

Thunder 7000 Tarp System Troubleshooting Guide

Below you will find troubleshooting steps for common tarp system issues.

● Remote function not working.

1. Reset system by removing trailer power connection for 15 seconds then reconnect.
2. If the system is not on, turn it on by pressing the **“OPEN”** & **“CLOSE”** buttons simultaneously on the keypad for 3-5 seconds until the LED and buttons illuminate.
3. Test remote function.
4. If no function, reprogram remote per the remote programming instructions.
5. If remote function now works, this can be an indication that the trailer power connection is loose and needs reworked and tightened.
6. If still no remote function, check battery level indicated by a continuously flashing status LED on the remote when the flip lid is opened indicating less than 25% charge, replace if needed.
7. Replacement of keypad or remote may be necessary if above steps fail to work.

● Tarp system will not power on.

1. Make sure that the 2-pole power cord is plugged into the trailer and has the proper polarity and voltage to the tarp system (12V to 14.7V). Vertical plugs are + positive on top, horizontal plugs are + positive to roadside.
2. Check that the tarp system circuit breaker, near the tractor battery, is allowing power through by using a voltmeter or test light. Replace if necessary.
3. Check for proper voltage inside the Thunder 7000 control box located in the nose of the trailer.
4. Check if remote power on method works by pressing the **“TARP OPEN”** & **“TARP CLOSE”** buttons simultaneously on the remote 3-5 seconds to verify keypad button failure.
5. Check for grease, dirt, and corroded connections at the battery terminals, circuit breaker and also at the trailer power receptacle plug and outlet.
6. Check for proper voltage on the back side of the 2-pole trailer receptacle. Also check for corrosion and looseness.
7. Check for proper connection of the communication cable between the inner control box and the keypad controller.
8. Unplug the trailer power from the 2-pole receptacle, wait 15 seconds, re-plug power and verify operation.
9. If the status LED illuminates green briefly on the keypad controller after plugging in power but does not turn on when pressing the **“OPEN”** & **“CLOSE”** buttons simultaneously, then this indicates the keypad controller has failed and needs to be replaced.

- **Tarp system powers on but does not function when pressing either (Open) or (Close), no flash codes are present.**
 1. Check for low voltage & loose connections.
 2. Test the remote functions of the tarp system to verify keypad button failure.
 3. Check for loose & corroded connections at the motor terminals and inspect the wires from the motor to the inner control box located in the nose of the trailer.
 4. Unplug the trailer power from the 2-pole receptacle, wait 15 seconds, re-plug power and verify operation.
 5. If the LED status flashes green continuously and connections to the motor have been verified, this may indicate the motor brushes are worn and the motor needs to be replaced.

- **Tarp system does not function and/or a red flashing light is present on the keypad controller, indicating an error code. See error code explanations below: Codes will flash, pause, and repeat until problem is corrected.**
 - **Two** flashes indicates an **Overcurrent Protection** fault, this is normal operation so long as the tarp has fully opened or fully closed. If not, check for obstructions in the operation of the tarp such as snow or ice buildup. This also could indicate increased drag in the tarp motor or other excessive drag problems causing premature tarp stoppage.
 - **Three** flashes indicates an **Overheat Protection** issue. This typically occurs if the system has been started and stopped rapidly in a short period of time. Also, it can indicate increased drag in the tarp system causing excess amperage. Re-check the tarp system after a cool down period.
 - **Four** flashes indicates an **Over Voltage Protection** issue. Using a voltmeter, check the tractor batteries & alternator for voltage exceeding 15.5 volts.
 - **Five** flashes indicates an **Under Voltage Protection** issue. Using a voltmeter, check the system for low voltage. Also check all connection points for looseness and corrosion including battery terminals, circuit breaker, power cord, and receptacle plug. Connect an alternate power source to verify.
 - **Six or Seven** flashes indicate a **Driver Error** fault indicating there is not enough amperage or voltage from the power source to run the drive motor **OR** the drive motor, motor wires may be shorted to ground.
 - (1) Connect an alternate power source to verify a low amperage/voltage problem. Source must be a lead-acid type high amperage battery source, not from a charger. Multiple 12v batteries wired in parallel are recommended for proper operation.
 - (2) Make sure the battery is fully charged and the charging system on the truck or power supply is running and working properly.
 - (3) Check connections at the motor for looseness or corrosion.
 - (4) Check motor wires for cuts, abrasions or bare spots that may touch ground.
 - **Eight** flashes indicate com failure from the inner control box to the keypad controller. This will always be preceded by 20 seconds of orange blink. See Orange blinking at startup below for more details. Check cable between keypad controller and control box for damage.

- **Tarp system starts/stops intermittently throughout run cycle.**

1. Can be caused by a diminished amperage/voltage state from the power source.
2. Make sure the battery is fully charged and the charging system on the truck or power supply is running and working properly.
3. Connect an alternate power source to verify a low amperage/voltage problem.
4. Check connections at the motor for looseness or corrosion.

- **Orange blinking at startup**

A feature was added to synchronize the keypad to the control board's communication transmit rate, at any point the keypad cannot communicate with the control board. While this is occurring the status light on the keypad will blink orange for no longer than 20 seconds. If the keypad cannot recover communications, the orange blinking will transition to an 8-code indicating a failure to communicate. The orange blink could be seen at startup and during any point the keypad is on. If no 8-code is displayed the system is operating as designed. If an 8-code becomes present after orange blink there is a hard communication fault and the communication cable to the control board should be inspected.

For further troubleshooting issues, please contact either your local Thunderstone dealer using our dealer locator @ www.thunderstonemfg.com/deal-locator/

OR you may call Thunderstone Manufacturing directly @ 402-435-4249.