

5680/5700/5700XP ec-H2O NanoClean Affiliate Kit



This kit includes the necessary parts to convert a standard model into an ec-H2O™ NanoClean model. It's intended for 5680/5700/5700XP models manufactured after serial numbers 10740686 (5680), 10741220 (5700/5700XP) March 2015.

INSTALLATION INSTRUCTIONS:

Installation Time: 4 Hours

Special Tools Required: Fish-Tape, Cartridge By-Pass Tool to test machine for leaks after install (provided separately).

Cylindrical Brush Models: Spray Bar Kit required, not included with ec-H2O kit. 9006743- 700mm model, 9006744- 800mm model, 9006745- 900mm model

PREPARE MACHINE FOR KIT INSTALL:

1. Drain the solution and recovery tanks.
2. Park the machine on a level surface, lower the scrub head and remove the key.

FOR SAFETY: Before installing kit, disconnect the battery cables.

3. Remove the front shroud from the machine (Figure 1).



Fig. 1

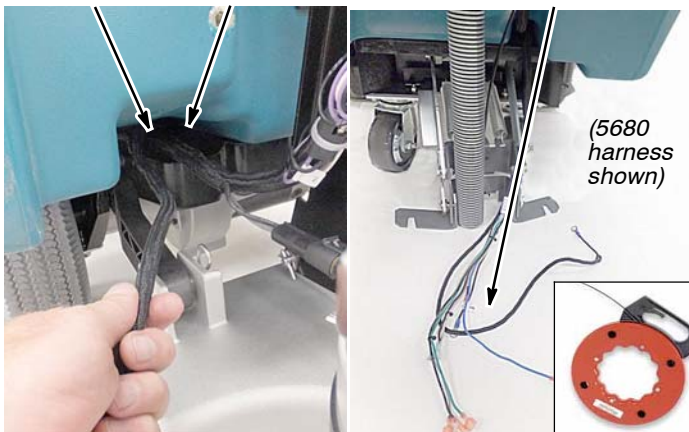
INSTALL ec-H2O WIRE HARNESS:

1. Using a fish-tape, route the ec-H2O wire harness through the harness channel along side the machine's main wire harness (Figure 2). Pull the harness from the front of the machine to the back. If installing 5700/5700XP ec-H2O kit, see NOTE.

Insert harness
end here

Harness
Channel

Route this end
of harness



(5680
harness
shown)

Fish-Tape

1074377 - 5680 ec-H2O Harness
1074379 - 5700/XP ec-H2O Harness

Fig. 2

NOTE: Before installing the 5700/XP ec-H2O harness, cut off the fuse connector to allow clearance to route harness (Figure 3). After routing harness, reconnect wire with an insulated 16G butt-splice connector (not included).

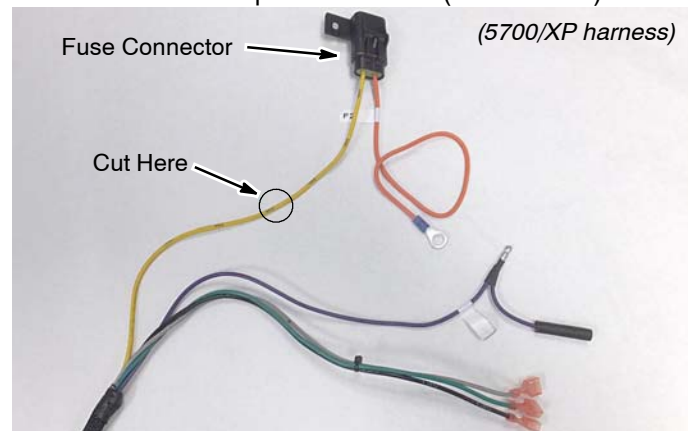


Fig. 3

2. Open the control console to access the internal wiring (Figure 4).

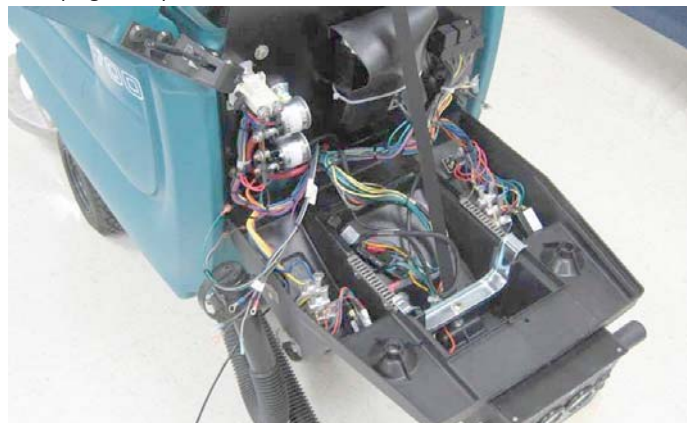


Fig. 4

3. Continue routing the ec-H2O harness up into the control console through grommet as shown (Figure 5). If installing 5680 ec-H2O kit, route the ground wire into battery compartment through access hole.

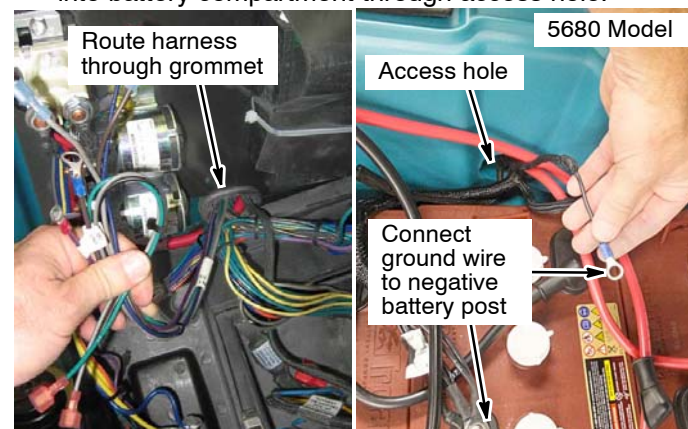


Fig. 5

INSTALL ec-H2O CONTROL PANEL

COMPONENTS:

5680 MODEL:

1. Remove and discard the left side cover plate. Install the ec-H2O cover plate and components as shown (Figure 6). Re-install the hour and battery meters.

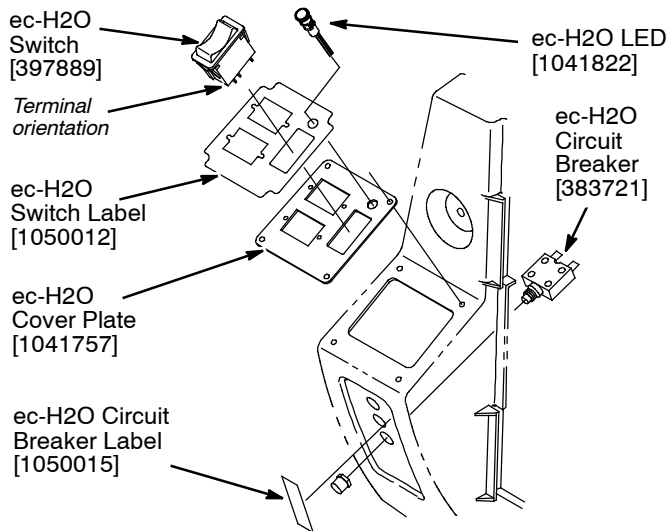
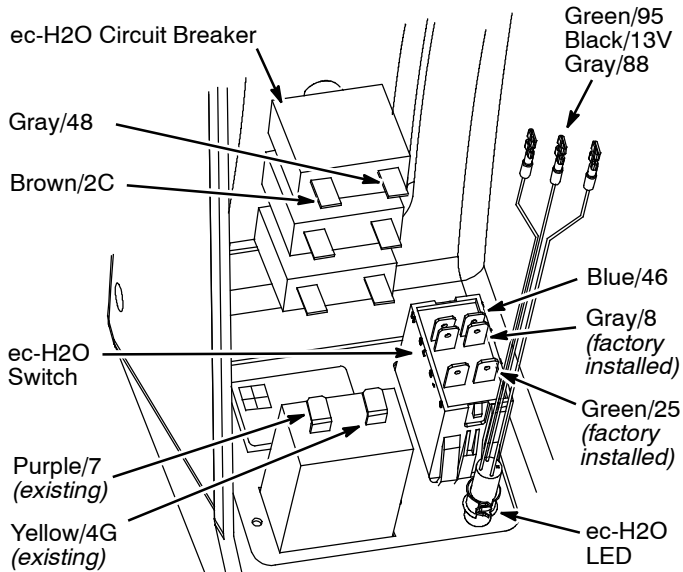


Fig. 6

2. Connect the routed ec-H2O harness wires to the control console components as shown (Figure 7). Locate the factory installed wires (Gray/8, Green/25) and connect to ec-H2O switch. The factory installed wires are connected together as shown below.



Green/25 & Gray/8
factory installed wires



Fig. 7

3. Connect the remaining ec-H2O harness wires to the contactor terminals as shown (Figure 8). After connecting harness, close the control console.

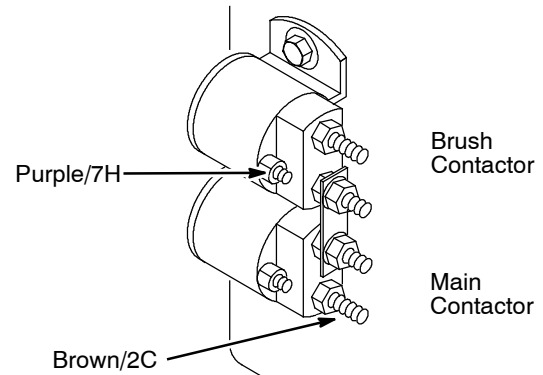


Fig. 8

4. Secure the ec-H2O wire harness with wire-ties [130773]. Close the control console.

5700/5700XP MODEL:

1. Remove the two plugs from control console and install the ec-H2O control console components as shown (Figure 9).

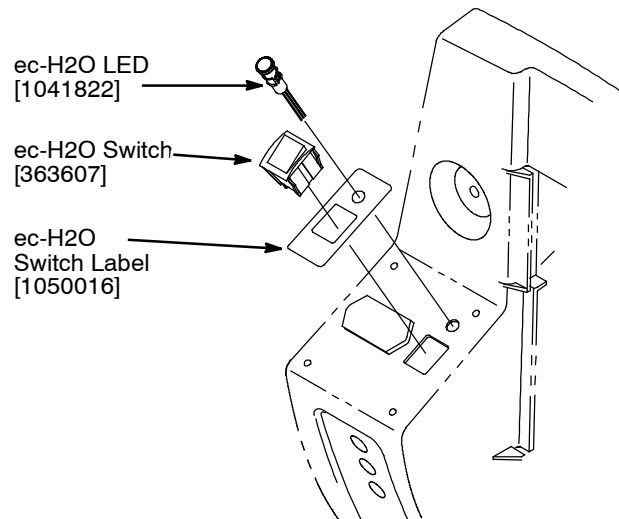


Fig. 9

2. Connect the routed ec-H2O harness wires to the ec-H2O LED. Locate the factory installed wires and connect to ec-H2O switch as shown (Figure 10).

