

# Lewmar TPX Boat Shade Installation and

**Owner's Manual** 

(For Aftermarket Applications)

#### **Table of Contents**

Introduction	2
Model/Serial Number Tag Location	
Customer Support	
Safety	2
Parts List	3
Resources Required	4
Specifications	4
Technical Data	4
Preparation	
Skill level of Installer	5
Installation	5
Determine Hardtop Centerline	5
Setting the Mounting Clamps	6
Securing the Roller Assembly	11
Securing the Crossbars	. 13
Pre-Loading the Canvas	. 15
Wiring the Electrical System	. 16
Wiring Diagram	. 18
Troubleshooting	. 19
Troubleshooting Chart	. 19
Troubleshooting the Control Box	. 19
Maintenance	
Regular Cleaning	. 20
Actuator Collar Maintenance	
Canvas	
Lewmar Limited Product Warranty Statement	
Lewinar Linnieu Frouuci warranty Statement	. 21

TPX Boat Shade Kit			
Qty	Description		
1	Shade specification drawing — specific to your shade and provided as a separate document		
4	Mounting clamps w/mounting hardware and bolt covers		
2	Pre-assembled actuators		
1	Roller assembly w/mounting hardware		
1	Outer crossbar w/mounting hardware		
1	Mid-crossbar w/mounting hardware		
1	Pre-rolled canvas (attached to roller assembly)		
1	Pre-programmed electronic controller		
2	Starboard and port control harness w/Deutsch connectors		

**NOTE:** Many provided parts are pre-assembled.

### Lewmar TPX Boat Shade

Installation and Owner's Manual (For Aftermarket Applications)

### Introduction

#### **Model/Serial Number Tag Location**

Your shade system is identified by the job number located on labels affixed to the actuators and crossbars. Do **NOT** remove these label. The canvas is identified by the white tag sewn into the canvas. Do **NOT** remove this label.

#### **Customer Support**

We take pride in offering an unprecedented level of customer service to our boat builders, dealers and owners using our shading systems. Whether you purchased your sunshade system as a factory-install option, an aftermarket installation through your local boat dealer or directly from us, you can have confidence in continued customer service resources from Lewmar.

Should you require assistance with your TPX installation, our technical experts are available from 8am - 5pm GMT Monday through Friday via email at <u>techsupport@lewmar.com</u>, or call us at +44 (0) 23 9247 1841.

Further customer resources and information can be found on our website at: <u>www.lewmar.com</u>

### Safety

Read and fully understand all instructions before installing or operating this product.

Adhere to all safety labels.

## **A WARNING**

THE "WARNING" SYMBOL ABOVE IS A SIGN THAT AN INSTALLATION PROCEDURE HAS A SAFETY RISK INVOLVED AND MAY CAUSE DEATH, SERIOUS PERSONAL INJURY, SEVERE PRODUCT AND/OR PROPERTY DAMAGE IF NOT PERFORMED SAFELY AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

# **A**CAUTION

THE "CAUTION" SYMBOL ABOVE IS A SIGN THAT A PROCEDURE HAS A SAFETY RISK INVOLVED AND MAY CAUSE PERSONAL INJURY, PRODUCT AND/OR PROPERTY DAMAGE IF NOT PERFORMED SAFELY AND WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

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INDICATES A SITUATION WHICH CAN CAUSE DAMAGE TO THE COMPONENTS AND/OR THE ENVIRONMENT, OR CAUSE THE EQUIPMENT TO OPERATE IMPROPERLY.

### **A**WARNING

ALWAYS WEAR OSHA-APPROVED BODY, EYE, EAR AND RESPIRATORY SYSTEM PROTECTION. NEVER WEAR LOOSE CLOTHING, JEWELRY OR LONG HAIR WHEN INSTALLING THE RETRACTABLE SHADE.

### **A WARNING**

ALWAYS KEEP HANDS AND LOOSE CLOTHING CLEAR OF THE ACTUATORS WHEN EXTENDING/ RETRACTING THE SHADE.

# **A**WARNING

BEFORE INSTALLING AND OPERATING THE RETRACTABLE SHADE, BE SURE TO READ AND UNDERSTAND THE CONTENT AND SAFETY MESSAGES IN THIS MANUAL.

# A CAUTION

- KEEP HANDS AWAY FROM MOVING SHADE PARTS.
- KEEP CLEAR OF SHADE WHILE EXTENDING AND RETRACTING.

• KEEP SHADE CLEAR OF OBSTRUCTIONS.

Important instructions:

- In the event of malfunction please submit a service request via email at <u>techsupport@lewmar.com</u>. Do **NOT** attempt to repair shade on your own or you could risk voiding the warranty.
- **NEVER** disassemble actuators without permission from Lewmar factory or you will void warranty.
- Do **NOT** install the shade anywhere it will obstruct or interfere with the navigation lights or any other boat accessories.
- When tensioning the canvas, refer to proper roller pre-load instructions. Improper tensioning can cause spring malfunction, which will prevent the roller assembly from operating normally.
- Be sure that boat batteries are sufficiently charged before operating the shade.

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Installation and Owner's Manual (For Aftermarket Applications)

- Your Lewmar TPX product has been designed and tested to withstand wind speeds of up to 80 kph (50 mph). However, it is recommended to retract the shade while underway.
- To protect the shade and components, always retract shade during inclement weather. Retracting the shade when **NOT** in use will prolong the life of the canvas and components.
- Do **NOT** operate the shade without the crossbars attached.
- It is important to understand the Warnings, Cautions and Notices **BEFORE** starting the installation.

