



INSTRUCTION BULLETIN

No. 9013768
Machine: T7 / SSR
Published: 02-2016
Rev. 05

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 9013869 (USA) / 9013973 (INTL)**

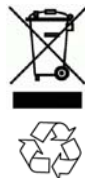
SYNOPSIS:

This kit contains the parts needed to install a telemetry kit onto T7 / Speed Scrub Rider scrubbers (SSR). Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 2 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. Park the machine on a clean level surface, turn off the machine, and remove the key.

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

3. Evaluate the condition of batteries, cables, and terminal connections. Batteries / cables / terminal connections must all be in safe working condition.
4. Disconnect the battery cable from the machine.



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

5. Disconnect the main wire harness from the seat and remove the seat assembly from the machine. Set the seat assembly aside. (Fig. 1)

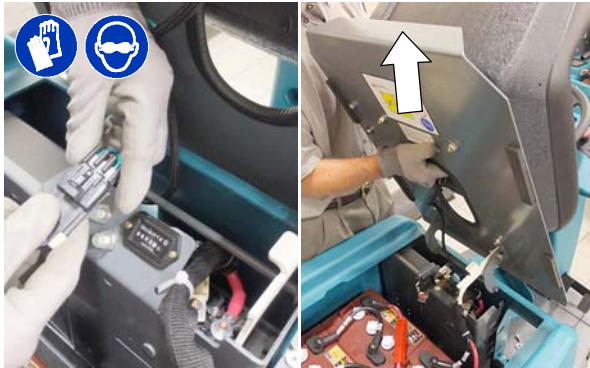


Fig. 1

6. Remove the small box from the battery compartment shroud to access the two mounting screws that secures shroud. Remove screws and lift battery compartment shroud from machine (Figure 2).

NOTE: For ec-H2O NanoClean models, simply lift battery box cover from machine. No screw removal is required.

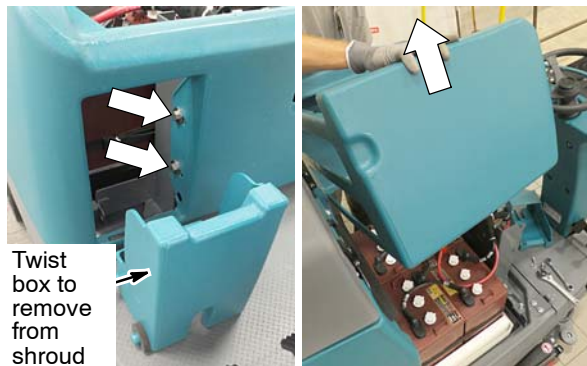


Fig. 2

7. Remove the front, right battery from machine.

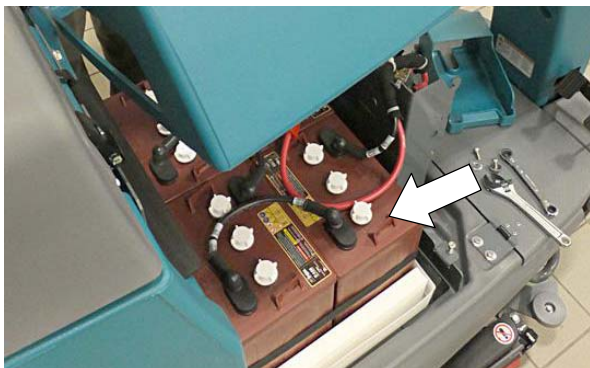


Fig. 3

KIT INSTALLATION:

1. Remove the additional SIM bar code label from the back of the telemetry control box and set aside in a safe place. The number on the SIM label will be needed for activating the IRIS system. (Fig. 4)

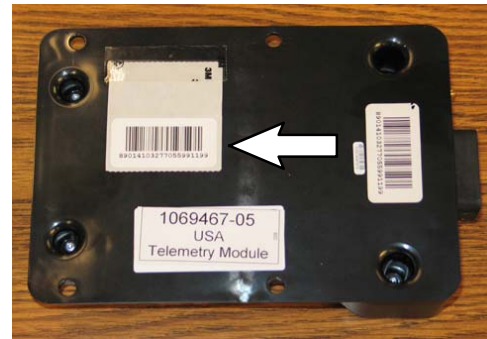


Fig. 4

2. IMPORTANT: To prevent possible damage to telemetry system during install, remove the inline fuse from the telemetry harness (16). (Fig. 5) Do not misplace fuse.

