

5000 TO 6000^{XR} SERIES CONTROL SYSTEM REPLACEMENT

Part # 102009

REMOVAL and INSTALLATION



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REVISION D

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PURPOSE:

This kit is used to replace a failed Thunder 5000 Series control box. This system will replace the old style control box with an external keypad and control box mounted in the nose of the trailer.

Tools Needed:

- 17/64" Drill Bit
- Drill
- Phillips Screwdriver
- Heavy Gauge Wire Cutters
- Wire Strippers
- 3/8" Torx Driver
- 5/32" Hex Wrench
- 1/4" Wrench
- 1" Wrench

Control System Replacement Kit – Part #102009

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
040-56424	Junction Box Mounting Plate	1
032-47918	Nut 1/4"-20 Hex UNC	4
101007	Screw #14 x 3/4" Phillips Self Tapping	8
102175	RF Keypad	1
101995	Inner Control Box w/ Relay	1
085-58360	Stainless Steel Mounting Plate	1
032-51281	Washer 1/4" Split Lock Med	4
032-48961	Screw 1/4" x 1 1/2" SS Phillips	2
032-53715	Screw 1/4" x 3/4" SS Phillips	2

REMOVING THE EXISTING CONTROL BOX

1. Disconnect the power cord from the 2-pole trailer connector.
2. Remove the three fasteners holding the old control box to the nose of the trailer.
3. Cut the 4 wires coming out of the bottom of the control box with heavy gauge wire cutters.
4. Pull the 4 wires back into the nose of the trailer for wiring the new control box.
5. Remove the old rubber grommet.
6. Discard the old control box.



Fig. 2.1

MOUNTING THE RF KEYPAD

1. Place the stainless steel mounting plate on the nose of the trailer matching the old 1-1/4" wire hole with the hole in the mounting plate.
2. Use four #10 x 3/4" self-drilling screws to attach the plate to the nose of the trailer. (See figure 2.2)
3. Drill two 17/64" holes into the nose of the trailer for the keypad using the predrilled mounting plate as a template.
4. Place the key pad up to the plate on the trailer and install the two 1/4"-20 x 1 1/2" Phillips head screws, the 1/4" lock washers, and 1/4"-20 nuts to hold the key pad to the nose of the trailer.
5. Make sure that all fasteners are tight.

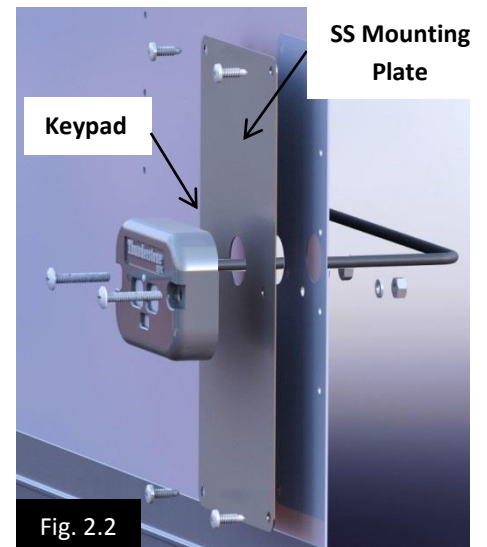
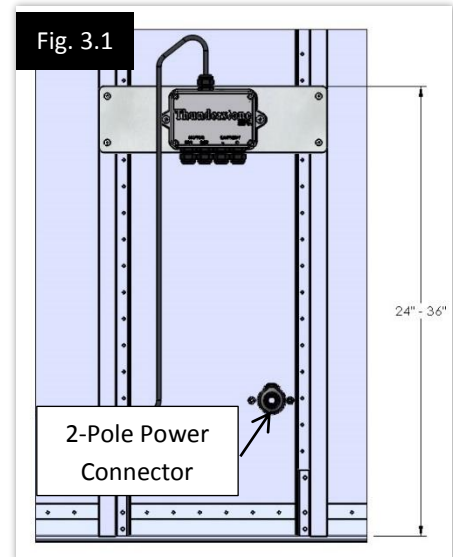


