

Model: T5

# CIRCUIT BOARD KIT



This kit includes the necessary parts to replace a defective circuit board.

## INSTALLATION INSTRUCTIONS:

**Installation Time: 1.5 Hours**

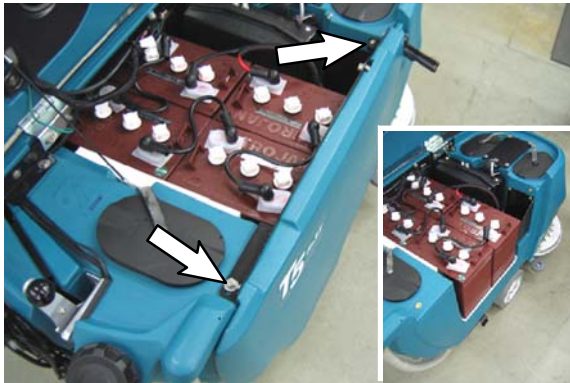
**TOOLS REQUIRED:** 1/2", 9/16" and 10mm socket wrench, 5mm nut driver, Philips Screwdriver and Wire Cutters

### PREPARATION

1. Park the machine on a clean level surface.
2. Turn off the machine and remove the key.

**FOR SAFETY: Before servicing machine, stop on level surface, turn off machine, and remove key.**

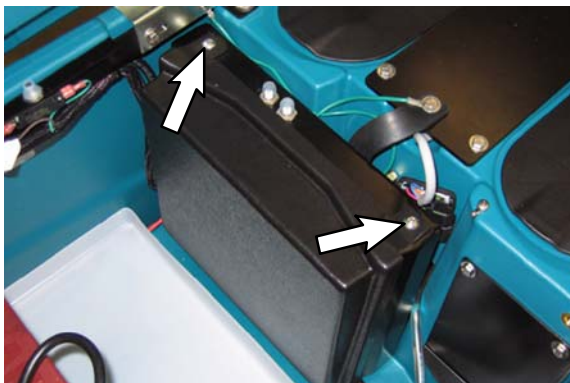
3. Remove the two screws that hold the machine's right side panel in place, then remove the side panel from machine.



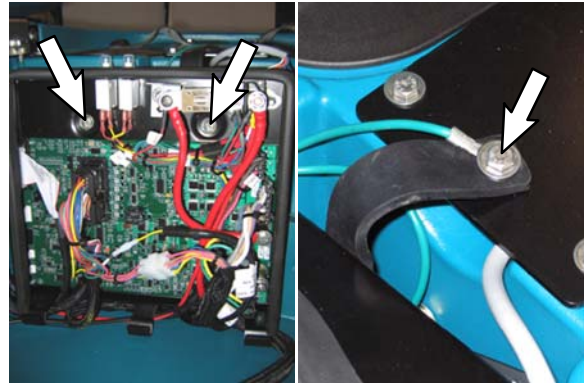
4. Disconnect the battery cables and remove the two front batteries from machine.

### INSTALLATION

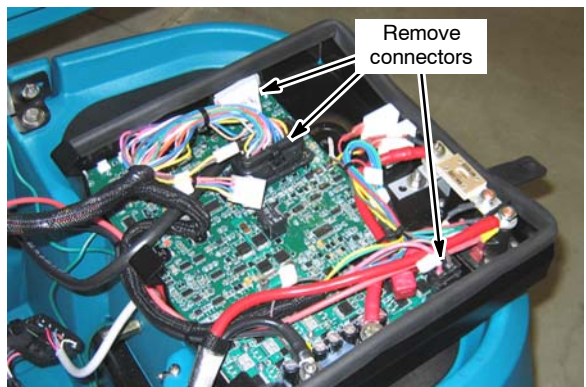
1. Remove the electrical panel cover from circuit board. Two screws secure panel in place.



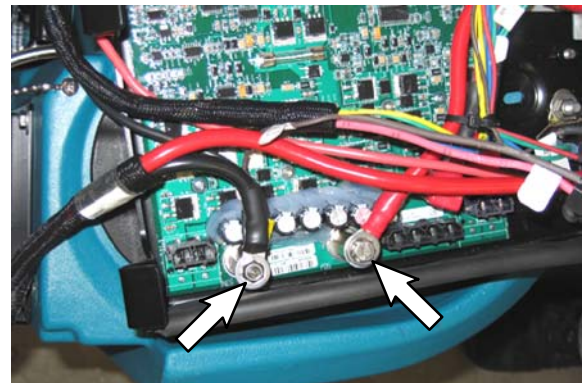
2. Remove circuit board from box. Two screws holds board in place. Disconnect the static strap and ground wire from the machine.