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

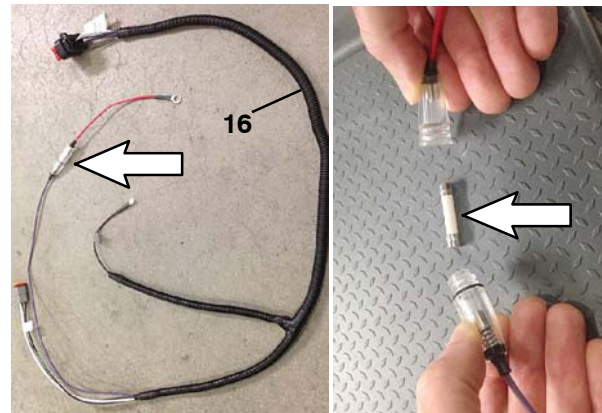


Fig. 5

3. Install two wire tie clips (15) and two wire ties (6) onto the shunt bracket (7). (Fig. 6)

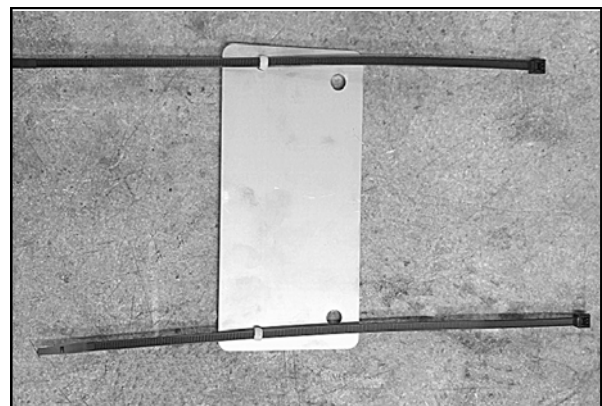


Fig. 6

4. Use the two M5 hex screws / flat washers securing the electrical panel cover to the machine to install the shunt bracket (7) onto the electrical panel cover. (Fig. 7)

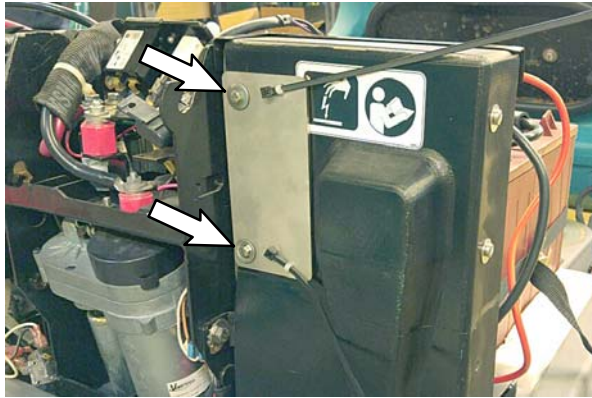


Fig. 7

5. Use one M8 hex screw (12), one flat washer (13), and one lock washer (14) to connect the 40 in. cable (18) to the shunt (8). (Fig. 8)

If machine is equipped with on-board battery charger, connect the charger's negative battery cable to shunt (8). (Fig. 8)

