

Controller Replacement Kit

Models: Tennant T7 / Nobles Speed Scrub Rider



This kit includes the necessary parts to replace a defective controller board on a T7/Speed Scrub Rider.

INSTALLATION INSTRUCTIONS:

Installation Time: 1.5 Hours

TOOLS REQUIRED: Torque Wrench, 8mm, 10mm and 13mm sockets, Wire Cutters, Insulated and Standard Wire Terminal Crimping Tool and Heat Gun.

PREPARATION

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

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

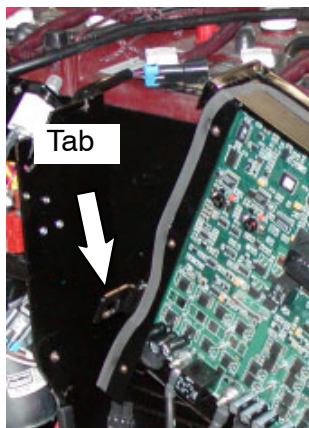
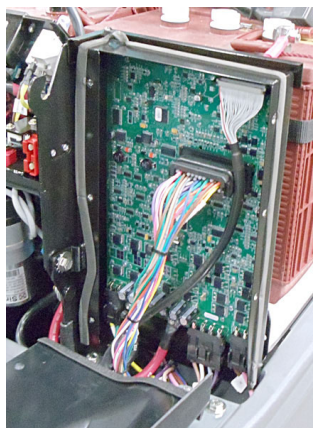
3. Disconnect the black (-) battery cable from battery pack.

FOR SAFETY: When servicing machine, disconnect battery connection before working on machine.

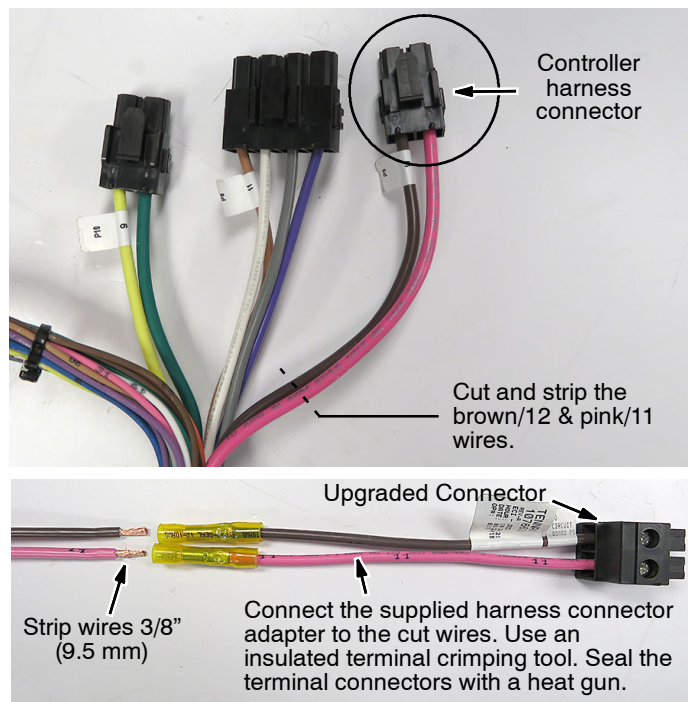
4. Disconnect the wire harness from the operator seat switch and remove the seat from the machine.
5. Remove the battery compartment shroud from the machine.

INSTALLATION

1. Remove the electrical panel cover from the controller. Six bolts secure panel in place.
2. Disconnect the controller wire harness connectors and the red (+) and black (-) cables from old circuit board. Remove the screw that mounts the controller panel tab to machine and dispose the old controller.



3. **For early models:** If the machine's controller wire harness is equipped with the circled connector, replace connector with the supplied harness connector adapter as described below. The new controller board requires the upgraded connector.



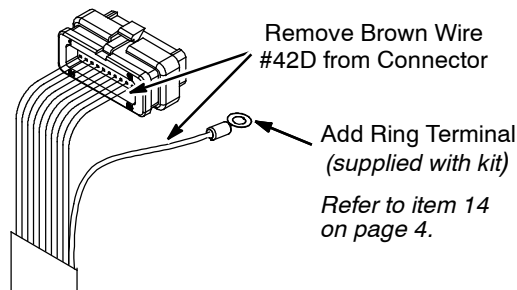
4. **For models manufactured before the following serial numbers perform this step:**

s/n 10426042 - North America/Int'l models

s/n T7xxx03593 - Europe disk model

s/n T7xxx02819 - Europe cyl brush model

If the main controller harness connector, shown below, is equipped with brown wire #42D (position #35), remove the wire from the connector and install the ring terminal supplied with kit as shown.



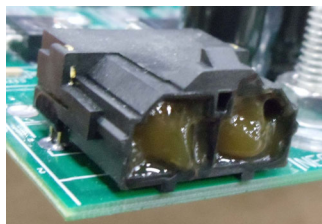
5. Install new controller.

