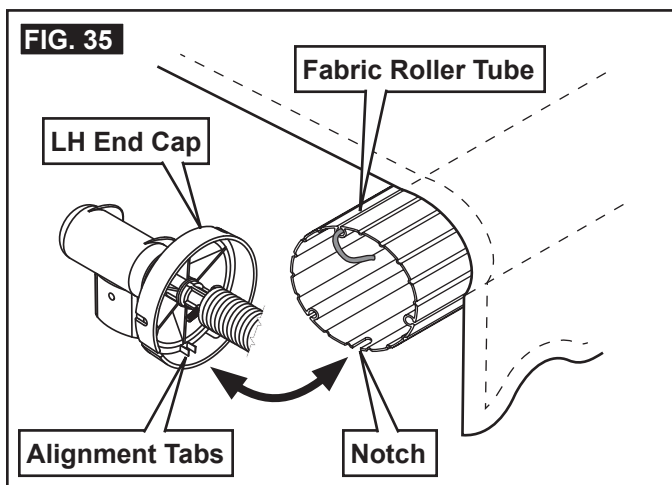
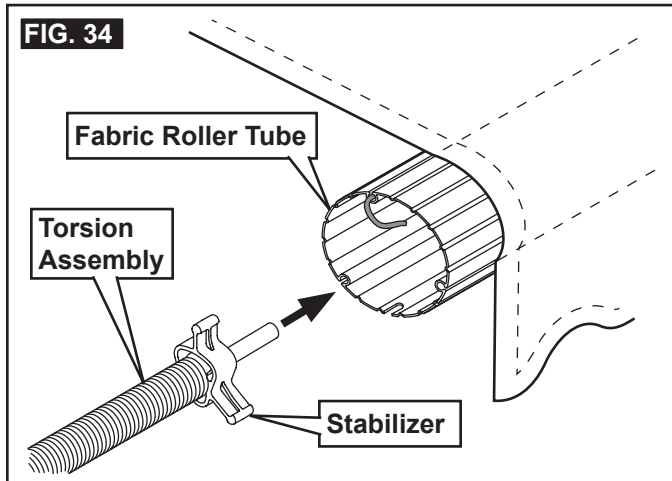
i Rivet holes in end cap and fabric roller tube **MUST** also align.

If a new torsion is installed on an old fabric roller tube (without notch),

REPLACE TORSION

the alignment tabs inside end cap **MUST** be removed (broken off). See (FIG. 35).

- b. While maintaining alignment, insert stabilizer end of torsion into fabric roller tube.
- c. Slide torsion inside fabric roller tube until end cap seats onto end of tube.



3. Secure end cap to fabric roller tube. See (FIG. 14) & (FIG. 36).
 - a. Verify end cap is aligned properly and fully seated on fabric roller tube.
 - b. If fabric roller tube has pre-drilled rivet holes, skip to step (d).
If fabric roller tube does **NOT** have pre-drilled rivet holes, proceed with step (c).
 - c. Drill 3/16" diameter holes into fabric roller tube using the rivet holes / slots in end cap as a guide.
 - d. Insert 3/16" x 3/8" blind rivets through rivet holes in end cap and secure to fabric roller tube.

C. Wind Torsion

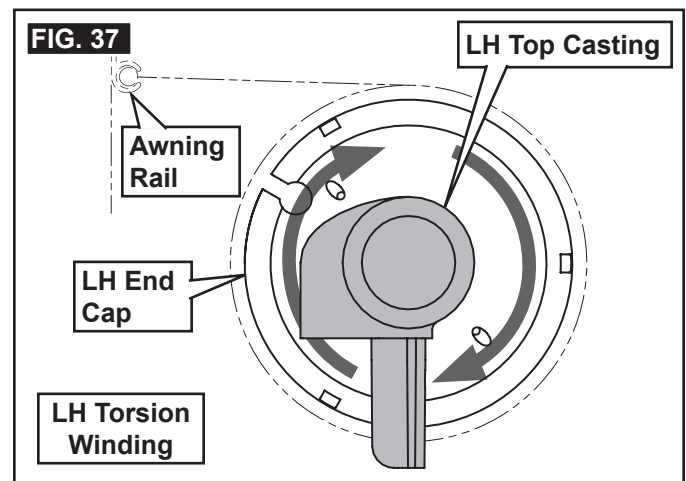
1. Place correct (torsion crank assembly) adapter over LH top casting. Then place and tighten hex head screw through adapter and into top casting. See (FIG. 15).

i See subsection, "A. Required Kits" on page (4) for torsion crank assembly.