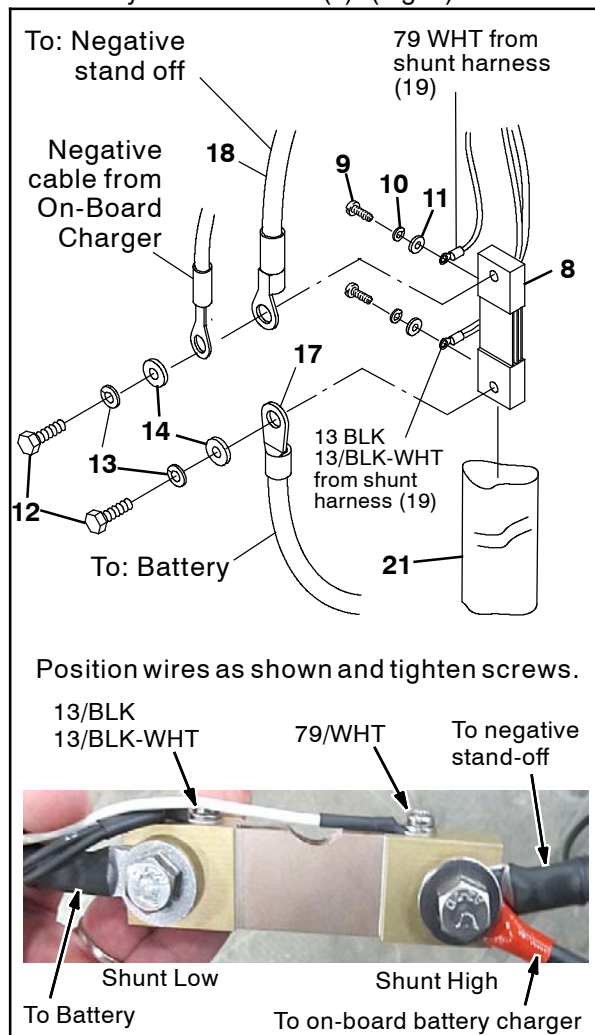


Fig. 8

6. Use one M8 hex screw (12), one flat washer (13), and one lock washer (14) to connect the 36 in. cable (17) to the shunt (8). (Fig. 8)
7. Use one M4 pan screw (9), one lock washer (10), and one flat washer (11) to connect the telemetry shunt harness (16) 79/WHT wire to the end of the shunt (8) with the cable assembly (18) black cable. (Fig. 8)
8. Use one M4 pan screw (9), one lock washer (10), and one flat washer (11) to connect the telemetry harness (16) black wire to the telemetry shunt harness (19) 13 / BLK 13 / BLK- WHT wires to the end of the shunt (8) with the cable assembly (17). (Fig. 8)
9. Slide the heat shrink (21) over the various wires and shunt, center the heat shrink onto the shunt, and heat the heat shrink over the shunt and the wire / cable connections to the shunt. (Fig. 8)
10. Use the two wire ties (6) on the shunt bracket (7) to secure the shunt (8) and the telemetry harness (16) battery connector to the shunt bracket. (Fig. 9)

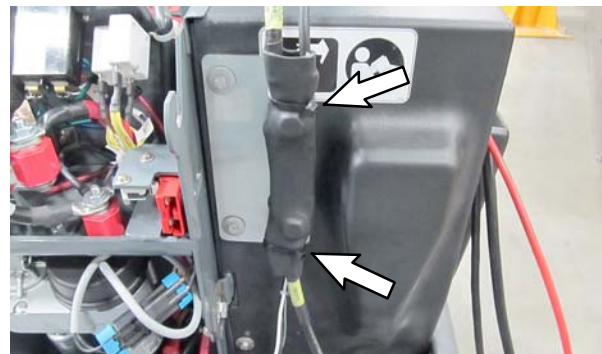


Fig. 9

11. Plug the shunt telemetry harness (19) into the main telemetry harness (16). (Fig. 10)

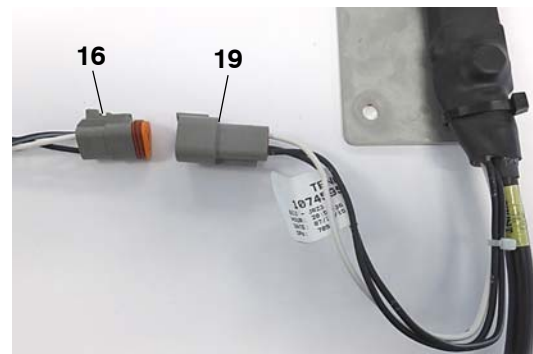


Fig. 10

12. **Machines equipped with ec-H2O NanoClean system:** Locate the factory installed brown wire labeled “Telemetry” coming from the ec-H2O module harness. Connect the telemetry harness (16) wire 22/BRN into the factory installed wire. (Fig. 11)

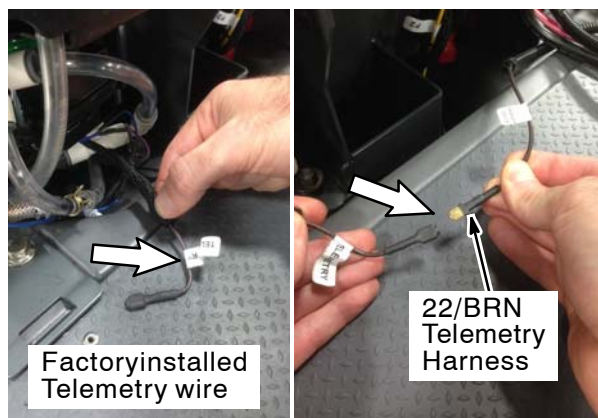


Fig. 11

Machines without ec-H2O system: Insert the wire (22/BRN) connector labeled “ec-H2O Harness”) into the telemetry harness (16) conduit. Use electrical tape to secure the connector inside the conduit. (Fig. 12)

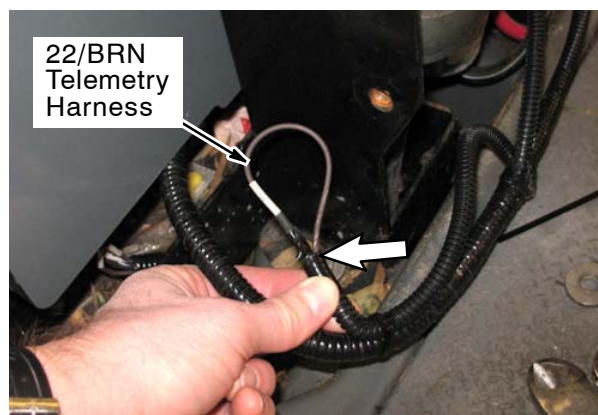


Fig. 12

Machines equipped with older ec-H2O module harness (p/n 1051053):

- A. Remove the ec-H2O module from bracket and disconnect the ec-H2O harness from module. (Fig. 13)



Fig. 13

- B. Remove about 6 inches of the braided insulator from the end of the ec- H2O connector harness. Locate wire 22/BRN and add T- tap connector (25) to wire as shown. (Fig. 14)