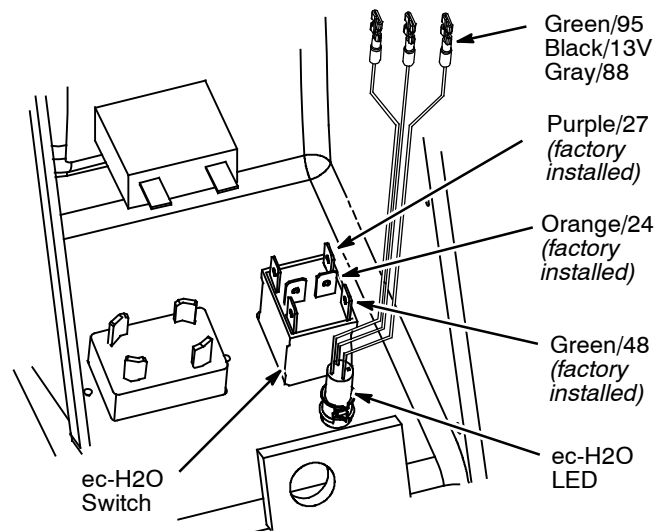


Fig. 10

3. Connect the remaining ec-H2O harness wires to the contactor terminals and main wire harness as shown (Figure 11).

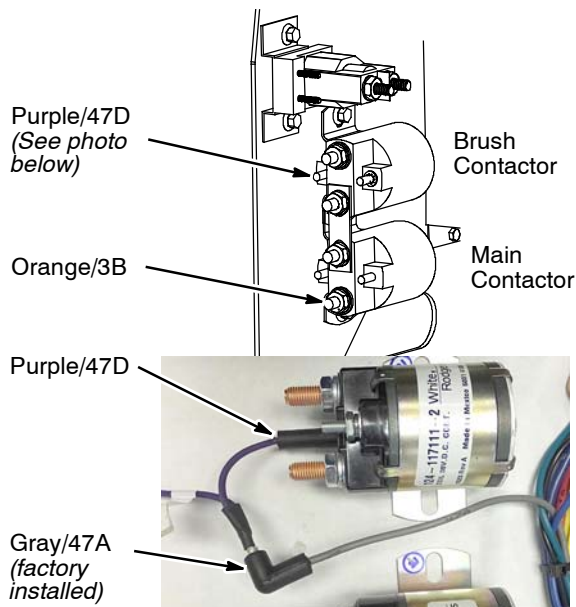


Fig. 11

4. Secure the ec-H2O wire harness with wire-ties [130773]. Close the control console.

INSTALL ec-H2O MODULE BRACKET ASSEMBLY:

1. Install the ec-H2O module bracket assembly to machine as described in following steps (Figure 12).

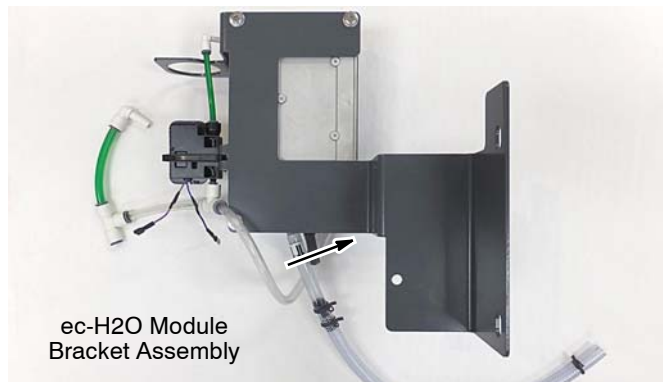


Fig. 12

2. Remove the two roller guide brackets from machine and discard (Figure 13). Remove the lower harness clamp to allow clearance for module bracket.

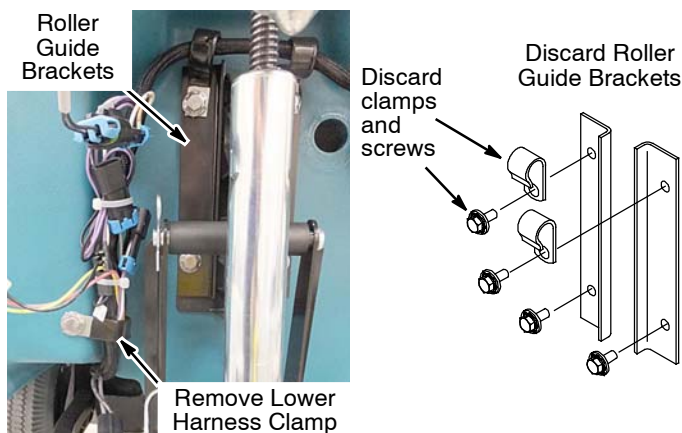


Fig. 13

3. Using larger clamp and new sems screw, install the ec-H2O module bracket assembly as shown (Figure 14). Reroute machine harness through clamp before connecting bracket.

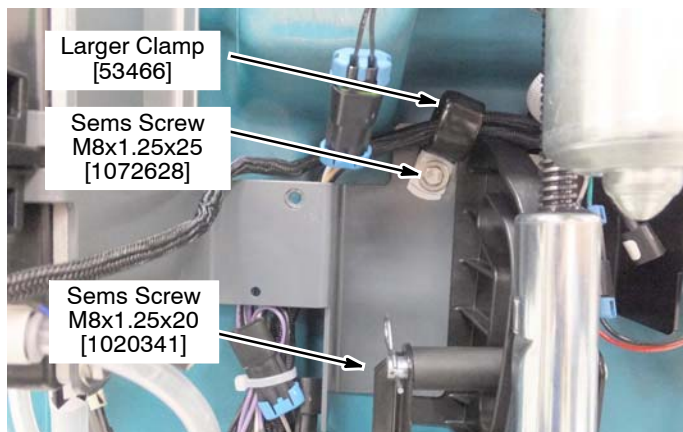


Fig. 14

INSTALL ec-H2O PUMP ASSEMBLY:

1. Install the ec-H2O pump assembly to machine as described in following steps (Figure 15).



Fig. 15

2. Using larger clamp and new sems screw, install the pump bracket as shown (Figure 16). Reroute machine harness through clamp before connecting bracket.

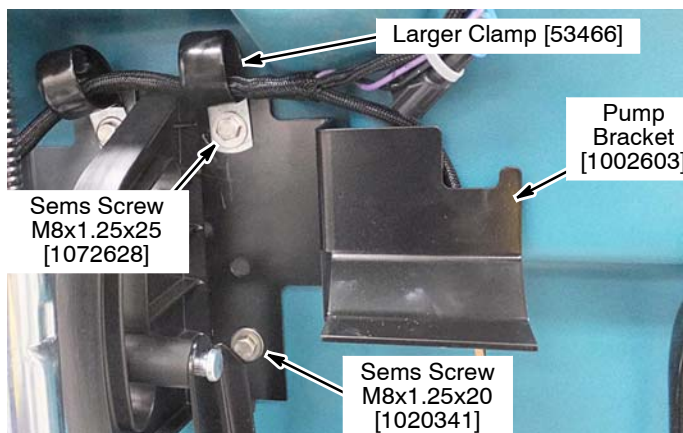


Fig. 16

3. Add pump clamp to bracket as shown (Figure 17).

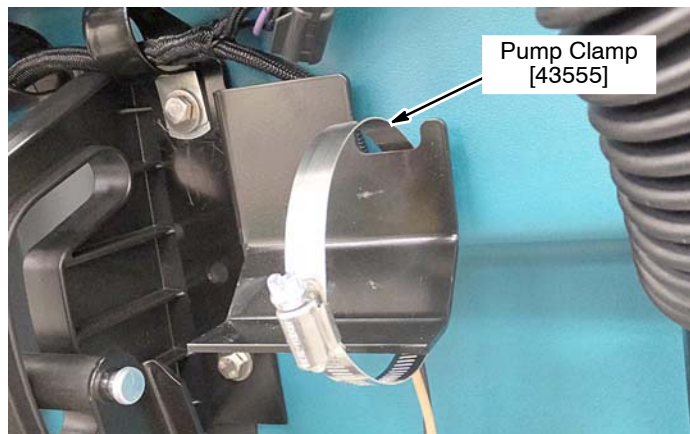


Fig. 17

4. Position the pump assembly as shown and tighten clamp (Figure 18). The pump should slightly touch drain hose.

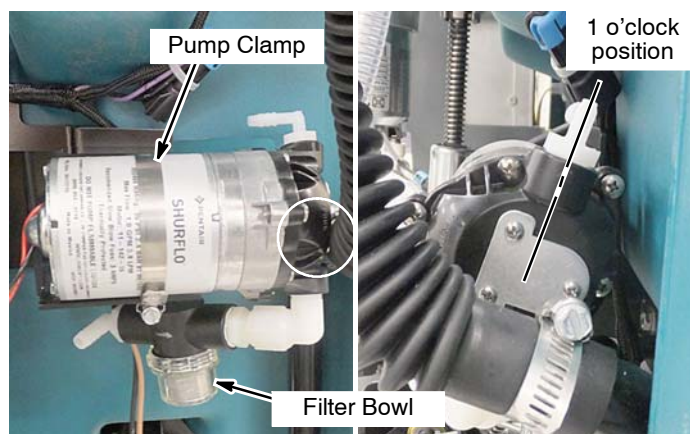


Fig. 18

5. Route the ec-H2O wire harness pump connector and capacitor connector through the two large clamps as shown (Figure 19).