ATTENTION: When handling the new circuit board use the anti-static ground strap, supplied with kit, to prevent the risk of damaging circuit board.

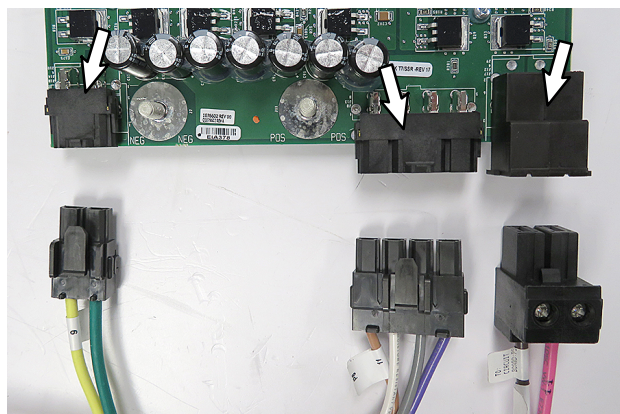
6. Apply a non-conductive dielectric grease inside the following output connectors before reconnecting the wire harness connectors to new board.

Non-Conductive Dielectric Grease**Recommendations:**

CRC Dielectric Grease / Dow Corning® 4 Electrical Insulating Compound or equivalent.



Fill the output connectors with grease as shown.



7. Reconnect the Red (+) and black (-) cables to the new circuit board terminals. Torque nuts to 33 lb-in / 3.8 Nm.

8. Replace electrical panel cover.

9. Replace the battery compartment shroud.

10. Replace the operator seat and reconnect the seat switch wire harness.

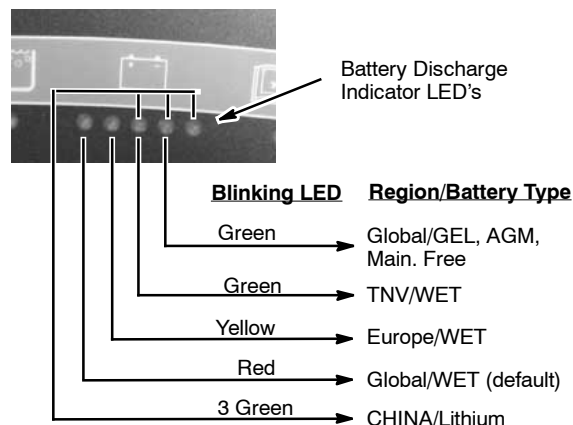
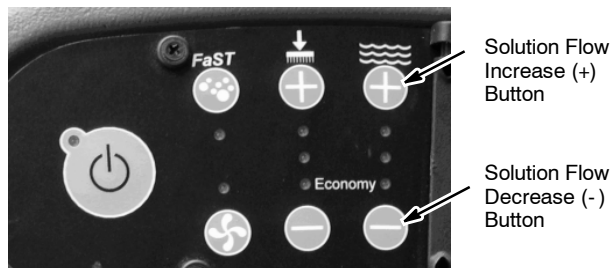
11. Reconnect battery cable to battery pack.

12. 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.

13. Run the Self-Test Mode to ensure proper machine operation (see next page).

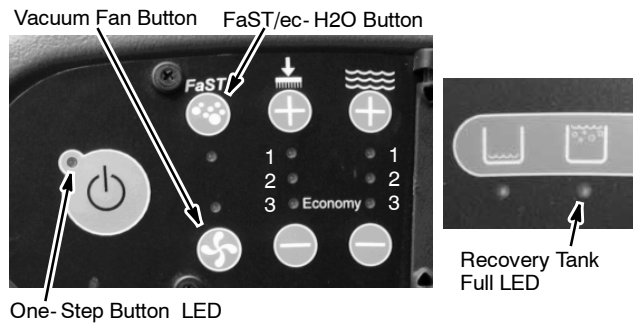
BATTERY SELECT MODE

1. 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 blink.
2. Refer to battery selection settings below. To select the proper battery type, press the solution flow decrease button (-) to advance selection.
3. Turn key switch off to save setting.