Fig. 2.2

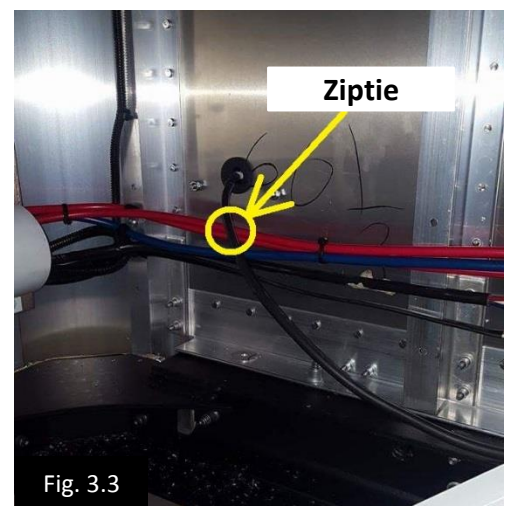
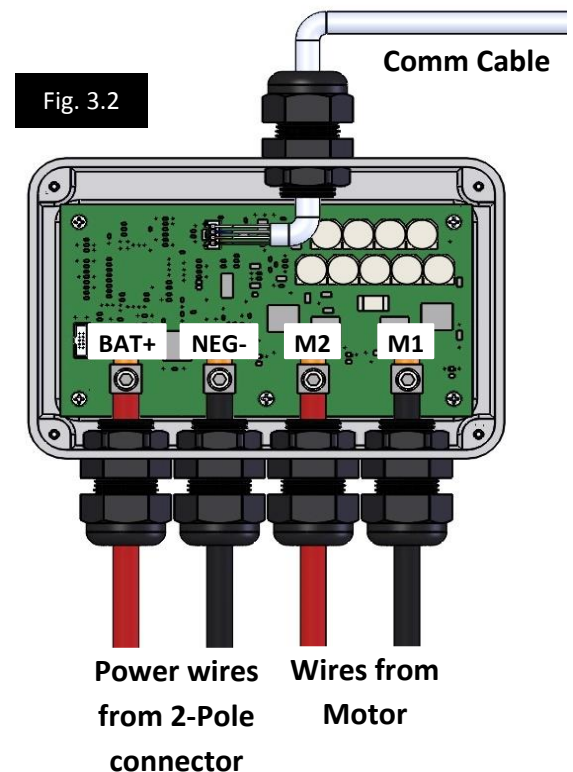
MOUNTING THE CONTROL BOX

1. Choose a location inside the nose of the trailer between two Z-posts above the power receptacle so that all wires can reach the junction box. (See figure 3.1)
2. If not already, attach the control box lid to the mounting plate using two 1/4"-20 x 1 1/2" Phillips pan head screws, the 1/4" lock washers, and 1/4"-20 nuts.
3. Clamp the mounting plate to the Z-posts using vice grip pliers or C-clamps to hold in place.
4. Use four #10 x 3/4" self-tapping screws to attach the mounting plate to the Z-posts using the predrilled hole in the plate as a guide.
5. Make sure that all fasteners are tightened.



WIRING THE CONTROL BOX

1. Cut off the proper length of motor & power wires to be used with the new control box location.
2. Strip back 1/2" of insulation off the motor & power wires.
3. Insert the power and motor wires through the appropriate compression fittings on the bottom of the control box. (See figure 3.2)
4. Push the stripped wires into the appropriate wire lugs and secure them with a 5/32" hex wrench.
5. Tighten each compression fitting with a 1" end wrench to hold the wires in place and to keep out dirt and moisture.
6. Plug the communications cable from keypad into the control board connector.
7. Tighten the compression fitting nut into the control box with a 1" end wrench to keep out dirt and moisture.
8. Remove any existing wire guarding and use zipties to fasten the communications cable to the airline (or equivalent) below the keypad in the nose of the trailer. (See figure 3.3)
9. Re-install the wire guarding with the communications cable routed behind for protection.
10. Reconnect the power cord to the 2-pole trailer connector.
11. Power up and operate the system in both directions to make sure that the motor wires are connected correctly.
12. If the system runs backwards, disconnect the power cord from the 2-pole trailer connector, switch the M1 and M2 wires and try operating again.
13. When everything is operating correctly, attach the control box lid to the base using the supplied #4 x 3/8" Torx head screws.



