

NOTICE

These instructions are for replacing the three existing thermostats with a single new solid-state thermostat.

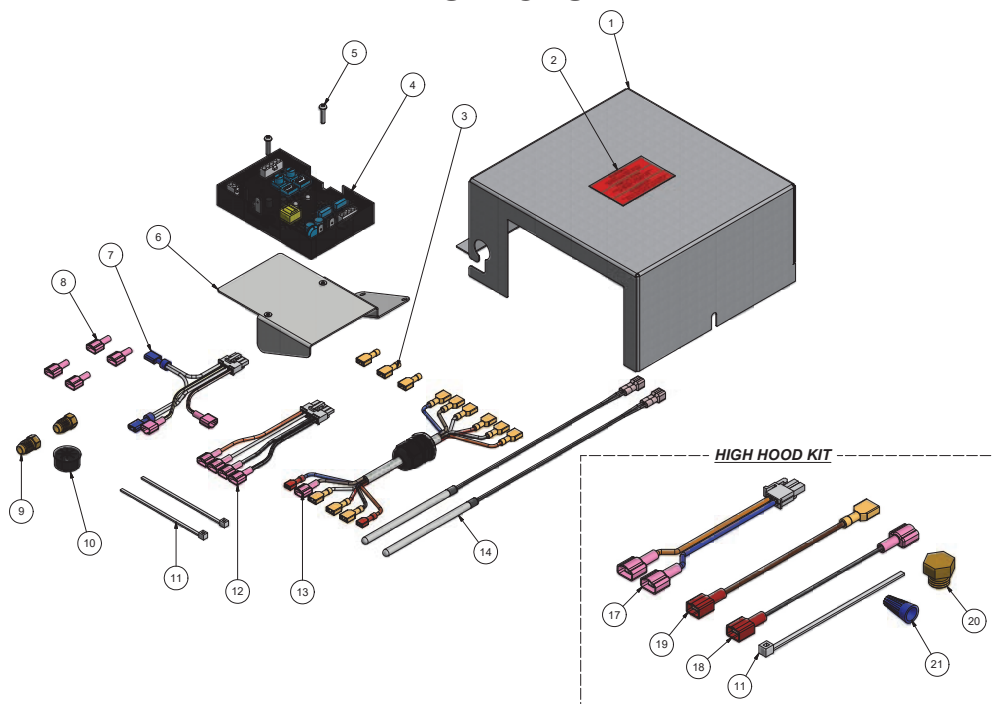
PREPARATION



Disconnect electrical power at the breaker or disconnect switch and lockout/tagout in accordance with procedures and codes.

Remove the strainer and drain stopper and completely drain the wash tank.

PARTS INCLUDED



TOOLS REQUIRED

- Adjustable Wrench
- Phillips Screwdriver
- Small Bucket (~1 gallon)
- 5/16" Nut Driver
- Wire Crimper
- Flathead Screwdriver
- Step Stool
- Wire Stripper
- Needle Nose Pliers
- 3/8" Wrench
- 7/16" Wrench
- 5/8" Wrench
- Box Cutter
- Drill
- 1/4" Drill Bit

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Cover, Wash Tank Heater	05700-004-22-15
2	1	Decal, Warning-Disconnect Power	09905-100-75-93
3	3	Terminal, Female	05940-200-58-00
4	1	Thermostat, Elan Electric	06685-004-17-27
5	2	Screw, 6-32 x 5/8"	05305-011-39-85
6	1	Thermostat Mounting Bracket Assembly	05700-004-22-17
7	1	Harness, 4-Pin, 4-Wire	05700-004-22-18
8	4	Terminal, Male	05940-200-74-00
9	2	Fitting, 1/4" Brass Nut/Sleeve	05310-924-02-05
10	1	Grommet, 7/8"	05975-200-40-00
11	3	Zip-tie, 4"	05975-602-01-16
12	1	Harness, 5-Pin Connector, 4-Wire	05700-004-22-19
13	1	Harness, 7-Conductor, 6-Wire	05700-004-22-29
14	2	Thermistor Probe, 4"	06685-004-17-26
15	1	Schematic (Not Shown)	09905-004-22-10
16	1	Instructions, Thermostat Retrofit (Not Shown)	07610-004-22-11
17	1	Harness, 2-Pin Connector, 2-Wire	05700-004-23-19
18	1	Harness, Control Relay to 6-Conductor Cable 1	05700-004-23-30
19	1	Harness, Control Relay to 6-Conductor Cable 2	05700-004-23-31
20	1	Plug, Brass	05700-011-73-73
21	3	Wire Nut, Blue Metal	05945-111-01-00
22	1	Instructions, HH Thermostat Retrofit (Not Shown)	07610-004-22-18

PANEL & COVERS 1. Lift up the front dress panel and pull out gently to remove.