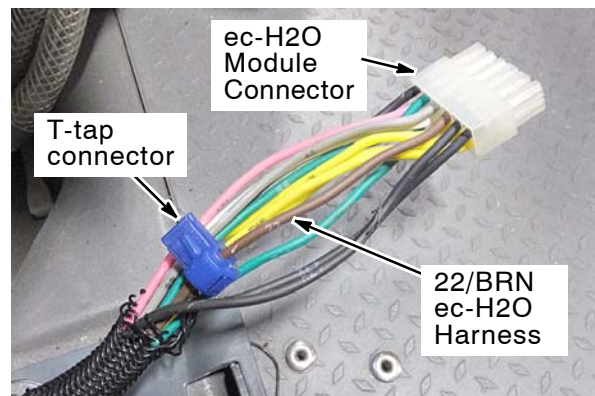


Fig. 14

- C. Connect 22/BRN wire labeled “ec- H2O Harness” from telemetry harness (16) to T-Tap connector (Fig. 15). Wrap harness with electrical tape.

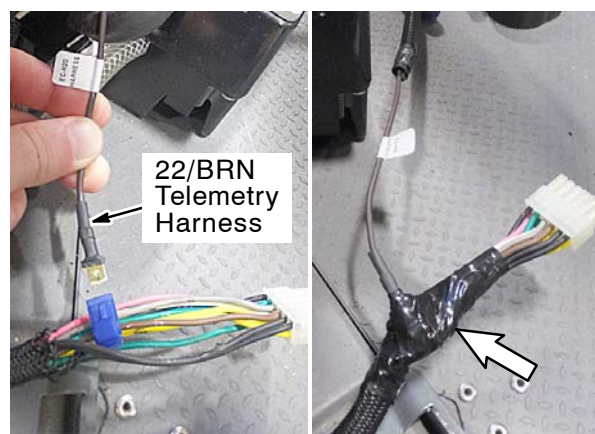


Fig. 15

- D. Plug ec-H2O harness back into module and reconnect module to bracket. (Fig. 16)



Fig. 16

13. Before mounting the telemetry control box to the machine, connect the telemetry harness (16) and the antenna (5) cable to the telemetry control box (1). (Fig. 17)

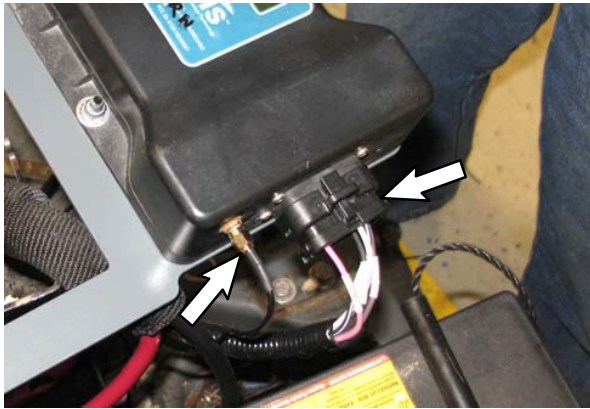


Fig. 17

14. Use four M6 hex nuts (22) and four flat washers (4) to install the telemetry control box (1) onto the module bracket (2). (Fig. 18)

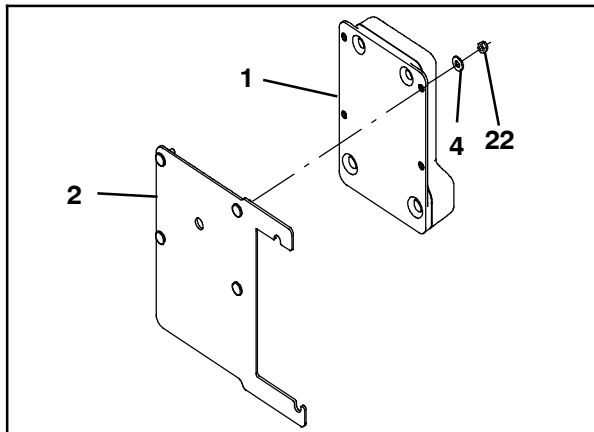


Fig. 18

15. Use two M6 hex screws (23) and two flat washers (24) to install the telemetry control box / module bracket (2) onto the actuator support. (Fig. 19). Partially thread top screw in first, attach module bracket then add bottom screw. Tighten screws.

For models equipped with on-board charger, see Figure 20.

