



RECORD THIS INFORMATION FOR FUTURE
REFERENCE:

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

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**TENSION RAFTER SYSTEM
WITH TOP (SUPPORT) CRADLE**

930060.(X)00(#)

**INSTALLATION & OPERATING
INSTRUCTIONS**

**TENSION RAFTER
SYSTEM
930060.(X)00(#)**

REVISION

Form No. 3105397.040 06/12
(Replaces 3105397.032)
(French 3108542.022)
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LaGrange, IN 46761

3105397.040



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

INTRODUCTION

These instructions apply to the tension rafter system (hereinafter referred to as “tension rafter system,” or “product”). This product is intended for use on RVs with straight sides, and it is compatible with any roll-up type awning that uses a roller tube. The tension rafter system includes an adjustable tension rafter and top cradle for fabric roller tube support. Use these instructions to ensure a properly installed, and properly functioning product.

Dometic, LLC 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 users 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 or national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA 1192, Recreational Vehicles Code

CANADA

- CSA Z240 RV Series, Recreational Vehicles

D. General Safety Messages



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.
- Frequently examine product for imbalance (uneven fit / sagging / loose parts); and signs of wear or damage to wiring (if applicable) and other critical parts. Do **NOT** use product if adjustments or repairs are necessary.



Critical parts may include brackets, pins, knobs, etc.

GENERAL INFORMATION

A. Scope Of Delivery

- (1) Tension Rafter Assembly
- (1) Top Bracket Assembly
- (1) Bottom Bracket
- (1) Backing Plate
- (1) Safety Spring Pin
- (4) #14-10 X 1 1/2" Hex Head Screw
- (4) 3/16" X 1" Oscar Rivet
- (1) 1/4-20 X 3" Hex Head Screw
- (1) Nylon Spacer
- (1) 1/4-20 Lock Nut
- (1) Installation & Operating Instructions

B. Required Tools

- Electric Drill
- 3/16" Drill Bit (for wood)
- 7/32" Drill Bit (for steel)
- 3/8" Drill Bit
- 7/16" Hex Nut Driver / Bit
- 3/8" Hex Nut Driver / Bit
- Center Punch
- Hammer
- Rivet Gun (If installing Backing Plate)
- Measuring Tape
- Pencil
- Ladder

C. Required Components

- Silicone Sealant

INSTALLATION INSTRUCTIONS

A. Determine Mounting Location

1. **⚠ WARNING** IMPACT OR CRUSH HAZARD. Verify mounting surface on RV is flat, has solid structural backing where fasteners penetrate surface, and will safely and securely support product. Otherwise, product may become unstable and could bend or collapse. Failure to obey this warning could result in death or serious injury.

Find a solid structure in RV wall for support of the tension rafter system (top and bottom brackets), while adhering to the following conditions:

- a. Must be near center of awning's FRTA (fabric roller tube assembly). See (FIG. 1).

i When installing (2) tension rafters, space them equally along FRTA.

(Divide length of FRTA into (3) equal spaces.)

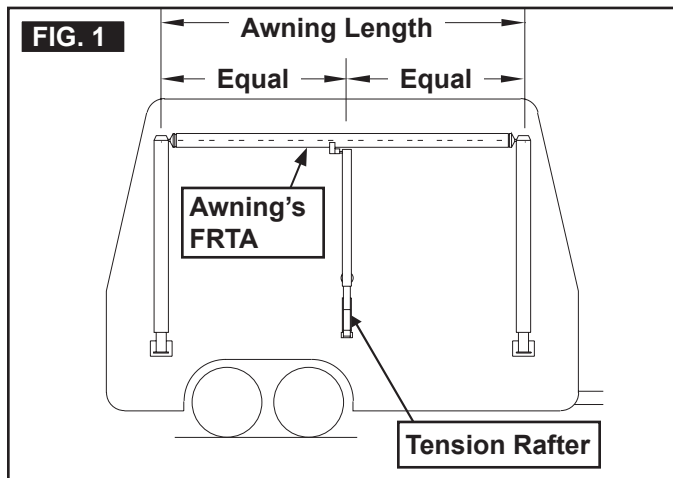
- b. Must have 69" of unobstructed clearance below awning rail.

i If windows and/or service access panels interfere, find a position that will avoid the interference while staying as close to center as possible.