3. Unplug all harness connectors from circuit board and carefully lay board on the solution tank as shown.



4. Remove the positive (+) red power cable and the negative (-) black power cable from circuit board.

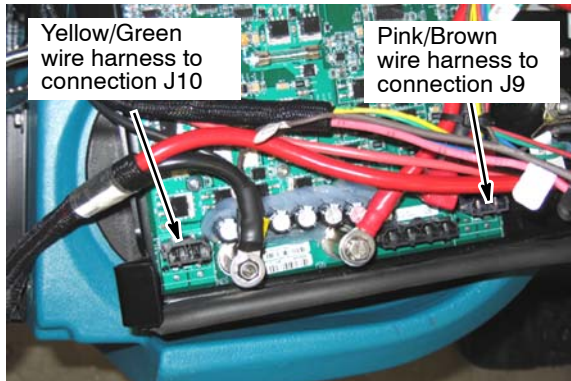


# CIRCUITBOARD KIT INSTALLATION INSTRUCTIONS - Continued

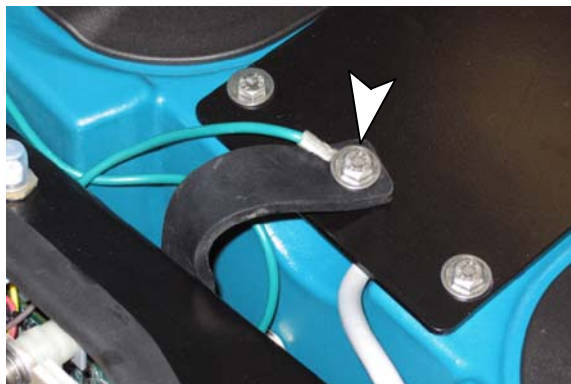
**NOTE: Refer to page 4 for alpha reference.**

5. Remove the old circuit board from box by removing mounting hardware (A,C, D, E). For easy hardware removal, clip the nylon supports (B).
6. Replace the nylon supports (B) and mount new circuit board to box. New nylon supports supplied.  
**ATTENTION:** When handling the new circuit board use the anti-static ground strap, supplied with kit, to prevent risk of damaging circuit board.
7. Apply the thermal heat sink pad (F) to back of new circuit board. Align hole pattern with board.
8. Using existing hardware (A,C,D,E) and mount new circuit board to circuit board box.
9. Reconnect the wire harness connectors to new circuit board. Secure wiring with wire ties.

**IMPORTANT:** Make sure the vacuum motor and propel motor wire harnesses are connected to the correct outlet. If the connections are reversed, the machine will propel when the squeegee lever is lowered.

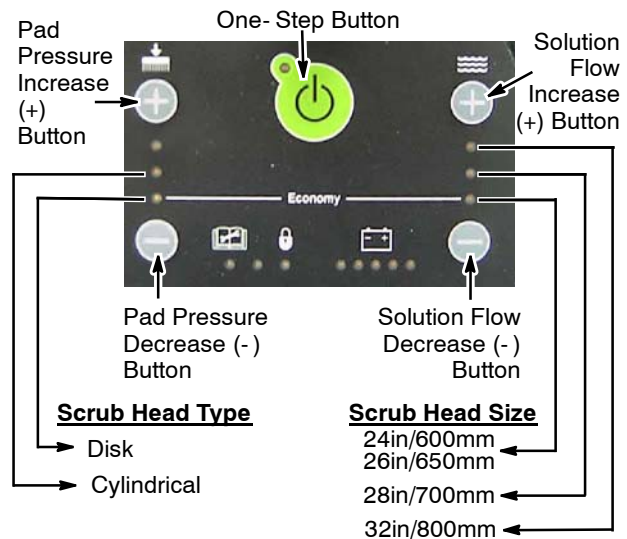


10. Mount the circuit board box on the machine and replace cover.
11. Reconnect the ground wire and static strap to metal plate.