PROGRAMING REMOTE TO THE KEYPAD

1. Four remotes can be programmed to the keypad. Have all of the remote units that are to be programmed ready.
2. To program a remote, open the flip style lid and make sure the remote is set to mode one (first light flashing). See figure 4.2
3. Turn the trailer keypad on by pressing and holding the two large buttons “Open” and “Close” for approximately 3 seconds or until the status LED and the two large buttons illuminate. See figure 4.1
4. Press and hold the program button (small button) and the “Open” button simultaneously until the status LED turns solid green then release both buttons. The LED will then flash orange rapidly which indicates it is ready to receive remote programming. See figure 4.1
5. On the first remote, press and hold the “On/Open” button until the LED on the trailer keypad blinks green rapidly for 2 seconds then turns solid white. Release the button and the keypad should then start blinking orange again to accept additional remotes.
6. Repeat step 5 until the desired amount of remotes (no more than 4) are programmed. The LED will blink red two times once programming has been completed or will go back to regular operating mode after 10 seconds of inactivity. Pressing the programming button will also exit programming mode.

The control box resets the list of remotes it remembers every time you enter the programming mode to program a remote. Remotes that were previously programmed are removed from the control box memory and will no longer be able to control the system. This is why all remotes need to be programmed at the same time.

OPERATING THE TARP SYSTEM

Powering up or down the system - To turn the system on or off, locate the “Open” and “Close” buttons on the keypad on the front of the trailer. Press and hold both buttons simultaneously for approximately 3 seconds. The LED status light and the two large buttons will illuminate on the keypad when the power is on and ready for operation. You can also press and hold the “On/Open” and “Off/Closed” buttons on the remote for 3 – 5 seconds to power the system on or off.

One Touch Operation - *The one touch function is fully automated. The system will stop when fully opened or closed.* To open or close the tarp using the one touch operation feature, press and hold the desired directional button on the keypad or remote for 1 – 1 ½ seconds until the keypad status light turns solid green. Release the button and the keypad status light will start flashing green indicating one touch operation. The tarp will travel in that direction automatically and stop when it is fully open or closed.

Incremental Operation - To inch the tarp in either direction, press then release the desired directional button on the keypad or remote for less than 1 – 1 ½ seconds intermittently to move the tarp in that direction.

Press and Hold operation - To open or close the tarp using the press and hold feature, press and hold the desired directional button on the keypad or remote for more than 2 ½ seconds or until the keypad status light turns from solid green to solid white. The tarp will travel in that direction until you release the button.

Never travel with the tarp in a partially covered position. The trailer should always be covered when traveling.

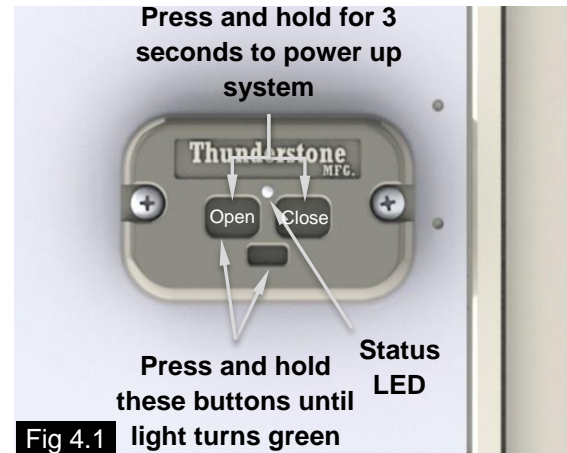


Fig 4.1

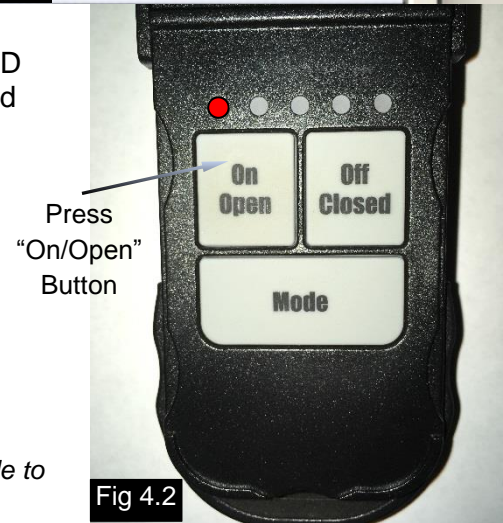


Fig 4.2