



# INSTRUCTION BULLETIN

No. 9045311  
Machine: S16  
Published: 01-2021  
Rev. 00

**NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save the cost of ordering an entire kit.**

*NOTE: Numbers in parenthesis ( ) are reference numbers for parts listed in Bill of Materials.*

Installation instructions for **kit number 9045310**

Kit installation must be performed by TennantTrue<sup>®</sup> service or an authorized service provider.

## SYNOPSIS:

This kit contains parts needed to install an ABW (Automatic Battery Watering) kit on S16 sweepers. Please follow step-by-step instructions.

**SPECIAL TOOLS / CONSIDERATIONS: Tennant Service device with Tennant Service Diagnostics software.**

(Estimated time to complete: 2.5 hours)



## PROTECT THE ENVIRONMENT

Please dispose of packaging materials, used machine components such as batteries and fluids in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.

## PREPARATION:

*NOTE: Only authorized Tennant Service Personnel can install this ABW (Automatic Battery Watering) kit onto the S16 sweeper.*

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

1. Lift the operator seat open and secure the seat into the open position.
2. Ensure the electrolyte in all batteries is filled to the correct level. Refer to *CHECKING THE ELECTROLYTE LEVEL* in the *MAINTENANCE* section of the Operator Manual for additional information.
3. Disconnect battery cable from the machine.



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

4. Remove the right side shroud from the machine. Set the right side shroud aside.
5. Open and/or remove the electrical compartment cover to access the rear breaker bracket/main wire harness connections inside the compartment. (Fig. 1)

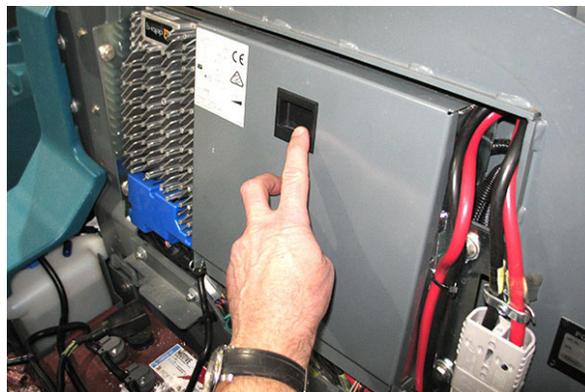
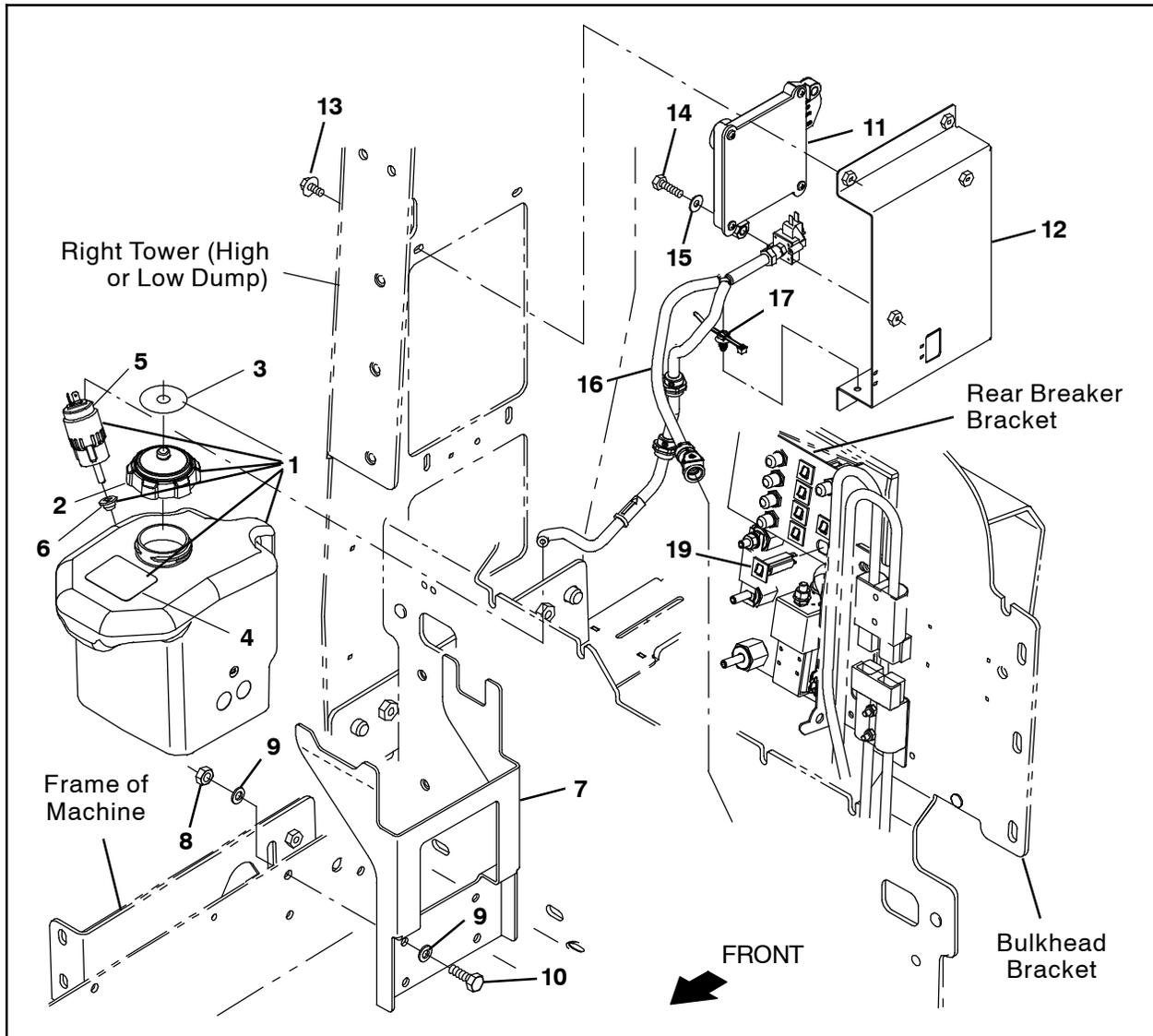


