



INSTRUCTION BULLETIN

No. 9013771
Machine: T5
Published: 02-2016
Rev. 04

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 9013870 / 9013962**

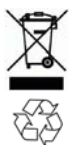
SYNOPSIS:

This kit contains the parts needed to install the telemetry kit onto T5 scrubbers.
Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: (NONE)

(Estimated time to complete: 2.5 hours)

The IRIS (telemetry module) must be activated to complete this installation. The module will not function until it is activated . Call for assistance (North America - Technical Support / Australia - CCC) activating the module after all telemetry components have been installed. Have machine serial number and IRIS module SIM number (located on back of IRIS control box assembly) ready when calling for activation.



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.

KIT PREPARATION:

1. **Machines equipped with ec- H2O only:** Confirm the ec- H2O system is fully functional. The ec- H2O must be fully functional before the IRIS system can be installed.
2. Confirm the hour meter is properly wired and functional. The hour meter must be fully functional and wired properly before the IRIS system can be installed.
3. Park the machine on a clean level surface, turn off the machine, remove the key, and set the parking brake if equipped.

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

4. Evaluate the condition of batteries, cables, and terminal connections. Batteries / cables / terminal connections must all be in safe working condition.
5. Remove right side panel and carefully remove batteries from machine (FIG. 1). If machine is equipped with ec-H2O module, lift out module to access the side panel mounting screw. Lay module on solution tank. Do not disconnect any hose or wire connections.

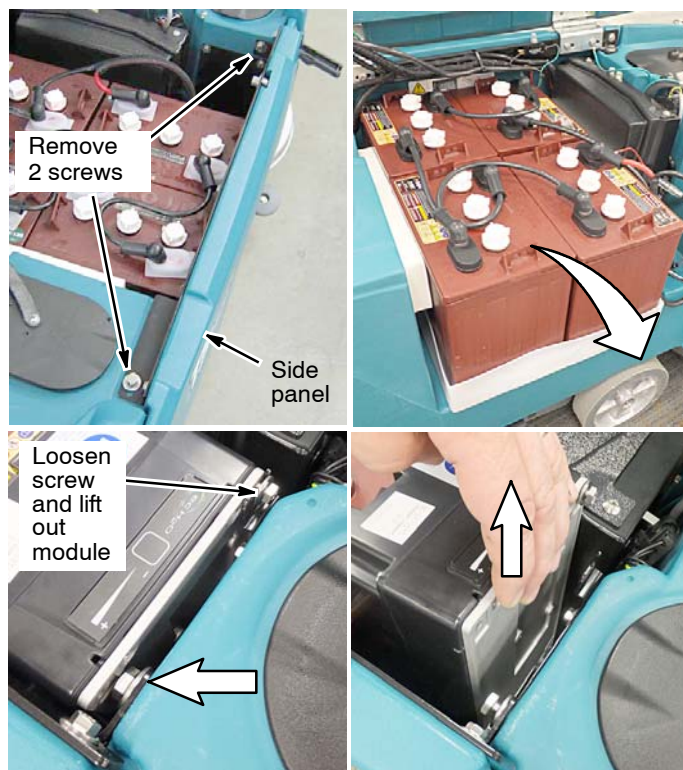


FIG. 1

KIT INSTALLATION:

1. Remove the squeegee lift lever assembly from the machine. Set all removed hardware aside (FIG. 2).
2. Remove all parts from the removed squeegee lift bracket and install them onto the new squeegee lift bracket (2). Discard the old squeegee lift bracket. (FIG. 2)

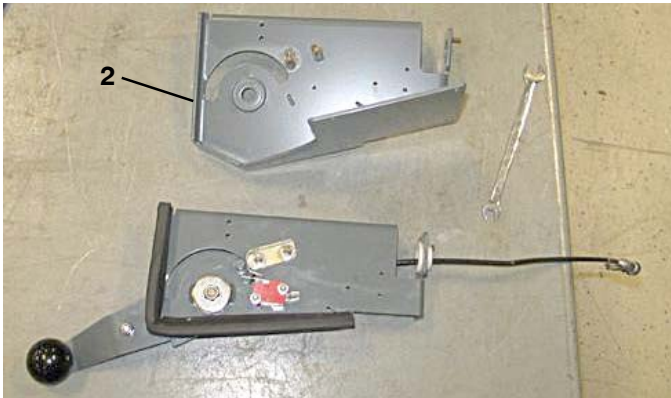


FIG. 2

3. Remove the additional SIM bar code label from the back of the telemetry control box (1) and set label aside in a safe place. The number on the SIM label will be needed to activate the telemetry system. (FIG. 3)

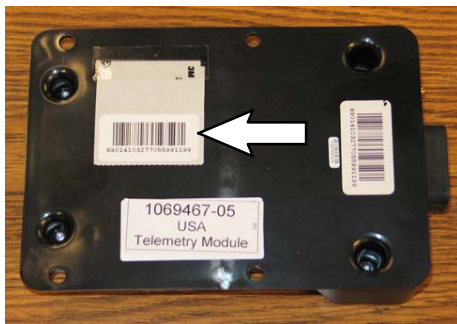


FIG. 3

4. **IMPORTANT:** To prevent possible damage to telemetry system during install, remove the in-line fuse from the telemetry harness (21) (FIG. 4)

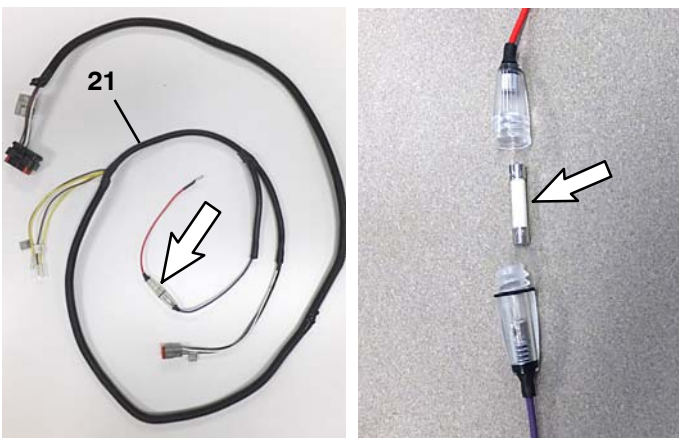


FIG. 4

5. Install the two foam edge seals (8) onto the squeegee lift bracket as shown. (FIG. 5)



FIG. 5

6. Using parts (3, 4, 5, 6), install the telemetry control box (1) to squeegee lift bracket (2) as shown. (FIG. 6)

NOTE: Numbers in parenthesis () are reference numbers for parts listed on page 10.