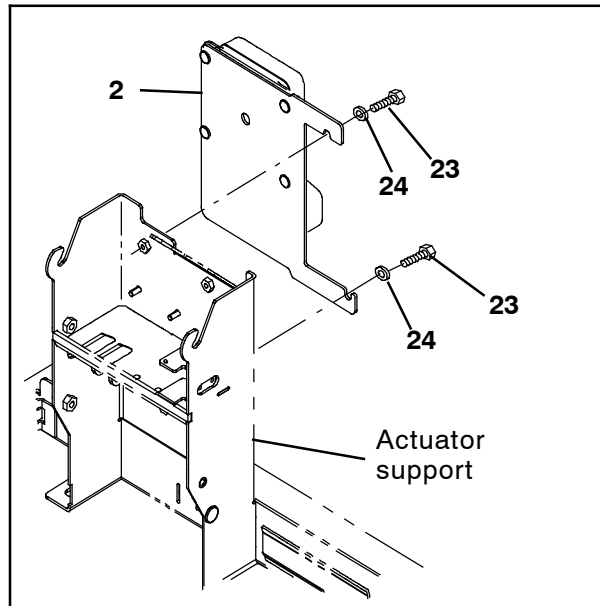


Fig. 19

Models equipped with on-board charger: Use existing hardware to install the telemetry control box / module bracket (2) onto the actuator support. (Fig. 20)

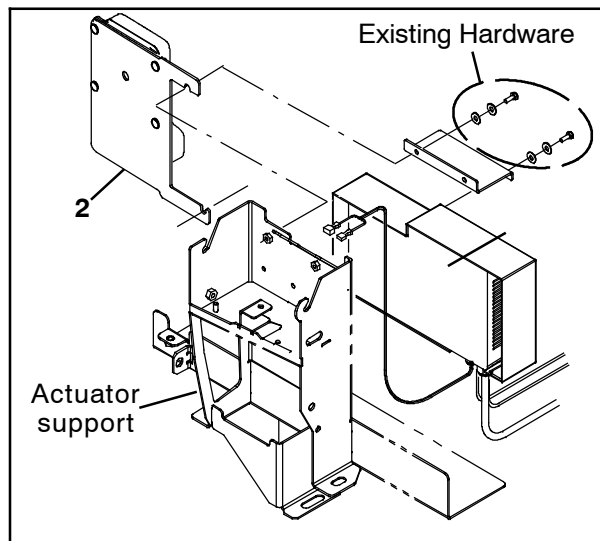


Fig. 20

16. Re-install battery and position the battery strap buckle as shown. (Fig. 21)



Fig. 21

17. Cut all cable-ties from the nylon braiding located on the battery harness cable. (Fig. 22)



Fig. 22

18. Disconnect the existing cable from the battery negative terminal and machine negative stand off. Set hardware and rubber terminal boot aside. Pull the disconnected cable out from the nylon braiding and discard the removed cable. (Fig. 23)

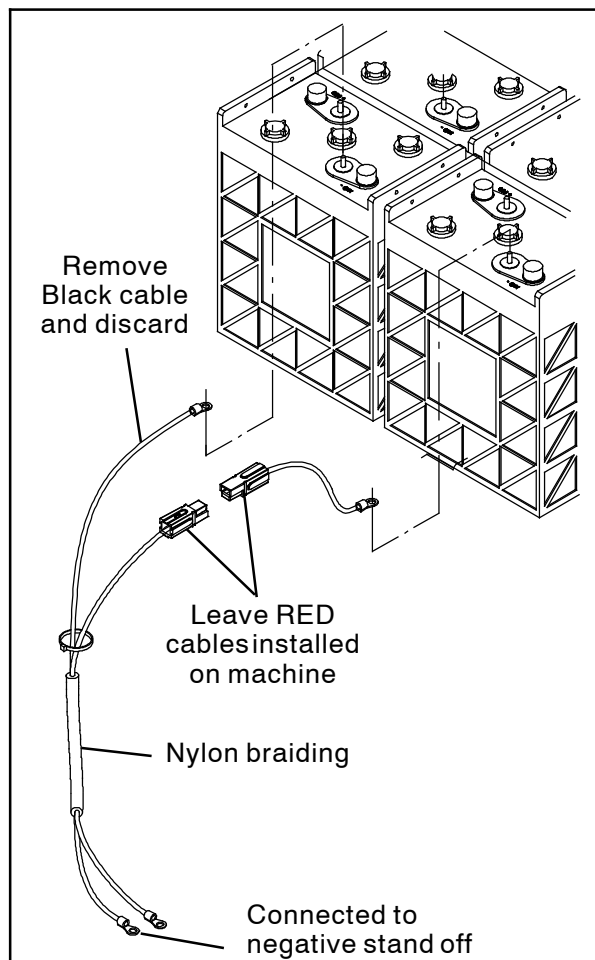


Fig. 23

19. Slide the terminal boot onto the 36 in. cable (17) from telemetry shunt and connect cable to the battery negative terminal. (Fig. 24)



Fig. 24

20. Route the 40 in. cable (18) from telemetry shunt in front of the batteries, through the nylon braiding (Fig. 25) and connect cable to the negative stand off (Fig. 26). Make sure terminal nut is tightened.