Set the panel to the side and keep the hardware. It will be re-installed later.

Set the rinse heater cover to the side and keep the hardware. It will be re-installed later.

Discard the wash heater cover but keep the hardware. A new cover will be installed later.



2. Remove both wash and rinse heater covers using a 3/8" wrench.

Rinse Heater Cover



Wash Heater Cover

CONTROL BOX SECTION

3. Remove the top of the control box using a phillips screwdriver.

See page 15 for a layout of control box components.



6-conductor cable from the kit is used in this step.

4. Get the gray 6-conductor cable from the kit. Notice that one end has all female terminals (this is the bottom portion) and the other end has one male and five females (this is the top portion). Keep the strain relief near the bottom portion of the cable.

5. Route the cable from the top of the machine and trail it down to the wash heater area.

Grommet from the kit is used in this step.

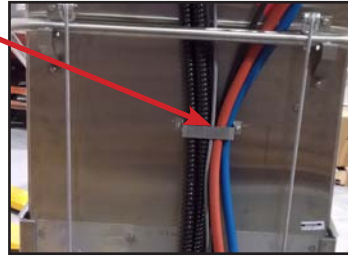
6. Pop-out a black blank on the back of the control box and insert a new grommet from the kit.

7. Insert the top portion of the cable (with the male and female terminals) through the grommet inserted in the previous step (leave ~12" in the control box).

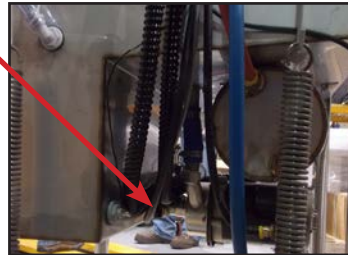


CONTROL BOX SECTION

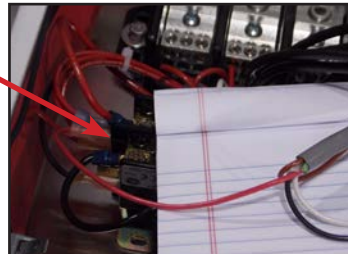
8. Run the cable down the back of the machine. Make sure to run the wire under the bar and bracket in the back so it's not hanging loose.



9. Route the cable between the wash tank and rinse booster, underneath the machine.



10. Once the cable is in the wash tank heater area, route the cable over the high-limit switch.
11. In the control box, attach the red wire from the 6-conductor cable to open tab on the L2 side of the wash motor contactor (R3).



See page 15 for a layout of control box components.

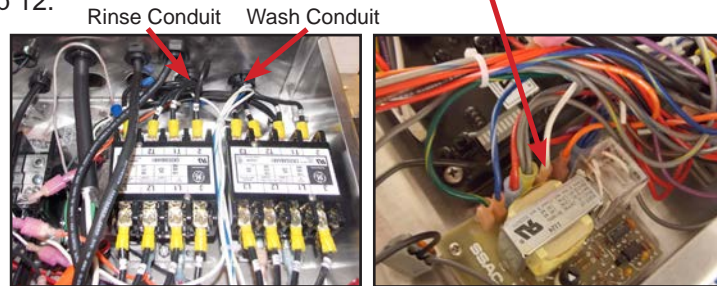
12. Locate and remove the two white wires in the single terminal on the water level controller (WL) at the #1 position. Cut the terminals off of the two white wires.



See page 15 for a layout of control box components.

**CONTROL BOX
SECTION**

13. Trace the two white wires to the back of the control box. On the white wire that enters the wash conduit (from the front of the box, it is the conduit on the far right), strip and crimp a female terminal onto the end of it and then connect it back to the water level controller (WL) at the #1 position where it was removed in Step 12.