- c. Structural backing must be able to withstand 100 lb force (per screw - provided).

i If there is insufficient structural backing, the backing plate (provided) **MUST** be installed.

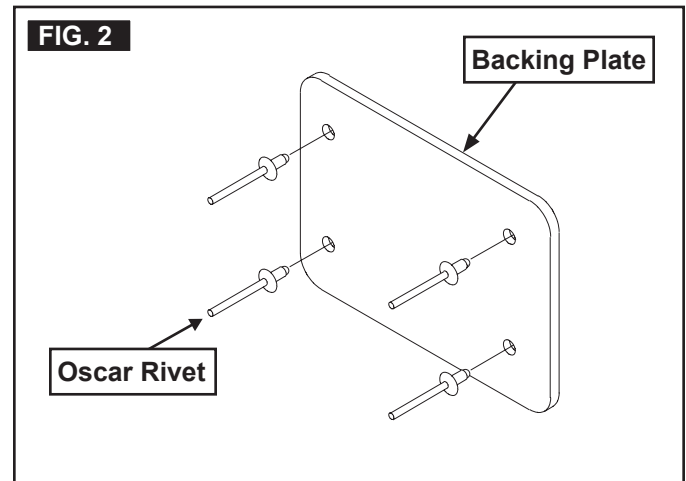
2. Mark the location (a vertical line near closed awning's FRTA) for top bracket.
3. If structural backing is sufficient (will withstand 100 lb force per screw), skip to subsection, "C. Install Top Bracket" on page (5).
4. If structural backing is **NOT** sufficient (under 100 lb force), proceed with subsection, "B. Install Backing Plate (If Necessary)" on page (4).



B. Install Backing Plate (If Necessary)

If there is insufficient structural backing, the backing plate (provided) must be installed. If structural backing will withstand 100 lb force (per screw), skip to subsection, "C. Install Top Bracket" on page (5).

1. With awning closed, place top bracket assembly on marked location (near center of awning), with top cradle against bottom of FRTA. Then mark position of top bracket. See (FIG. 1) & (FIG. 3).
2. Place backing plate against wall, centered on marked position of top bracket, and mark backing plate's hole locations. See (FIG. 2).



3. **⚠ WARNING** FIRE OR ELECTRICAL SHOCK HAZARD. Verify there are no obstacles inside RV's roof and/or walls (wires, pipes, etc.). Shut **OFF** gas supply, disconnect 120 Vac power from RV, and disconnect positive (+) 12 Vdc terminal from supply battery **BEFORE** drilling or cutting into RV. Failure to obey these warnings could result in death or serious injury.

Drill 3/16" diameter holes (7/32" diameter if drilling steel) through marked hole locations and into solid structure of RV.

4. **NOTICE** ALWAYS use sealant on (clean) parts and surfaces where fasteners enter RV's roof and/or walls. Otherwise, water leakage could occur.

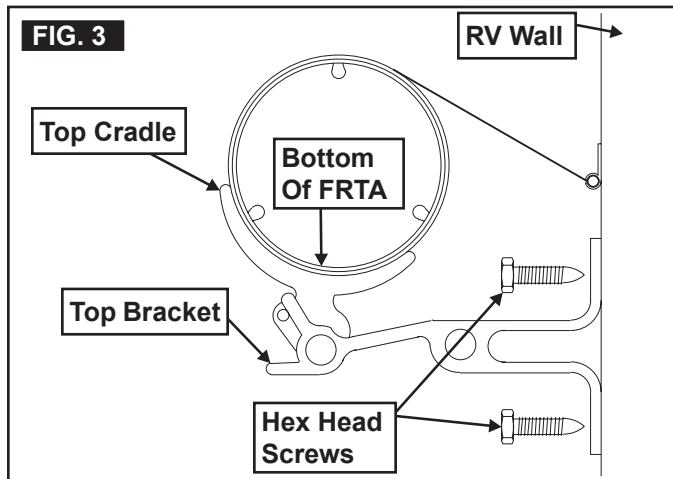
Apply sealant to the 3/16" X 1" oscar rivets (provided). Then place rivets through back channel and secure to solid structure of RV.

i Structural backing (with skin) **MUST** be 3/8" to 1/2" thick to accommodate oscar rivets.