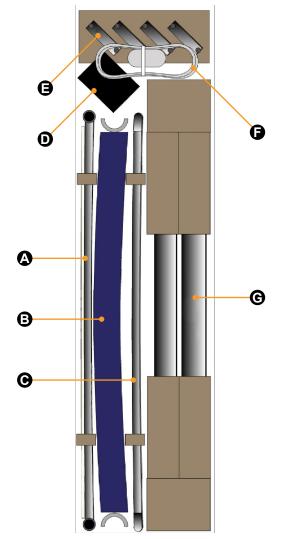
Safety labels **MUST** be legible to alert personnel of safety hazards. Replace any illegible or missing labels immediately. Safety labels removed during any repair work **MUST** be replaced in their original position (**Fig.1**) before operating the shade.





Fig.1

### **Parts List**



Letter	PN	Description	Qty
А	NA	Outer Crossbar	1
В	NA	Roller Assembly	1
С	NA	Mid-Crossbar	1
D	NA	Electronic Controller/ Connections/Wireless remote	1
E	NA	Mounting Clamps	4
F	NA	Control Harness, Roller Clamps, Miscellaneous Hardware	2
G	NA	Actuators	2

**NOTE:** Make sure all assembled parts are contained in the shipping container **BEFORE** starting installation.

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### **Resources Required**

Deserves	Ins	stall
Resource	Surface	Integrated
Safety glasses/goggles	Х	Х
Ratchet and socket set	Х	Х
Power drill	Х	Х
Jigsaw	Х	Х
Drill bits	Х	Х
Phillips head screwdriver	Х	Х
Allen wrench set (standard)	Х	Х
Wire strippers	Х	X
Wire cutters	Х	Х
Wire crimper	Х	X
Utility knife	Х	Х
Assorted wire connectors	Х	Х
Wire (8-gauge for power as per ABYC E-11, Table IX, 10% Voltage drop, 14-gauge for switch connections)	х	Х
Multimeter (or similar device)	Х	Х
Tape measure	Х	Х
Marine caulk	Х	Х
Extension cord	Х	
Thread lock (Loctite®)	Х	Х
Electrical tape	Х	Х
Tubing cutter, hacksaw		Х
Fish tape (used to route wires through inaccessible areas)		Х
Level		X
Grease pencil	Х	Х
Wire ties	Х	Х
Hole saws		Х
Dremel <sup>®</sup> with round sanding wheels and/or round grinding bit (If not available, a drill can be used)		Х
Ladder	Х	Х

### **Specifications**

#### **Technical Data**

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Functional Specification	ATF Stage
Width	Up to 3658mm (12') Over 3658mm (12') custom
Hardware Specification	
Extension length	1524mm (5'), 1828mm (6') or 2134mm (7')
Actuator material	316SS
Framework material	316SS
Mounting component material	316SS
Actuator placement	Integrated within bridge or hardtop Top surface-mount Underside surface-mount
Roller configuration	Straight or cambered spring-tension roller
Canvas	Marine-grade acrylic
Electrical Specification	
Voltage	12-24V
Amperage	8 amps maximum
Operating device	Toggle switch and remote control
Controller type	Software-based synchronisation
	Standard toggle switch:
Controller dimensions	130mm x 160mm x 76mm (5.35" x 6.25" x 3") Wireless remote control: 180mm x 210mm x 62mm (7.063" x 8.25" x 2.44")
Controller dimensions Structural Specification	(5.35" x 6.25" x 3") Wireless remote control: 180mm x 210mm x 62mm
	(5.35" x 6.25" x 3") Wireless remote control: 180mm x 210mm x 62mm

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Installation and Owner's Manual (For Aftermarket Applications)

### Preparation

#### Skill level of Installer

Must be able to read a tape measure and be comfortable using a hand drill.

Unless otherwise specified, all dimensions are in mm (inches).

For installation of shade framework, intermediate skill level:

- Read tape measure
- Use hand drill
- Able to lift 16 kg (35 lbs)

Electrical installation, wiring of shade:

• Wiring of shade to the boat should be done by an experienced marine electrician.

#### Installation

**NOTE:** Lewmar recommends two people perform the installation. Depending on the type of mount—surface or integrated—and the complexity of the wire run to the boat's power source, the installation can take anywhere from 10–16 hours.

#### **Determine Hardtop Centerline**

**NOTE:** Refer to the supplied shade specification drawing to determine the shade's centerline width. Shade centerline width is determined by the centerline of the port actuator tube to the centerline of the starboard actuator tube, and is the most critical dimension in order to properly center the shade framework on the hardtop.

Mark hardtop centerline as follows:

**1.** Measure across the hardtop at the forward section from the port side to the starboard side. Using a grease pencil, mark the center of the hardtop (**Fig.2A**).

**2.** Repeat step 1 for the aft section (**Fig.2B**). Using the pencil marks as a guide, run tape or string down the center of the hardtop (**Fig.2C**).