14. Trace the other white wire that was removed in Step 12 to the rinse conduit (from the front, it is the conduit to the immediate left of the wash conduit). Strip and crimp a male terminal onto the white wire and then connect it to the white wire from the 6-conductor cable.

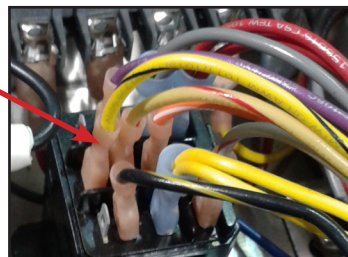


15. Locate the control relay (R4). Cut and remove the zip-tie closest to the control relay that is bundling all the wires.



See page 15 for a layout of control box components.

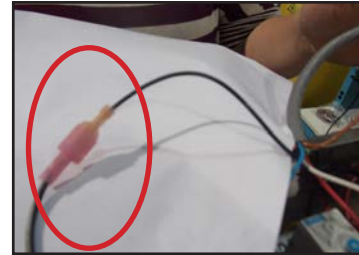
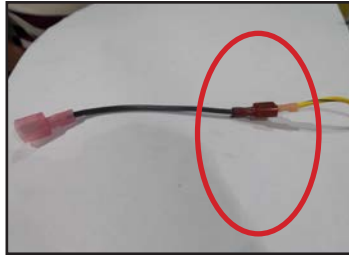
16. Disconnect the yellow/black wire from the #2 location on the control relay (R4) and replace it with the blue wire from the 6-conductor cable.



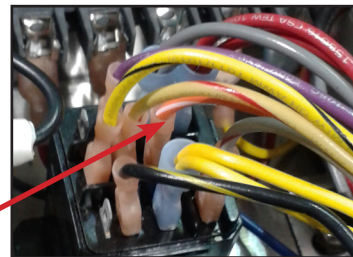
See page 15 for a layout of control box components.

**CONTROL BOX
SECTION**

17. Connect the yellow/black wire removed in Step 16 to the black jumper wire from the kit. Then connect the other end of the black jumper wire to the black wire from the 6-conductor cable.

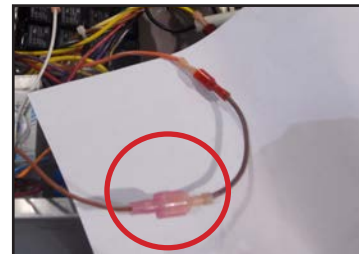
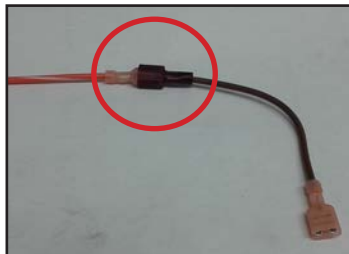


18. Disconnect the orange/white wire from the #8 location on the control relay (R4) and replace it with the orange wire from the 6-conductor cable.



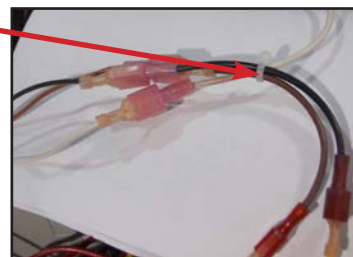
See page 15 for a layout of control box components.

19. Connect the orange/white wire removed in Step 18 to the brown jumper wire from the kit. Then connect the other end of the brown jumper to the brown wire from the 6-conductor cable.



Brown jumper wire from the kit is used in this step.

20. Zip-tie the brown, black, and white wires together.



Zip-tie from the kit is used in this step.

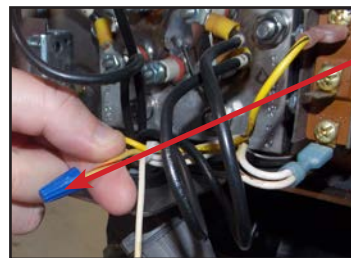
21. Replace the control box top using a phillips screwdriver.

RINSE BOOSTER SECTION

22. Place a bucket under the booster.
23. Find the thermostat farthest to the left on the booster tank. Disconnect the yellow/red and white wires from the thermostat.



24. Cut the ring terminal off of the yellow/red wire and then attach a wire nut to the exposed end.



Wire nut from the kit is used in this step.