2. **⚠ 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.

Note the position of LH top casting for winding start position. Then carefully and slowly turn top casting 9 turns (revolutions) clockwise to apply torsion spring tension. See (FIG. 37).

i If awning is installed on RV and extended 2 revolutions (turns) from awning rail, **ADD 2** turns for a total of 11.



REPLACE TORSION

3. Turn top casting (or rotate FRTA) until pin near top casting is parallel with the two slots in end cap. See (FIG. 1).

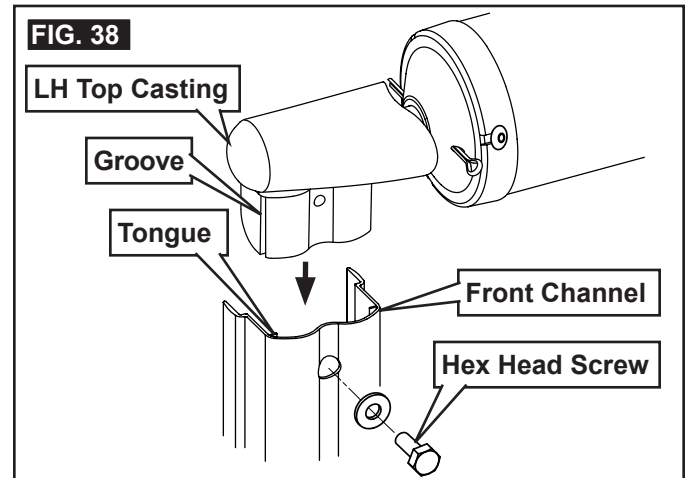
i Hole in torsion rod **MUST** align with slots in end cap.

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

D. Reattach Torsion to Awning Hardware

1. Insert LH top casting into corresponding front channel. See (FIG. 38).

i Do **NOT** force top casting into front channel. Top casting (groove) should slide easily into front channel (tongue).



2. Reinstall hex head screw (and washer) to secure front channel to top casting. See (FIG. 38).

REPLACE DRIVE ASSEMBLY

This section applies to awning fabric, fabric roller tube, and drive assembly replacement.

i To finish torsion replacement only, skip to section, "Finish Installation" on page (19).

If awning is installed on RV, the following procedures **MUST** be performed:

- with FRTA extended 2 revolutions (turns) from awning rail, and
- while on a stepladder.

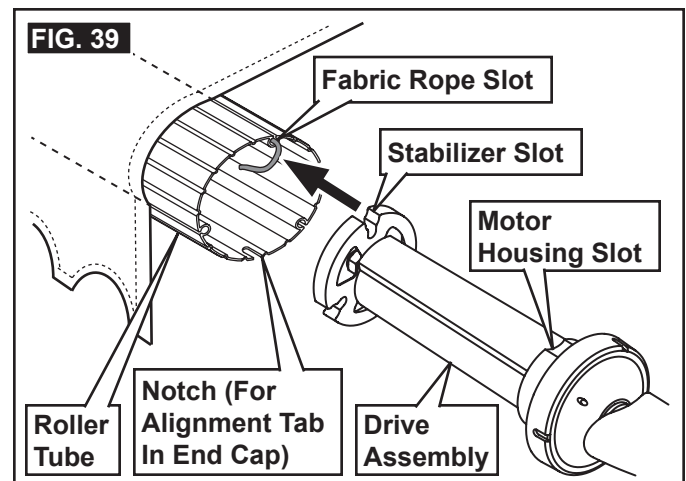
A. Place Drive Assembly Into Roller Tube

Insert drive assembly into RH end of roller tube. See (FIG. 17) & (FIG. 39).