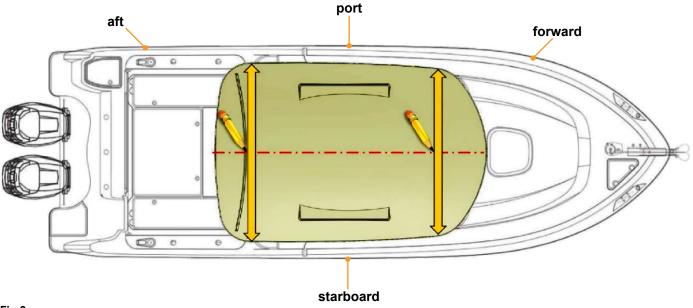


Fig.2

### **Lewmar TPX Boat** Shade

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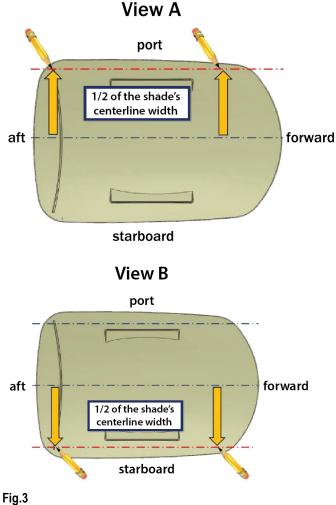
3. After marking the centerline of the hardtop, begin determining the placement of the mounting clamps.

NOTE: Placement of mounting clamps MUST hold actuators parallel to each other to ensure proper functioning of shade system.

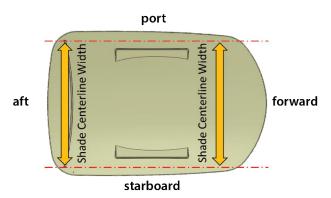
A. Refer to the shade centerline width dimension on the shade specification drawing.

**B.** Take <sup>1</sup>/<sub>2</sub> of the width of the shade specification drawing dimension and measure out from the hardtop centerline to the port side by that amount (Fig.3, VIEW A).

NOTE: For example, if the shade centerline width is 2000mm, measure 1000mm from the hardtop centerline to the port or starboard side (Fig.3, VIEWS A and B).



4. To verify centerline measurements, measure the distance from the port side to the starboard side at the forward and aft sections (Fig.4) to make sure marks are parallel. These measurements should be the same as the shade centerline width provided on the shade specification drawing.



#### Fig.4

#### Setting the Mounting Clamps

1. Disassemble the four mounting clamps, which may include spacers (Fig.5) depending on installation, by removing the two M6 x 20mm socket head screws from each clamp.

- A. Remove the top clamp (Fig.5).
- B. Set the screws and top clamps aside.

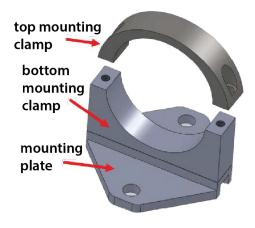


Fig.5

### Lewmar TPX Boat Shade

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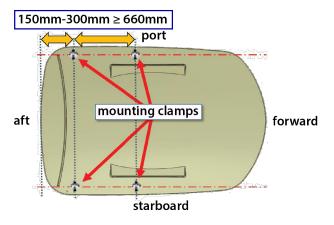
**C.** Place mounting clamps 150mm-300mm (6"-12") from aft of hardtop (**Fig.6**). Spacing between forward and aft mounting clamps should be no less than 660mm (26") (**Fig.6**).

**NOTE:** When applicable, 762mm (30") or more is preferred.

**2.** Position the four bottom mounting clamps (Fig.5) along the predetermined lines on the hardtop (Fig.6).

**NOTE:** Place actuator in clamps to aid in aligning and spacing mounting clamps.

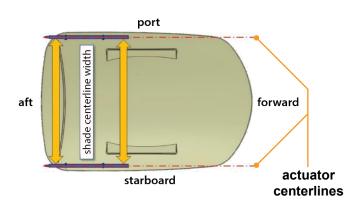
**3.** With assistance, have each person place and hold an actuator onto the starboard and port mounting clamps.



**NOTE:** Actuators should be used to finalise placement **BEFORE** drilling holes.

**4.** Measure from port actuator centerline to starboard actuator centerline at the forward and aft sections (**Fig.7**) to make sure the centerline width is accurate. Refer to shade centerline width dimension located on shade specification drawing.

**NOTE:** Shade actuators are used during this process to confirm proper shade position.



#### Fig.7

**NOTE:** Take note of the style of the hardtop (flat or curved) **BEFORE** drilling the mounting holes.

**5.** If the hardtop is flat\* (**Fig.8**), the mounting hole locations are the same as the shade's center width for either a topside or underside mount (**Fig.8**).

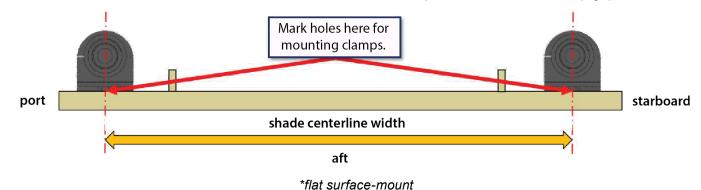


Fig.8

Fig.6

7

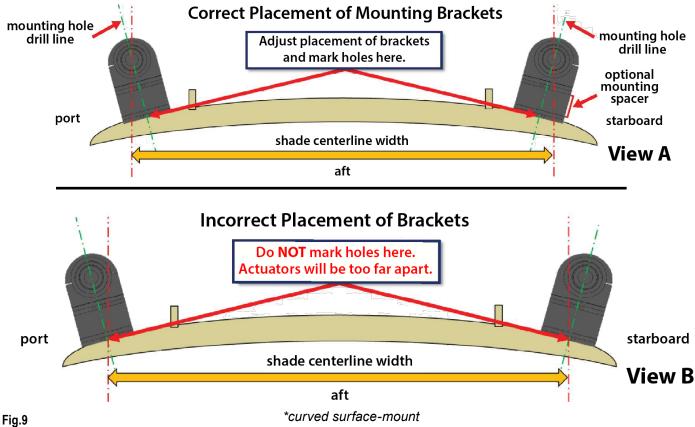
### Lewmar TPX Boat Shade

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**6.** If the hardtop is curved\*, the mounting holes are different than the shade centerline.