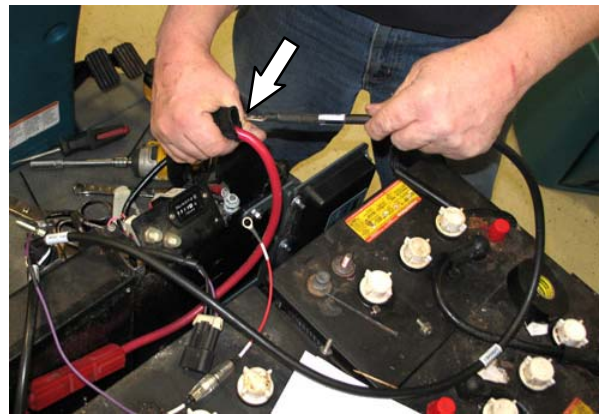


Fig. 25

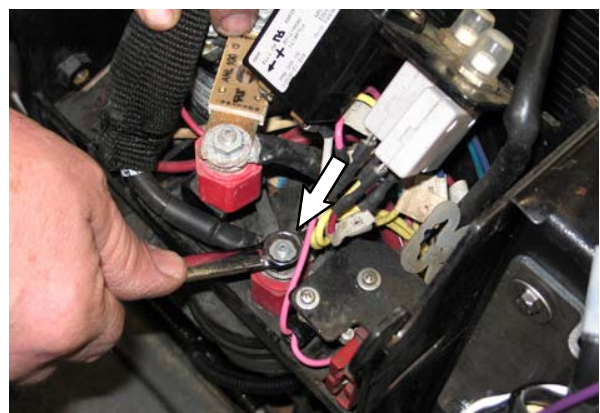


Fig. 26

21. Connect the red fuse wire from telemetry harness (16) to the battery positive terminal. (Fig. 27). Cover wire connection with terminal boot. (Fig. 28)



Fig. 27



Fig. 28

22. Route the antenna (5) in front of the batteries and to the side of the machine opposite of where the telemetry assembly is installed.
23. Remove the backing from the adhesive strip on the antenna (5) and install the antenna onto the antenna bracket (3). (Fig. 29)



Fig. 29

24. Use hex screws / flat washers securing the circuit board cover to the circuit board assembly to install the antenna assembly onto the circuit board assembly. (Fig. 30)

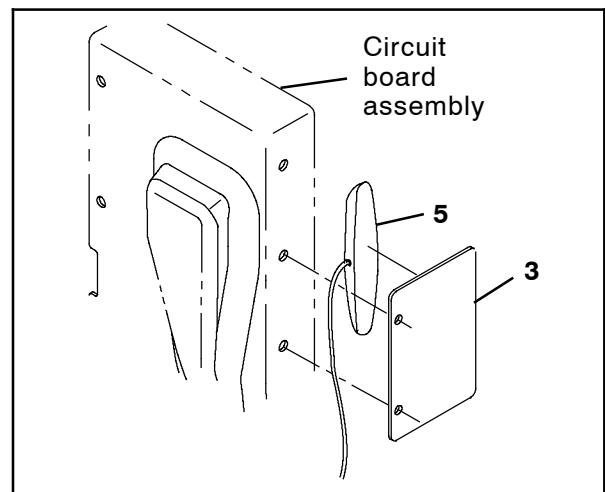
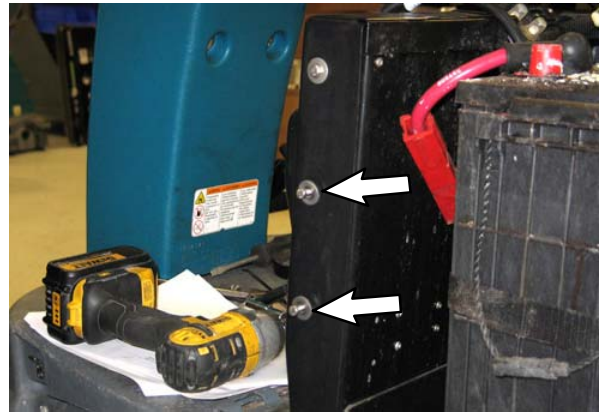


Fig. 30

25. Reinstall the battery box cover and seat assembly onto the machine.
26. Install the the FCC label (20) and the SIM bar code label onto the operator seat assembly. (Fig. 31)



Fig. 31

27. Reconnect the battery cable to the machine.
28. Replace the inline fuse within the telemetry harness. (Fig. 32)



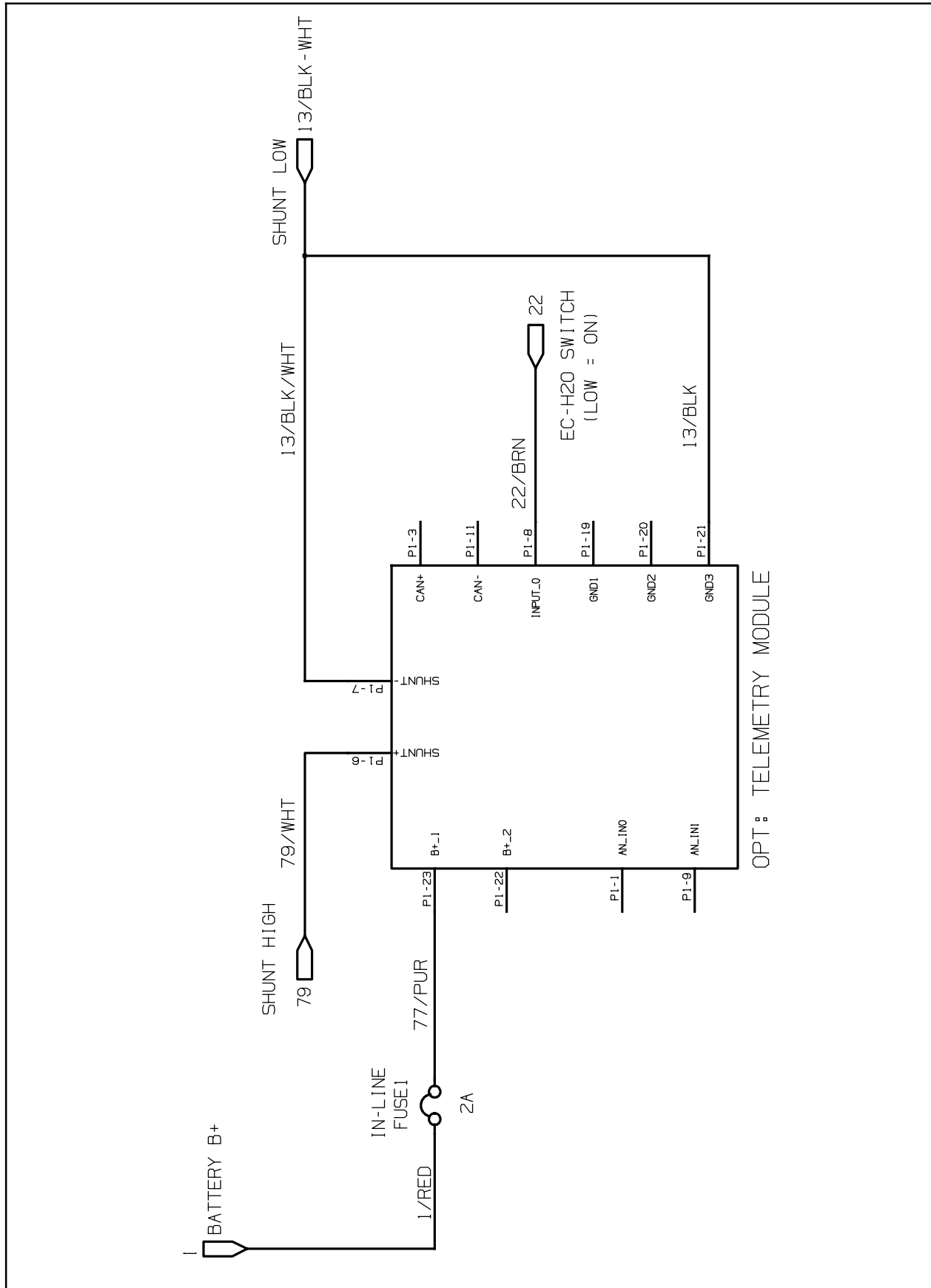
Fig. 32

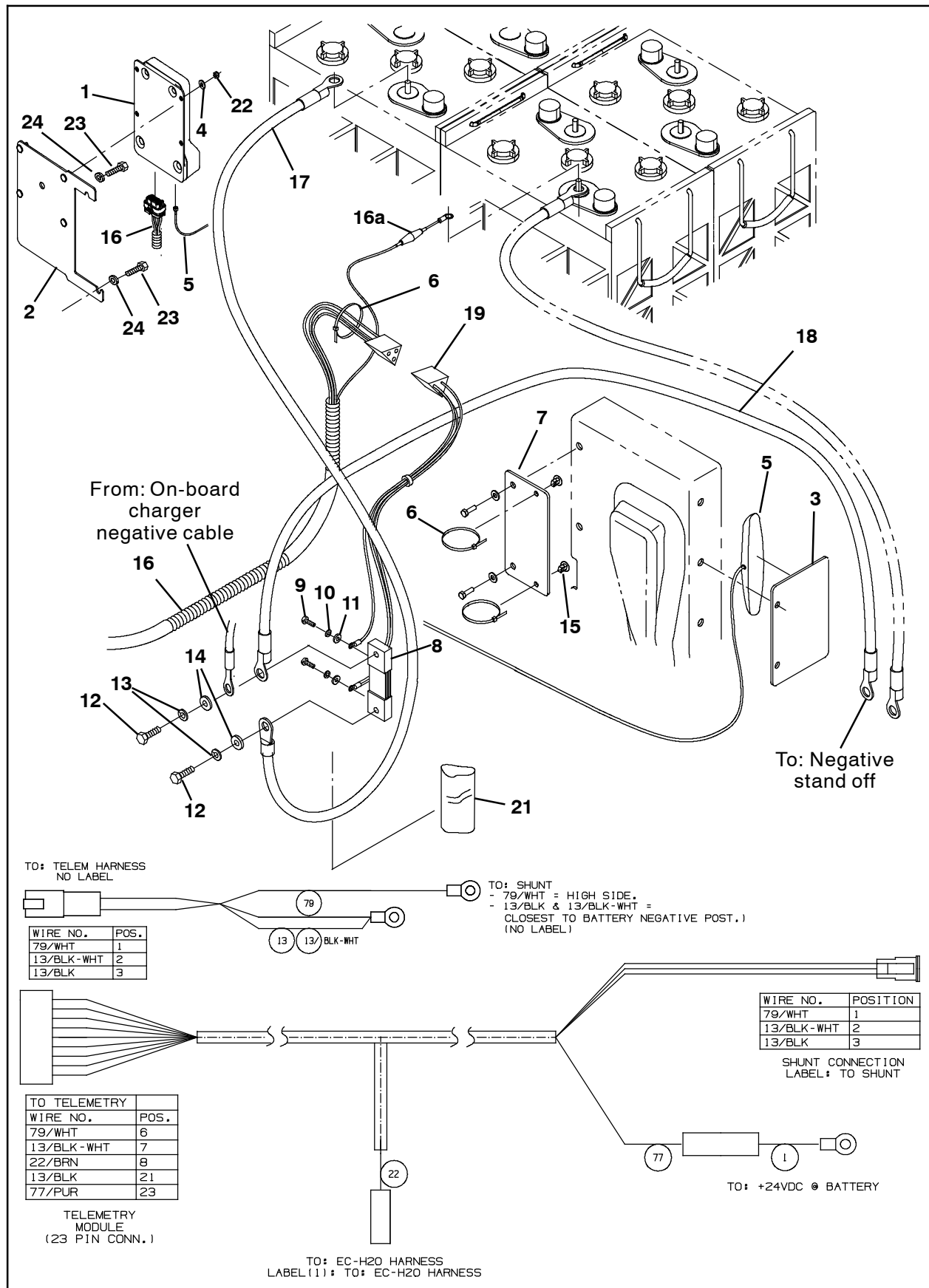
29. Start and test the machine.
30. **North America Customer Locations:**
Activate the IRIS (telemetry module): Call Technical Support (between hours of 7:00 am and 5:00 pm CST) for assistance to activate the module. The IRIS telemetry system must be activated to complete this install. Have machine serial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

31. **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 Schematic





Telemetry Kit, CI [T7/SSR, USA] - 9013869 / Telemetry Kit, CI [T7, INTL] - 9013973

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	1216714	Bracket Wldt, Module	1
3	1216382	Bar, Mtg, Antenna, Telem	1
4	32483	Washer, Flat, 0.25, SAE	4
5	1070659	Antenna, Telem, 70 In [GPRS]	1
6	130773	Tie, Cable, Nyl, 11.0L, .14W, 3.0 Max. D	13
7	1215943	Bracket, Shunt	1