12. Reinstall the batteries and side panel on machine.

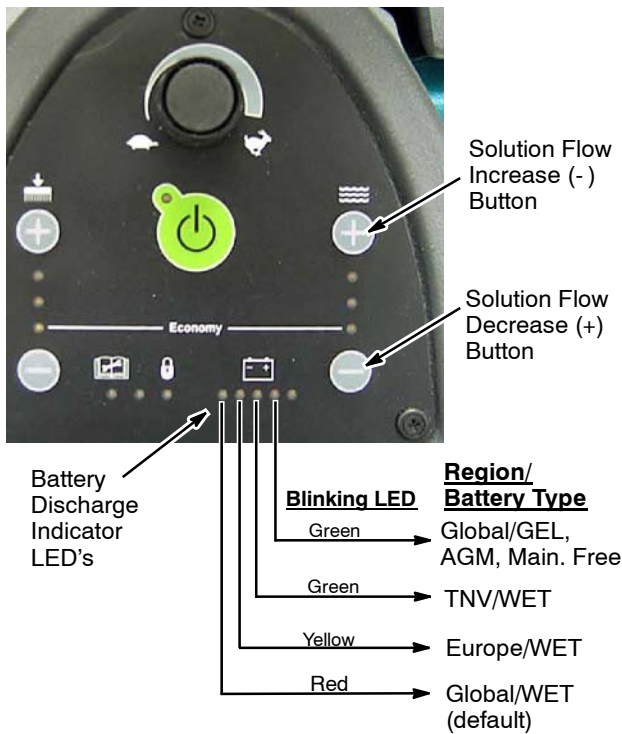
13. Program the new circuit board for proper scrub head size and type.
  - a. To enter the head size/type mode, hold down the Brush Pressure Decrease (-) button and the Solution Flow Decrease (-) button while turning key switch on. Hold the buttons until a Down Pressure LED and a Solution LED turn on. These LED's display the current machine configuration as described below.
  - b. To change the scrub head settings, press and hold the One- Step button for five seconds until the One- Step button starts to flash. Use the Brush Pressure Increase (+) button to change the scrub head type. Use the Solution Flow Increase (+) button to change the scrub head size.
  - c. Turn key switch off to save settings.



# CIRCUITBOARD KIT INSTALLATION INSTRUCTIONS - Continued

14. Run the Battery Select Mode to program the new circuit board per your battery type. This affects the performance of the battery discharge indicator. If not properly programmed, premature battery damage may result.

- a. To enter the Battery Select Mode, press and hold the solution flow increase button (+) while turning the key switch on. Release the solution flow button when a LED on the battery discharge indicator begins to flash.
- b. Refer to battery selection settings below. To select the proper battery type, press the solution flow decrease button (-) to advance selection.
- c. Turn key switch off to save setting.



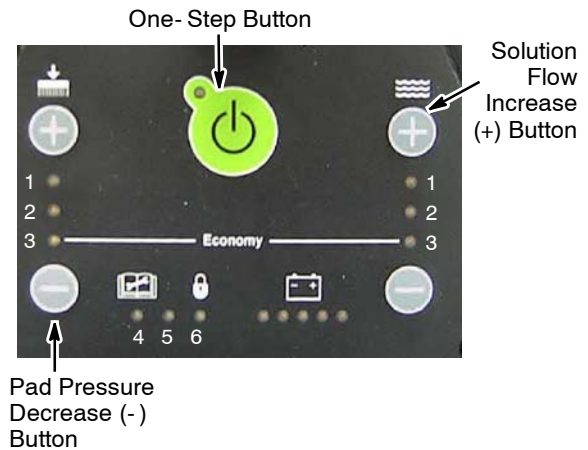
15. Run the Self-Test Mode to ensure proper machine operation.

**NOTE:** If machine is equipped with FaST, ec-H2O and Wand Pump options, activate the switch before entering Self-Test Mode. If switches are in the OFF position the circuit will not be tested.



To enter the Self-Test Mode, hold the Brush Pressure Decrease (-) button and the Solution Flow Increase (+) button while turning key switch on. The Self-Test Mode will run approximately 40 seconds to complete test.

After the test has completed, the One-Step LED will illuminate to confirm proper installation. If a fault is detected, the following LED's will either light solid or flash indicating the fault (refer to table). Check all harness connections and re-run test.