**NOTE:** When mounting on a curvature\*, mark one clamp and measure from the mounting hole to the actuator centerline. Use that measurement to aid in placement of the remaining clamps.

**A.** To determine mounting hole location for topside surface mount with curvature\*, see figure 9. The mounting holes will ultimately be drilled narrower than the shade centerline.



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**B.** To determine mounting hole location for an underside surface mount on a hardtop with curvature\*, see figure 10. The mounting holes will ultimately be drilled wider than the shade centerline.

7. Mark location of mounting holes with a grease pencil.

**8.** Carefully remove actuator from mounting clamps. Make sure mounting clamps are in marked location and mark holes for drilling. See figures 11 and 12.

**NOTE:** Re-measure and make sure placement of mounting clamps for both sides are clear of any obstructions and measurements are correct before drilling holes.

**9.** Drill the two marked holes for each of the mounting clamps.

A. For flat surface mount\*, drill straight down (Fig.8).

**B.** For curved surface mount<sup>\*</sup>, drill on an angle perpendicular to surface (**Fig.10**, **VIEW A**).

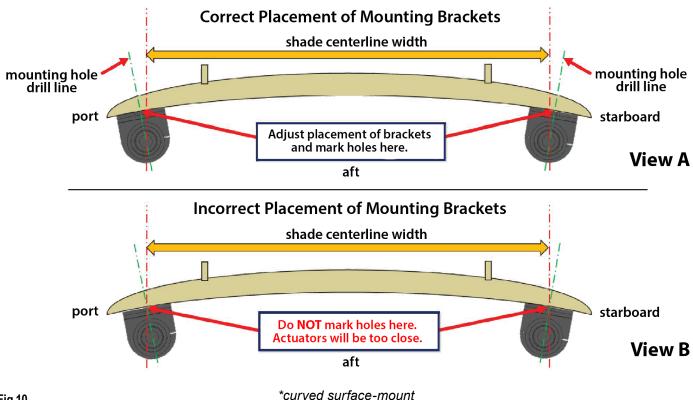
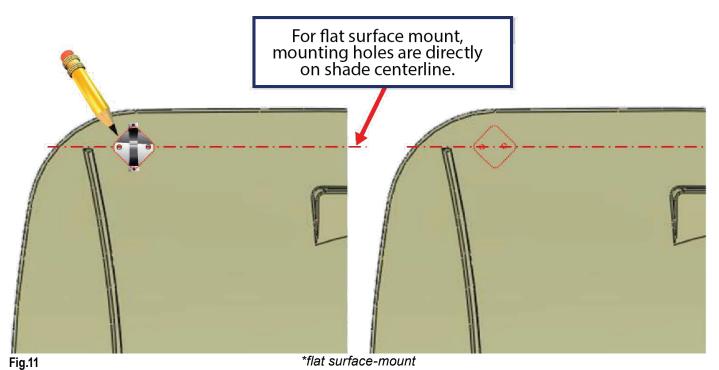
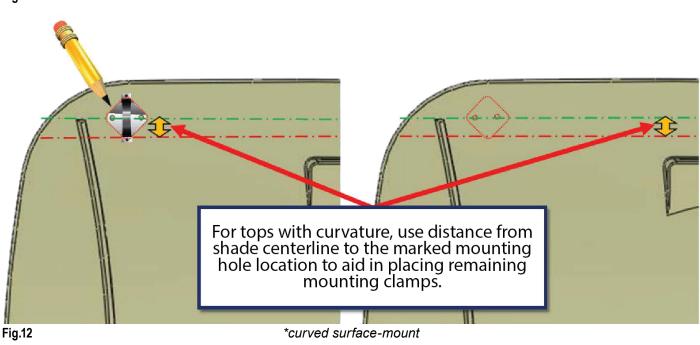


Fig.10



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### Lewmar TPX Boat Shade

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**NOTE:** Use care when tightening mounting clamp bolts. Do **NOT** overtighten to the point where the surface material starts to buckle.

**10.** Line up and install the four mounting clamps to the hardtop (Fig.13).

NOTE: Mounting hardware is NOT provided.

#### Installing and Securing the Actuators

The Lewmar TPX is factory-set and should be configured ready for use. At no point should the installer adjust (twist) the mid or inner tubes.

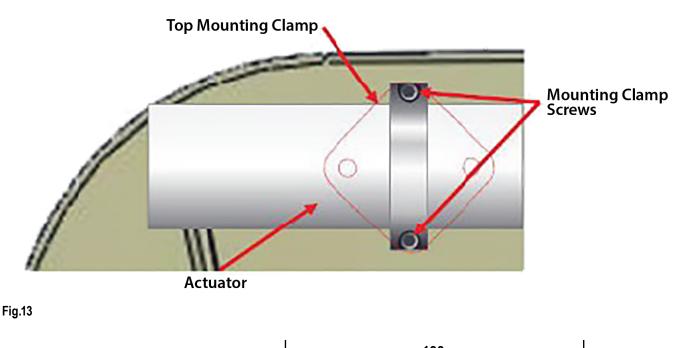
**1.** Position the actuator onto the installed mounting clamps with the "T" stickers on top. Once installed, the motor mounting bolts on each actuator should be in line.

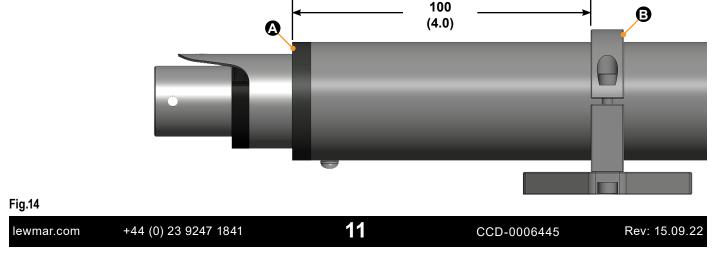
**2.** Attach the top mount to the mounting clamps using the provided hardware. Do **NOT** tighten as forward/aft adjustments may be needed.

**3.** Measure from the telescoping end (**Fig.14A**) of the stationary actuator tube to the aft mounting clamp (**Fig.14B**). There should be no less than 100mm (4") between the end of the tube and the aft mounting clamp (**Fig.14**).

4. Repeat steps 2 and 3 for the other actuator.

**5.** Once both actuators are aligned, tighten the mounting clamp top brackets.







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#### Securing the Roller Assembly

**NOTE:** The zipper of the canvas should be facing aft and on top of the roller when installed.

1. Slide the roller assembly (Fig.15A) onto the actuators.

**2.** Make sure roller clamps are aligned over "Place Roller Clamp Here" stickers; 50mm (2") in from the end of the actuator main tube (**Fig.15**).

**3.** Secure the roller in place using the provided M6 x 20mm socket head cap screws.

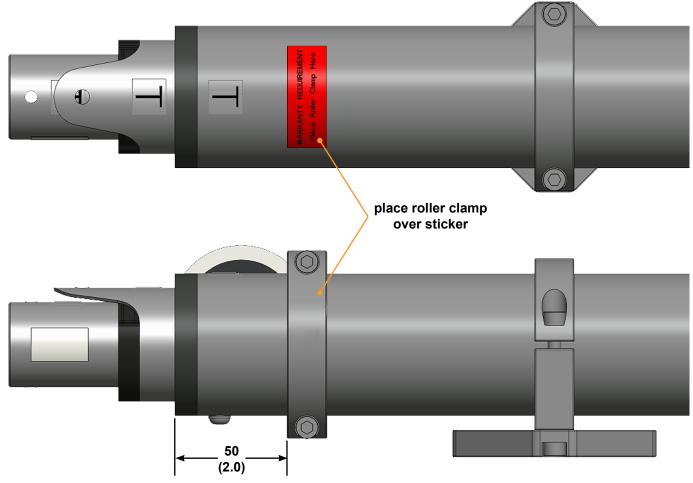


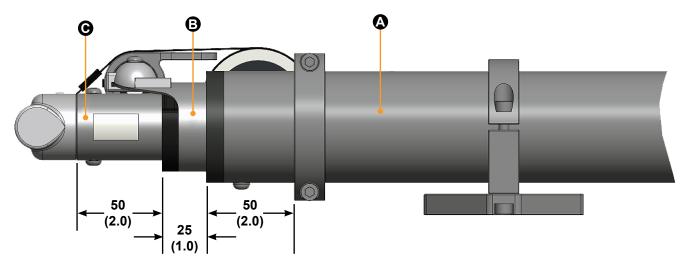
Fig.15

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Installation and Owner's Manual (For Aftermarket Applications)

**4.** To make sure the actuator is properly spaced, do as follows:

**A.** Measure the space between the stationary actuator tube (**Fig.16A**) and the mid-extending actuator tube (**Fig.16B**). It should measure approximately 25mm (1").



#### Fig.16

**B.** Measure the space between the mid-actuator tube (Fig.16B) and the inner actuator tube (Fig.16C). It should measure approximately 50mm (2").

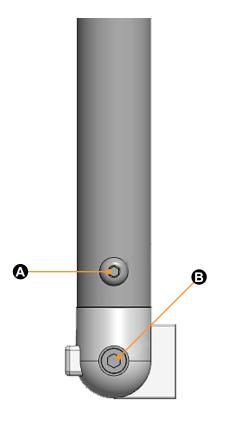
**C.** If measurements are off, rotate the inner actuator tube (Fig.16C) clockwise to retract—or counterclockwise to extend.

#### Securing the Crossbars

1. Mid-Crossbar

**NOTE:** Do **NOT** remove the set screws (Fig.17A) that connect the outer and mid-crossbar sleeves to the crossbars.

**A.** Remove the two M5 x 12mm socket head button screws (**Fig.17B**) from the ends of the mid-crossbar.

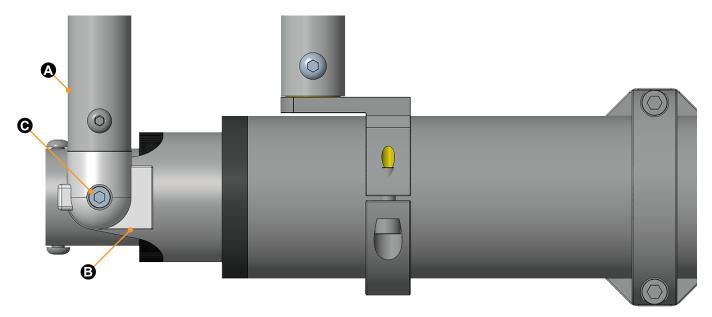


13

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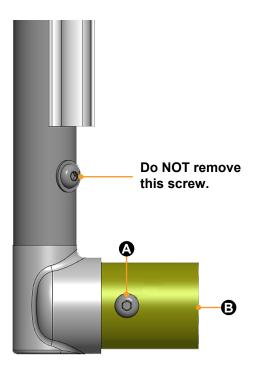
**B.** Attach the mid-crossbar (Fig.18A) onto actuator's mid-crossbar tab (Fig.18B) and secure in place using two M5 x 10mm socket head cap screws (Fig.18C).



#### Fig.18

#### 2. Outer Crossbar

A. Remove the two M5 x 6mm button head screws (Fig.19A) from ends of the outer crossbar (Fig.19B).

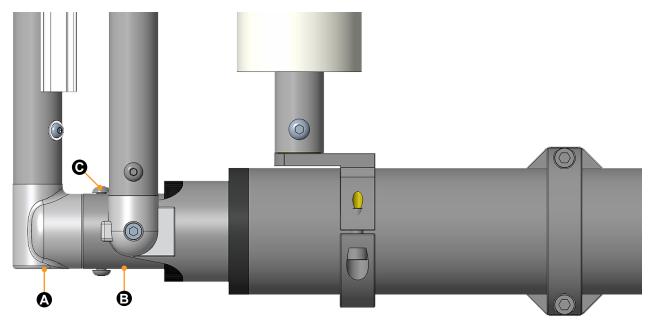


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**B.** Slide the aft crossbar (Fig.20A) into the ends of actuator tubes (Fig.20B) and secure in place using the M5 x 6mm button head screws (Fig.20C).



#### Fig.20

#### **Pre-Loading the Canvas**

**NOTE:** When pre-loading the roller, make sure the roller is rotated toward the crossbars, aft of the boat. Rotating the roller in the opposite direction will release the tension spring and prevent the roller from working.

Go to <u>https://www.sureshade.com/service-videos/</u> to view a video on how to properly pre-load the canvas.

**3.** Pre-load the roller 5-10 full revolutions by rotating the canvas and roller toward the crossbars/aft of the boat. Canvas and roller need to rotate together.

**A.** Stand behind the roller facing the front of the boat and grab the canvas and roller with both hands (Fig.21).



**B.** Grip and rotate the roller and canvas towards you and towards crossbars (**Fig.22A**). You will begin to feel the tension of the roller after about 3 to 4 full rotations (**Fig.23**). Continue as needed until canvas is taut.

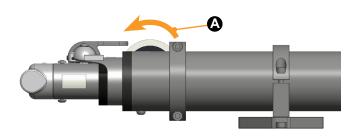
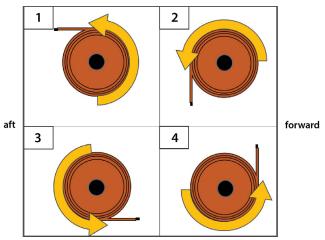


Fig.22

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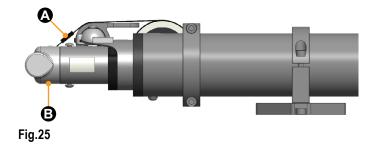
#### Fig.23

**4.** Holding the canvas firmly, pull the canvas to the aft crossbar (**Fig.24A**).



#### Fig.24

**5.** Attach the zipper of the canvas (Fig.25A) to the crossbar (Fig.25B) and fully zip the canvas.



#### Wiring the Electrical System

The electrical housing controls the retracted and extended positions as well as the synchronisation of the actuators' movement. Sensors positioned inside the actuator communicate with the electrical housing and result in synchronisation.

These sensors, along with the controller software, will keep the two actuators synchronised with each other during travel. When one actuator gets ahead of the other actuator, the system will shut the faster actuator down until the slower actuator catches up and then continues movement again. This is a completely normal function of the shade operation.

The Lewmar TPX system is designed to be plug and play, with all required calibration carried out in the factory before it is shipped

**NOTE:** The controller and electrical housing are pre-wired and tested before shipping. Supplied wire and connections are for testing purposes only.

6. Use new wire connections for your installation.

7. Make sure all wire connections are secure and watertight.

**8.** Refer to any relevant local standards for DC Electrical Systems on Boats.

**NOTE:** When calculating wire gauges, ensure that no more than 10% of the voltage is dropped across the length of the cable run. Voltage drops can cause intermittent faults during travel.

## **NOTICE**

A 20AMP CIRCUIT BREAKER OR SLOW BLOW FUSE OF A TYPE SUITED FOR INDUCTIVE LOADS MUST BE FITTED AS PER THE ELECTRICAL WIRING DIAGRAM.

**NOTE:** All control wires for the actuators to the controller are supplied with Deutsch connectors. Once the control wiring is properly fed through tubing and fiberglass, connect one end of the control wire to the actuator and the other end to the electrical housing.

CONTROL BOX MUST BE AT LEAST 600MM (2FT) AWAY FROM ANY RF/ELECTROMAGNETIC-EMITTING DEVICE, SUCH AS RADARS AND GPS; AS WELL AS MICROWAVES, ICE MAKERS AND REFRIGERATORS.



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## A CAUTION

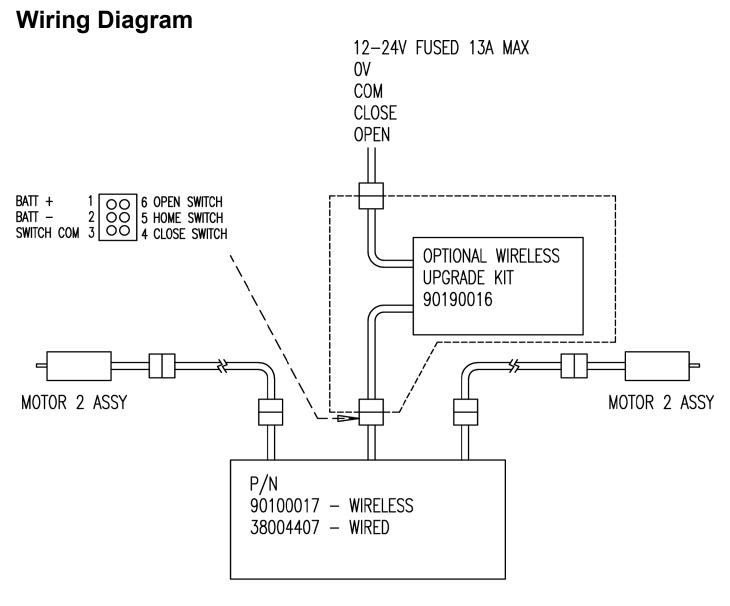
DO NOT OPERATE THE SHADE WITHOUT THE CROSSBARS SECURELY MOUNTED TO THE ACTUATORS.

**9.** Connect the positive and negative wires to a power source.

- **10.** Connect the open, close and home switches.
- **11.** Plug in the encoder extension leads.
- 12. View the wiring diagram for more details.



Installation and Owner's Manual (For Aftermarket Applications)



# ADDITIONAL FOBS REFER TO 68001005

Length	Cable Part No.
2.5M (8'3")	72003530
3.5M (11'6")	90190033
5M (16'5")	90190034
6.5M (21'4")	90190035
7.5M (24'7")	90190036
8.3M (27'3")	90190037

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### Troubleshooting

#### **Troubleshooting Chart**

What is happening?	Why?	What should be done?
	De et a come a et consilet le	Make sure boat's batteries are 100% charged.
	Boat power not available.	Check current to control box using a multimeter.
Shade does not extend/ retract when switch is	Tripped circuit breaker/ Blown fuse.	Inspect circuit protection and make sure it is not blown.
pressed.	Incorrectly wired.	Inspect wiring. Look for loose connections. Make sure proper gauge thickness is being used.
	—undetermined	Contact techsupport@lewmar.com
Voltage drop when	Boat battery is not fully charged.	Ensure boat's batteries are 100% charged.
extending/ retracting shade.	Incorrect wire is being used.	Ensure proper gauge wire is being used per your local standards.
	Loose wiring connections.	Ensure all wiring connections are tight.
System does not fully open/close.	Sensor and/or motor malfunction.	Contact techsupport@lewmar.com
Canvas is sagging when shade is retracting.	Not enough tension set on roller spring.	Unzip canvas from outer crossbar and rotate canvas to add more tension. See Pre-Loading the Canvas.

#### **Troubleshooting the Control Box**

The Control Box is designed so that the shade will not operate at any voltage under 10V at start-up of the shade. During operation of the shade, if the voltage drops below 9V, the shade will shut down.

#### If the shade does not operate:

In the event the shade either does not operate at start-up or it shuts down during operation, the **FIRST STEP** in troubleshooting is to **ALWAYS CONFIRM VOLTAGE AT THE CONTROL BOX**: 1. Locate the control box in the vessel.

**2.** Using a voltmeter or multimeter measure the voltage between pins 1 and 2 of the enclosed PCB.

**NOTE:** The PCB also contains a number of additional indicators via **status LED lights** to aid in troubleshooting efforts.

During normal operation, the status LED will slowly pulse on and off and will switch to a sequence of short blinks when a fault occurs.

Red LED Code	Indication	Action Required
Pulsing	Controller is ready to operate.	None—shade is operable.
Solid red	Homing in progress.	Complete homing sequence.
1 blink	Position corrupted or homing failed.	Homing reset required.
2 blinks	Overcurrent trip.	Troubleshooting needed.
3 blinks	No encoder signal received.	Troubleshooting needed.
4 blinks	Synchronization error.	Homing reset required.
5 blinks	Maximum voltage exceeded.	Troubleshooting needed.

**NOTE:** This fault does not confirm that the encoder is either good or bad, just that there is a communication issue. There is a faulty power/signal connection between the control unit and the encoder and therefore the controller will not operate. Further troubleshooting is required.