8	1217304	Shunt [EMPRO, 250AMP/50MV, Metric]	1
9	391403	Screw, Pan, Phl, M4 X 0.70 X 8, SS	2
10	02938	Washer, Lock, Int, 08, SS	2
11	41578	Washer, Flat, 06, SS	2
12	15675	Screw, Hex, M8 X 1.25 X 16, SS	2
13	01685	Washer, Flat, 0.38B 0.88D .08, SS	2
14	43952	Washer, Lock, Int, 0.31, SS	2
15	1202868	Clip, Tie, 0.25D, PLST	2
▽ 16	1074466	Harness, Ele, [Telem, T7]	1
▲ 16a	9009990	Fuse. 002A. 250vdc, Cartridge	1
17	1074488	Cable, 04GA, 36.0L, Blk .31Ring/.31Ring	1
18	1074489	Cable, 04GA, 40.0L, Blk .25Ring/.31Ring	1
19	1074595	Harness, Ele [Telem, Shunt]	1
20	1069580	Label, Mach, Telem [FCC, USA, 2G/3G] (not shown)	1
21	1217818	Heat Shrink [1.5" Dia., 7.0" Sections]	1
22	08708	Nut, Hex, Lock, M6 X 1.00, NL	4
23	1016005	Screw, Hex, M6 X 1.00 X 25, NL, FL, SS *	2
24	01684	Washer, Flat, 0.27B 0.69D .05, SS *	2
25	130183	Terminal, TT, .25FEM. 18- 14GA (not shown)	1

* NOTE: Only used on machines not equipped with the optional on-board battery charger.

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