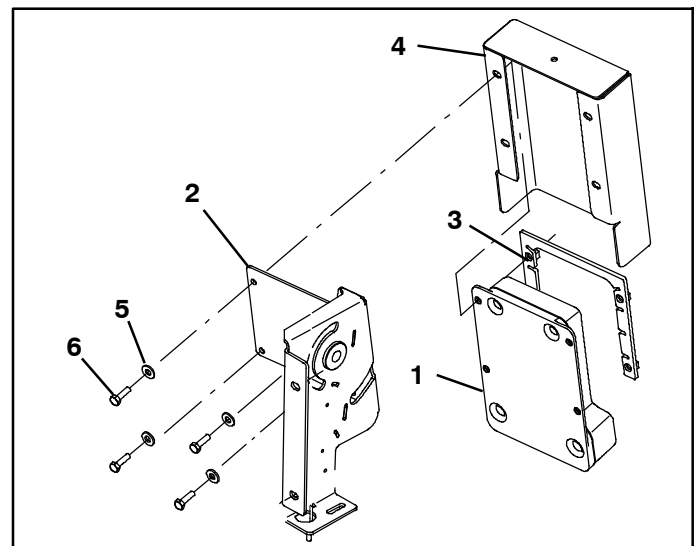


FIG. 6

7. Reconnect wires to squeegee lift lever assembly (FIG. 7).

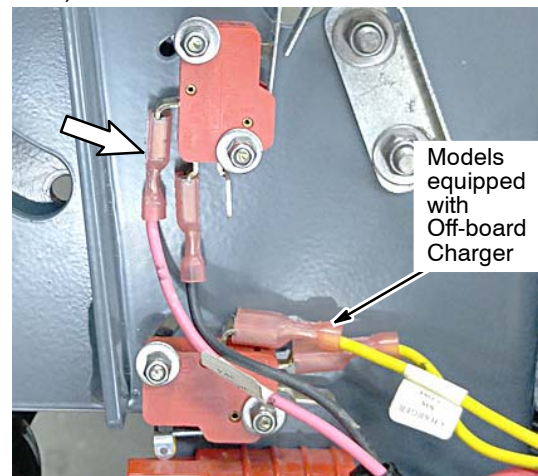


FIG. 7

8. Connect the antenna (9) cable and the telemetry harness (21) to the telemetry control box (1). (FIG. 8)

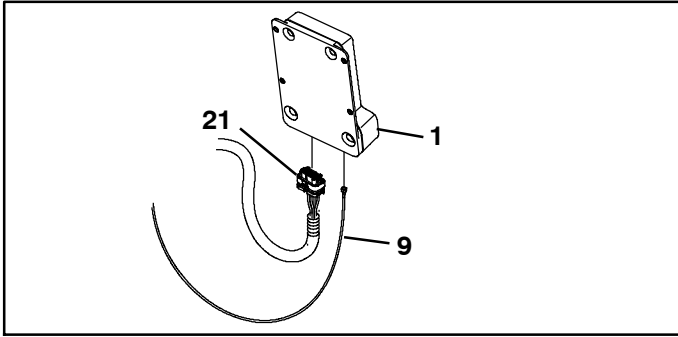


FIG. 8

9. Route the telemetry harness and antenna cable as shown and secure harness with cable-ties (6) (FIG. 9).
10. Install new bracket assembly to machine using existing hardware (FIG. 9).

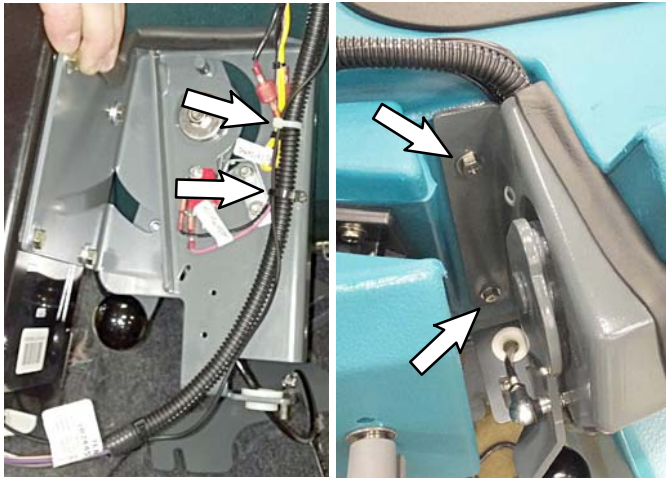


FIG. 9

11. With the help of a second person or hoist to hold recovery tank, remove the hardware securing the rear portion of the left side rail to the solution tank (FIG. 10)



FIG. 10

12. Lift the recovery tank assembly and position the telemetry harness and antenna cable between the solution tank and the left side panel as shown. Make sure the telemetry harness and antenna cable cannot be pinched when the left side rail is reinstalled (FIG. 11). Reinstall hardware to side rail.

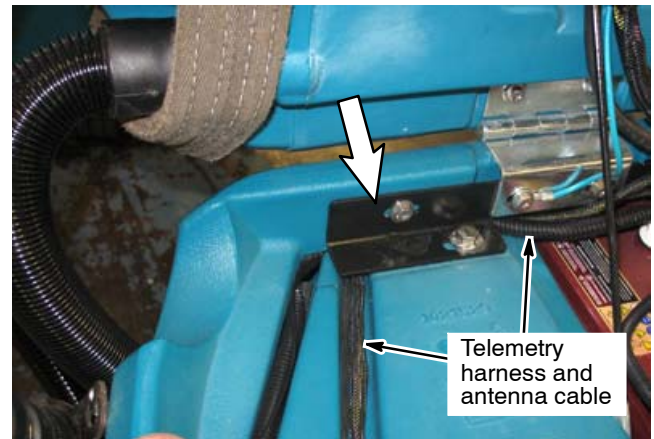
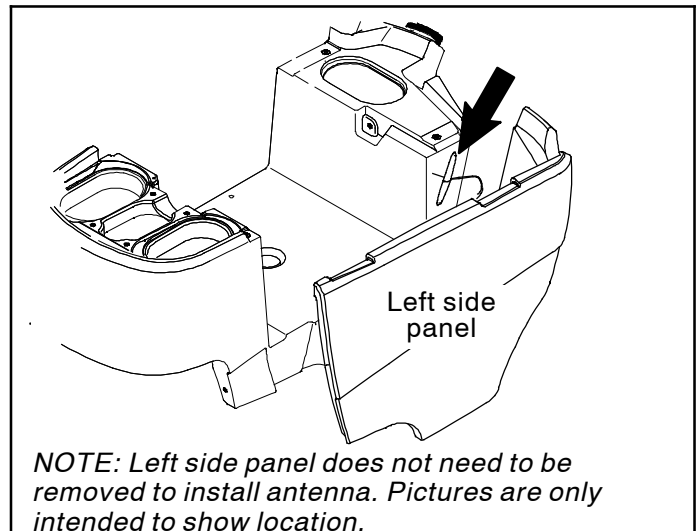