### Lewmar TPX Boat Shade

Installation and Owner's Manual (For Aftermarket Applications)

#### Homing reset:

In the event the shade does not return all the way to its home position and a retract command does not resolve this issue, a homing sequence can be initiated on a new shade. After power-up, press the homing switch input for more than 5 seconds and hold until the shade returns to the home location.

#### Maintenance

Lewmar recommends following basic care and maintenance of the TPX components to maintain peak performance and prolong the life of your shading system.

#### **Regular Cleaning**

Petroleum-based cleaners and abrasive metal cleaners should not be used.

To clean and polish, extend the shade fully and wipe down all components using polish. Then, use a rag to wipe off any excess and polish the tubes.

Clean the shades no less than every other month and perhaps more frequently in saltwater areas and areas with higher-than-average temperatures (e.g., southwest Florida or the Caribbean).

#### **Actuator Collar Maintenance**

It may be necessary, as preventive maintenance, to replace the black collar/seals on the actuators every few years to prevent excessive friction while actuators are traveling. Following the recommended cleaning schedule may prolong this period, but replacement will eventually be necessary for continued peak performance.

#### Canvas

**NOTE:** Lewmar does not recommend removing canvas from the roller system, as it may be difficult to properly reinstall or may result in damage to the rollers. Under **NO** circumstances should the canvas supplied with any TPX system ever be placed in a washing machine.

Basic canvas care includes:

- General, light cleaning with a hose on a monthly basis with clear water to remove debris.
- A thorough cleaning every 2-3 years, which may include fabric guard and/or mildew treatments.
- Conduct an annual inspection of your canvas to ensure that all threading is intact.
- A pull test on the thread to confirm that threading has not become dry-rotted from the elements.

#### Long-Term Storage

Lewmar TPX systems are built with quality marine-grade construction and materials; however, just like other parts of your boat, canvas systems need to be shielded from snow and other harsh winter weather conditions to protect the canvas and mechanical components.

Lewmar recommends that customers take proper precautions to avoid damage during winter storage (or ground transportation for winter storage), which include fully retracting and securing the shading system and properly tarping or shrink-wrapping your boat.



Installation and Owner's Manual (For Aftermarket Applications)

### Lewmar Limited Product Warranty Statement

Lewmar provides the following Limited Warranty of its electric sunshade awning systems.

Lewmar warrants that the shade framework which consists of the actuator drive assemblies, cross bars, roller assembly, mounts, motors, controllers and wires that connects the actuators to the controller, will be free from material defects and workmanship and will repair or replace, at its sole discretion, any inoperable components that are reported within 3 years from the date of shade sales at original purchaser (boat builder, dealer or private boat owner).

Lewmar will also replace, at its sole discretion, the canvas component of the shade system, when reported defective within one year from the date of canvas manufacture, as indicated on the white manufacture tag attached to the canvas (Tag must remain attached for warranty purposes).

Exclusions to this limited warranty are as follows:

- Damage resulting from abuse, misuse, neglect, improper installation, improper operation, improper maintenance, attempted repair efforts resulting in further damage, power surges, underpowering or forcing operation in low voltage situations, improper stowage for ground transportation, inclement weather or other act of nature.
- Damage resulting from leaving the shade extended unattended during inclement weather.
- Damage resulting from leaving shade extended in conditions that exceed the shade framework's wind rating of 50 mph (Applies to aft facing shade only. Forward shade must be stowed at all times while boat is underway).
- Damage resulting from corrosion.
- Any shade product that has been altered or modified from Lewmar factory specifications.
- Any shade that's installed without Lewmar-supplied or approved mounting components.
- Removal and/or dismantling of the shade and its components (including actuator drive system) without proper notification to Lewmar.
- Deterioration of the canvas thread and stitching.
- Travel time to/from boat to troubleshoot, repair and/or replace components.
- Labour cost and expenses associated with removal or reinstallation of other components in order to access the shade product components.

- Any cost associated with production downtime or time spent troubleshooting or reviewing troubleshooting documentation/videos.
- Excessive labour cost beyond recommended standard labour repair rates.

Lewmar reserves the right to utilise reconditioned, refurbished, repaired or remanufactured products or parts in the warranty repair or replacement process. Such products and parts will be comparable in function and performance to an original product or part and warranted for the remainder of the original warranty period.

In no event shall any repair or replacement under this Limited Warranty exceed the fair market value of the product as of the date of the owner's claim.

Acceptance of any product returned for any refund provided by Lewmar shall not be deemed an admission that the product is defective.

In order for a warranty claim to be deemed valid, the following information must be provided to Lewmar immediately after discovery of any defect:

- · Description of the nature of the problem
- Details of the boat that the shade is installed on year, make, model and hull identification number.
- Date of shade purchase, or in the case of factory install, date of boat purchase.
- Details of the installation Factory install? Dealer install? Private install?

Lewmar will make every effort to troubleshoot, determine root cause and fully resolve the issue, either directly or with an experienced marine technician. Lewmar is solely responsible for determining and authorising the remedial actions to be performed either by a Lewmar technician or an experienced marine technician approved by Lewmar.

The remedy of repair or replacement of parts or materials that are found to be defective in factory materials or workmanship covered by this limited warranty shall constitute the owner's sole and exclusive remedy against Lewmar for any claims whatsoever of economic loss resulting from product failure.

Please contact us or call +44 (0) 23 9247 1841 with any questions or concerns, or if replacement canvas or parts for Lewmar sunshade systems are needed.



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