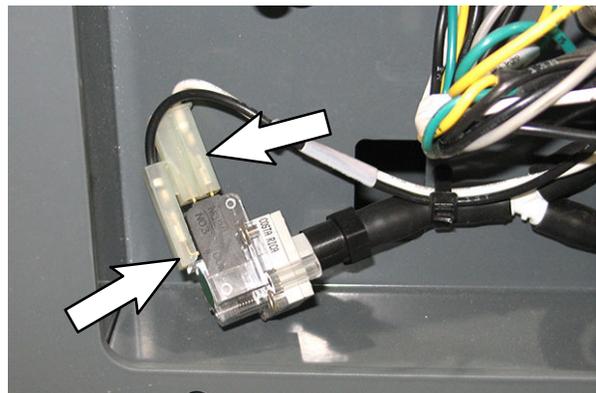
FIG. 1

**INSTALLATION:**



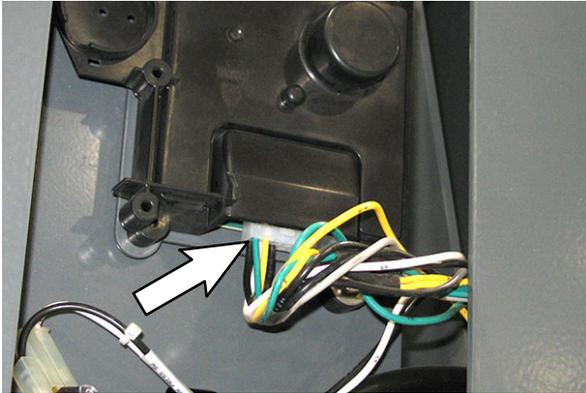
**FIG. 2**

1. Use two M6 hex screws (14) and two flat washers (15) to install the ABW controller (11) onto the ABW mount bracket (12). (Fig. 2)
2. Use four SEMS M6 hex screws (13) to install the ABW controller (11)/ABW mount bracket (12) onto the right tower. (Fig. 2)
3. Place battery water delivery assembly (16) into the compartment created when installing the ABW mount bracket (12) and route the battery water delivery assembly hoses out/down toward the battery compartment. (Fig. 2)
4. Connect the main wire harness to the battery water delivery assembly (16) pressure switch. (Fig. 2/Fig. 15)



