Smart-Fill™
Automatic Battery Watering Kit
Models: T600e, T600

TENNANT

This kit includes the necessary part to add an automatic battery watering (ABW) system on models equipped with TROJAN batteries. Kit installation is intended for affiliate distributors only.
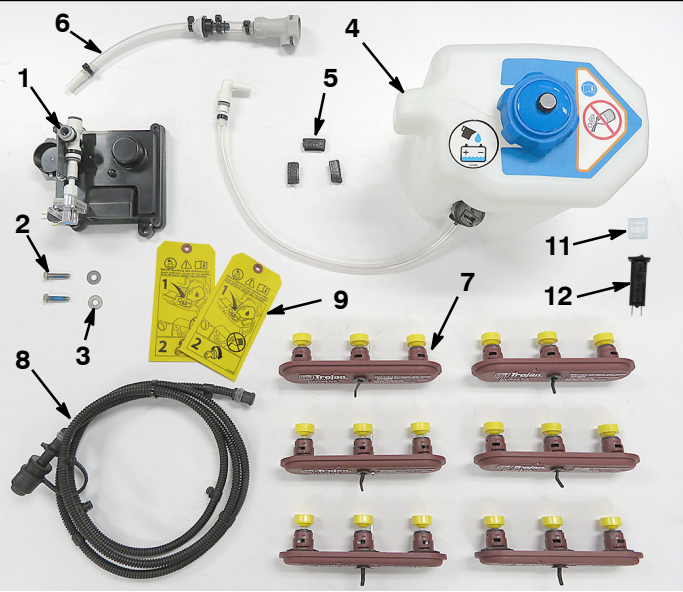
INSTALLATION INSTRUCTIONS:

Installation Time: 1 Hour

Kit Installation Requirements: Tennant Service Application Software and USB cable.

Tools Required: 10mm socket wrench, Philips screwdriver

9042065 - Kit Contents

Ref	Part No.	Description	Qty.
1	9016697	Module Kit	1
2	1016005	Screw, Hex, M6 x 1.00 x 25	2
3	01684	Washer, flat, 0.27B 0.69D .05, ss	2
4	9016698	Tank Assemble	1
5	C460140	Molding, Trim	3
6	9016699	Hose Assembly, ABW	1
7	1204142	Battery Vent Cap [Trojan Hydrolink]	6
8	1201997	Battery Watering Tube, 36V [Trojan]	1
9	1233145	Tag, Attention, Fill Tank	2
10	1064187	Circuit Breaker 10 Amp, resettable	1
11	1064191	Boot, Circuit breaker	1

1. Park the machine on a level surface, lower the scrub head and remove the key.
2. Disconnect battery cable connector from battery pack (Figure 1).

⚠ **WARNING: Always disconnect battery cables from machine before working on electrical components.**
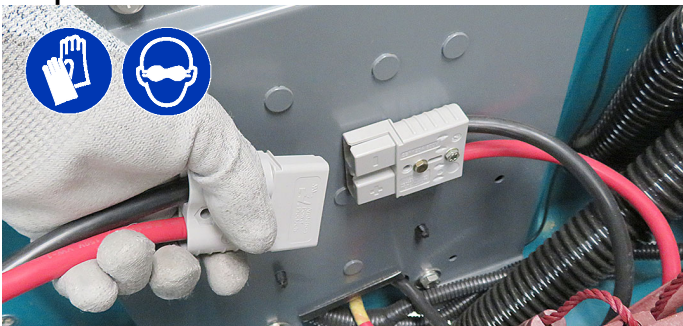