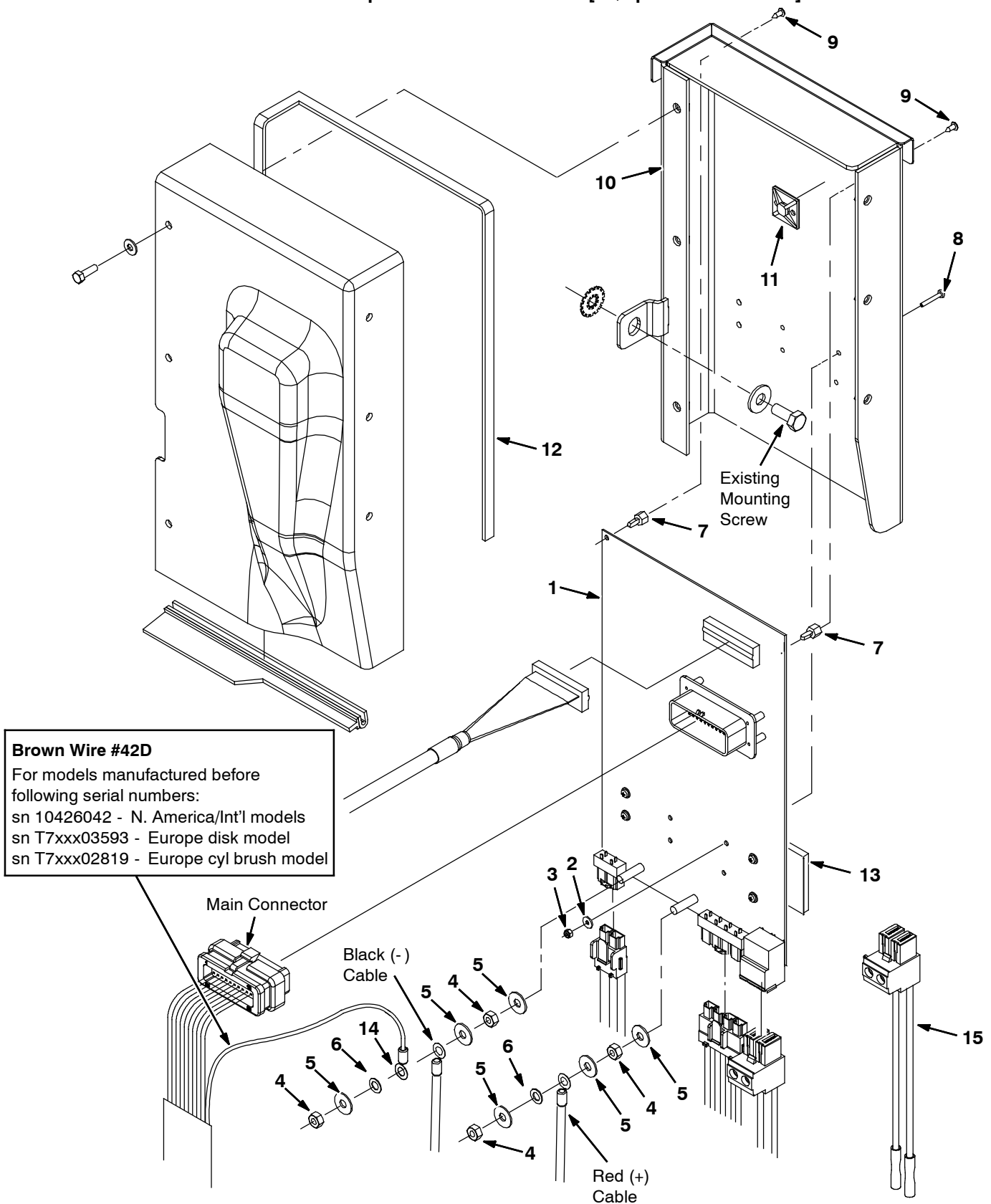
SELF- TEST MODE

To enter the Self- Test Mode, press and hold the FaST/ec- H2O and Vacuum Fan buttons while turning key switch on. Release the buttons after hearing a click within 10 seconds. 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 signifying the fault (refer to table). Check all harness connections and re- run test.



LED (Flashing = Open, Solid = Short)	Fault
One- Step LED	No Faults Detected
FaST/ec- H2O LED	Pump
Vacuum Fan LED	Vacuum Fan
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	Squeegee Actuator
Solution Flow LED #3	Brake
Recovery Tank Full LED	Horn/Back- up Alarm

Controller Replacement Kit Contents [T7/Speed Scrub Rider]



Controller Replacement Kit Contents [T7/Speed Scrub Rider] Parts List

Ref.	Part No.	Description	Qty.
▽ 1	9012711	Controller Kit, Replmt (Disk Model)	1
▽ 1	9012712	Controller Kit, Replmt (Cylindrical Model)	1
▽ 1	9012713	Controller Kit, Replmt (Disk Model - Lowe's Stores)	1
▲ 2	1019218	Washer, Flat, 0.14B 0.31D, Nyl	4
▲ 3	579211	Nut, Hex, Lock, M3 X .5, SS	4
▲ 4	07785	Nut, Hex, Std, M6 X 1.00, SS	4
▲ 5	1057560	Washer, Flat, M6 .4B X 16D X 1 PL SS	6
▲ 6	32982	Washer, Lock, Int, 0.25	2
▲ 7	1016825	Support, Circuitboard	2
▲ 8	06922	Screw, Pan, M3 X 0.5 X 20, 4.8	4
▲ 9	3701.6	Screw, Pan, #06- 32 X 0.38, Phl SS Shtmtl	2
▲10	1017754	Panel Wldt, Cntrl	1
▲11	55248	Mount, Cable Tie	1
▲12	1020284	Seal, Strip, Adh	1
▲13	1016816	Pad, Thermal, Heat Sink	1
▲14	130135	Terminal, Ring, 1/4"	1
▲15	1076630	Harness, Ele, Connector Adapter	1
▲N/S	27964	Strap, Static, Ground, Disposable	1