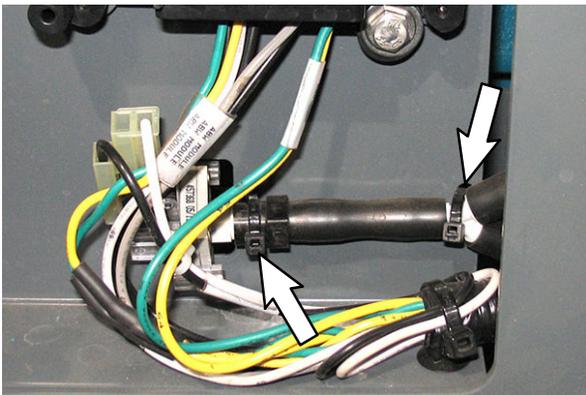
**FIG. 3**

5. Connect the main wire harness to the ABW controller (11). (Fig. 4/Fig. 2/Fig. 15)



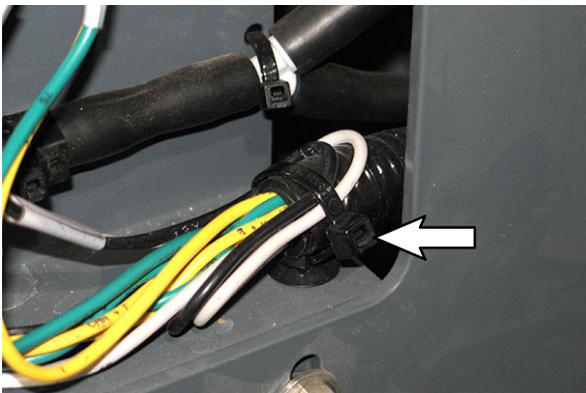
**FIG. 4**

6. Use two cable ties (20) to secure the battery water delivery assembly (16) to the ABW mount bracket (12). (Fig. 5/Fig. 2)



**FIG. 5**

7. Use one wire tie (17) to secure the main wire harness leads connected to the ABW controller (11)/battery water delivery assembly (16) to the ABW mount bracket (12). (Fig. 6/Fig. 2)



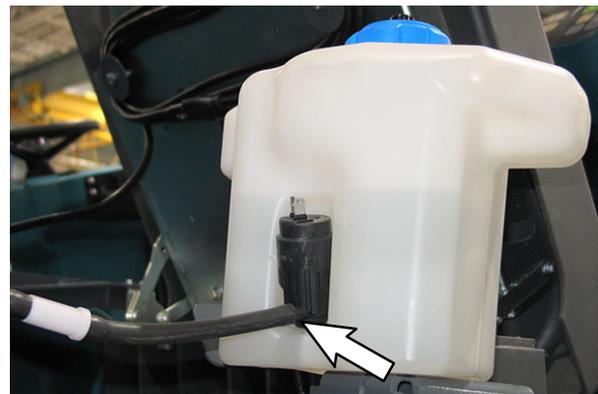
**FIG. 6**

8. Use four M8 hex screws (10), eight flat washers (9), and four M8 hex lock nuts (8) to install the ABW tank mount bracket (7) onto the frame of the machine (Fig. 7/Fig. 2).



**FIG. 7**

9. Install the Do Not Add Detergent label (4) onto the ABW tank (1). (Fig. 2)
10. Install the Automated Battery Watering label (3) onto the blue tank cap (2). (Fig. 2)
11. Install blue tank cap (2) onto the ABW tank (1). (Fig. 2)
12. Install the pump grommet (6) into the ABW tank (1). (Fig. 2)
13. Insert the in tank pump (5) into the pump grommet (6) inserted into the ABW tank (1) in the previous step. (Fig. 2)
14. Connect the battery water delivery assembly (16) hose to the in tank pump (5) installed in the ABW tank (1). (Fig. 8/Fig. 2)