Fig. 1

3. Remove the front scrub head shroud from the machine to access the ABW module mounting location.
4. Remove the harness clamp screw near the scrub head as shown. Locate the three factory installed ABW wire harness connectors (Figure 2). The ABW wires are labeled accordingly. Cut the zip-tie to free up the wire connectors.
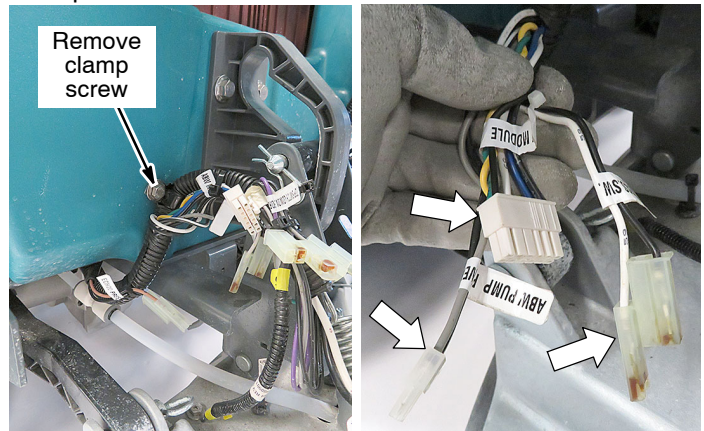

Fig. 2

5. Install the module assembly using the supplied hardware in the location as shown (Figure 3). Make sure to refasten the harness clamp.
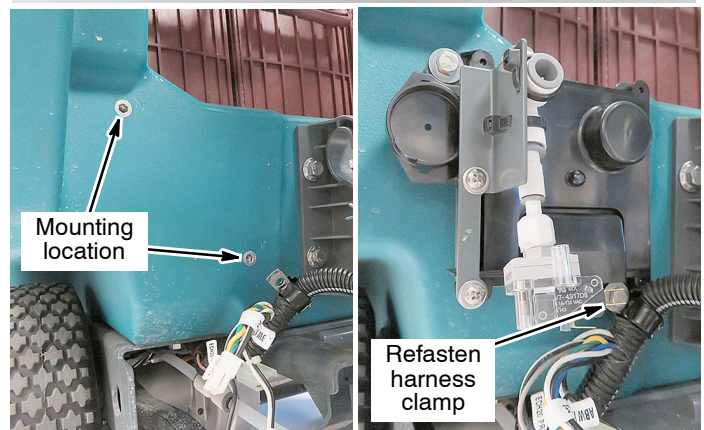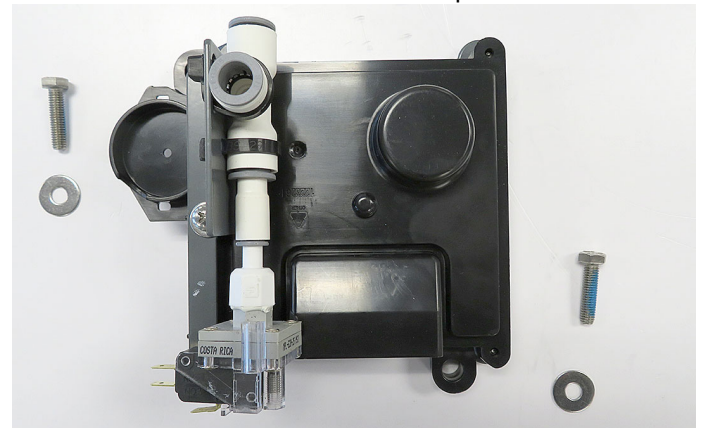

Fig. 3

6. Plug the three ABW wire harness connectors into the module and pressure switch (Figure 4).
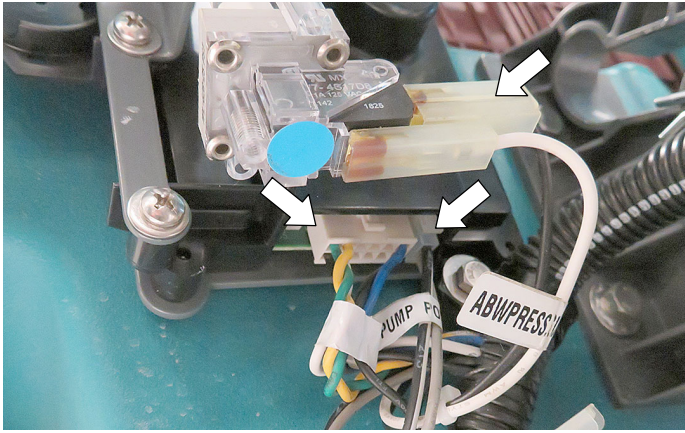