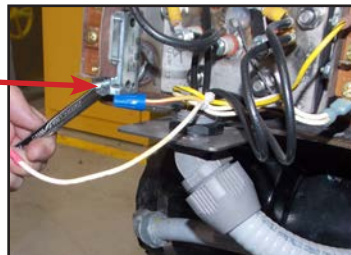


WARNING! To prevent burns, make sure the machine has been off long enough for the water to cool before draining the booster tank!

NOTICE

If Steps 25 and 26 are done rapidly, minimal water will drain from the booster tank.

25. Get the brass plug from the kit and have it ready. Use a 7/16" wrench on the fitting behind the thermostat. After the fitting is loosened, pull out on the thermostat until the probe is removed from the wash tank.



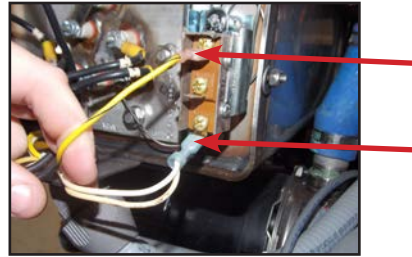
26. Quickly insert the brass plug into the hole where the thermostat was. Tighten the plug with a 5/8" wrench.



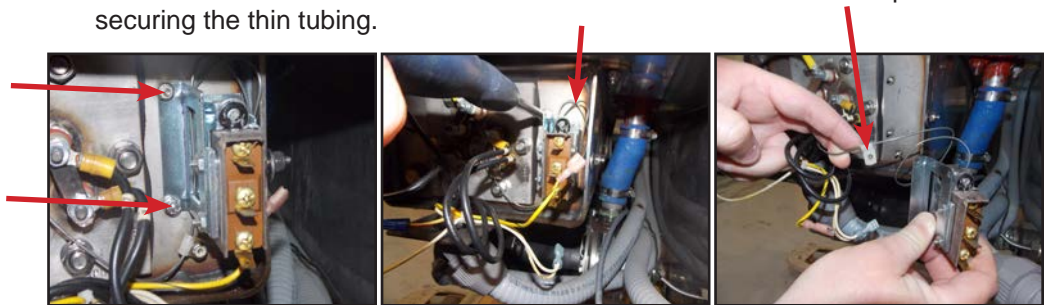
Brass plug from the kit is used in this step.

RINSE BOOSTER SECTION

27. Find the thermostat on the far-right of the booster tank. Disconnect the yellow/black wire and the white wires from the thermostat.



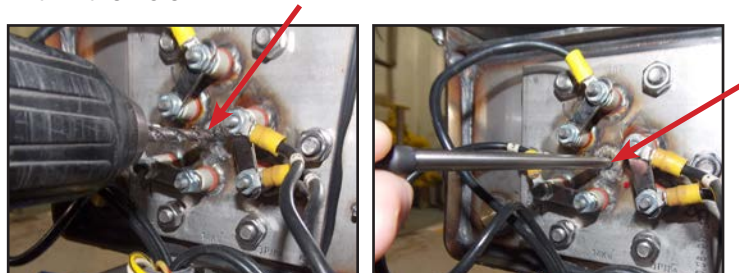
28. Using a 5/16" nut driver, remove the two nuts securing the thermostat bracket. Be careful with the thin tubing coiled behind the thermostat as you remove the bracket and thermostat from the studs. Also remove the P-clamp that is securing the thin tubing.



29. Remove the probe in the thermowell located in the center of the heater elements by using a box cutter to slice around the edges of the silicone and then pulling the existing probe out. Remove any accessible silicone.



30. Insert the rinse probe into the thermowell from Step 29. If the probe will not fit due to remaining silicone, very carefully use a 1/4" drill bit to remove any silicone within the hole.



Thermistor probe from the kit is used in this step.

RINSE BOOSTER SECTION

31. Slide the probe all the way into the thermowell.



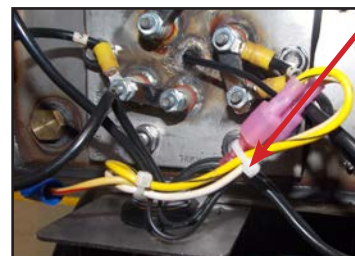
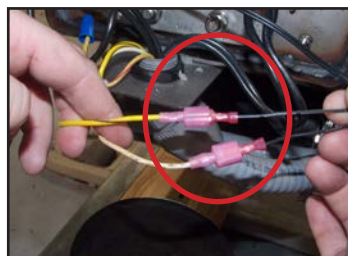
Terminal from the kit is used in this step.