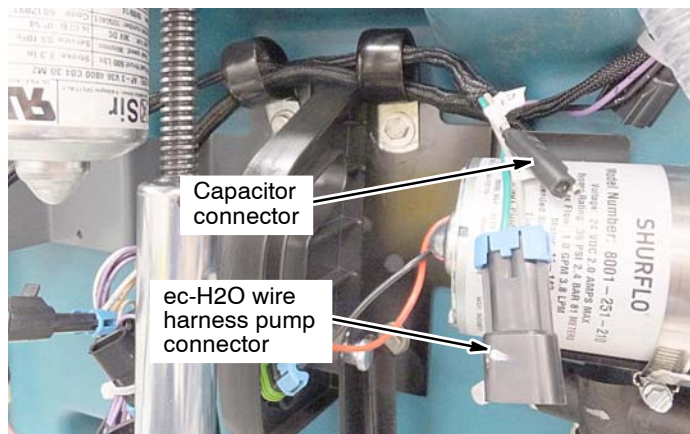


Fig. 19

6. Connect the pump connector to ec-H2O wire harness connector (Figure 20). Plug capacitor into wire harness.

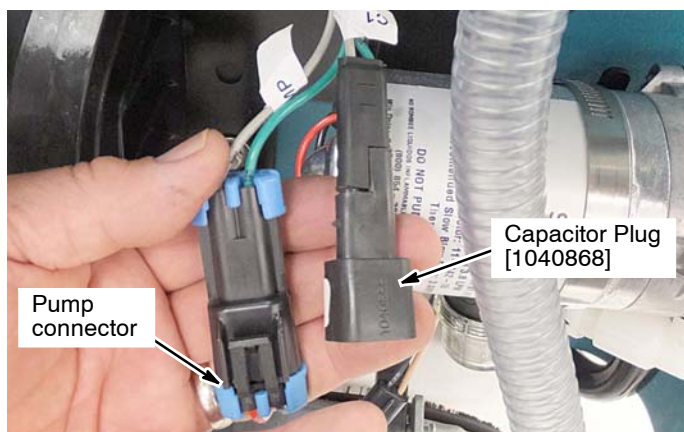


Fig. 20

7. Install the pump outlet hose assembly as described in following steps (Figure 21).

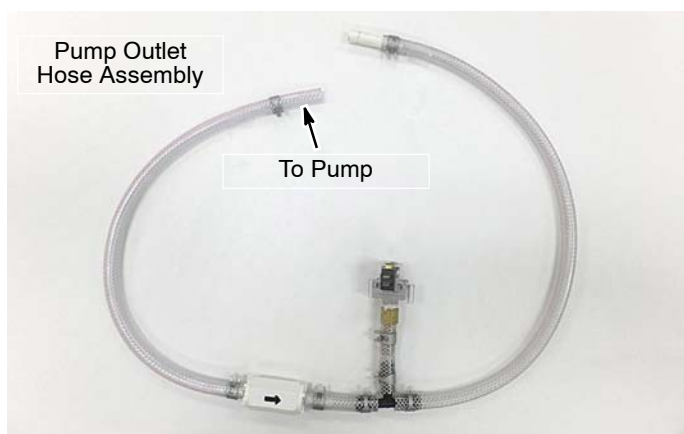


Fig. 21

8. Route the pump outlet hose assembly through the two large clamps and connect to pump as shown (Figure 22).

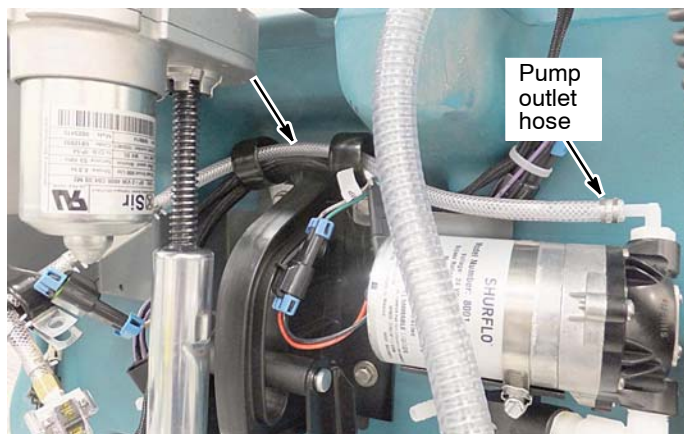


Fig. 22

9. Using hose clamp and sems screw, secure the pump outlet hose assembly to the module bracket as shown (Figure 23).

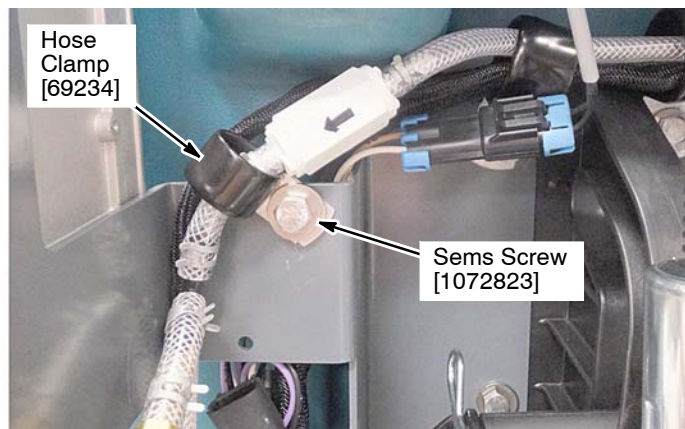


Fig. 23

10. Connect the pump outlet hose to the water conditioning pump assembly as shown (Figure 24).

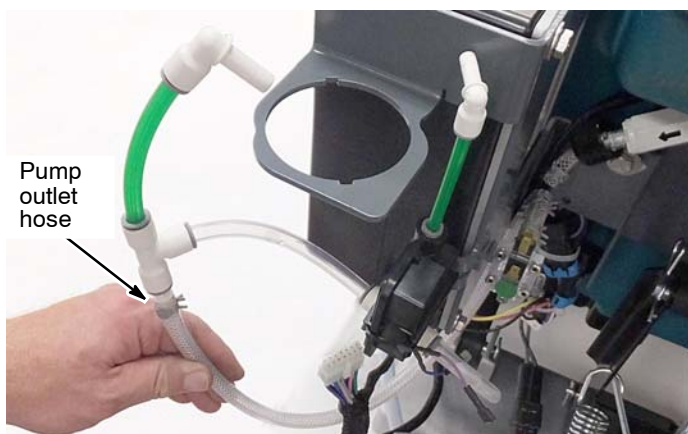


Fig. 24

11. Remove the solution tank plug and install hose barb fitting (Figure 25). Use thread sealer.

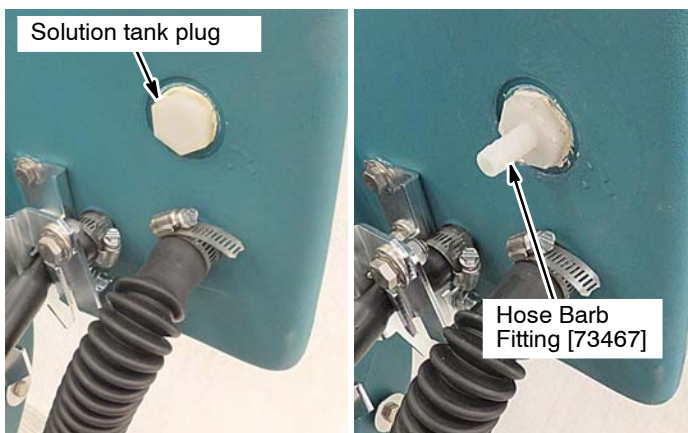


Fig. 25

12. Using two hose clamps install the solution tank outlet hose to tank and pump as shown (Figure 26).

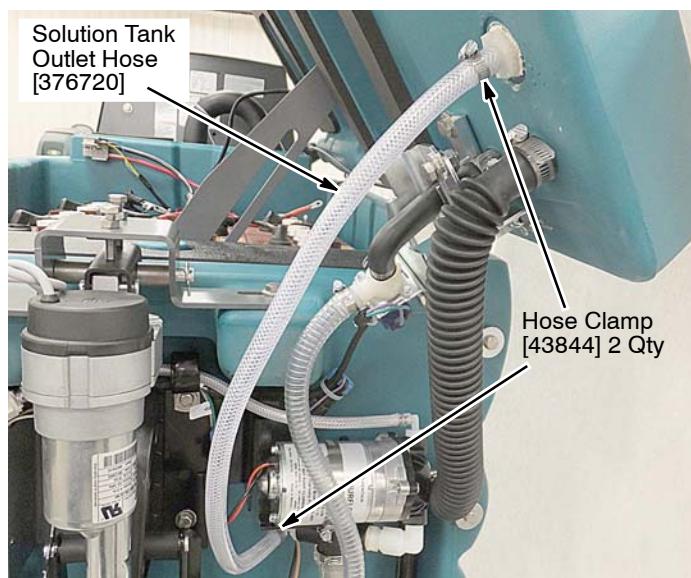


Fig. 26

CONNECT THE REMAINING ec-H2O HARNESS WIRES TO KIT COMPONENTS:

1. Plug the ec-H2O wire harness into the bottom of the ec-H2O module (Figure 27).

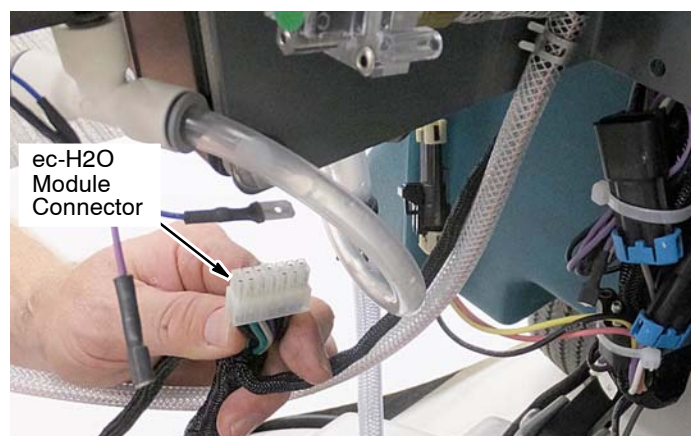


Fig. 27

2. 5700/XP ec-H2O Wire Harness: Locate the factory installed plug connector in the main wire harness near harness channel. Plug the ec-H2O wire harness into the connector (Figure 28).

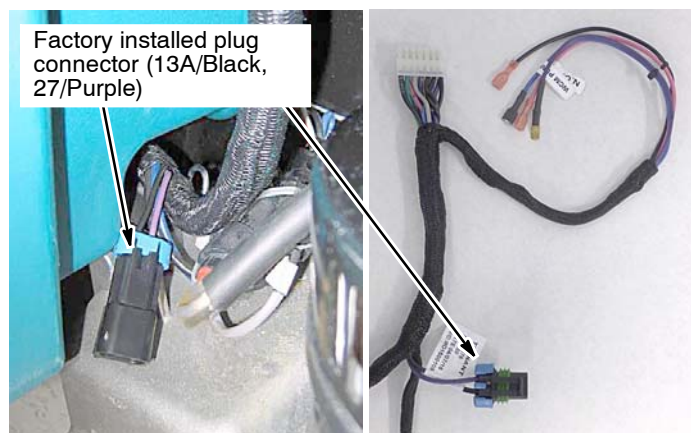
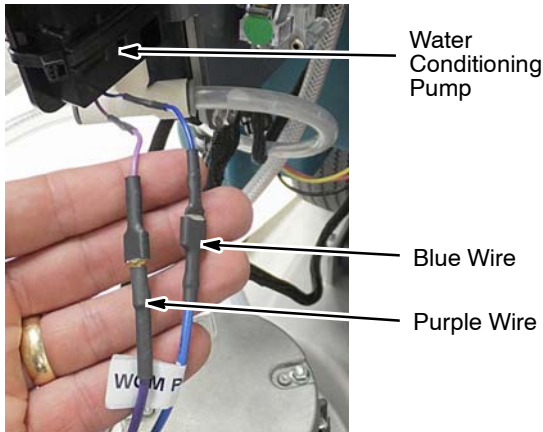
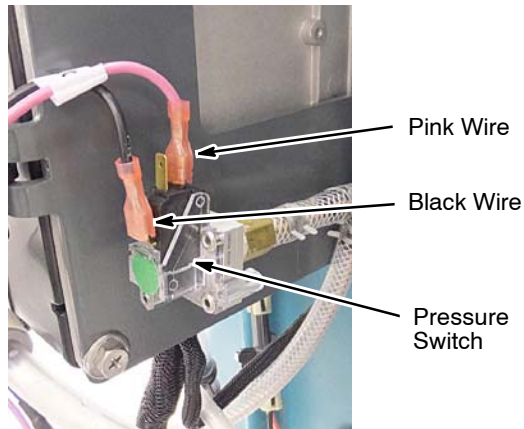


Fig. 28

3. Connect the purple and blue wires from the ec-H2O harness to the Water Conditioning Pump as shown (Figure 29).

**Fig. 29**

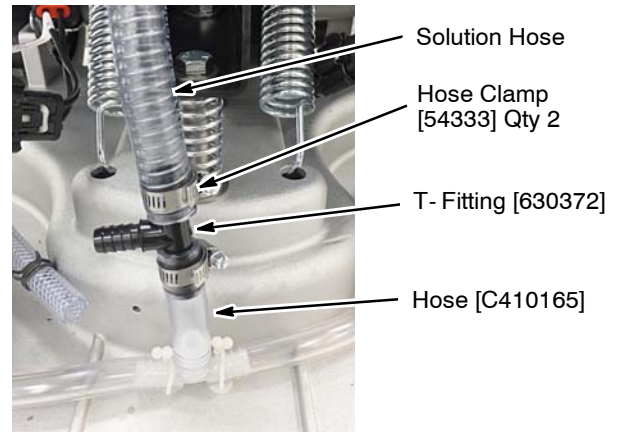
4. Connect the pink and black wires from the ec-H2O harness to the pressure switch as shown (Figure 30).