1. Align stabilizer and motor housing slots (drive assembly) with fabric rope slot in roller tube.
2. Insert drive assembly into roller tube until motor housing slot is engaged with fabric rope slot, and end cap is seated on roller tube.

i Make sure fabric rope is folded back and locked into notch at end of fabric rope slot (in roller tube).

Do **NOT** cut fabric rope.

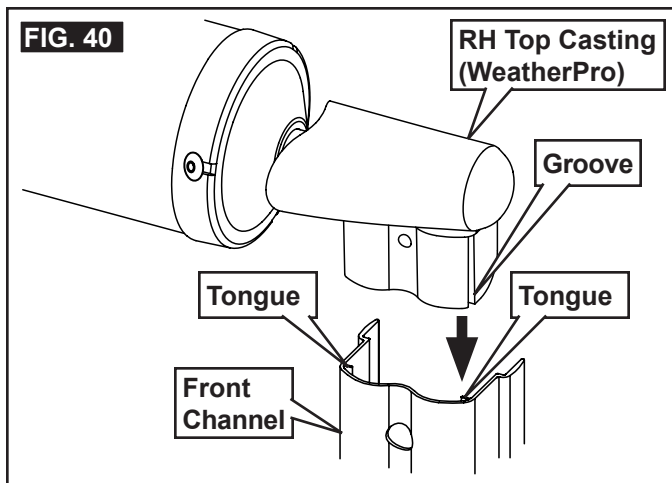


B. Attach Drive Assembly To Front Channel

1. Rotate new drive assembly until RH top casting is parallel (aligns) with front channel. See (FIG. 40).

i Alignment **MUST** allow RH top casting (both grooves) to slide easily into front channel (both tongues).

REPLACE DRIVE ASSEMBLY



- ⚠ WARNING** IMPACT OR CRUSH HAZARD. Make sure top casting is aligned and seated correctly into front channel. Otherwise, top casting could move unpredictably and become unstable, causing awning to [detach / bend / collapse]. Insert RH top casting into front channel until seated securely. See (FIG. 40).
i Make sure both grooves in RH top casting fully engage both tongues in front channel. If top casting does **NOT** slide easily into front channel, repeat step (1).
- Reinstall hex head screw (and washer) to secure RH top casting to front channel. Tighten to 65-80 in·lb torque. See (FIG. 17).

C. Release RH Arm Assembly

This subsection applies **ONLY** if awning is installed on RV.

- i** If awning is **NOT** installed on RV, do **NOT** remove nylon ties at this time. Skip to subsection, "D. Secure Drive Assembly To Roller Tube" on page (19).

⚠ WARNING IMPACT OR PINCH HAZARD. Arm assemblies are under tension from gas strut. Hold arm assemblies and FRTA securely **BEFORE** removing ties. Otherwise, arms will extend quickly and unexpectedly. Failure to obey this warning could result in death or serious injury.

While holding RH arm assembly (front channel) and FRTA securely, cut nylon ties around front and back channels with diagonal cutters. Then carefully allow front channel to open slowly until awning fabric is taut.

- i** If performed while on a stepladder, make sure stepladder is positioned to allow arm assembly (front channel) to open.

D. Secure Drive Assembly To Roller Tube

Attach RH end cap to roller tube. See (FIG. 17).

- i**
- Turn end cap until all rivet holes / slots on end cap and roller tube align.
 - Make sure end cap is fully seated on roller tube.
 - Insert 3/16" x 3/8" blind rivets (provided) through rivet holes in end cap and secure to roller tube.

FINISH INSTALLATION

- i** Additional procedures **MUST** be performed to complete the replacement. These procedures will vary in detail based on awning model. See latest Installation Instructions for your specific awning model.

Additional procedures may include:


- Secure awning fabric to awning rail.
- Secure HDWR to RV.
- Remove LH cotter pin (**AFTER** awning is installed).
- Remove nylon ties (**AFTER** awning is installed).
- Connect motor and switch wiring.
- Connect LED wiring (if equipped).
- Etc.

VERIFY INSTALLATION

A. Test Operation

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

B. Secure Awning For Travel

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

C. Keep Literature

Keep these instructions with awning.