Fig. 4

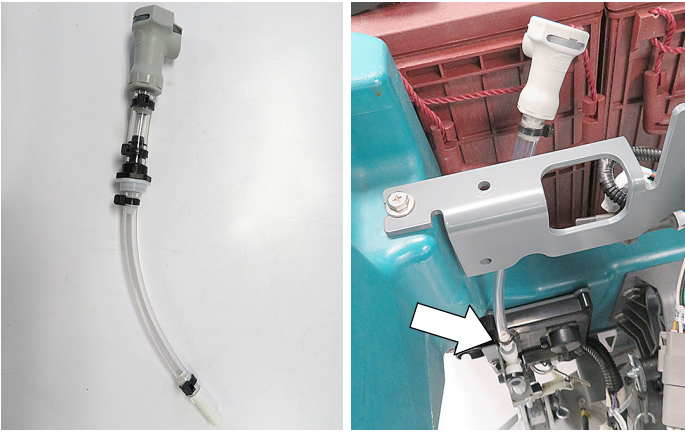7. Plug the ABW hose assembly into the ABW module assembly as shown (Figure 5).

Fig. 5

8. Install the 3 pieces of protective molding to the machine frame directly above the ABW module as shown (Figure 6).
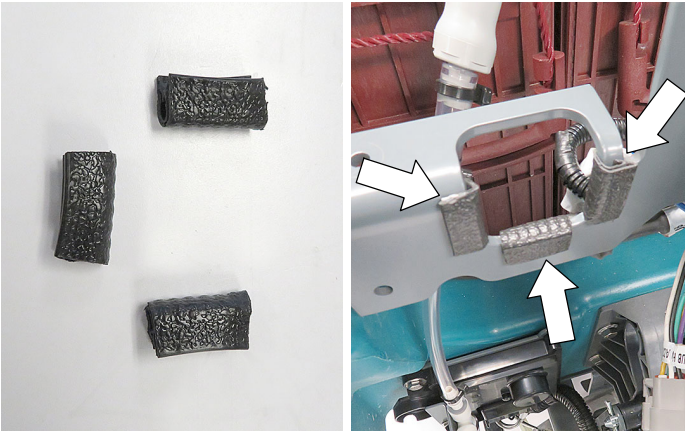

Fig. 6

9. Install the ABW tank assembly. Locate the factory installed ABW pump harness connector near the protective molding. Cut the zip-tie to free up the wire connector. Re-secure the remaining harness wires with zip-tie. Plug the connector into the ABW pump located on tank assembly (Figure 7).
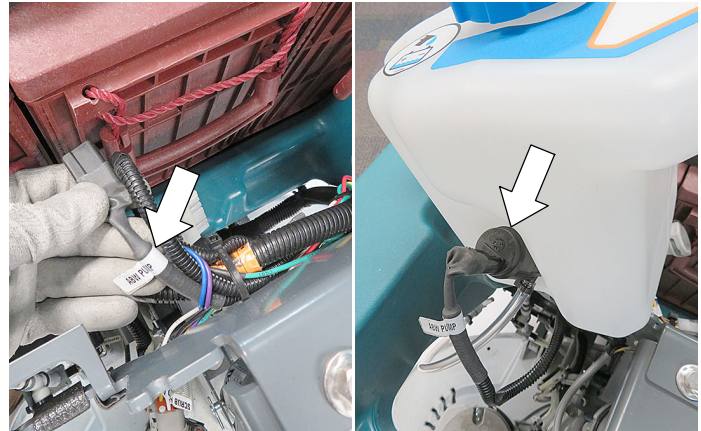