FIG. 11

13. Adhere the telemetry antenna (9) onto the side of the solution tank as shown (FIG. 12). Peel masking from antenna to adhere.



NOTE: Left side panel does not need to be removed to install antenna. Pictures are only intended to show location.

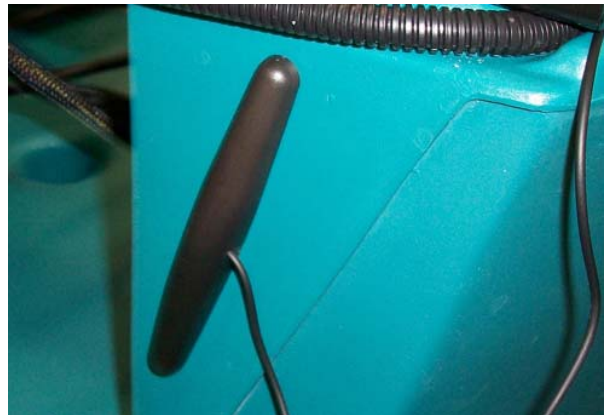


FIG. 12

14. Remove the cover from the electrical panel. Set the cover and hardware aside (FIG. 13).

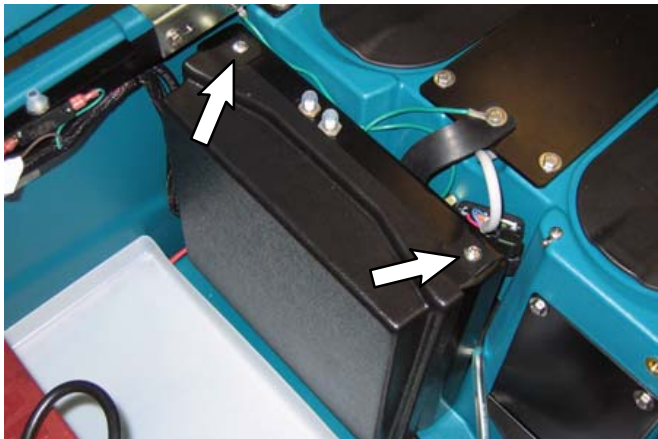


FIG. 13

15. Using cable-tie (11), secure the telemetry harness to main machine harness as shown (FIG. 14)

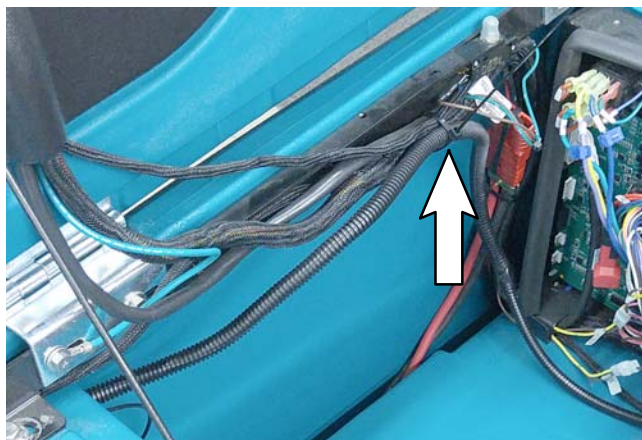


FIG. 14

16. Route the brown and yellow wires from the telemetry harness under cover clip as shown (FIG. 14).

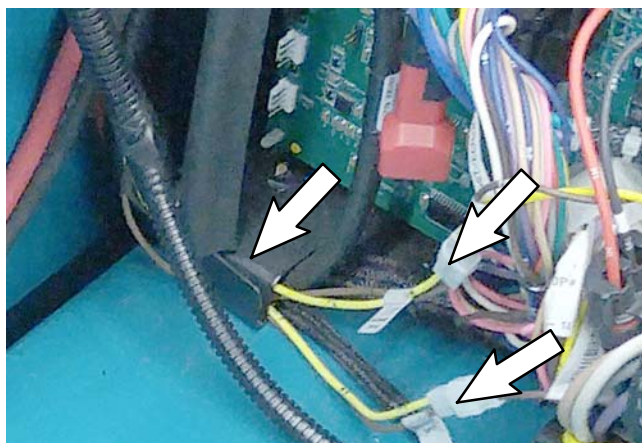


FIG. 15

17. **Machines without ec-H2O:** Locate the factory installed open wire connector labeled FaST/ECH2O, (wires 14A/YEL 22A/BRN) within the circuit board area. Connect the brown/yellow wire connector from telemetry harness into open connector (FIG. 16).

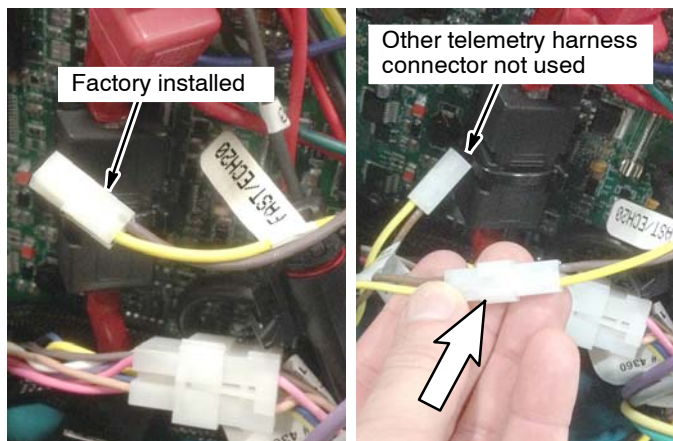


FIG. 16

18. **Machines with ec-H2O:** Locate the main FaST/ec-H2O harness connector within the circuit board area. Disconnect the wire connection and connect the the two brown and yellow wire connectors from telemetry harness (FIG. 17).

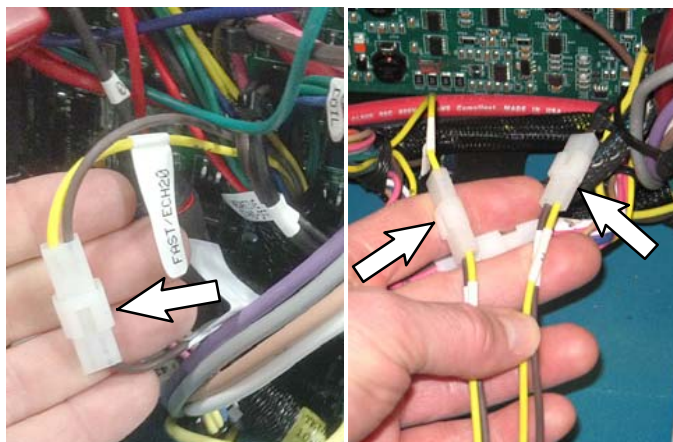


FIG. 17

19. Route telemetry harness next to the main wire harness and along the bottom and side of the circuit board assembly. Use cable ties (11) to secure telemetry harness to the main wire harness. (FIG. 18)

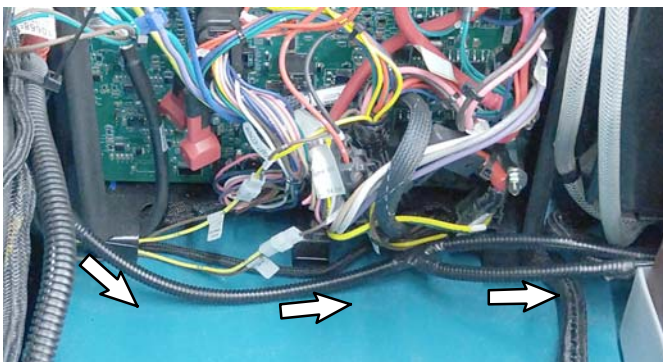


FIG. 18

20. Reinstall the cover onto the electrical panel.

21. Using the following hardware, connect battery cable (22), machine's negative battery cable and the small telemetry harness (23) to shunt (12) as shown (FIG. 19).

NOTE: Refer to parts list on page 11 for hardware descriptions..

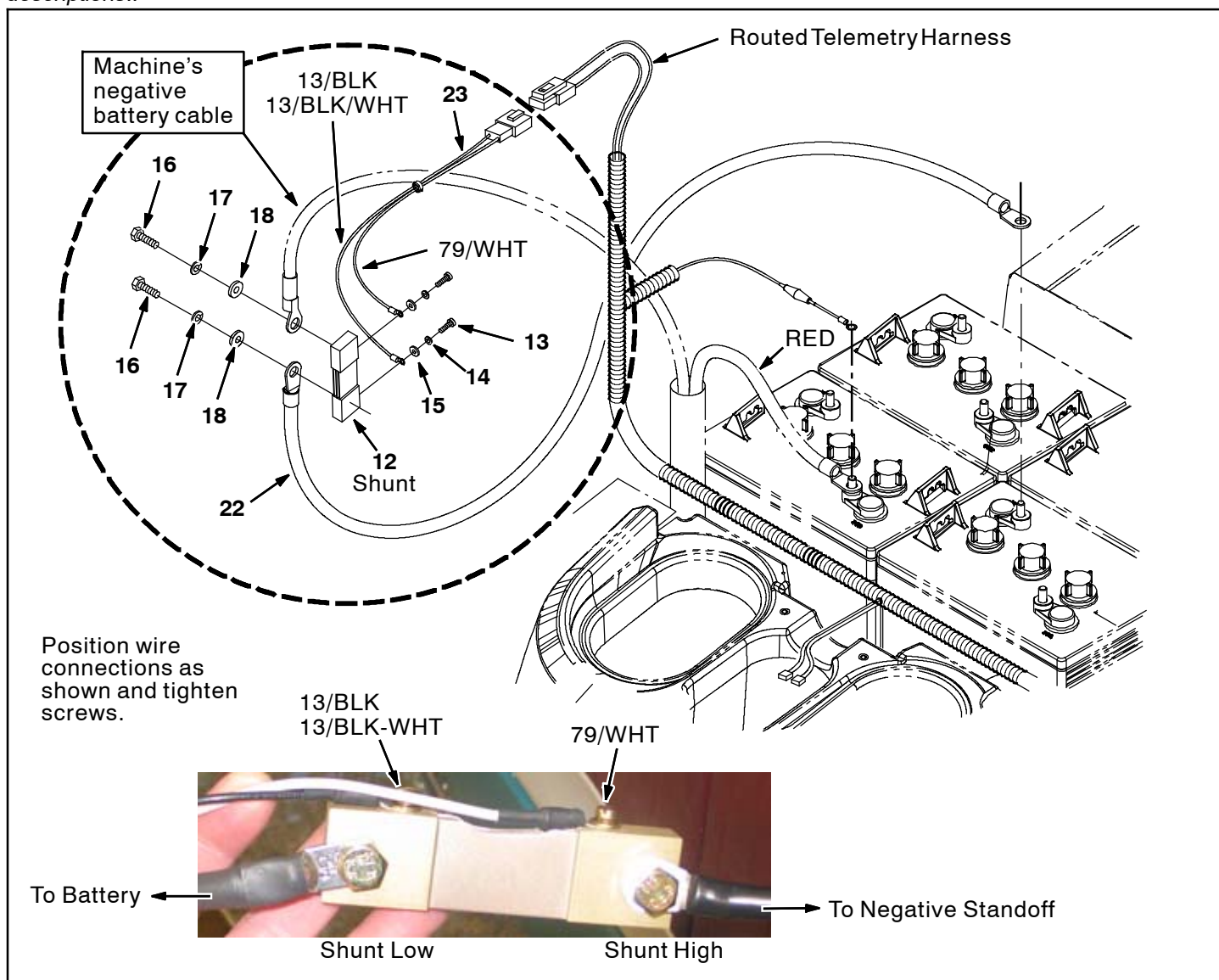


FIG. 19

22. Slide the heat shrink (25) over the shunt and apply heat (FIG. 20)

23. If model is equipped with ec-H2O remove the following screw from module bracket (FIG. 21)

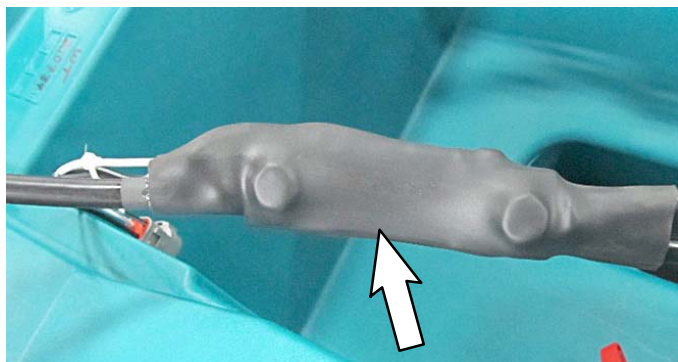


FIG. 20

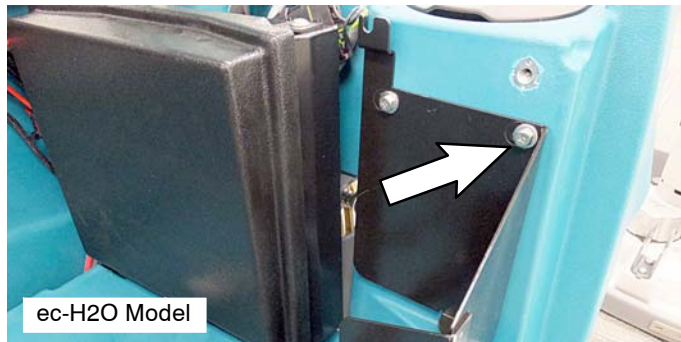


FIG. 21

24. Install two cable-tie clips (20) to shunt bracket (19). (FIG. 22)

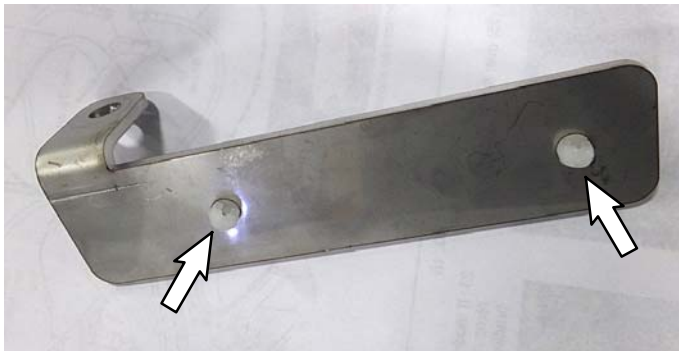


FIG. 22

25. Use existing sems screw from ec-H2O module bracket to install the shunt bracket (19) to machine as shown (FIG. 23). For machine's without ec-H2O bracket, use sems screw (10).



FIG. 23

26. Carefully reinstall batteries in machine. (FIG. 24)



FIG. 24

27. Connect the routed telemetry harness connector to the shunt harness connector (FIG. 25).

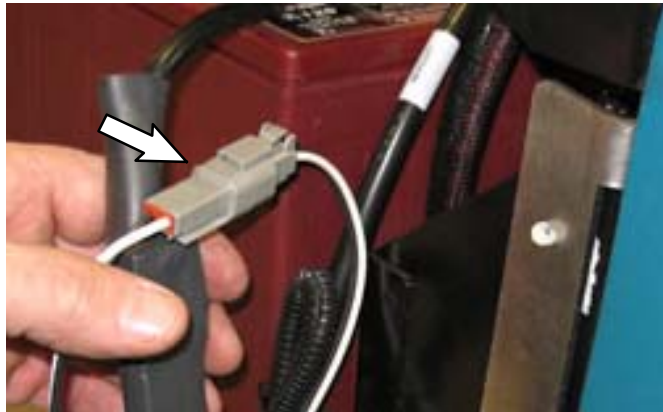


FIG. 25

28. Use two cable-ties (11) to attach the shunt assembly to the shunt bracket (FIG. 25). Secure telemetry wires with cable-ties as shown.

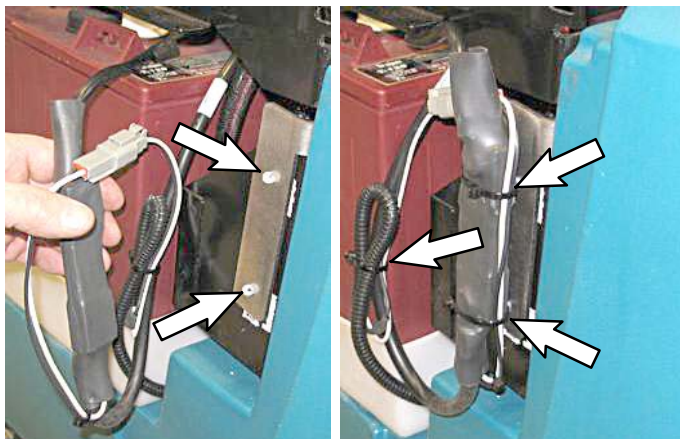


FIG. 26

29. Connect the negative battery cable from the shunt assembly to battery (FIG. 27)

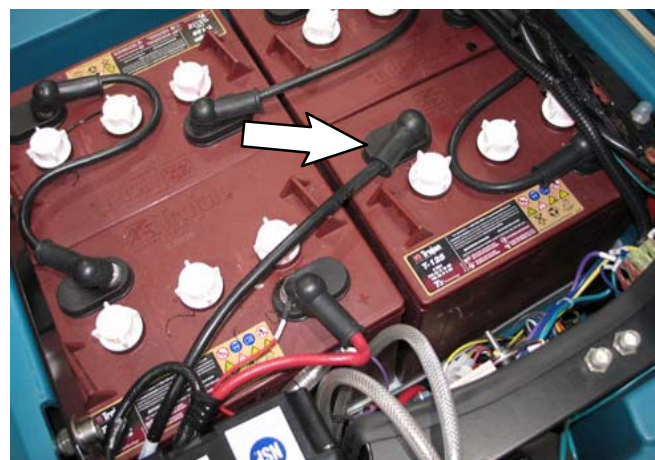


FIG. 27

30. Connect the red fuse wire from the telemetry harness to the positive battery terminal (FIG. 28). Position the ring terminal on top of the battery cable.



FIG. 28

NOTE: It may be necessary to cut the nylon braiding from the machine's battery cable harness to allow the positive battery cable to reach battery terminal (FIG. 29). Use electrical tape to tape off the nylon braiding.

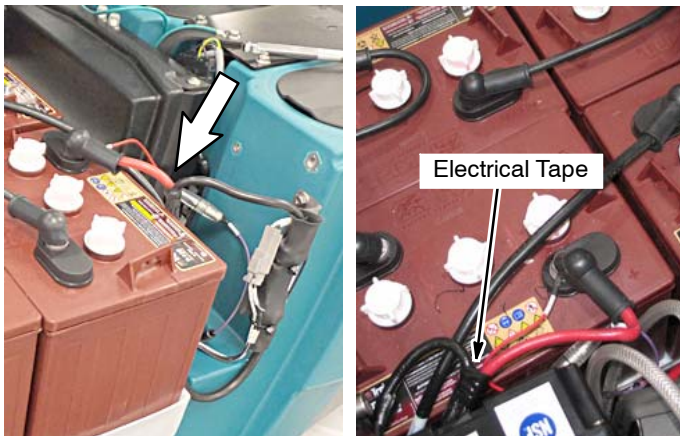


FIG. 29

31. Reinstall fuse into telemetry harness. (FIG. 30)

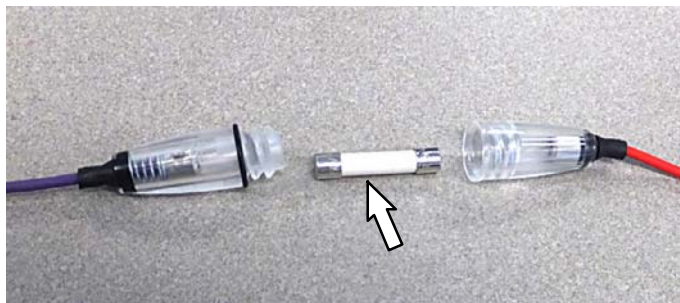


FIG. 30

32. Reinstall the side panel (FIG. 31). If machine is equipped with ec-H2O, replace the ec-H2O module in bracket and secure with screw.



FIG. 31

33. Install the FCC label (24) and the SIM bar code label onto the telemetry cover (4). (FIG. 32)

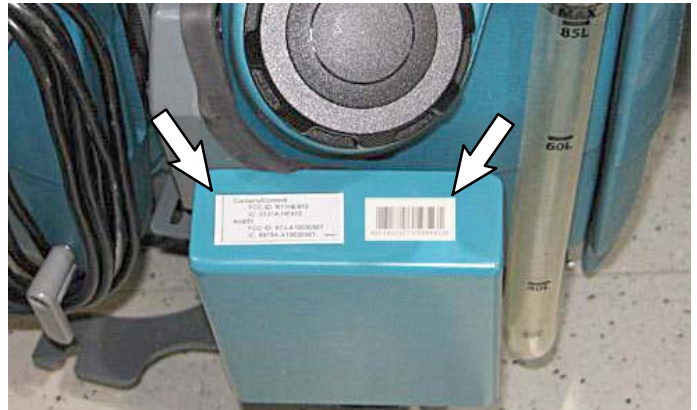


FIG. 32

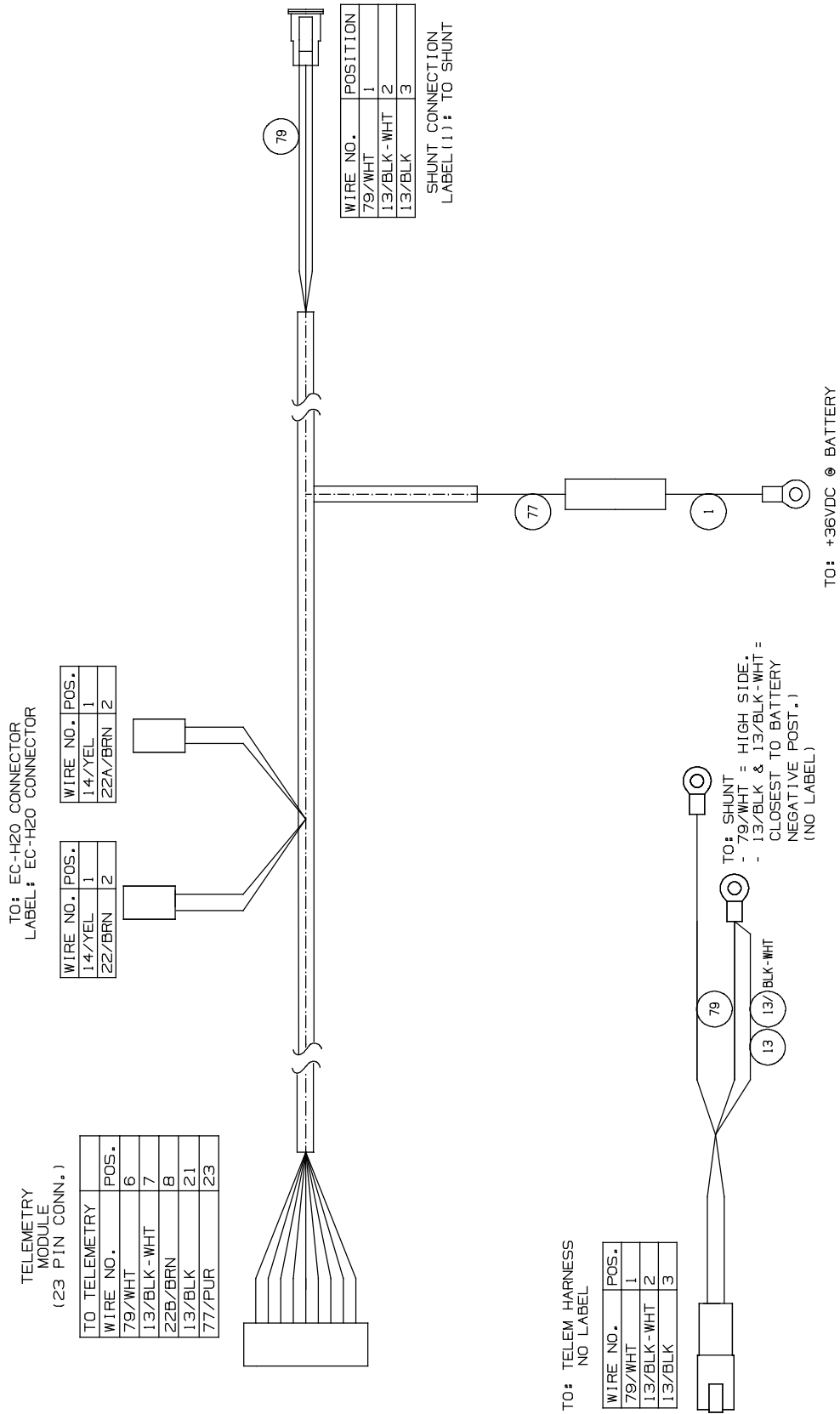
34. Start and test the machine.

35. **North America Customer Locations:** Activate the IRIS (telemetry module): Call Technical Support (between hours of 7:00 am and 5:00 pm CST) for assistance to activate the module. The IRIS telemetry system must be activated to complete this install. Have machine serial number and IRIS module SIM number ready when calling for activation.

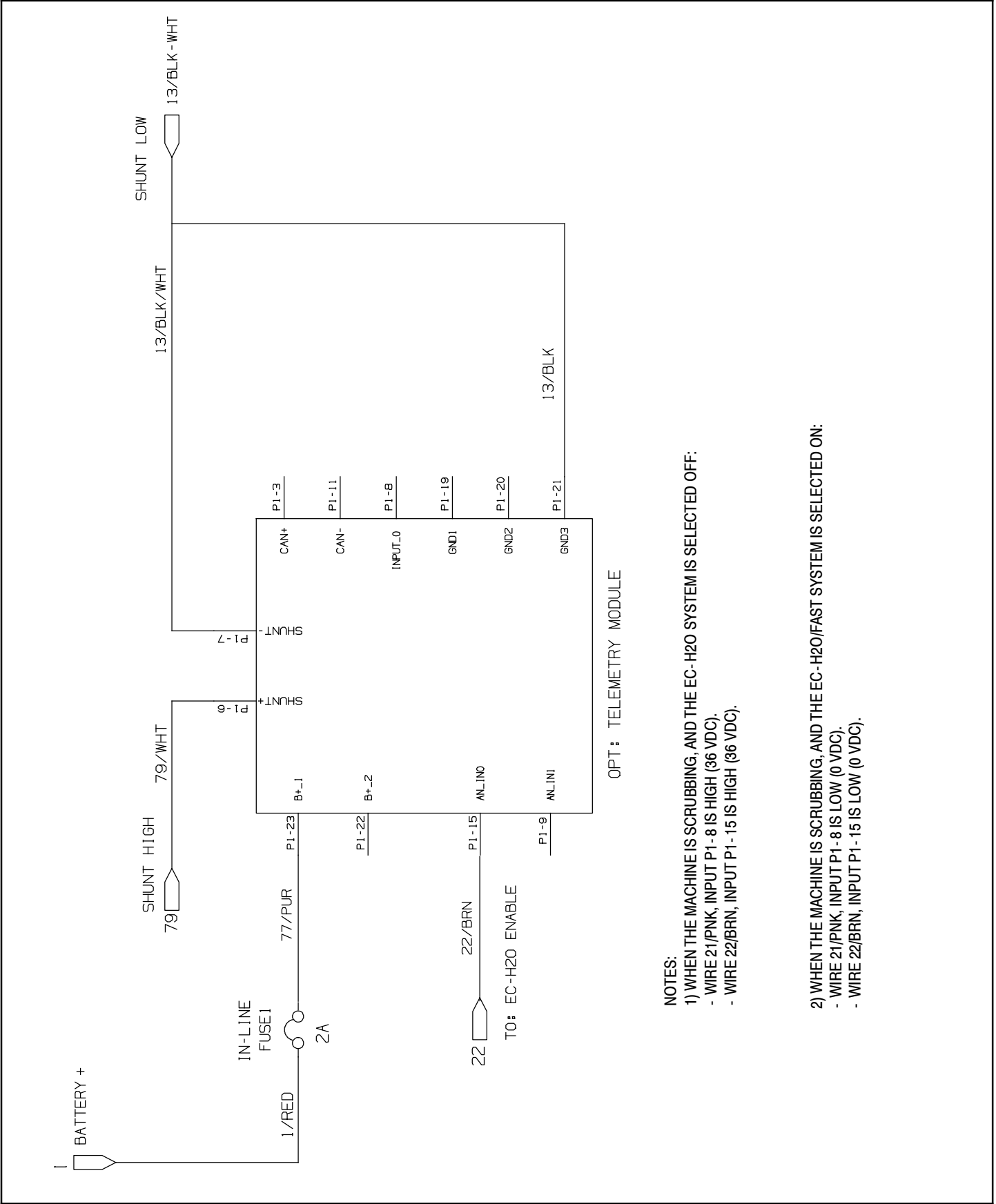
Australia Customer Locations: Activate the IRIS (telemetry module): Call CCC (between hours of 8:00 am and 5:00 pm AEST) and ask to be routed to the IRIS expert for assistance to activate the module. The IRIS telemetry system must be activated to complete this install. Have machine serial number and IRIS module SIM number ready when calling for activation.

NOTE: The IRIS (telemetry module) must be activated to complete this installation. The module will not function until it is activated. Call for assistance activating the module after all telemetry components have been installed.

Telemetry Electrical Harness

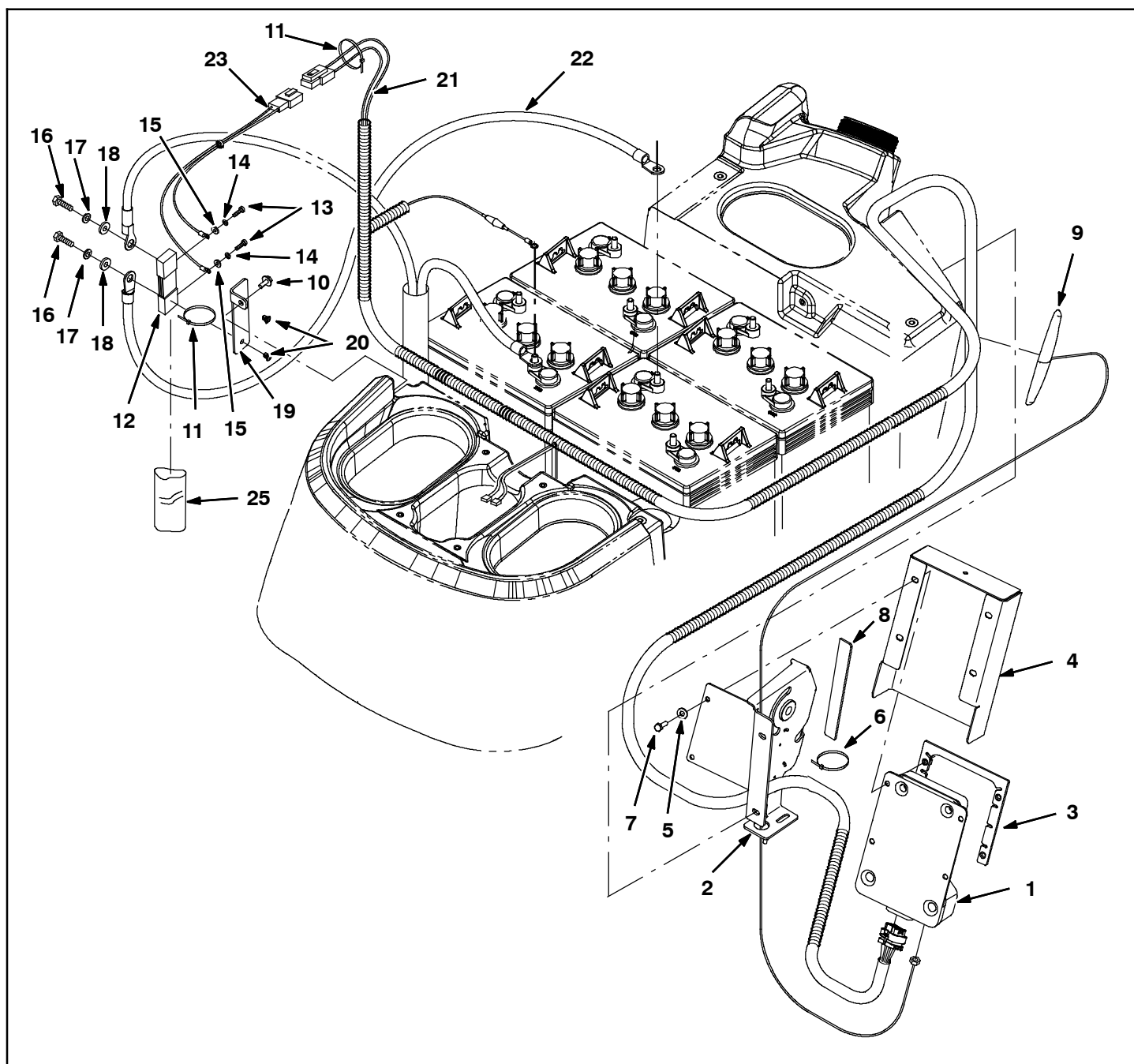


Telemetry Electrical Schematic



NOTES:

- 1) WHEN THE MACHINE IS SCRUBBING, AND THE EC-H2O SYSTEM IS SELECTED OFF:
 - WIRE 21/PNK, INPUT P1-8 IS HIGH (36 VDC).
 - WIRE 22/BRN, INPUT P1-15 IS HIGH (36 VDC).
- 2) WHEN THE MACHINE IS SCRUBBING, AND THE EC-H2O/FAST SYSTEM IS SELECTED ON:
 - WIRE 21/PNK, INPUT P1-8 IS LOW (0 VDC).
 - WIRE 22/BRN, INPUT P1-15 IS LOW (0 VDC).



Bill Of Materials For Telem Kit, CI [T5, USA] - 9013870 / Telem Kit, CI [T5, Intl.] - 9013962

	Ref.	Tennant Part No.	Description	Qty.
	1	1070541	Control Box Assy, Telem [3G, Intl.]	1
	1	1069467	Control Box Assy, Telem [USA, 3G]	1
	2	1216224	Bracket Wldt, Lift, Sqge, T5	1
	3	1216841	Guard Wldt, Control Box	1
	4	1217789	Cover, Guard	1
	5	32483	Washer, Flat, 0.25, SAE	4
	6	130773	Tie, Cable, Nyl, 11.0L, .14W, 3.0 Max. D	1
	7	06943	Screw, Hex, M6 X 1.00 X 20, 8.8	4
	8	1006267	Seal, Edge, Foam, .37, .75W, Bulk (1.16 ft)	1
	9	1070659	Antenna, Telem, 70 IN [GPRS]	1
	10	1034731	Screw, Hex, M6 X 1.00 X 16, Sems, Ss	1
	11	130773	Tie, Cable, Nyl, 11.0L, .14W, 3.0 Max. D	11
	12	1217304	Shunt [EMPRO, 250amp/50mv, Metric]	1
	13	391403	Screw, Pan, Phl, M4 X 0.70 X 8, SS	2
	14	02938	Washer, Lock, Int, 08, SS	2
	15	41578	Washer, Flat, 06, SS	2
	16	15675	Screw, Hex, M8 X 1.25 X 16, SS	2
	17	01685	Washer, Flat, 0.38B 0.88D .08, SS	2
	18	43952	Washer, Lock, Int, 0.31, SS	2
	19	1215919	Bracket, Shunt	1
	20	1202868	Clip, Tie, 0.25D, Plstc	2
▽	21	1074445	Harness, Ele, [Telem, T5]	1
▲		9009990	Fuse. 002A. 250vdc, Cartridge	1
	22	1070498	Cable, 4ga, Blk [6200E, Telemetry]	1
	23	1074595	Harness, Ele [Telem, Shunt]	1
	24	1069580	Label, Machine, Telem [FCC, USA, 2G/3G]	1
	25	1217818	Sleeve, Heat Shrink, 1.50id, 07.0l	1

TENNANT COMPANY
P. O. Box 1452
Minneapolis, MN 55440-1452