32. On the yellow/black wire disconnected in Step 27, cut-off the female terminal and then strip and crimp a male terminal from the kit onto the end of the wire.
33. On the white wire disconnected in Step 27, cut-off the blue female terminal. Remove and discard the white jumper that went to the thermostat from Step 23. Strip and crimp a male terminal to the remaining white wire.



Terminal from the kit is used in this step.

34. Connect the yellow/black wire to the black/white wire from the rinse probe. Connect the white wire to the black wire from the rinse probe. Use a zip-tie to gather the wires.



Zip-tie from the kit is used in this step.

Use cover and hardware removed in Step 2.

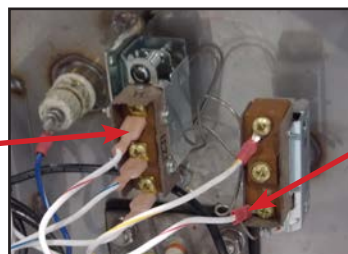
35. Verify that the probe is still fully inserted into the thermowell. Re-attach the rinse heater cover with a 3/8" wrench.

WASH TANK SECTION



WARNING! Make sure the drain stopper has been removed and the wash tank drained before proceeding!

36. Disconnect the white/red wire from the wash thermostat as well as from the high-limit switch. Remove the wire completely and discard.



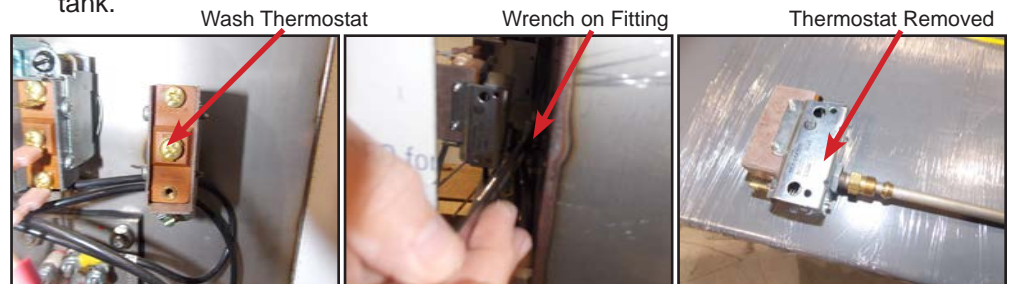
WASH TANK SECTION

Terminal from the kit is used in this step.

37. Disconnect the white/yellow wire from the wash thermostat.



38. Cut the ring terminal off of the white/yellow wire. Strip and crimp a female terminal to the white/yellow wire.
39. Use a 7/16" wrench on the fitting behind the wash thermostat. After fitting is loosened, pull out on the thermostat until the probe is removed from the wash tank.



40. Slide a 1/4" brass fitting from the kit onto the new wash probe that is included in the kit.

Brass fitting from the kit is used in this step.

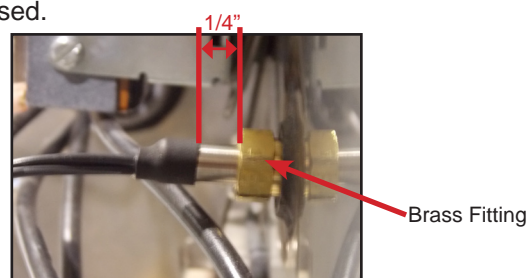
Thermistor probe from the kit is used in this step.



41. Slide the probe into the hole the same way the wash thermostat came out.



42. Tighten 1/4" brass fitting on probe with a 7/16" wrench, making sure to leave 1/4" of the probe exposed.

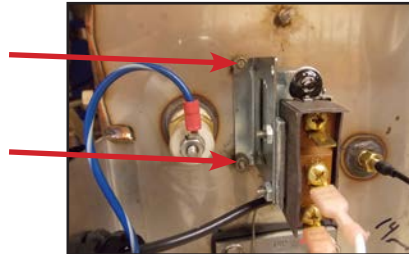


A bracket fits over the probe in a later step, so be sure that only 1/4" of the probe is exposed or the bracket will not fit correctly.