**Fig. 30**

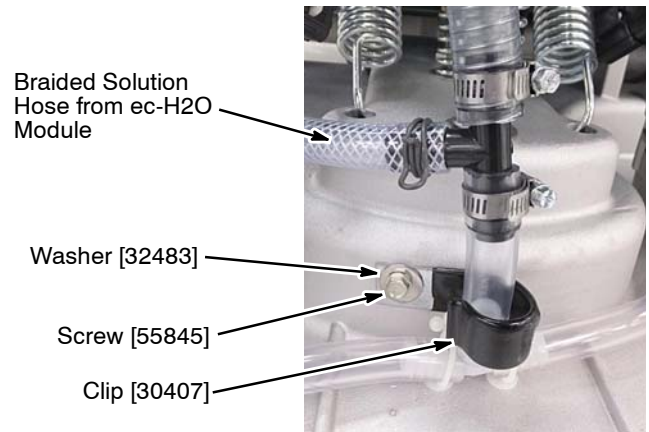
CONNECT THE ec-H2O SOLUTION HOSE TO SCRUB HEAD:

DISK MODEL:

1. Install T-Fitting to solution hose as shown (Figure 31).

**Fig. 31**

2. Connect the braided solution hose from the ec-H2O module to the T-Fitting and secure with solution hose with clip as shown (Figure 32).

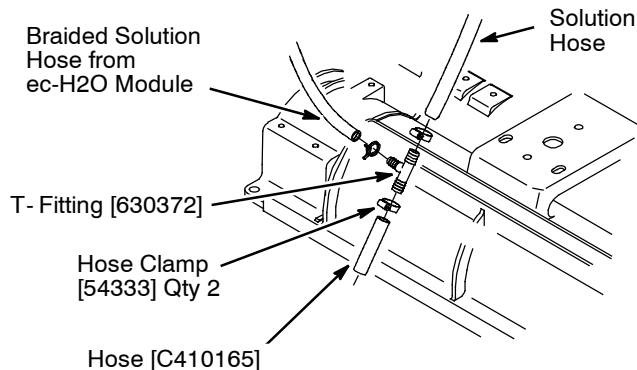
**Fig. 32**

CYLINDRICAL BRUSH MODEL:

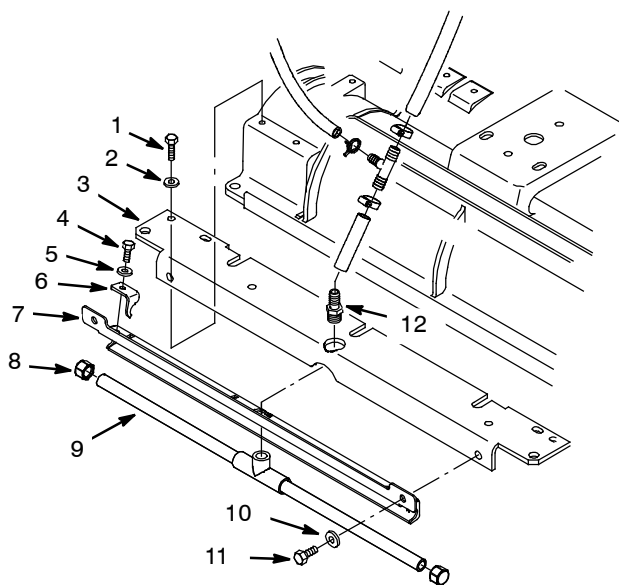
Spray Bar Kit required (not included):

- 9006743 - For 700mm Cylindrical Brush Model
- 9006744 - For 800mm Cylindrical Brush Model
- 9006745 - For 900mm Cylindrical Brush Model

1. Install T-Fitting to solution hose as shown (Figure 33). Connect the braided solution hose from the ec-H2O module to the T-Fitting.

**Fig. 33**

2. Install Spray Bar Kit as shown (Figure 34).

**SPRAY BAR KIT PARTS LIST**

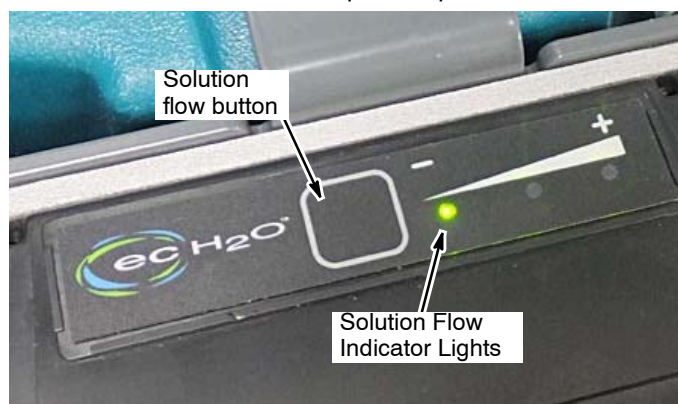
Ref	p/n.	Description	Qty.
1	76099	Screw, Hex, m8x1.25x25	4
2	01685	Washer, Flat, 0.3B 0.88, SS	4
3	1046020	Angle Bracket - 700mm Model	1
3	1046023	Angle Bracket - 800mm Model	1
3	1047642	Angle Bracket - 900mm Model	1
4	11635	Screw, Hex, m6x1.00.12, nl, ss	3
5	01684	Washer, Flat, 0.27B 0.69D .05, ss	3
6	1014673	Bracket, Bar, Spray	1
7	1014993	Bracket Wldt, Bar - 700mm Model	1
7	1014957	Spray Wldt, Bar - 800/900mm Models	1
8	1025580	Cap, Spray Bar	2
9	1046049	Spray Bar - 700mm Model	1
9	102576	Spray Bar - 800/900mm Models	1
10	01685	Washer, Flat, 0.3B 0.88, SS	2
11	12273	Screw, Hex, m8x1.25x20, nl, ss	2
12	64743	Fitting, Plstc, Str, Bm08/Pm06	1

Fig. 34**PROGRAM THE ec-H2O MODULE:****Set Machine Configuration:**

Refer to table for proper configuration.

1. Turn key to the on position.
2. To view the current machine configuration, press and hold the solution flow button. Release the button when **LEFT** solution flow indicator light turns on, approximately in 4 seconds (Figure 35). When the button is released, the solution flow indicators will blink the current machine configuration for 10 seconds (see Table). After the 10 second window, the lights will revert back to normal operation. Repeat step to re-enter program.

Attention: If you hold the solution flow button too long, you may enter the firmware mode. To exit from this mode, press the solution flow button and repeat step 2.



Solution Flow Indicator Lights (Machine Configuration)	Machine (ScrubHead Size)
★ ★ ●	T5/T5e/A5 (600/650mm)
● ● ★	T5/T5e/A5 (700/800mm)
★ ● ★	T7
★ ● ●	5680/5700/XP (900mm)
● ★ ●	5680/5700/XP (700mm/800mm)

Fig. 35

3. To change the machine configuration, repeat step 2. While the indicator lights are blinking (within the 10 second window), press the solution flow button to cycle through the machine configurations as shown in Table (Figure 35). Each press will advance to next setting. After selecting the desired setting, wait 5 seconds for module to save setting and revert back to normal operation.
4. Turn key to the OFF position.

CHECK THE ec-H2O NanoClean SYSTEM FOR PROPER OPERATION:

To ensure the ec-H2O NanoClean system is operating properly, perform the following.

1. Connect the cartridge by-pass tool, provided separately, to the two green hoses as shown. Route the clear discharge hose to the floor. The use of the cartridge by-pass tool is to prevent activating the ec-H2O water conditioning cartridge during the check process (Figure 36).



Fig. 36

2. Fill solution tank with cool clean water (less than 21°C/70°F). Do not add any conventional floor cleaning detergents, system failure may result.
3. Turn the key to the on position. Verify that the 4 LED's on the module flash on for one second and then turn off, followed by displaying the current flow rate setting (Figure 37).



Fig. 37

4. Press the ec-H2O system switch to the on position (Figure 38).
5. The ec-H2O system indicator light will turn on when the machine starts scrubbing (Figure 38).



ec-H2O System Indicator Light

Solid Green Light = Normal operation

Solid or blinking Red Light = System fault
Check all ec-H2O wire harness connections and refer to Service Manual.

Fig. 38

6. Operate the ec-H2O module in Manual Mode (See NOTE below). Verify that the ec-H2O system is putting water on the floor at the scrub head and at the By-Pass Tool hose.
7. Check all ec-H2O system hose connections for water leaks.

NOTE: To enter the module's Manual Mode, depress and hold the service switch for 20 seconds and release (Figure 39). The first and third green LEDs will alternate on and off indicating that you are in the Manual Mode and the ec-H2O pump will be operating. To exit the Manual Mode, depress the Service Switch for one second and release. The module will also exit the manual mode automatically after 7 minutes.

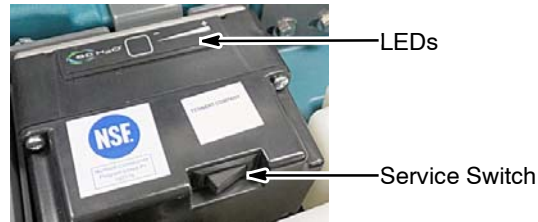


Fig. 39

8. After checking machine for proper operation or possible leaks, drain all tanks and vacuum out any residual water. With the ec-H2O module in Manual Mode, attach the hose from the By-pass Tool to a vacuum unit and vacuum out any remaining water from module.
9. Exit the Manual Mode and remove the Cartridge By-pass Tool from machine. To exit Manual Mode, depress the Service Switch for one second and release.

INSTALL ec-H2O WATER CONDITIONING CARTRIDGE:

1. Check the manufacture date on the Water Conditioning Cartridge before installing. The shelf-life of an un-installed cartridge is one year from manufacture date. Discard cartridge if shelf-life has expired. For replacement Cartridge, order p/n 9013646.
2. Fill in the installation date on the Water Conditioning Cartridge label (Figure 40).



Fig. 40

3. Remove the two plugs from cartridge. Press the gray collars inward and pull plugs outward to remove (Figure 41). Position the cartridge in the cartridge holder bracket as shown and connect green hoses to cartridge (Figure 41). Make sure the hose connectors are fully inserted.



Fig. 41

4. Re-install the front shroud (Figure 42).

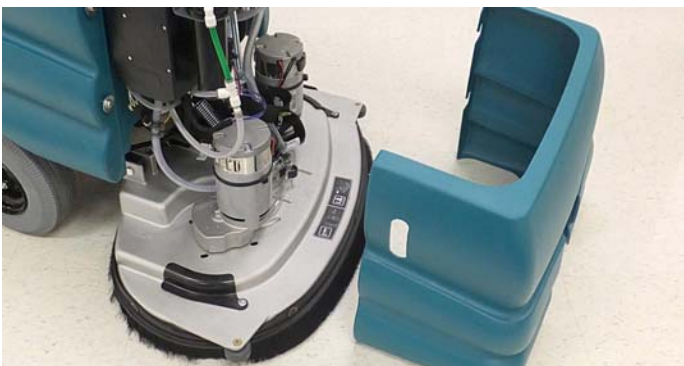


Fig. 42

Set Timer for Water Conditioning Cartridge:

Carefully read and understand the following steps before performing procedure.