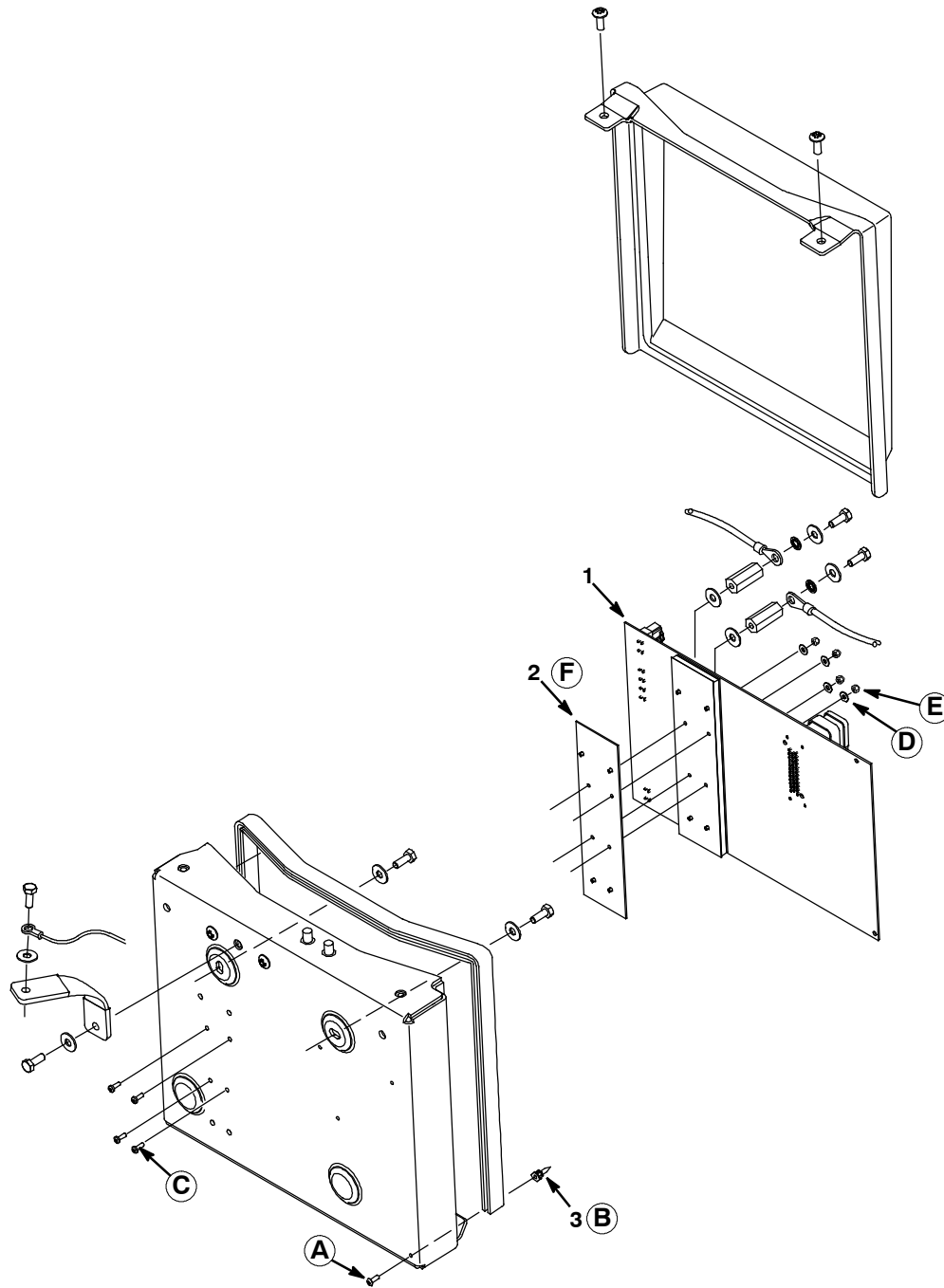


LED (Flashing=Open circuit, Solid=Short)	Fault
One-Step LED	No Faults Detected
Brush Pressure LED #1	Right Brush
Brush Pressure LED #2	Left Brush
Brush Pressure LED #3	Head Actuator
Solution Flow LED #1	Water Valve
Solution Flow LED #2	FaST/ec- H2O Pump
Solution Flow LED #3	Wand Pump
Service LED #4	Controller
LED #5	Vacuum Motor
Lock- Out LED #6*	Scrub Head Actuator

\* Flashing indicates actuator stall during retract. Solid light indicates a retract timeout error or mid- stroke switch fault.

# CIRCUITBOARD KIT INSTALLATION INSTRUCTIONS - Continued

## CIRCUIT BOARD KIT (9012721)



Ref.	Tennant Part No.	Description	Qty.
▽	9012721	Circuit board Kit, Logic, [T5]	1
▲ 1	-	Circuit board, Logic, [T5]	1
▲ 2	1016816	Pad, Thermal, Heat Sink	1
▲ 3	1016825	Support, nylon, Circuit board	4
▲ N/S	27964	Strap, Ground, Static, Disposable	1

▽ = Kit ▲ = Included in kit N/S = Not Shown