**WASH TANK
SECTION**

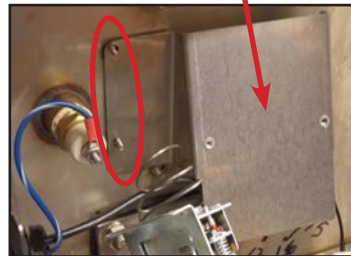
Keep hardware!

43. Using a 5/16" nut driver, remove the two nuts securing the high-limit switch bracket (keep the nuts to re-attach later). Be careful with the thin tubing coiled behind the high-limit switch as you remove the bracket and switch from the studs.



44. Place the new thermostat mounting bracket from the kit onto the two studs where the high-limit switch was removed.

Thermostat mounting bracket from the kit is used in this step.

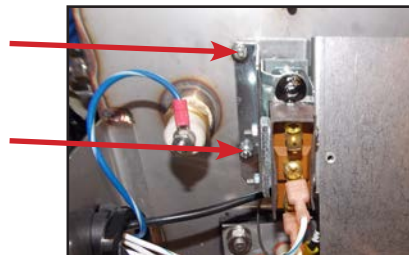


45. Reposition the coil of thin tubing on top of the mounting bracket.



46. Fasten the high-limit switch (with the nuts from Step 43) on top of the mounting bracket to the open studs from Step 43.

Use hardware from Step 43.



47. Install the new thermostat onto the mounting bracket using the 6-32 screws from the kit. Make sure the thermostat is configured so the 5-pin connector is at the bottom.

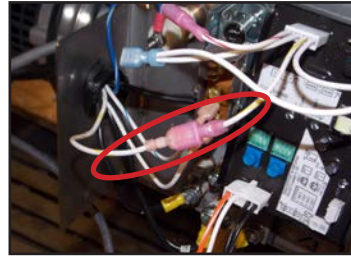
Elan electric thermostat from the kit is used in this step.

Screws from the kit are used in this step.

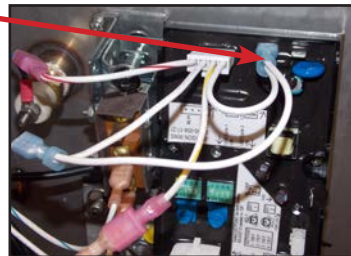


Elan Electric
Thermostat
5-pin
Connector

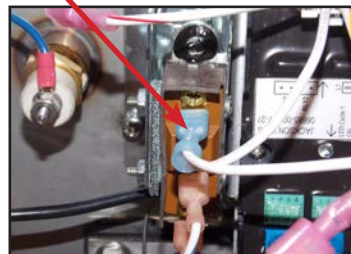
- WASH TANK SECTION**
48. Connect the 2-pin, 4-pin, and 5-pin connectors to the thermostat.
49. Connect the white/yellow wire removed in Step 38 to the white/yellow wire in slot 3 of the 4-pin connector.



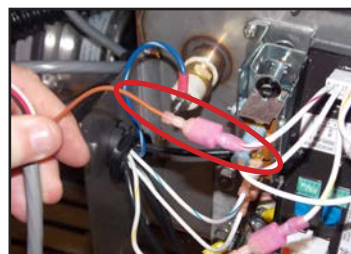
50. Locate the white wire in slot 4 of the 4-pin connector. It has a blue female terminal and is attached to a white jumper. Plug the blue female terminal into the L1 tab on the thermostat.



51. Locate the white wire in slot 2 of the 4-pin connector. It has a blue female terminal and is attached to the same jumper described in Step 50. Plug the blue female terminal into the top position (normally-closed) on the high-limit switch.



52. Locate the white/red wire in slot 1 of the 4-pin connector. Connect it to the brown wire from the 6-conductor cable.

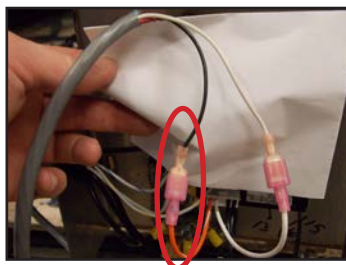


WASH TANK SECTION

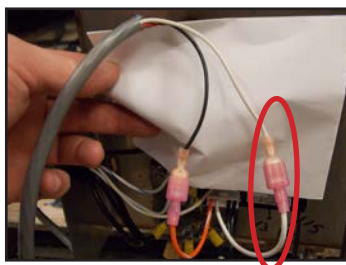
53. Connect the red wire from the 6-conductor cable to the L2 tab on the thermostat.