**FIG. 8**

15. Place the ABW tank (1) into the ABW tank mount bracket (7). (Fig. 9/Fig. 2)



**FIG. 9**

16. Connect the main wire harness to the in tank pump (5) installed in the ABW tank (1). (Fig. 10/Fig. 2/Fig. 15)



**FIG. 10**

17. Remove all the caps from the batteries and discard the battery caps.

18. Install the battery watering distribution assembly (18) into the batteries. (Fig. 12)

19. Connect the battery water delivery assembly (16) to the battery watering distribution assembly (18). (Fig. 11)



**FIG. 11**

20. Install the 2.5- Amp circuit breaker (16) into the rear breaker bracket location CB10. (Fig. 2)

21. Connect the main wire harness to the 2.5- Amp circuit breaker (16). (Fig. 2/ Fig. 15)

22. Reinstall/close the electrical compartment cover.

23. Fill the ABW tank (1) with distilled water.

24. Reconnect the battery cable to the machine.

*NOTE: A Tennant Service device equipped with Tennant Service Diagnostics software is required to configure the machine with the ABW option.*

25. Plug machine USB cable into service device and configure the machine for ABW option.

26. Leave machine ON and observe the ABW tank (1), battery watering distribution assembly (16), and battery water delivery assembly (18) hoses and connections for leaks. Repair all leaks. (Fig. 14)