Fig. 7

10. Plug the tank's hose into the ABW module assembly and position the tank into the machine as shown (Figure 8).
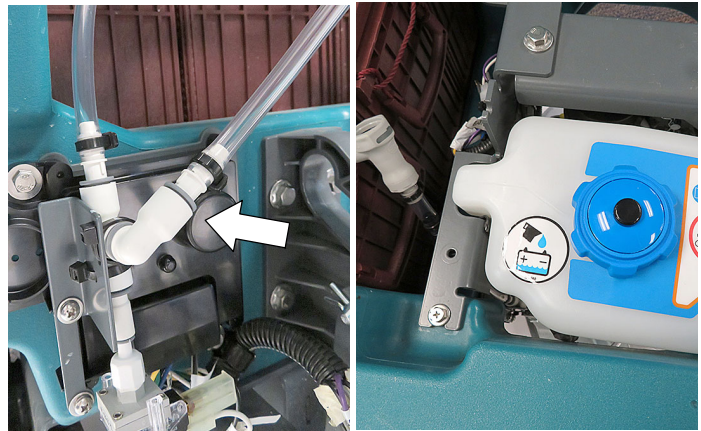

Fig. 8

11. Remove the battery caps from the batteries and install the Trojan Hydrolink system on the batteries as shown (Figure 9).

Fig. 9

12. Connect the battery watering tube connector into the ABW hose connector (Figure 10).
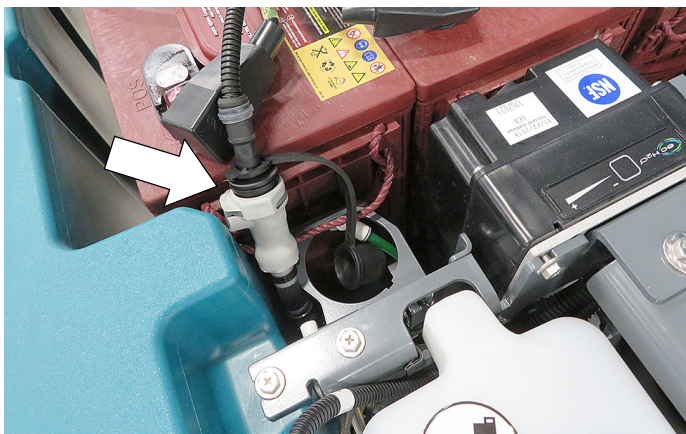

Fig. 10

13. **T600e Model Only:** Install the 10 Amp Circuit breaker and boot into the CB-2 location as shown below (Figure 11). Connect the Red and Pink CB-2 wires.

NOTE: If machine is currently equipped with ec-H2O NanoClean technology, circuit breaker installation is not required. The ec-H2O system and ABW system share the same 10A circuit breaker (CB-2).

Fig. 11

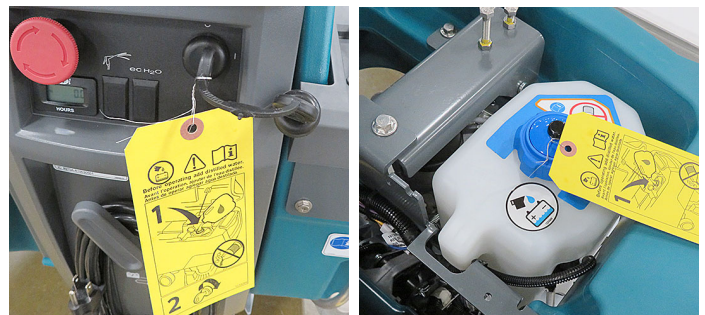14. Attach yellow tags to machine as shown (Figure 12).

Fig. 12

15. Reinstall the front scrub head shroud on machine and reconnect the battery cable connector to battery pack.

RECONFIGURE THE MACHINE'S CONTROL BOARD FOR BATTERY WATERING SYSTEM:

Tennant Service Application Software is required to reconfigure the machine's control board to recognize the ABW installed option (Figure 13).

NOTE: If the Service Application Software is currently installed on your computer, confirm or re-install the software to ensure latest software version is installed.