1. Turn key to the on position (Figure 43).
2. Press and hold the service switch on the module for 10 seconds. After releasing the service switch, the three solution flow indicator lights will begin to (ripple) move back and forth.

Attention: If you hold the service switch too long, the 1st and 3rd lights will alternate on and off. If this happens, press and release the service switch and repeat step 2.

3. Within 5 seconds after releasing the service switch, while the three indicator lights are still moving back and forth (ripple), press the quickly release the solution flow button located on ec-H2O module.
4. The indicator lights will then blink three times to confirm timer has been set. Repeat process if the three indicator lights do not blink three times.

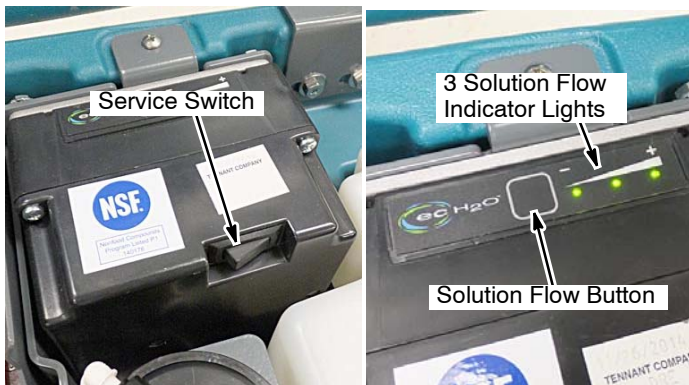


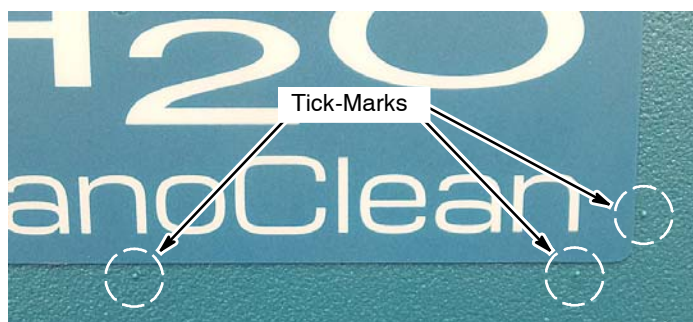
Fig. 43

INSTALL ec-H2O NanoClean LABELS

Apply the new ec-H2O NanoClean labels on machine as described below (Figure 44).



ec-H2O NanoClean Label [1216520] Qty2

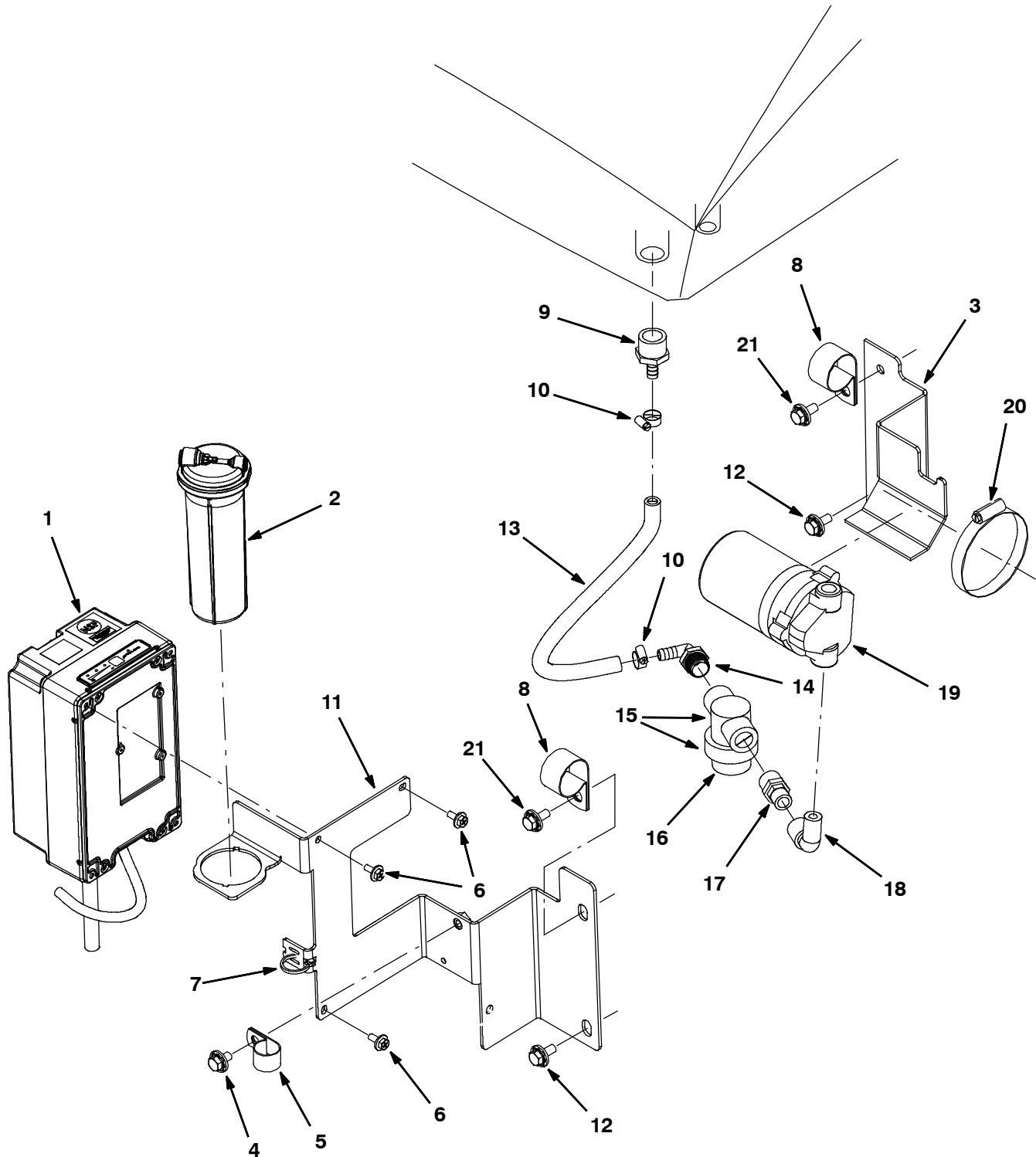


To properly position labels, align label with tick-marks in rotomold tank.



Attention, Solution Fill, ec-H2O Label [1050003]