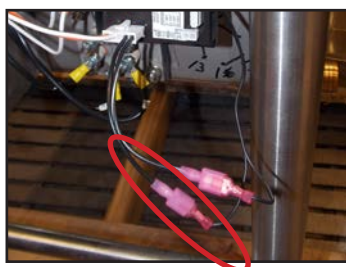
54. Connect the black wire from the 6-conductor cable to the orange/white wire in slot 5 of the 5-pin connector.



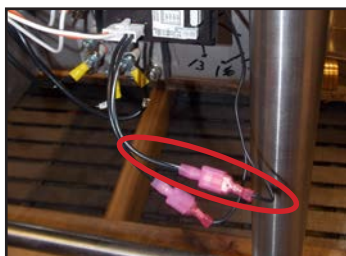
55. Connect the white wire from the 6-conductor cable to the white wire in slot 4 of the 5-pin connector.



56. Connect the black wire from the probe to the black wire in slot 2 of the 5-pin connector.



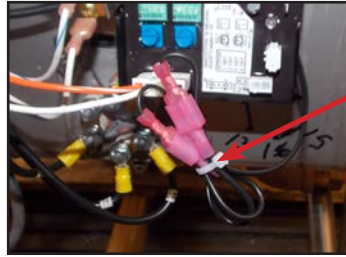
57. Connect the black/white wire from the probe to the black/white wire in slot 1 of the 5-pin connector.



WASH TANK SECTION

Zip-tie from the kit is used in this step.

58. Using a zip-tie, coil and secure the black and black/white wires from the 5-pin connector and probe.



59. Connect the blue wire from the 6-conductor cable to the blue wire in slot 1 of the 2-pin connector.



60. Connect the orange wire from the 6-conductor cable to the orange wire in slot 2 of the 2-pin connector.



61. Adjust the settings for the thermostat as follows:

- Set dip switch #1 (rinse) to the 1 position (1 set closest to the numbers and 2, 3, and 4 set away from the numbers).
- Set dip switch #2 (wash) to the 3 position (3 set closest to the numbers and 1, 2, and 4 set away from the numbers).
- Set the blue dials as shown below (or mid-position between the two stops).

The switches can be moved through the protective film with either a fingernail or flathead screwdriver.



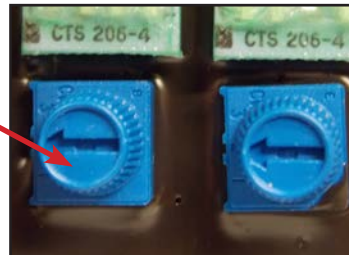
WASH TANK SECTION

62. Replace the drain stopper and strainer.
63. Reconnect electrical power at the breaker or disconnect switch. Turn the power switch to the "ON" position and wait until tanks are heated to setpoints. Run the machine three cycles and check rinse and wash temperatures.
64. Adjust the blue dial on the left until the desired rinse temperature is achieved (between 180 °F and 195 °F) for the entire rinse cycle.

Turning the dial clockwise increases the temperature.

Total adjustment range is ± 10 °F.

Rinse Dial

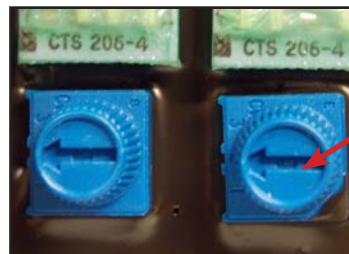


65. Adjust the blue dial on the right until 150 °F wash temperature is achieved.

Turning the dial clockwise increases the temperature.

Total adjustment range is ± 10 °F.

Wash Dial



Wire nuts from the kit are used in this step.

66. There is a green wire that is unused. Cap each end with a blue wire nut from the kit.
67. Adjust the strain relief and tighten once in position. Install the new wash tank heater cover from the kit. Replace the front dress panel.

Wash tank heater cover from the kit is used in this step. Use hardware removed in Step 2.

Use panel and hardware removed in Step 1.



CONTROL BOX LAYOUT

