

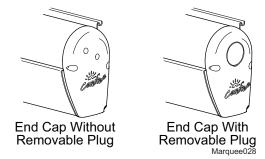
# **TUBULAR MOTOR REPLACEMENT KIT**

Kit No: R001531

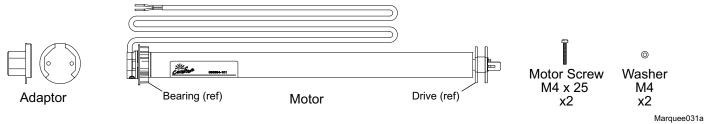
## FOR THE MARQUEE WINDOW & OTD

This operation can be done while the awning is mounted on the vehicle. Use care not to damage the walls etc.

Determine the correct kit for the unit. Examine the idler end cap. Units with end caps without a removable plug use R001531. Units with end caps with the removable plug R001651.



#### COMPONENT CHECKLIST



#### PRELIMINARY STEPS

- 1. Disconnect power to the awning.
- 2. If the awning is extended: Carefully push the lead rail toward the case so that the arms collapse. While holding the lead rail in this position, firmly tie the elbows of the spring arms together. Use a minimum 1/2" rope do not use bungee cords. When tying the rope, use a non-slip knot such as a square knot or equivalent.
- If the awning is closed: Firmly brace the lead rail in the closed position. A second person can hold the lead rail steady during the disassembly process.

CAUTION FAILURE TO SECURE THE LEAD RAIL AS DESCRIBED WILL ALLOW THE SPRING ARMS TO UNEXPECTANTLY EXTEND OUT POSSIBLY CAUSING PERSONAL INJURY AND DAMAGE TO THE AWNING.

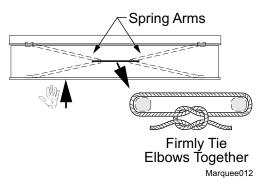


Figure 1. Tying the Arms.

## MOTOR REPLACEMENT (KIT NO. R001531)

1. Remove the four (4) screws holding the end cap to the case. Do not remove the two (2) motor screws.

CAUTION IF THE AWNING IS CLOSED WHEN THE END CAP IS DETACHED, THE SPRING ARMS WILL TRY TO OPEN. CONTINUE TO HOLD THE LEAD RAIL CLOSED.

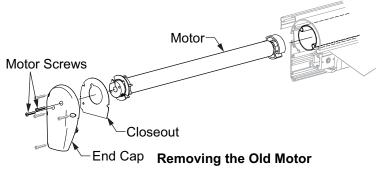
2. Pull the end cap and motor partially out.

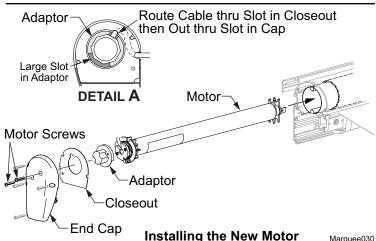
CAUTION WHEN PULLING THE MOTOR OUT OF THE ROLLER TUBE, THE SERVICING TECHNICIAN MUST USE CARE TO NOT BREAK OR DAMAGE THE MOTOR CABLES.

- 3. Disconnect the motor wires from inside the vehicle and pull out *or* clip the motor wires. If cutting the motor wires be sure to leave enough wire that can be stripped and spliced.
- 4. Pull the motor and end cap out of the roller tube.

CAUTION IF THE AWNING IS CLOSED WHEN THE END CAP IS REMOVED, THE SPRING ARMS WILL TRY TO OPEN. SUPPORT THE ROLLER TUBE AND ALLOW THE AWNING TO OPEN SLOWLY THEN SECURE THE ARMS BY TYING THE ELBOWS TOGETHER AS DESCRIBED PREVIOUSLY.

- 5. Remove the end cap and closeout from the old motor.
- 6. Hold the closeout on the end cap and push the adaptor into the motor mount post in the end cap. Align the motor screw holes in the end cap, new adaptor and new motor. Attach the motor to the end cap using two (2) M4 x 25 screws. Note the orientation of the adaptor, motor and wire shown in Detail B.