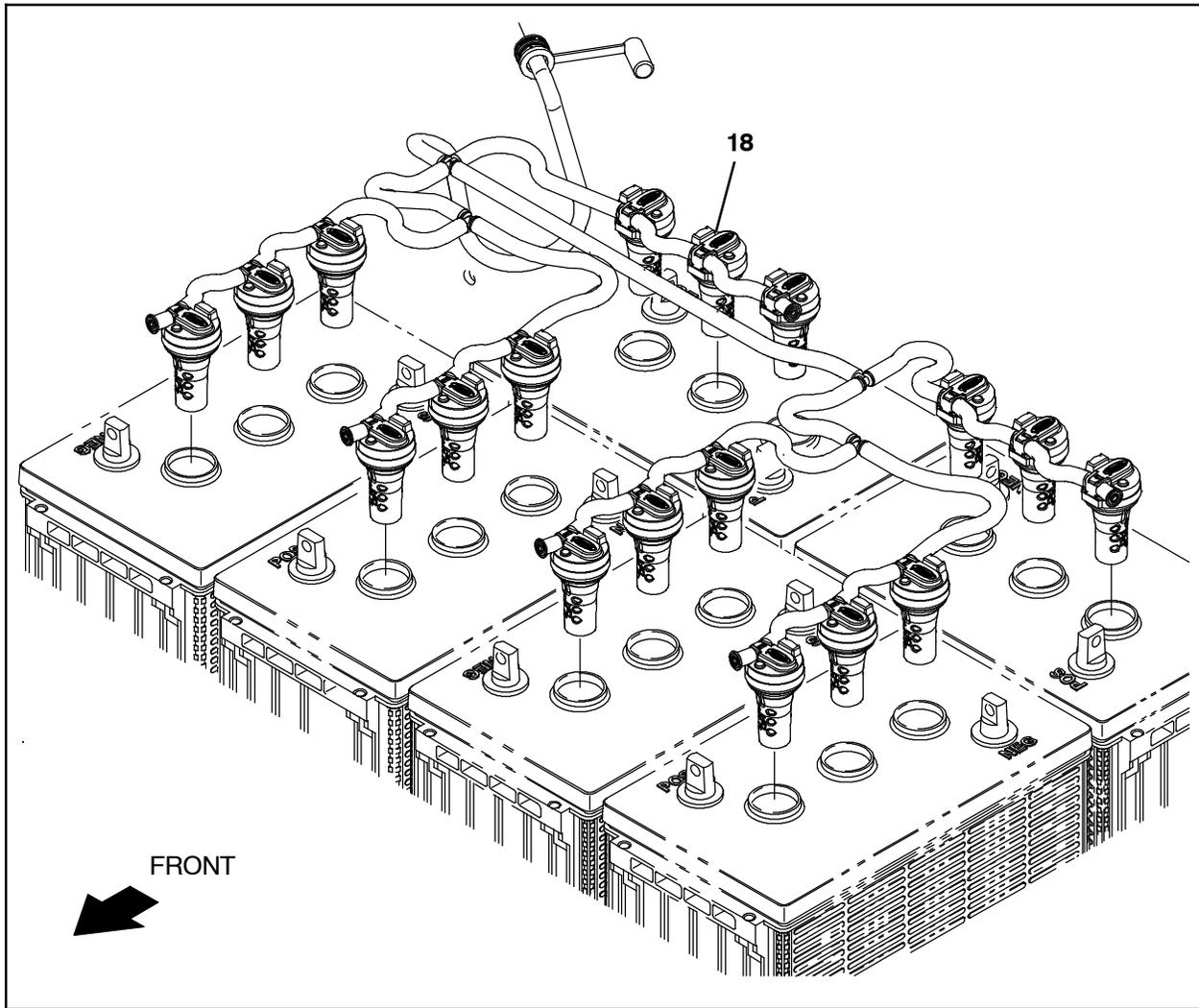


FIG. 12

27. Leave machine ON and observe the battery watering distribution assembly (18) valve indicators. The battery watering indicators are black when the battery fluid level is low and batteries require filling. The ABW system will automatically fill the batteries. The battery valve indicators are white when the battery fluid level is adequate and batteries do not require filling. (Fig. 13)