INSTALLATION INSTRUCTIONS

C. Install Top Bracket

1. With awning closed, place top bracket assembly on marked location (near center of awning), with top cradle against bottom of FRTA. Then mark position of top bracket. See (FIG. 1) & (FIG. 3).



2. Move top bracket up 1/4", and mark hole locations.
3. **⚠ WARNING FIRE OR ELECTRICAL SHOCK HAZARD.** Verify there are no obstacles inside RV's roof and/or walls (wires, pipes, etc.). Shut **OFF** gas supply, disconnect 120 Vac power from RV, and disconnect positive (+) 12 Vdc terminal from supply battery **BEFORE** drilling or cutting into RV. Failure to obey these warnings could result in death or serious injury.

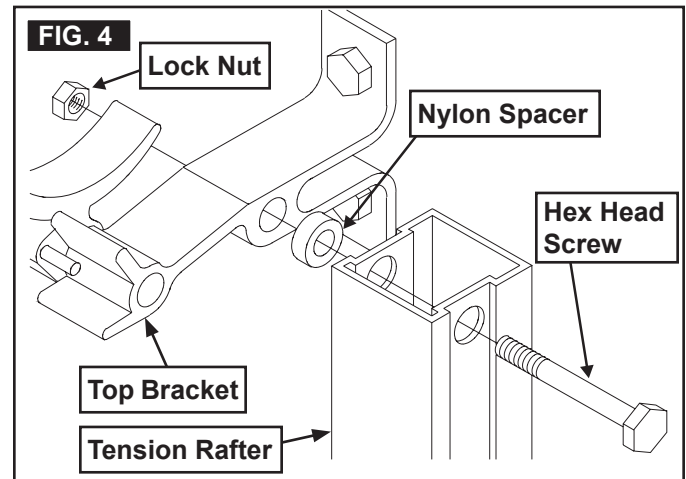
Drill 3/16" diameter holes (7/32" diameter if drilling steel) through marked hole locations and into solid structure of RV.

4. Replace top bracket against wall, and align its mounting holes to the pre-drilled holes in RV.
5. **NOTICE ALWAYS** use sealant on (clean) parts and surfaces where fasteners enter RV's roof and/or walls. Otherwise, water leakage could occur.

Apply sealant to #14-10 X 1 1/2" hex head screw threads. Then place and tighten screws through top bracket and into solid structure of RV. See (FIG. 3).

D. Install Tension Rafter

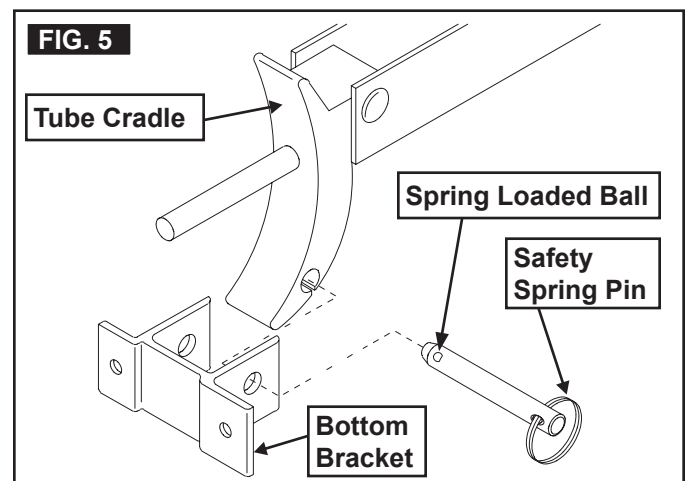
1. Insert 1/4-20 X 3" hex head screw through right side of top hole in tension rafter, so that threaded end of screw protrudes from left side of tension rafter. See (FIG. 4).



2. Place nylon spacer onto hex head screw. See (FIG. 4).
3. Insert hex head screw (with tension rafter and nylon spacer) through top bracket, so that tension rafter is to the right side of top bracket. See (FIG. 4).
4. Place and tighten 1/4-20 lock nut onto hex head screw to secure tension rafter to top bracket. See (FIG. 4).