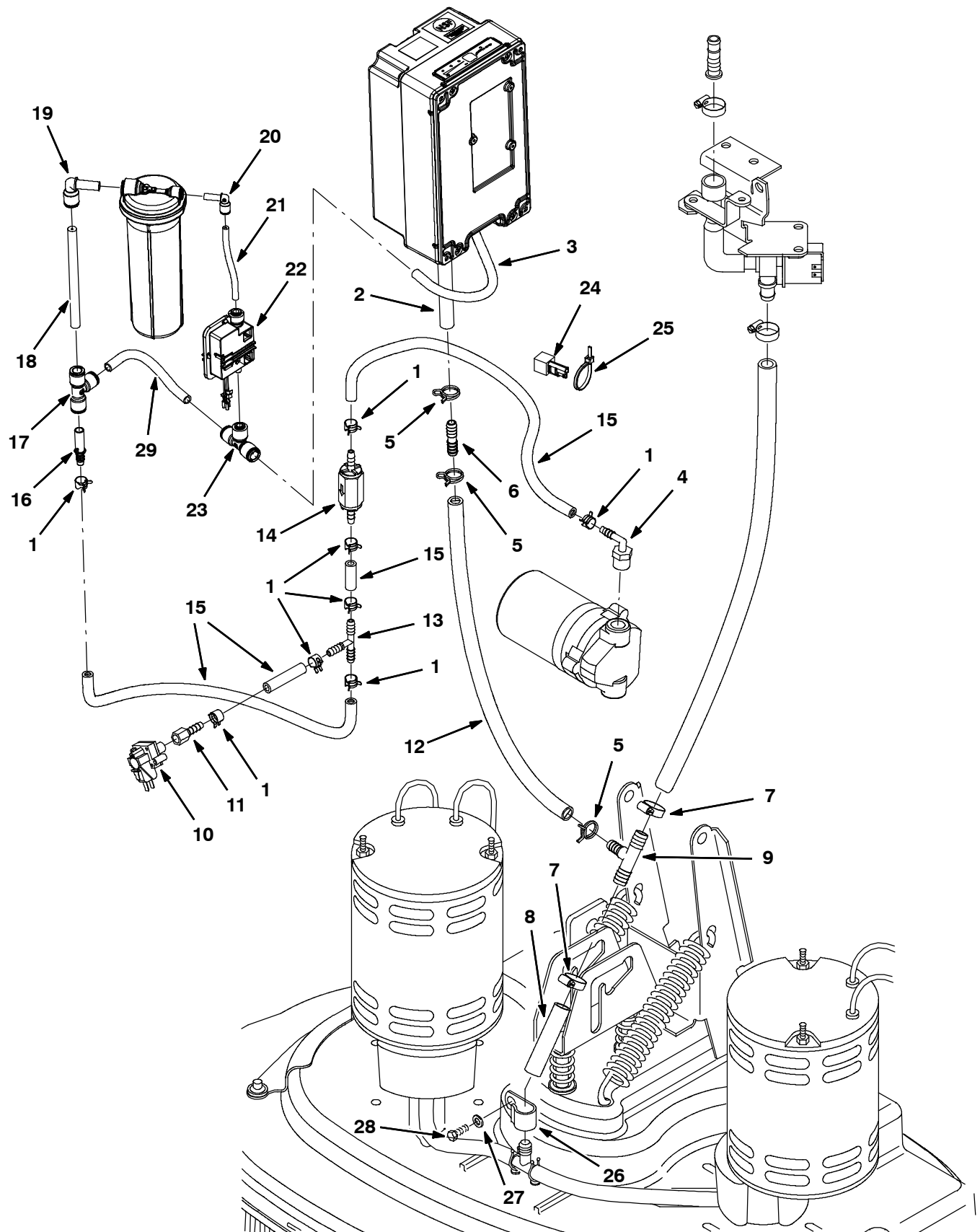
Fig. 44

ec-H2O NanoClean Affiliate Kit Parts

ec-H2O NanoClean Affiliate Kit Parts

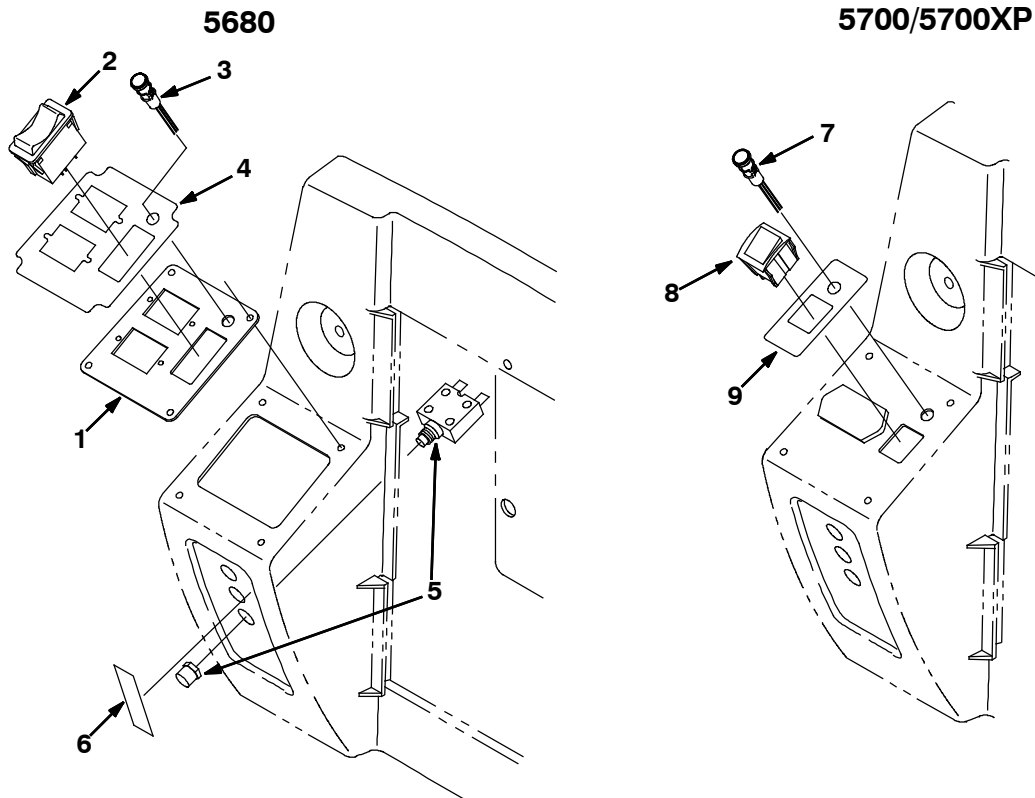
Ref.	Part No.	Description	Qty.
1	9011810	Module Kit, Replmt [Ec- H2o, B 02] (See Breakdowns)	1
2	9013646	Cartridge, Ec- H2o Nanoclean Wcm, 270ml	1
3	1002603	Bracket, Pump, Soltn	1
4	1072823	Screw, Hex, M8 X 1.25 X 16, Ss, Sems	1
5	69234	Clamp, Cable, Stl, 1.00d X 0.75w, 1hole	1
6	1034731	Screw, Hex, M6 X 1.00 X 16, Sems, Ss	3
7	130773	Tie, Cable, Nyl, 11.4l .19w 3.0 Max D	2
8	53466	Clamp, Cable, Stl, 1.50d X 1.00w, 1hole	2
9	73467	Fitting, Plstc, Str, Bm06/Pm12, Nyl	1
10	43844	Clamp, Hose, Wormdrive, 0.25- 0.62d, .31w	2
11	1216007	Bracket Assy, Mtg, Ec- H20 Module [5680]	1
12	1020341	Screw, Hex, M8 X 1.25 X 20, Ss, Sems	2
13	1006400	Hose, Afrmkt, Pvc, Brd, 0.38id, 03ft, Clr	1
14	03394	Fitting, Plstc, E90, Bm06/Pm08	1
15	1005388	Filter, In- Line, Pf08/Pf08 080mesh 02.6l	1
16	1005304	Screen, Fltr, 80 Mesh, Ss	1
17	611009	Fitting, Plstc, Str, Pm06/Pm08, Reducer	1
18	1005318	Fitting, Plstc, E90, Pf06/Pm06, Nyl	1
19	1042495	Pump, Soltn, Ele, 24vdc, 35psi	1
20	43555	Clamp, Hose, Wormdrive, 2.50- 3.50d, .50w	1
21	1072628	Screw, Hex, M8x1.25x25, Ss. Sems	2

ec-H2O NanoClean Affiliate Kit Parts - Continued

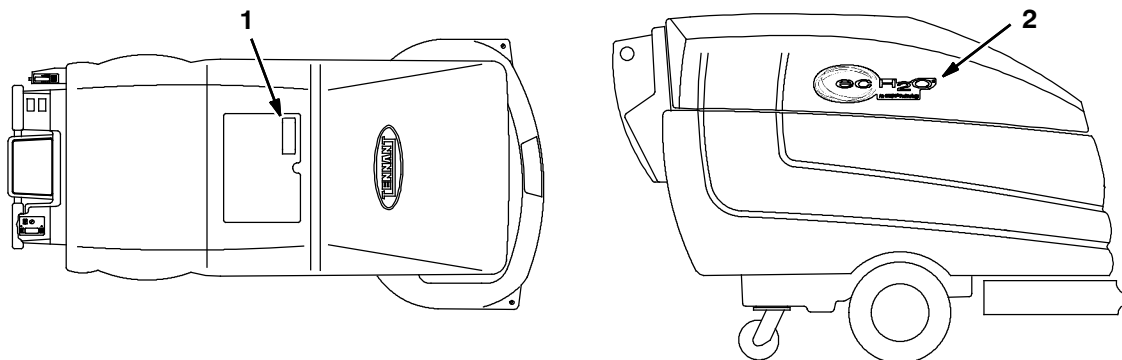


ec-H2O NanoClean Affiliate Kit Parts - Continued

Ref.	Part No.	Description	Qty.
1	603654	Clamp, Hose, Ear, .44d [Ctb]	8
2	1208526	Hose, Molded, Bm08/Bm06	1
3	1006415	Hose, Afmkt, Pvc, Clr, 0.25id, 03ft	1
4	150417	Fitting, Plstc, E90, Bm04/Pm06	1
5	613735	Clamp, Hose, Wir, .40 - .42, Yel	3
6	20950	Fitting, Plstc, Str, Bm06/Bm06	1
7	54333	Clamp, Hose, Wormdrive, 0.31- 0.88d, .31w	2
8	1015071	Hose, Afmkt, Pvc, Clr, 0.50id, 01ft	1
9	630372	Fitting, Plstc, Tee, Bm06/Bm08/Bm08, Br	1
10	1044415	Switch, Press, 18psi, Pm02	1
11	150520	Fitting, Brs, Str, Bm04/Pf02	1
12	1006400	Hose, Afmkt, Pvc, Brd, 0.38id, 03ft, Clr	1
13	150713	Fitting, Plstc, Tee, Bm04/Bm04/Bm04	1
14	1216879	Valve, Check, 0005psi Bm04/Bm04	1
15	9014210	Hose, Afmkt, Pvs, Brd .25id .44od, 05ft	1
16	1212857	Fitting, Plstc, Str, Qm06/Bm04	1
17	1212573	Fitting, Plstc, Tee, Qf06/Qf06/Qf06	1
18	9014146	Hose, Afmkt, Pvc, 0.06id .38od, 05ft	1
19	1215186	Fitting, Plstc, E90, Qf06/Qm06	1
20	1214339	Fitting, Plstc, E90, Qfo4/Qm04	1
21	9014147	Hose, Afmkt, Pvc, 0.06id .25od, 05ft	1
22	1216973	Pump Assy, Dispenser	1
23	1212855	Fitting, Plstc, Tee, Qf04/Qf06/Qf06	1
24	1040868	Capacitor, Plug [.01 Uf, 200v]	1
25	130773	Tie, Cable, Nyl, 11.0l, .14w, 3.0 Max. D	1
26	30407	Clip, Keeper, Open	1
27	32483	Washer, Flat, 0.25, Sae (Disk Model)	1
28	55845	Screw, Hex, M5 X 0.80 X 16, Fmg (Disk Model)	1
29	1014987	Hose, Afmkt, Pvc, Clr, 0.25id, 01ft (Disk Model)	1

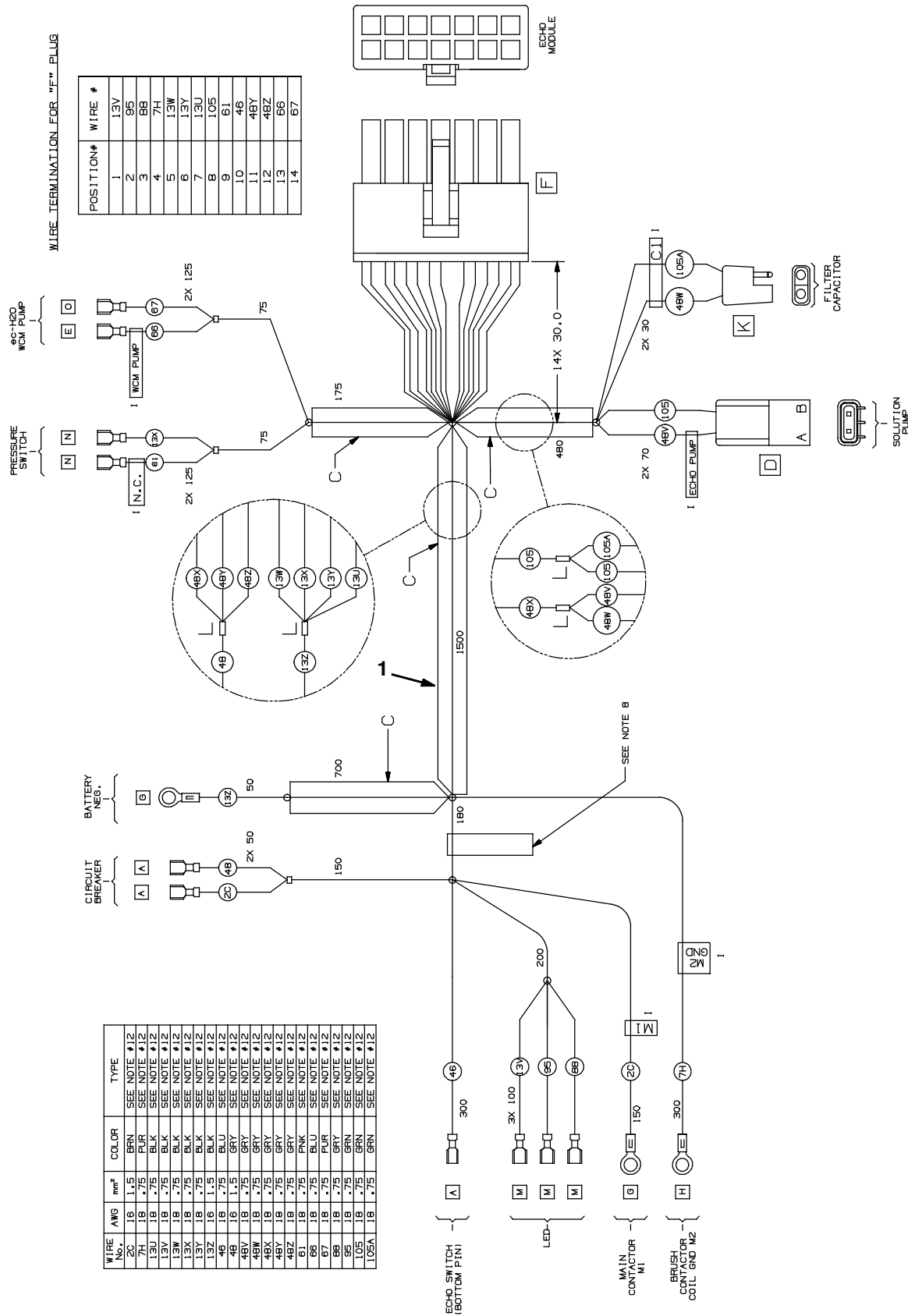
ec-H2O NanoClean Affiliate Kit Parts - Continued

