



TECH NOTE:	10-002
TITLE:	Anti-Ice Power Module Retro-Fit Instruction's
DATE:	01/13/10
REVISION:	1.0

This document describes how to install the Anti-Ice Power Module (AIPW) and if needed retrofit existing TS-8003a & TS-8004a cables.

Background: the Anti-Ice boom sensor cables TS-8003a & TS-8004a have constant power out to the back of the truck regardless if the Spreadsmart system has the internal Anti-Ice channels "On or Off". With these being higher amperage devices the need to turn "Off" the power was needed when the device was not being used.

Corrective Action: the Anti-Ice Power Controller was designed to allow the operator to control the output power to back of the truck. This will allow the operator to turn supply power "On or Off" with the flick of a switch on the Spreadsmart keypad. For example, when the Anti-Ice ON/Off switch is turned "ON", the power out to the sensor will be enabled; and vice versa when it is "Off". The same is true for the Boom switches.

Installation: TS-8003a and TS-8004a cables already in the field (before 1/13/10) will need to be modified with a new 12-pin Molex to work with this module. Refer to page 2 for instructions.

- 1.) Mount the module in the cab within 12" of a Cirrus Spreadsmart box.
- 2.) Connect the Power (MK-1003), into the 4-pin Power socket. Refer to Figure 1.0.
 - a. If the Cirrus Spreadsmart has a TS-2000 & TS-1000 cable plugged into the "Sensor In" Port this will need to be unplugged; plug the cable into the Anti-Ice Power Modules "TS-2000 or TS-1000" port.
 - b. Install one side of the JP-1006 sensor interface cable into the Anti-Ice Power Module's "Sensor In" port (it doesn't matter which end); the other side into the "Sensor In" on the Spreadsmart.
 - c. Next, connect one side of the JP-1008 cable into the AI Boom input on the module (it doesn't matter which end) followed by the other end into the Spreadsmart's Anti-ice boom port.

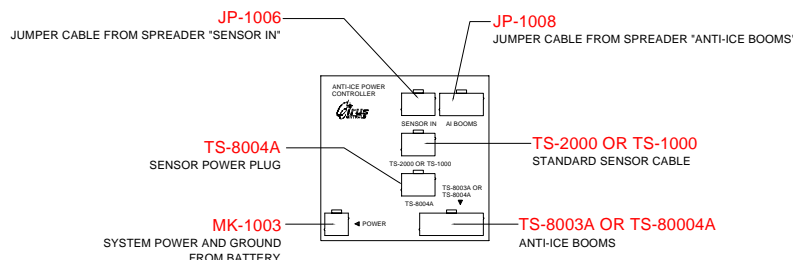


Figure 1.0

Modification of TS-8004a cables: follow the below instructions if your TS-8004a cable does not have a 12-pin Molex attached to its end.

Removal of 6-pin to 6-pin Molex: Cut off the 3 wires (blue, green/yellow & yellow wires) as close as you can to the solder union on the TS-8004a's 6-pin Molex male to 6-pin Molex female.

- a. Trim off ¼" and crimp each wire with a Molex terminal pin.

Removal of 8-pin Molex: Remove all the wires from the 8-pin Molex with a Molex extraction tool, if one is not available cut off the wires as close as you can to the Molex. Make a note of each wire color for each port.

- a. Disconnect the power and ground wires (i.e. the fuse holder = power; blue/white & green/white = ground)
- b. If the wires had to be cut, trim off a ¼" of open wire and crimp each wire with a Molex pin.

Installation of 12-pin & 6-pin Molex: the below list shows the pin-out/port setup needed for the cable to work with the AIPM, for a complete drawing refer to TS-8004a's Rev "B" drawing.

Note: Due to the gauge of the fuse holder, crimp only one Molex pin to the fuse holders open lead.

- a. Install the blue wire into pin 2 on the new 6-pin Molex
 - b. Install the green/yellow wire into pin 1 on the new 6-pin Molex
 - c. Install the yellow wire into pin 4 on the new 6-pin Molex.
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- a. Install the Pink wire into pin 1 on the 12-pin Molex;
 - b. Install the Brown wire into pin 2 on the 12-pin Molex;
 - c. Install the White wire into pin 3 on the 12-pin Molex;
 - d. Install the Orange wire into pin 4 on the 12-pin Molex;
 - e. Install the Gray wire into pin 7 on the 12-pin Molex;
 - f. Install the Fuse holder wire into pin 12 on the 12-pin Molex;
 - g. Install the Blue/White & Green White wire into pin 11 & 5 on the 12-pin Molex;

Modification of TS-8003a cables: follow the below instructions if your TS-8003a cable does not have a 12-pin Molex attached to its end.

Removal of 8-pin Molex:

- a. Remove all wires from the 8-pin Molex with a Molex extraction tool, if one is not available; cut off the wires as close as you can to the Molex. Make a note of the wire color for each port.
- c. If the wire had to be cut, trim off a ¼" of open wire and crimp each wire with a Molex pin.
- d. Disconnect the power and ground wires (i.e. the fuse holder = power; blue/white & green/white = ground). Crimp each of these wire's with a Molex pin. **Note:** Due to the gauge of the fuse holder, crimp on only one Molex pin to the fuse holders open lead.

Installation of wires into 12-pin Molex: follow TS-8003a Rev "B" drawing for termination.