Icon on Desktop

Fig. 13

1. Start the Service Software Application program. After start up, the following screen will appear (Figure 14).
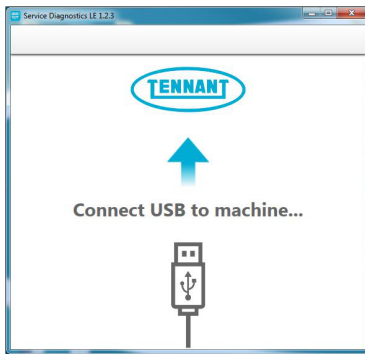

Fig. 14

2. Connect the USB cable to computer and to the USB port on machine as shown. Turn the key switch to the on position (Figure 15).
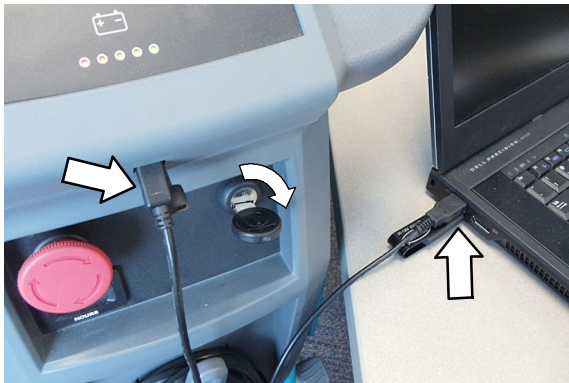

Fig. 15

3. Once connected, the home screen will appear (Figure 16). If firmware updates are required, the "Firmware" button will be highlighted in yellow as shown. Press the button to update the machine's firmware.
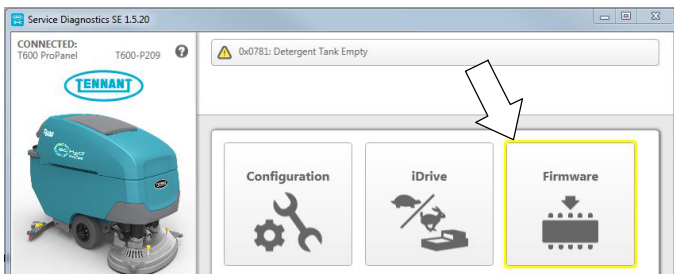

Fig. 16

Continue with the firmware update by pressing the yellow "Update" button (Figure 17).

Fig. 17

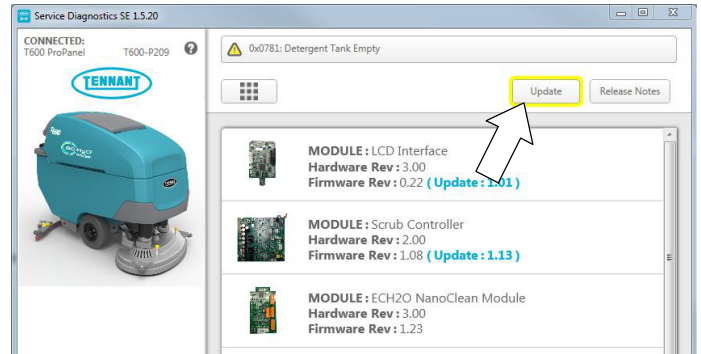4. From the Home screen, select the "Configuration" button (Figure 18).