Ref.	Part No.	Description	Qty.
1	1041757	Plate, Cover, Ele [5680]	1
2	397889	Switch, Rocker, Dpdt, On / None / On [5680]	1
3	1041822	Light, Led, .312d, 5 Volt [Tri- Color]	1
4	1050012	Label, Switch, <i>ec- H2O</i> [5680]	1
5	383721	Circuitbreaker, 10.0a, Resetable [5680]	1
6	1050015	Label, Circuitbreaker, <i>ec- H2O</i> [5680/5700]	1
7	1050016	Label, Switch, <i>ec- H2O</i> [5700]	1
8	363607	Switch, Rocker, Dpdt, On / None / On [5700]	1
9	1041822	Light, Led, .312d, 5 Volt [Tri- Color] [5700]	1

ec-H2O NanoClean Affiliate Kit Parts - Continued

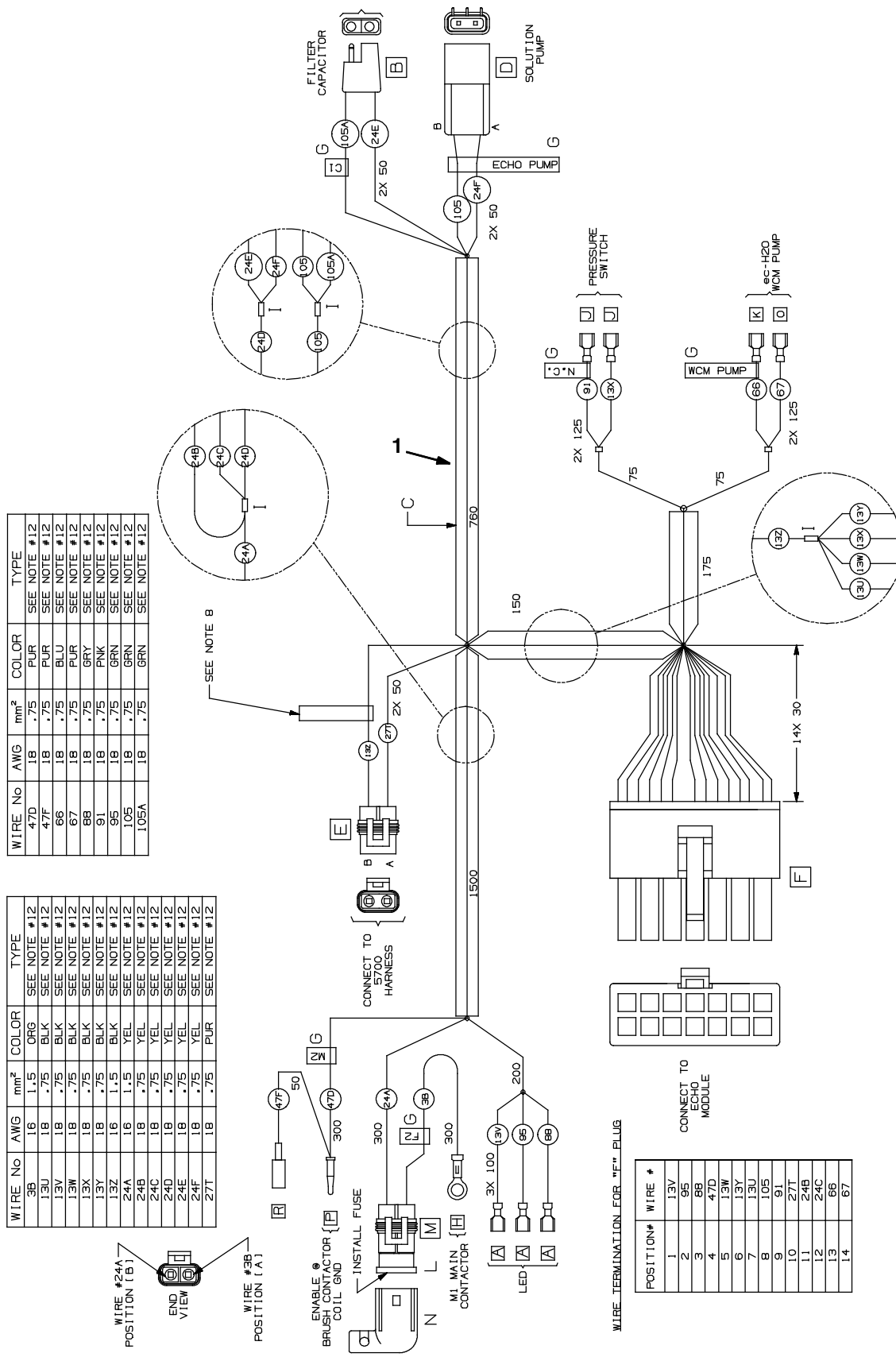
Ref.	Part No.	Description	Qty.
1	1050003	Label, User, Attention, <i>ec- H2O</i>	1
2	1216520	Label, Logo [Ech2o Nano]	2

5680 ec-H2O NanoClean Wire Harness



Ref.	Part No.	Description	Qty.
1	1074377	Harness Assy, Wire [5680 Ec- H2o G2]	1

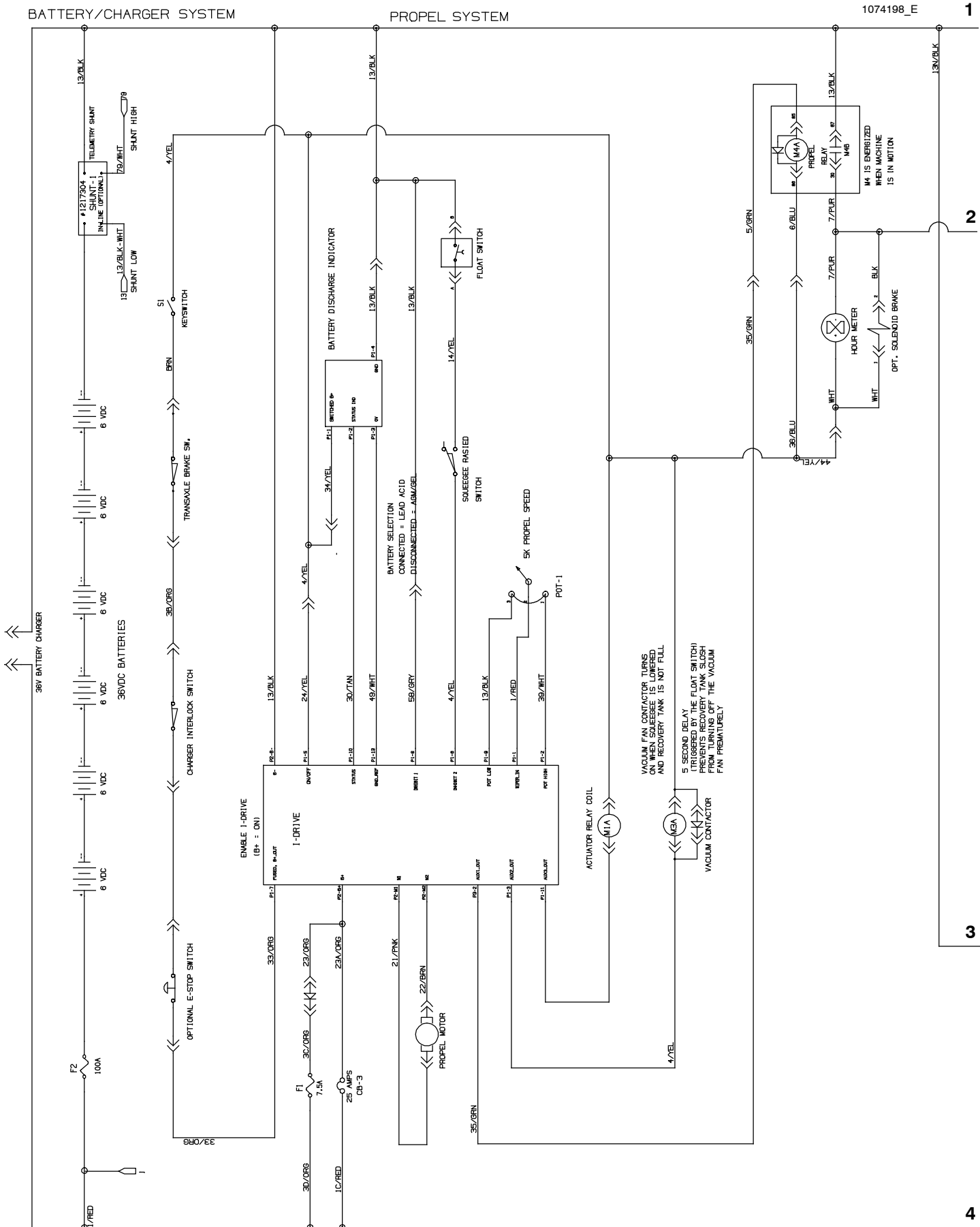
5700/5700XP ec-H2O NanoClean Wire Harness



Ref.	Part No.	Description
1	1074379	Harness Assy, Wire [5700 Ec- H2o G2]

Qty.
1

5680 ELECTRICAL DIAGRAM



5680 ELECTRICAL DIAGRAM

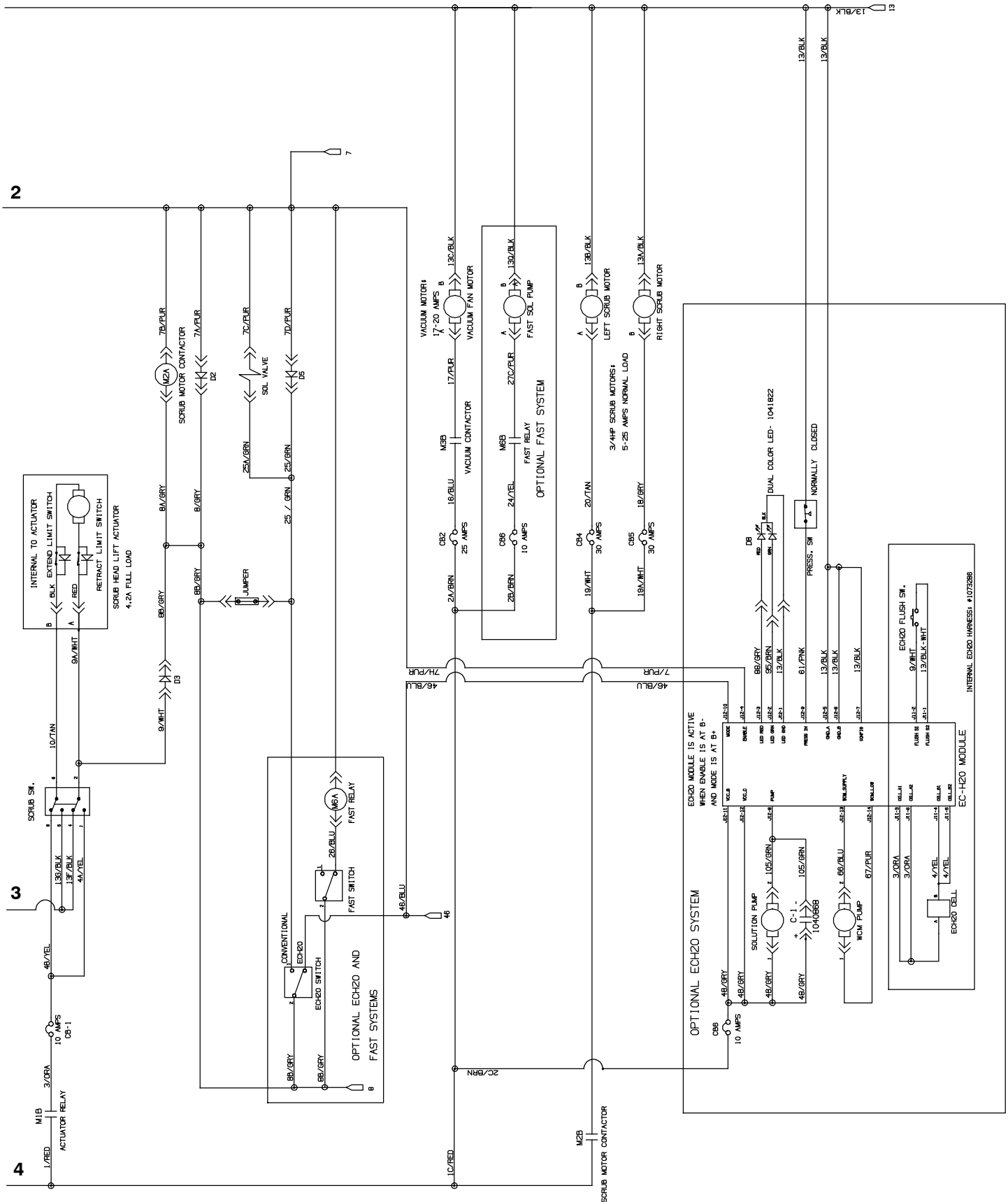
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SCRUB AND RECOVERY SYSTEMS