E. Install Bottom Bracket

1. Place bottom bracket onto tube cradle, align holes, and insert safety spring pin through holes until pin (with spring loaded ball) protrudes from other side. See (FIG. 5).



INSTALLATION INSTRUCTIONS

2. **⚠ WARNING IMPACT OR CRUSH HAZARD.** Verify mounting surface on RV is flat, has solid structural backing where fasteners penetrate surface, and will safely and securely support product. Otherwise, product may become unstable and could bend or collapse. Failure to obey this warning could result in death or serious injury.

Find a solid structure in RV wall for support of bottom bracket that is at least 69" below awning rail.

i Bottom bracket may be mounted directly into floor line, or into solid structural backing that is able to withstand 100 lb force (per screw).

3. With tension rafter hanging vertically from top bracket, place bottom bracket against wall and mark hole locations.
4. **⚠ WARNING FIRE OR ELECTRICAL SHOCK HAZARD.** Verify there are no obstacles inside RV's roof and/or walls (wires, pipes, etc.). Shut **OFF** gas supply, disconnect 120 Vac power from RV, and disconnect positive (+) 12 Vdc terminal from supply battery **BEFORE** drilling or cutting into RV. Failure to obey these warnings could result in death or serious injury.

Drill 3/16" diameter holes (7/32" diameter if drilling steel) through marked hole locations and into solid structure of RV.

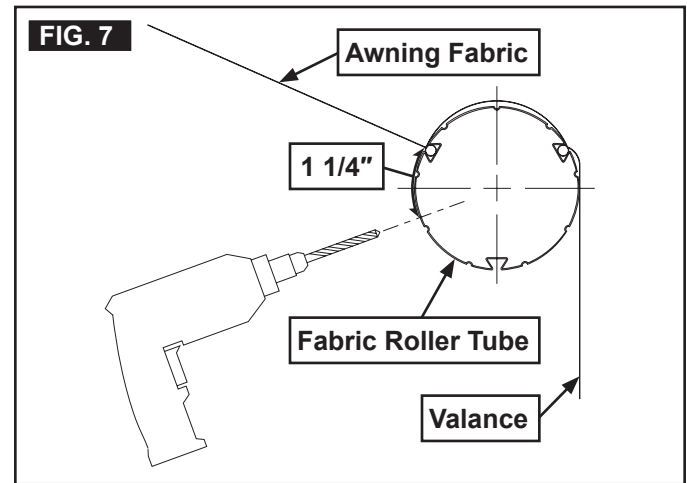
5. Replace bottom bracket against wall, and align its mounting holes to the pre-drilled holes in RV.
6. **NOTICE ALWAYS** use sealant on (clean) parts and surfaces where fasteners enter RV's roof and/or walls. Otherwise, water leakage could occur.

Apply sealant to #14-10 X 1 1/2" hex head screw threads. Then place and tighten screws through bottom bracket and into solid structure of RV. See (FIG. 6).

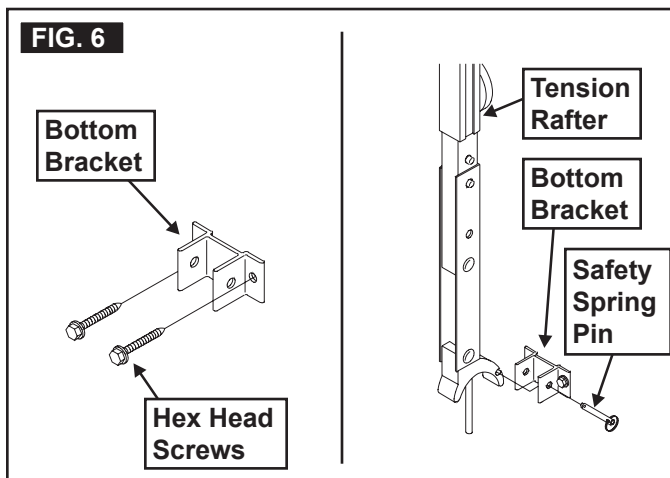
F. Drill Attachment Hole (In FRTA)

1. Open awning to its fully extended position. See awning's Operating Instructions.
2. From center of fabric roller tube, measure 1 1/4" from below awning fabric around circumference of fabric roller tube, and mark the location for attachment hole. See (FIG. 7).

i When installing (2) tension rafters, space (2) attachment holes equally along FRTA.
(Divide length of FRTA into (3) equal spaces.)