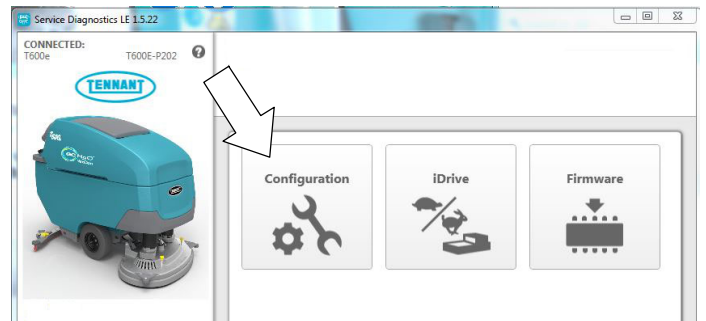**Fig. 18**

5. Change the Battery Watering System to **"Smart-Fill Automatic"** from the pull-down menu (Figure 19). Then press the down arrow button to program the machine. A green check will appear next to the down arrow button when programmed.
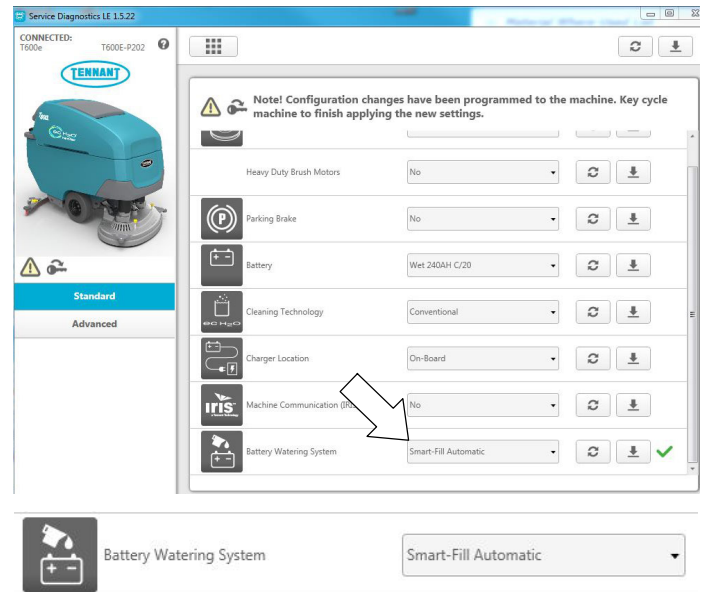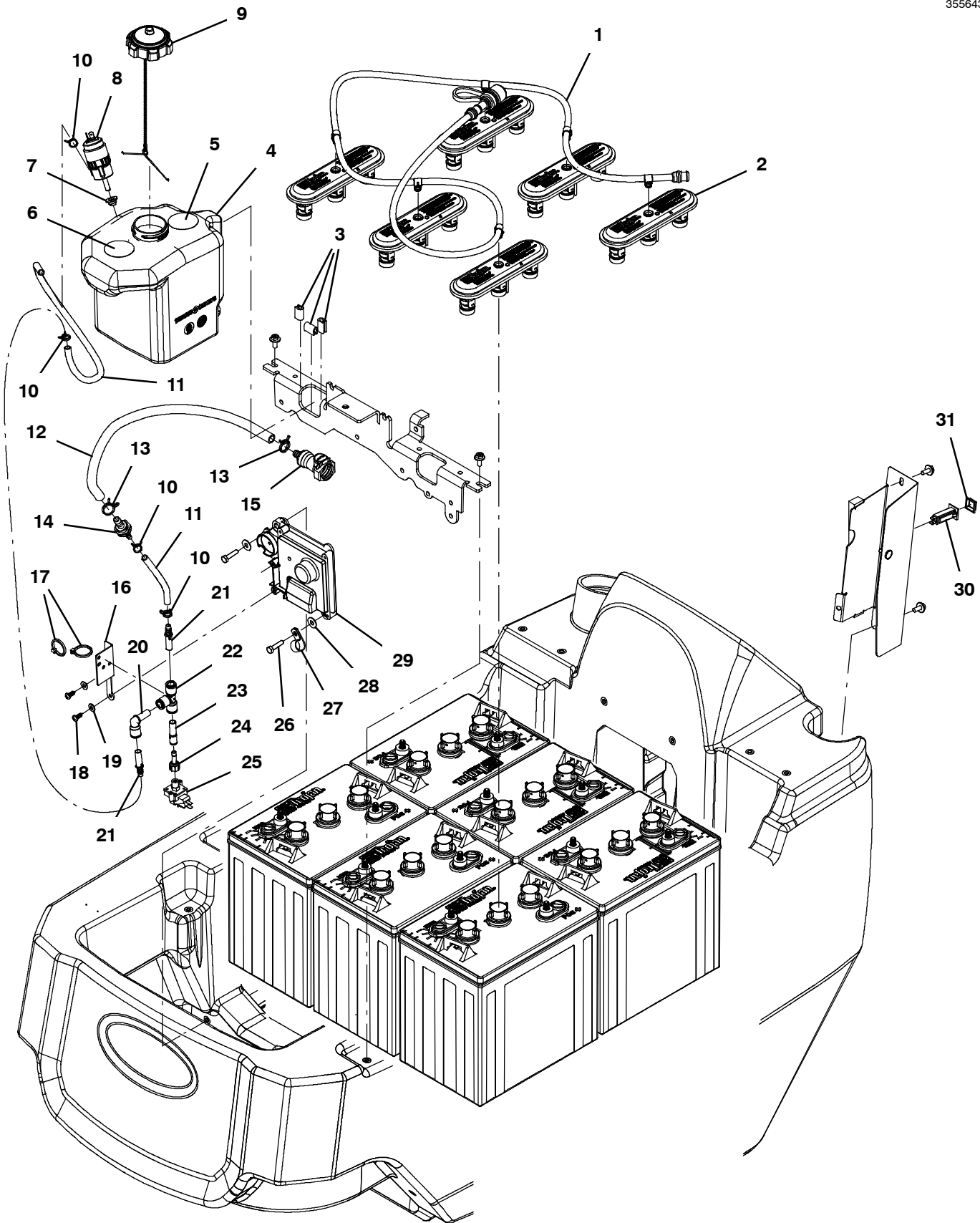