28. Reinstall the right shroud onto the machine.

29. Disengage the seat support and lower the seat.



FIG. 13

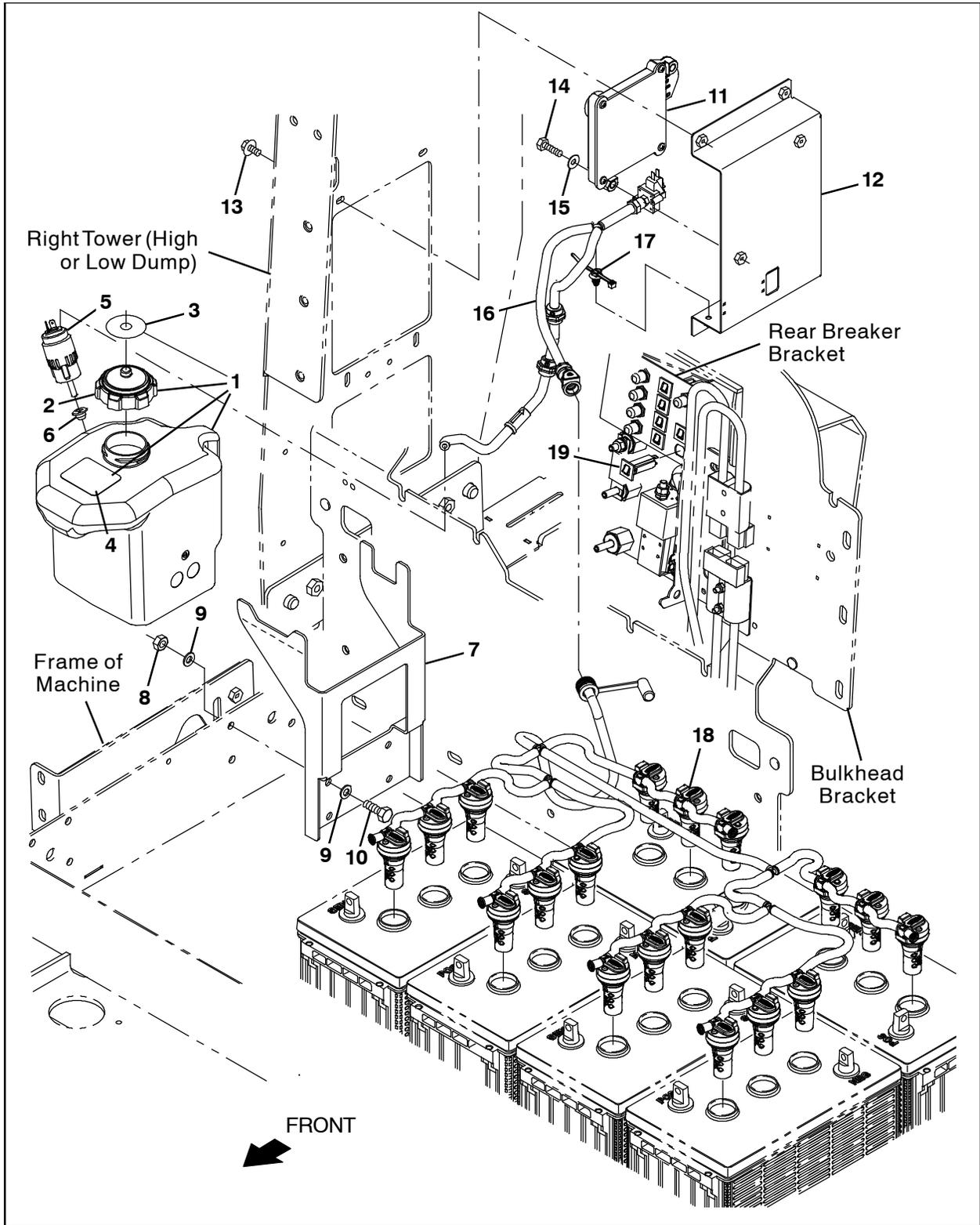


FIG. 14

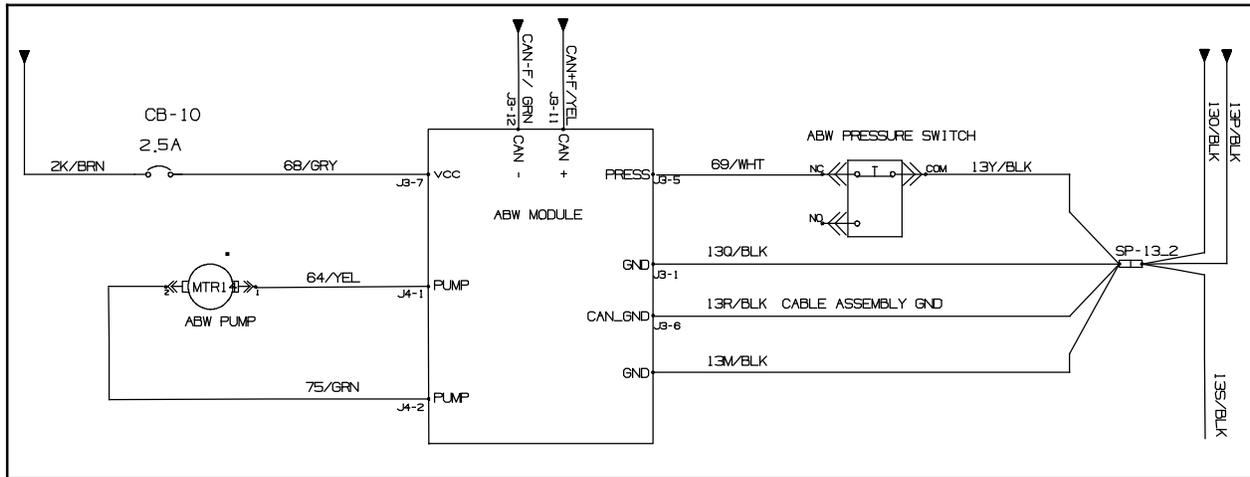


FIG. 15

Bill Of Materials For Fill Kit, Battery, Auto, CI [S16] - 9045310 \*

Ref.	Tennant Part No.	Description	Qty.
▽ 1	9045064	Tank Assy, ABW 4.0L	1
▲ 2	1235763	Cap, Tank, 2.25 [Blue,Vented w/Lanyard]	1
▲ 3	1224988	Label, Automated Battery Watering	1
▲ 4	1233633	Label, Detgt [Do Not Add]	1
▲ 5	1231018	Pump, In- Tank, 13.5VDC 3.5LPM	1
▲ 6	1231338	Grommet, Pump	1
7	1239470	Bracket, Mount, Tank [ABW]	1
8	08709	Nut, Hex, Lock, M8 X 1.25, NI	4
9	39349	Washer, Flat, 0.31, SAE	8
10	09010	Screw, Hex, M8 X 1.25 X 25, SS	4
11	9040160	Controller Kit, Battery, 24VDC, FI [ABW]	1
12	1239279	Bracket Wldt, Mount, ABW	1
13	1034731	Screw, Hex, M6 X 1.00 X 16, SEMS, SS	4
14	09007	Screw, Hex, M6 X 1.00 X 25, SS	2
15	01684	Washer, Flat, 0.27b 0.69d .05, SS	2
16	1246536	Delivery Assy, Water, Battery	1
17	1210807	Wire, Tie [w/.25" Fir Tree Clip]	1
18	1248178	Distribution Assy, Water, Battery	1
19	1064184	Circuit Breaker, 02.5A, Resettable	1
20	763114	Tie, Cable, 11.3L, 2.75D Max	2
21	1233145	Tag, Attention [Fill ABW Tank]	1

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