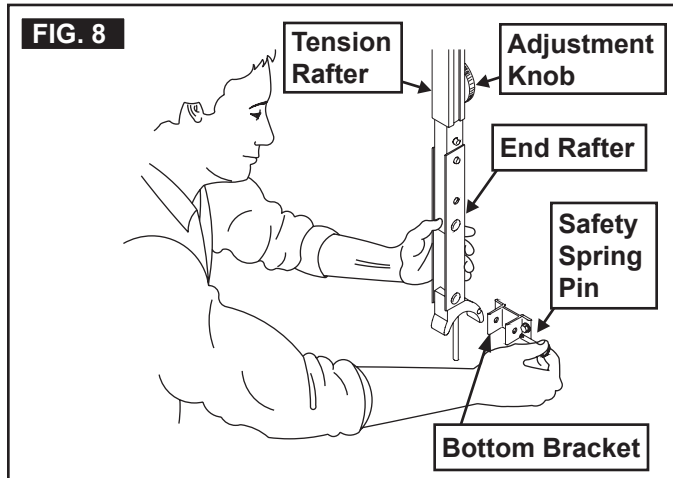
3. Center punch the marked location(s), then drill a 3/8" diameter hole through wall of fabric roller tube. See (FIG. 7).
4. File edges of hole(s) to remove any sharp edges and burrs.



OPERATING INSTRUCTIONS

A. Attach (Open) Tension Rafter

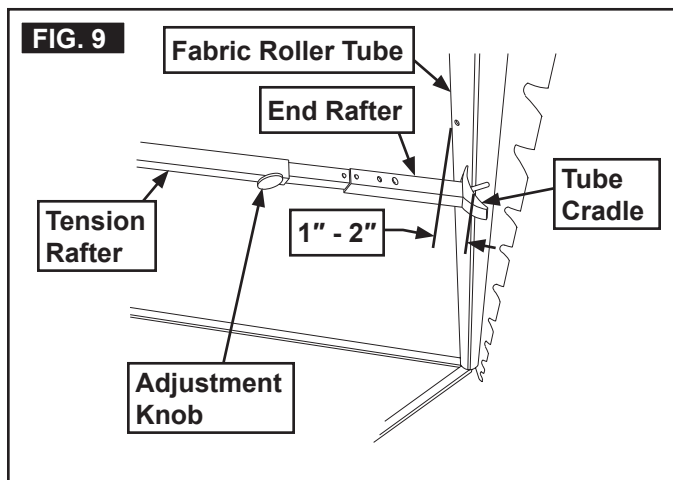
1. Open awning to its fully extended position. See awning's Operating Instructions.
2. Loosen adjustment knob on tension rafter. See (FIG. 8).



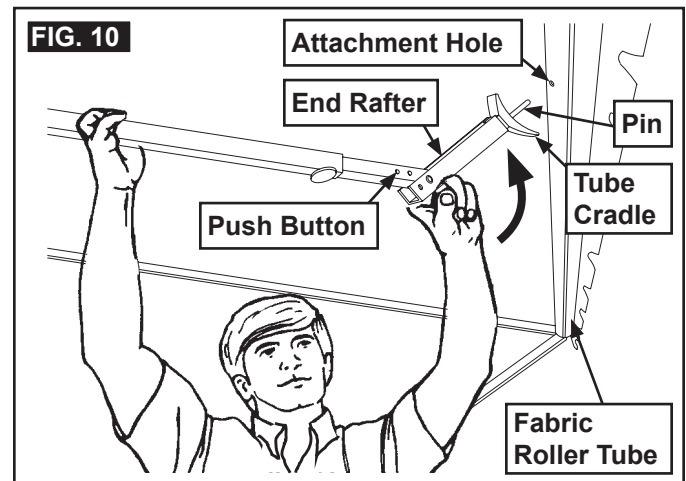
3. While grasping end rafter (near bottom bracket), remove safety spring pin from bottom bracket. See (FIG. 8).

i Save safety spring pin for use later.