Fig. 19

6. Cycle the key to apply the new machine configuration. Disconnect the USB cable.

SMART-FILL™ AUTOMATIC BATTERY WATERING KIT

355643

SMART-FILL™ AUTOMATIC BATTERY WATERING KIT

	Ref.	Part No.	Description	Qty.
	1	1201997	Tube, Water, Battery, 36vdc [Trojan]	1
	2	1204142	Cap, Fill, Battery [Trojan]	6
	3	1020168	Molding, Afmkt, Trim, Pvc, .08 .11, 01ft	1
▽	4	9016843	Tank Assy, Soltn, 4.0l, Afmkt [T600,Abw]	1
▲	5	1224988	Label, Automated Battery Watering	1
▲	6	1224989	Label, Detergent Metering Tank	1
▲	7	1231338	Grommet, Pump	1
▲	8	1231018	Pump, In- Tank, 13.5vdc 3.5lpm	1
	9	1235763	Cap, Tank, 2.25 [Blue,Vented W/Lanyard]	1
	10	613735	Clamp, Hose, Wir, .40 - .42, Yel	4
	11	1014985	Hose, Afmkt, Pvc, Clr, 0.25id, 08ft	1
	12	63182- 2	Hose, Pvc, Clr, 0.38id 0.56od 036.0l	1
	13	607775	Clamp, Hose, Wir, .63 - .66, Blk	2
	14	1225185	Valve, Check, 0002psi Bm04/Bm06	1
	15	1221589	Fitting, Plstc, Str, Bm06, Cplg, Fem[Hl]	1
	16	1234378	Bracket, Mtg, Abw	1
	17	49263	Tie, Cable, Nyl, 11.4l .19w 3.0 Max D	2
	18	1018155	Screw, Pan, Phl, M5 X 0.80 X 16, Tcut,Ss	2
	19	01683	Washer, Flat, 10, Ss	2
	20	1215186	Fitting, Plstc, E90, Qf06/Qm06	2
	21	1212857	Fitting, Plstc, Str, Qm06/Bm04	2
	22	1212573	Fitting, Plstc, Tee, Qf06/Qf06/Qf06	1
	23	1212934	Fitting, Plstc, Str, Qf04/Qm06	1
	24	1231855	Fitting, Plstc, Str, Qm04/Pf02	1
	25	1055254	Switch, Press, 25 Psi, Pm02	1
	26	1016005	Screw, Hex, M6 X 1.00 X 25, Nl, Fl, Ss	2
	27	33584	Clamp, Cable, Stl, 0.63d X 0.50w, 1hole	1
	28	01684	Washer, Flat, 0.27b 0.69d .05, Ss	2
	29	9016770	Controller Kit, Battery, 24vdc, Ci [Abw]	1
	30	1064187	Circuitbreaker, 10.0a, Resetable	1
	31	1064191	Boot, Circuitbreaker	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY