



Smart-Fill™

Automatic Battery Watering Upgrade Kit

Models: T350, Speed Scrub 350



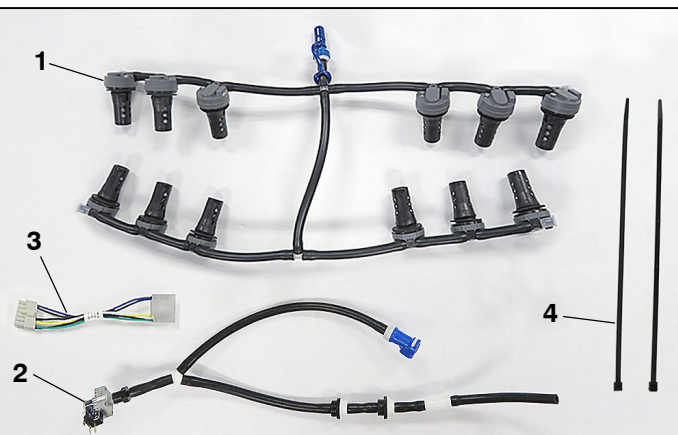
This kit includes the necessary parts to upgrade the Smart-Fill ABW system to prevent the risk of any potential battery fluid leaks. Carefully install the upgrade kit as instructed.

INSTALLATION INSTRUCTIONS:

Installation Time: 1 hour

Special Tools Required: None

9018990 - Kit Contents



Item	Part No.	Description	Qty.
1	1246651	Distribution Asm., Water, Battery	1
2	1246536	Delivery Asm., Water, Battery	1
3	1076629	Harness, Ele [Adapter, ABW]	1
4	130773	Tie, Cable, Nyl, 11.0L, 14w, 3.0	2

IMPORTANT INSTALLATION STEPS: In addition to installing the upgrade parts, the ABW pump wire harness connector will require rework and the firmware will require updates as described on page 3.

FOR SAFETY: Before servicing machine, wear personal protection equipment. Avoid contact with battery acid.



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

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

2. Disconnect battery cable connector from battery pack (Figure 1).

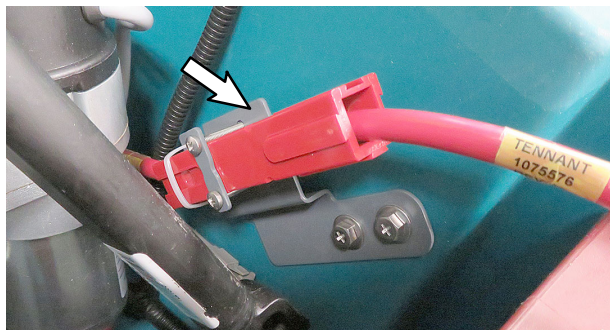


Fig. 1

- Using a mixture of water and baking soda carefully neutralize the top of the batteries and the battery compartment of any battery fluid. Remove batteries if necessary.
- Carefully remove the existing battery water distribution assembly from the batteries (Figure 2). Neutralize the old parts with a mixture of water and baking soda and discard.

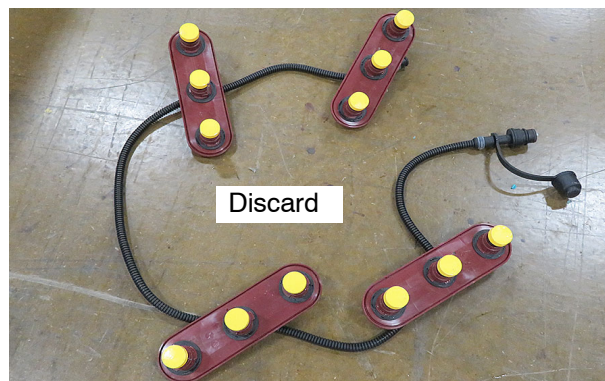
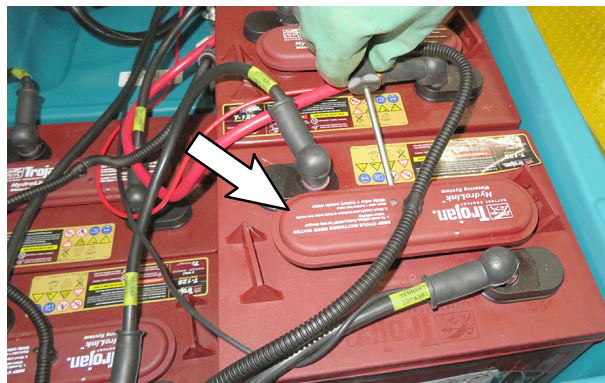


Fig. 2

- Check the fluid level of each battery cell. The level should be about 3mm (1/8") below the sight tubes. Add distilled water if low (Figure 3). DO NOT OVERFILL. If fluid level is too high remove some with a suction device such as turkey baster.

Fluid level should be 3mm (1/8") below sight tube

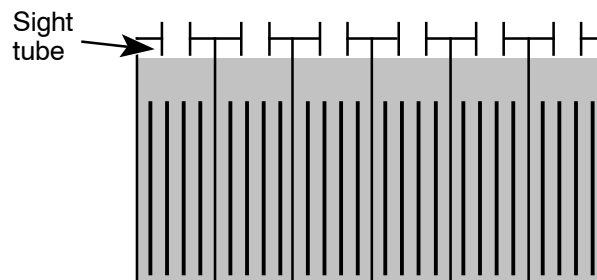


Fig. 3

6. Install the new battery watering distribution assembly on the batteries as described below (Figure 4).

FOR SAFETY: To avoid risk of a battery fluid splash, make sure each cap is fully seated into battery cell before seating next cap .

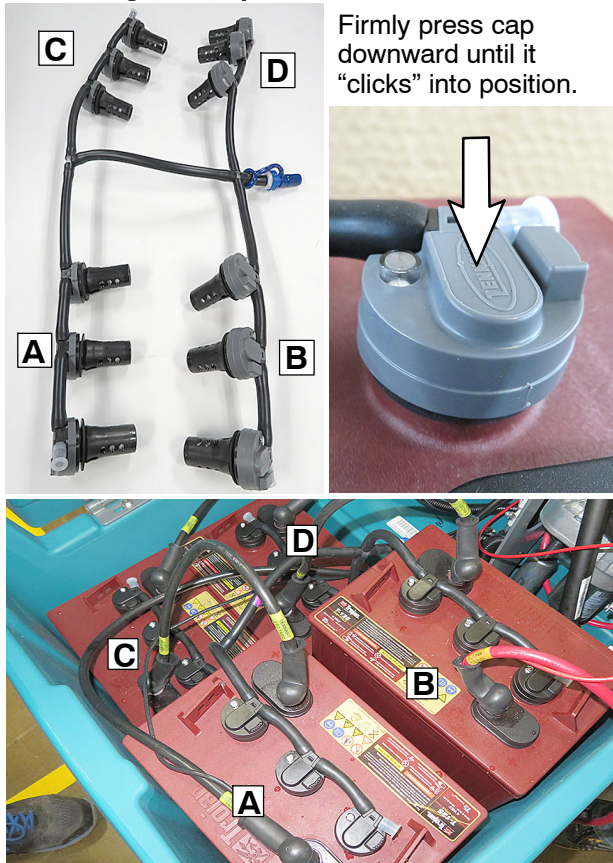


Fig. 4

7. Empty the water from the ABW tank and disconnect the water delivery hose from the pump (Figure 5).

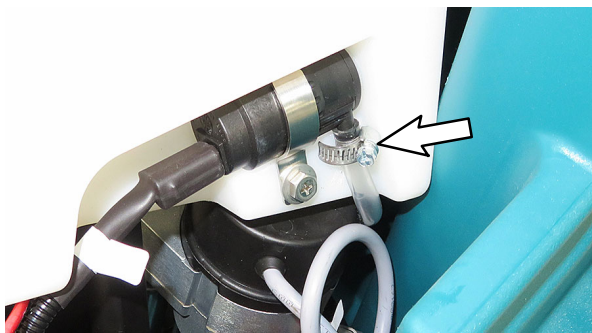


Fig. 5

8. Disconnect the wires from the pressure switch and discard the old water delivery assembly (Figure 6).

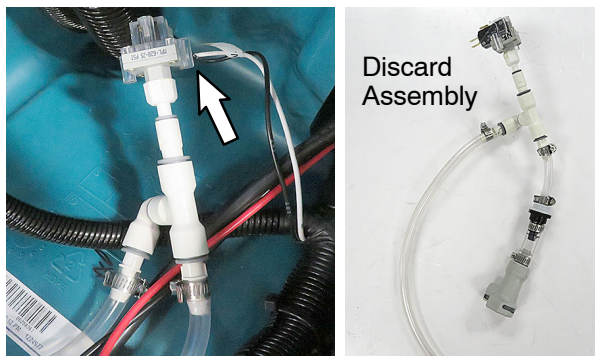


Fig. 6

9. Install the new battery water delivery assembly to the ABW tank. Route the delivery hose under the actuator bracket as shown (Figure 7).

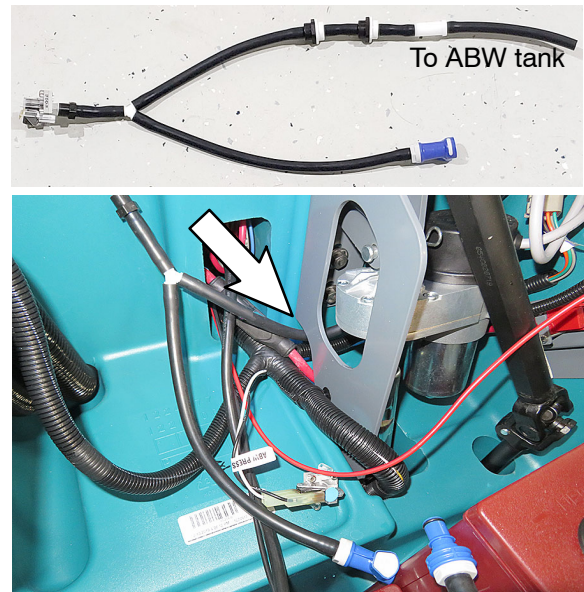


Fig. 7

10. Connect the delivery hose to the ABW pump (Figure 8). No hose clamp required.

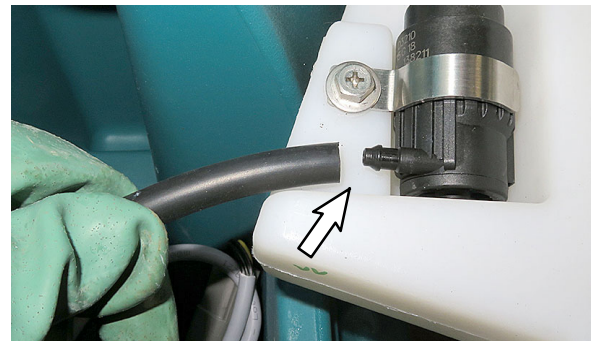


Fig. 8

11. Reconnect the wires to the new pressure switch on the new water delivery assembly (Figure 9).

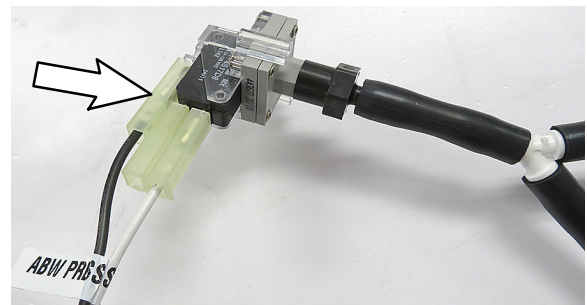


Fig. 9

12. Connect the ABW hose assemblies (Figure 10).

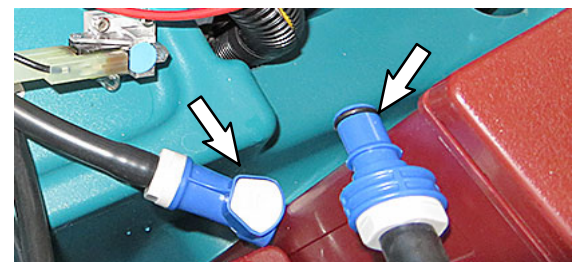


Fig. 10

13. Position the water delivery assembly as shown and secure it to wire harness with a cable-tie (Figure 11).

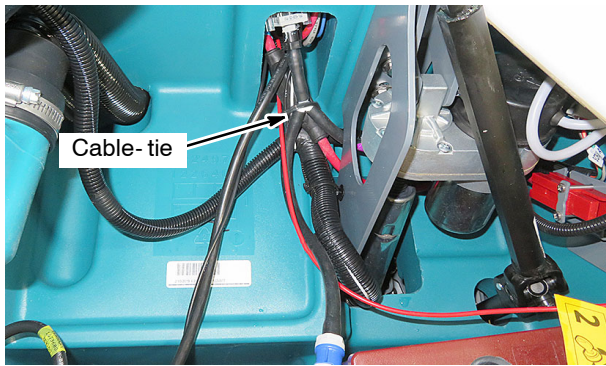


Fig. 11

14. Rework the ABW pump wire connector as described below:

a. Carefully cut back the heat shrink to expose the wires as shown (Figure 12). Do not remove the heat shrink completely.

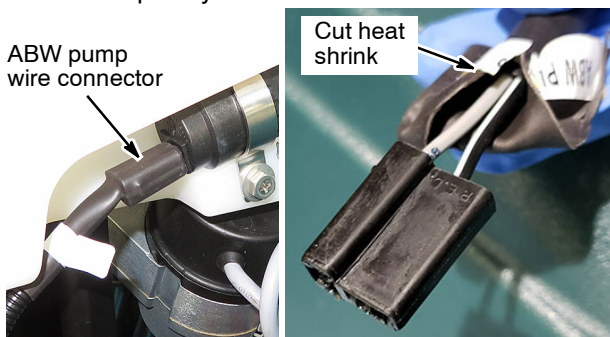


Fig. 12

b. Flip the position of the two wire terminals (blk/wht wire ↔ gray wire). To remove terminals, insert a small standard screwdriver into the connector to release the retaining tab (Figure 13).

NOTE: Before re-inserting the terminals, bend the tab outward slightly to ensure a secure connection.

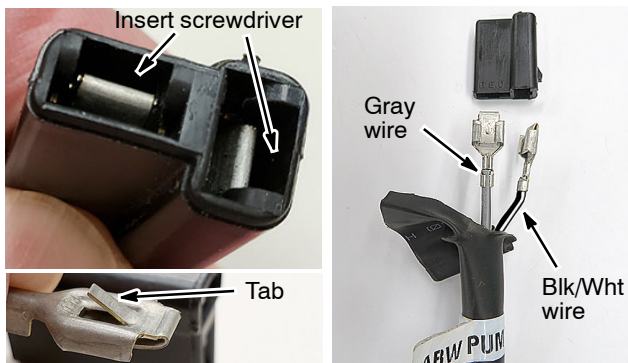


Fig. 13

c. Fold back the heat shrink and reseal the connector with blue electrical tape (Figure 14).

Then reconnect the wire connector to the ABW pump.



Fig. 14

15. Unplug the wire harness from the ABW module and install the new adapter harness between the wire harness and module (Figure 15).

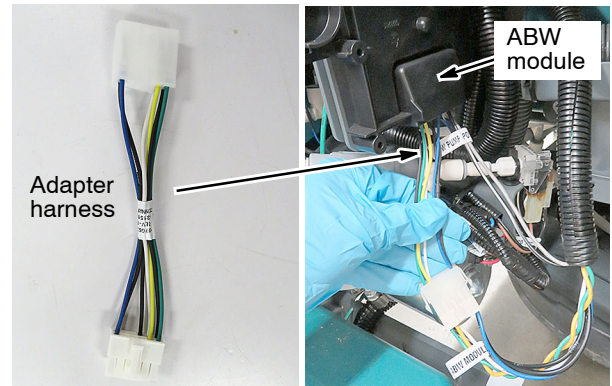


Fig. 15

16. Loop the adapter harness as shown and secure it with a cable-tie (Figure 16).

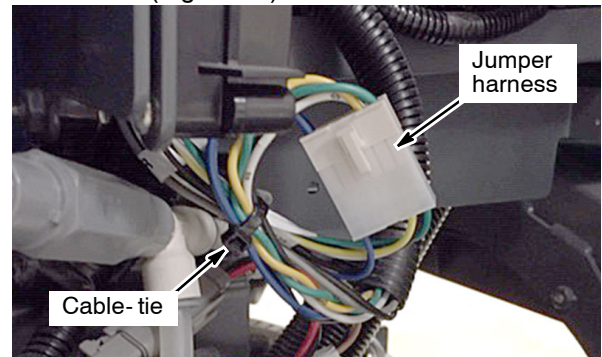


Fig. 16

17. Reconnect the battery cable to the battery pack.
18. Using the Service Diagnostics Software Application (version SE 1.6.0 and LE 1.6.0 or newer), update the Firmware to the latest revision (Figure 17).
- User Interface Module **Rev: 1.26 or newer**
 - Battery Watering Module **Rev: 2.07 or newer**

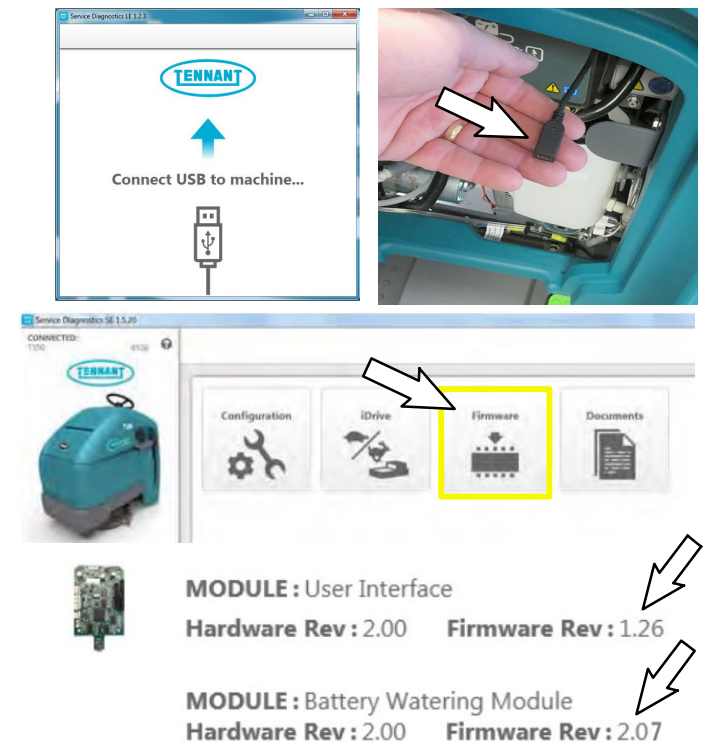


Fig. 17