4. Swing tension rafter toward fabric roller tube, extend tension rafter so that tube cradle projects approximately 1" - 2" beyond inside edge of fabric roller tube, and tighten adjustment knob. See (FIG. 9).



5. Press push button and pivot end rafter up. See (FIG. 10).

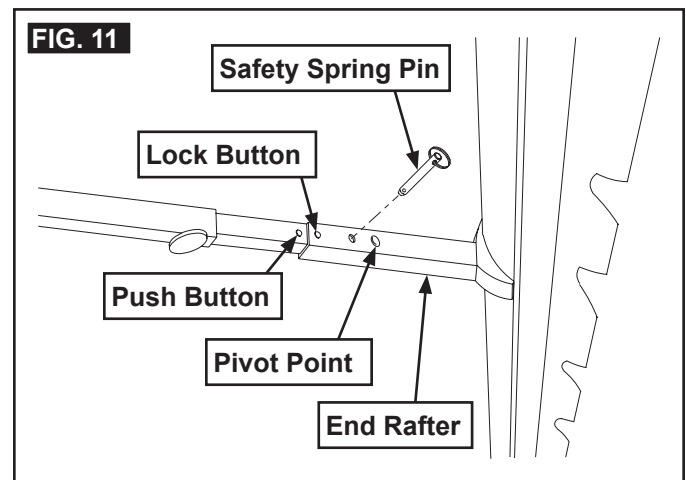


6. Insert tube cradle's pin into attachment hole in fabric roller tube. See (FIG. 10).

i You may need to rotate the fabric roller tube (as if rolling / unrolling awning) by hand until tube cradle's pin aligns with attachment hole.

7. **CAUTION** PINCH HAZARD. Keep **CLEAR** of pivot area while locking tension rafter in place. Failure to obey this caution could result in injury.

Lock tension rafter in place by pushing up on end rafter until lock button snaps into hole. See (FIG. 11).



8. Insert safety spring pin (removed in step (3)) through hole in end rafter (near pivot point) to secure in place. See (FIG. 11).

i This will prevent tension rafter from opening under severe loads.

OPERATING INSTRUCTIONS

B. Stow (Close) Tension Rafter

-  1. Loosen adjustment knob on tension rafter (to relieve pressure). See (FIG. 11).
2. Remove safety spring pin from end rafter (near pivot point). See (FIG. 11).
 Save safety spring pin for use later.
3. Press push button and pivot end rafter (pivot point) down. See (FIG. 10) & (FIG. 11).
4. Remove tube cradle's pin from attachment hole in fabric roller tube. See (FIG. 10).
5. Fold end rafter back in place (against tension rafter) until lock button snaps into hole, and swing tension rafter toward RV wall. See (FIG. 10) & (FIG. 11).
6. Align holes in tube cradle with holes in bottom bracket, and insert safety spring pin through holes until pin (with spring loaded ball) protrudes from other side. See (FIG. 5) & (FIG. 8).
7. Tighten adjustment knob on tension rafter. See (FIG. 8).

C. Operation Of Top (Support) Cradle

The top cradle helps support the awning FRTA (Fabric Roller Tube Assembly) for travel.

Its operation is automatic, and no effort (to operate) by the user is required:

-  1. When the awning is closed (rolled up), the top cradle will engage and support the FRTA. See (FIG. 3).
 When closing (rolling up) the awning, position the pull strap away from top cradle at least 12".
2. When the awning is open (extended), the top cradle will disengage the FRTA.

GENERAL CARE AND USE

A. Maintenance

-  1. **NOTICE** Do **NOT** use strong chemicals or abrasives to clean parts, as their protective surfaces will be damaged.
Clean awning hardware (as needed) with a mild surface cleaner (such as dish soap).
2. **NOTICE** Do **NOT** use silicone sprays near labels. Otherwise, the label's adhesive bond to product surfaces could weaken.
Lubricate all sliding surfaces of tension rafter with silicone spray as needed.

B. When To Get More Help

If malfunctions occur (that cannot be corrected by reviewing these instructions), contact a qualified service technician.