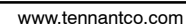
ECH20 MODULE MODULE

1074198_E

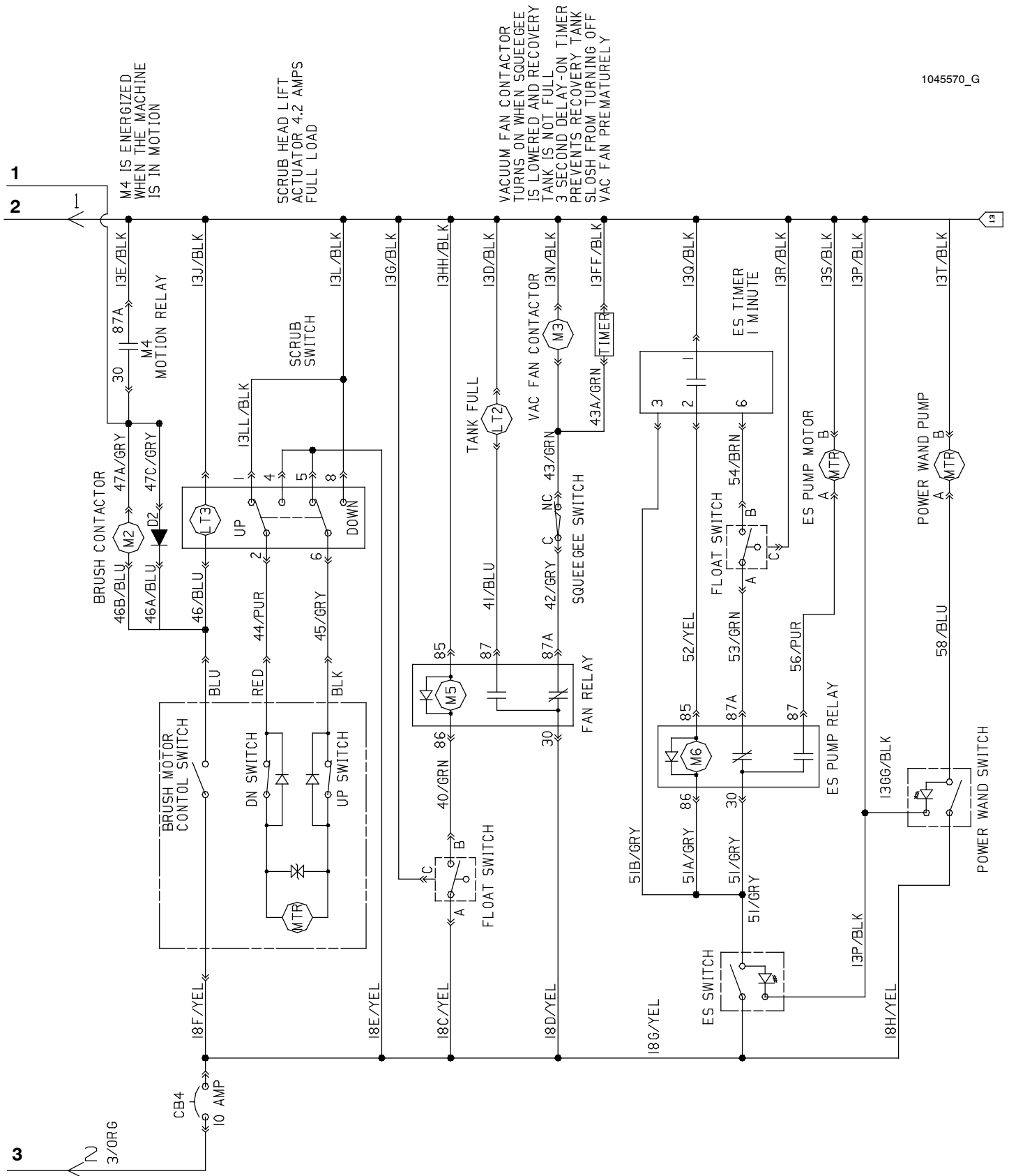
2



1045570 G



5700 ELECTRICAL DIAGRAM



1045570_G

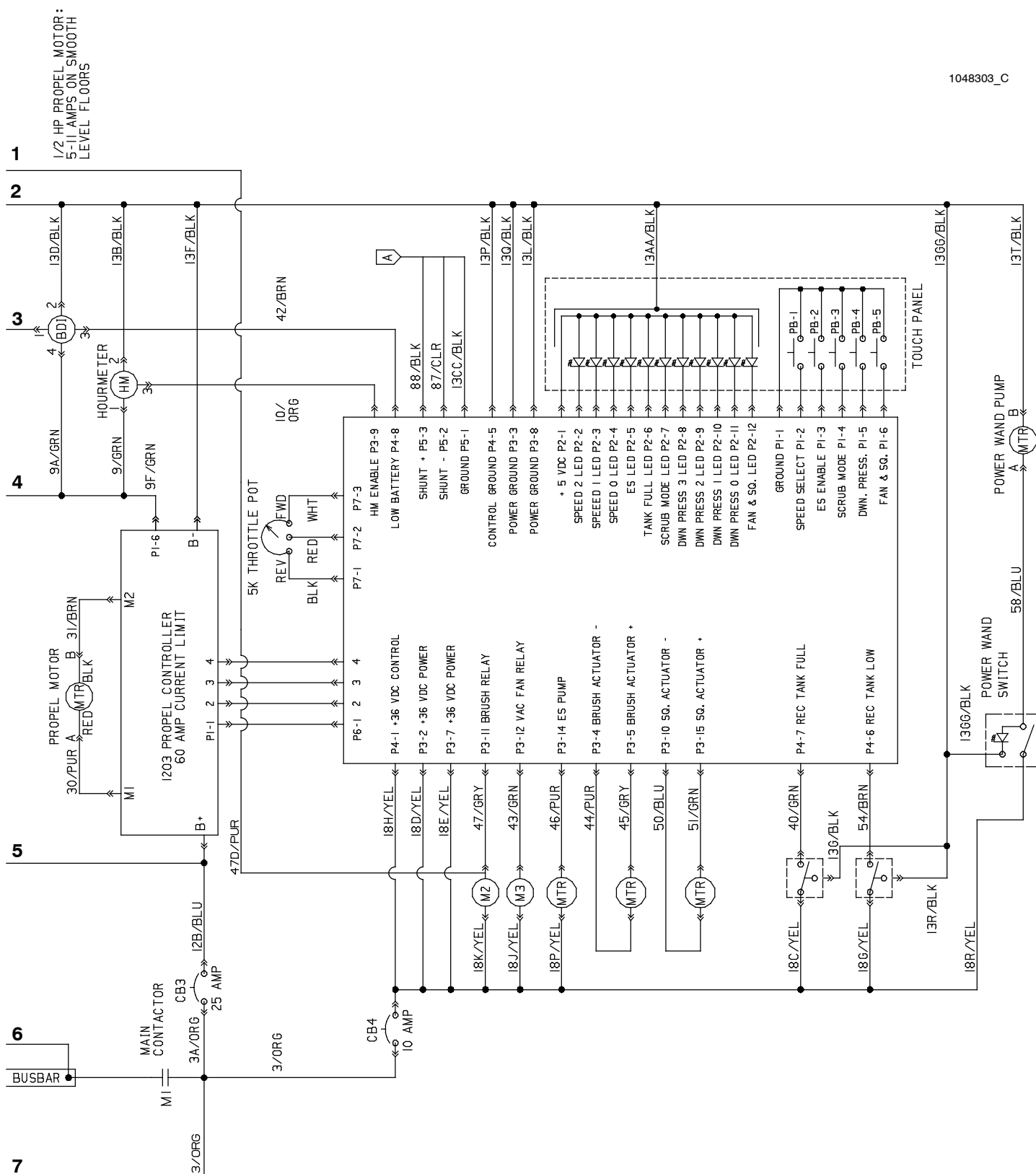
VACUUM MOTOR:
17-20 AMPS

The diagram illustrates the electrical system for the EC-H2O control board. It features a 36V battery charger connected to a busbar. The busbar supplies power to various components, including a brush contactor, a fuse, and a key switch. The key switch controls the EC-H2O control board, which in turn controls the EC-H2O flush switch, EC-H2O mod. transformer, and EC-H2O pressure switch. The diagram also shows the internal components of the EC-H2O control board, including the EC-H2O flush switch, EC-H2O mod. transformer, and EC-H2O pressure switch.

Wiring Details:

- 36 VOLT BATTERY CHARGER:** Connected to the busbar via a 10 AMP fuse.
- BUSBAR:** Supplies power to the brush contactor, fuse, and key switch.
- BRUSH CONTACTOR:** Controls the EC-H2O control board.
- FUSE:** 10 AMP, 60C/YEL.
- KEY SWITCH:** Controls the EC-H2O control board.
- EC-H2O CONTROL BOARD:**
 - EC-H2O FLUSH SWITCH:** Controls the EC-H2O mod. transformer.
 - EC-H2O MOD. TRANSFORMER:** Controls the EC-H2O pressure switch.
 - EC-H2O PRESSURE SWITCH:** Controls the EC-H2O mod. transformer.
- Other Components:**
 - RIGHT SCRUB MOTOR:** 20/35 AMPS, 62B/BLU.
 - LEFT SCRUB MOTOR:** 20/35 AMPS, 64B/BLU.
 - SOLUTION VALVE:** 48A/GRN.
 - SOLUTION PUMP:** 48B/GRN.
 - WCM PUMP:** 66/BLU.
 - EC-H2O MOD. TRANSFORMER:** 48B/GRN.
 - EC-H2O PRESSURE SWITCH:** 48B/GRN.
 - EC-H2O FLUSH SWITCH:** 48B/GRN.
 - EC-H2O MOD. TRANSFORMER:** 48B/GRN.
 - EC-H2O PRESSURE SWITCH:** 48B/GRN.
 - EC-H2O FLUSH SWITCH:** 48B/GRN.
 - EC-H2O MOD. TRANSFORMER:** 48B/GRN.
 - EC-H2O PRESSURE SWITCH:** 48B/GRN.

5700XP ELECTRICAL DIAGRAM



1048303_C