**IMPORTANT NOTE:** On early units the motor was attached with M4 x 20mm screws; current production uses M4 x 25mm screws. When replacing a motor that is attached using the shorter screws, discard the existing screws and attach the motor using the longer screws and washers included with the motor replacement kit. Do not use the washers for units that already use the longer screws.

- 7. (Detail A) Route the motor cable through the slot in the closeout then between the closeout and cap. Pull the cable out of the rear slot of the end cap.
- 8. Partially slide the new motor assembly into the roller tube. Ensure that the motor drive is properly seated inside the roller tube.
- 9. Route the new motor wire into the vehicle and attach or if the wires were cut, splice the new wires to the existing wires. Match the wires (Blue to Blue and Brown to Brown). Push the splices into the vehicle then use a quality silicone sealant to seal the wire hole into the vehicle.

**NOTE:** If splicing the wires, allow enough lead wire from the motor so that the completed splices can be pushed into the wall before sealing. There is not clearance room in the case for the wires and splices.

- 10. Finish pressing the motor into the roller tube; make sure that the bearing is aligned with the roller tube. Attach the end cap to the case.
- 11. While holding the lead rail, carefully remove any roller tube supports and arm ties. Allow the lead rail to extend until the fabric is taunt.
- 12. To test, restore power then extend and retract the awning.
- 13. After replacing the motor, it will be necessary to adjust the motor limits.

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#### **SETTING THE MOTOR LIMITS**

The limit switches are located inside the case, near the end cap. It is necessary to extend the awning to access the switches. The "OUT" limit switch stops the motor when the awning is fully extended. The "IN" limit switch stops the motor when the awning is fully retracted.

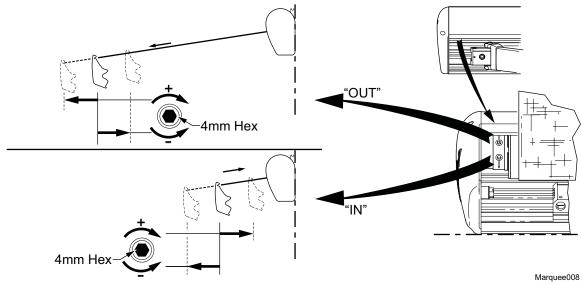


Figure 2. Motor Limit Switches.

## ADJUSTING THE OUT LIMIT SWITCH

- 1. Extend the awning out completely.
- 2. Confirm that the arms are fully extended. The motor should stop and the fabric should be tight. If the motor continues to run, the fabric will sag; or, if the motor quits before the arms are fully extended, it will be necessary to adjust the "OUT" limit switch.
- 3. Using a 4mm Allen wrench turn the "OUT" limit switch. CLOCKWISE increases time the motor runs during extension, COUNTERCLOCKWISE reduces the time the motor runs.

NOTE: It is best to make the adjustments in increments of a single turn. 3 full turns of the screw equals approximately 2" of fabric extension.

- Extend and retract the awning several times to confirm that the adjustment is correct.
- 5. Repeat steps 3 and 4 as required until the awning extends correctly.

### ADJUSTING THE IN LIMIT SWITCH

CAUTION THE IN-LIMIT SWITCH MUST BE SET TO SHUT OFF THE MOTOR WHEN THE AWNING IS CLOSED. THE MOTOR MUST NOT CONTINUE TO RUN AFTER THE AWNING IS CLOSED OTHERWISE DAMAGE TO THE MOTOR WILL OCCUR IF THE MOTOR CONTINUES TO RUN AFTER THE AWNING IS CLOSED.

- 1. Retract the awning in completely.
- 2. Confirm that the arms are fully retracted. The motor must stop when the awning is fully retracted. If the motor continues to run; or, if the motor quits before the arms are fully retracted, it will be necessary to adjust the "IN" limit switch.
- 3. Using a 4mm Allen wrench turn the "IN" limit switch. Clockwise increase time the motor runs during retraction, counter clockwise reduces the time the motor runs.

NOTE: It is best to make the adjustments in increments of a single turn. 3 full turns of the screw equals approximately 2" of fabric extension.

- 4. Extend and retract the awning several times to confirm that the adjustment is correct.
- 5. Repeat steps 3 and 4 as required until the awning retracts correctly.

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