



T5e/SS5 IRIS AM II Upgrade Kit



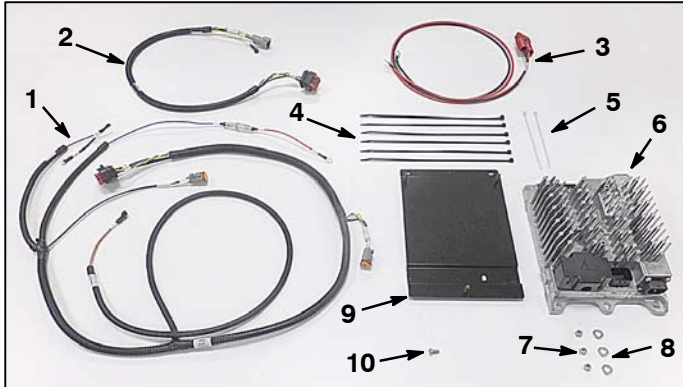
This kit includes the necessary parts to add battery charger communication functionality to machines equipped with IRIS telemetry technology. See the **IMPORTANT INSTALLATION NOTICE** before installing kit.

INSTALLATION INSTRUCTIONS:

Installation Time: 2 Hours

Special Tools Required: T10 & T30 torque screwdrivers

KIT CONTENTS:



Ref	Part No.	Description	Qty.
1	1074457	Harness, Ele, Telem [T5e]	1
2	1075427	Harness, Ele, Telem [Charger Comm.]	1
3	1075426	Cable Assy, 10Ga (T5 AMII, Telem)	1
4	130773	Tie, Cable, Nyl, 11.0L, .14W, 3.0 Max. D	6
5	130040	Tie, Cable, Nyl, 06.0L .12W	2
6	1219460	Charger, 24VDC, 650W, 100-240VAC [Onbrd]	1
7	13513	Nut, Hex, Lock, .25-28, NL	3
8	01684	Washer, Flat, 0.27B 0.69D .05, SS	3
9	1214224	Bracket, Mount, Charger, Delta-Q	1
10	06931	Screw, Pan, Phl, M5x0.08x6, 4.8	1

NOTE: Charger power cord not included, use cord from previous charger.

IMPORTANT INSTALLATION NOTICE:

Telemetry harness (Ref. 1) is not required for IRIS models manufactured after February 2017. The telemetry harness (Ref. 1) is factory installed. Carefully follow the kit installation instructions with this in mind.

When installing the complete IRIS kit with the addition of the AMII upgrade kit, two telemetry harnesses (Ref. 1) will be provided. One from each kit. Only one harness is required for both kits.

KIT PREPARATION:

1. Drain the solution and recovery tanks.
2. Park the machine on level surface, turn off machine, remove the key, and set the parking brake if equipped.
3. Disconnect battery cables from the machine.

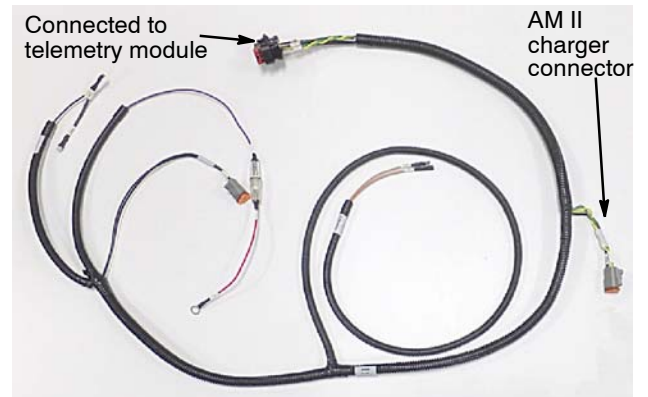
WARNING: Always disconnect battery cables from machine before working on electrical components.



REMOVE EXISTING TELEMETRY HARNESS AND ON-BOARD CHARGER:

1. Remove the existing telemetry harness, shown below, from machine as described in following steps.

NOTE: For IRIS models manufactured after February 2017, the removal of existing telemetry harness is not required. The existing telemetry harness is AM II kit compatible. To confirm, the harness includes an open AM II charger connector as shown below. The AM II charger connector is located behind the squeegee lift bracket (See Figure 18).



2. Remove cover from circuit breaker box (FIG. 1).

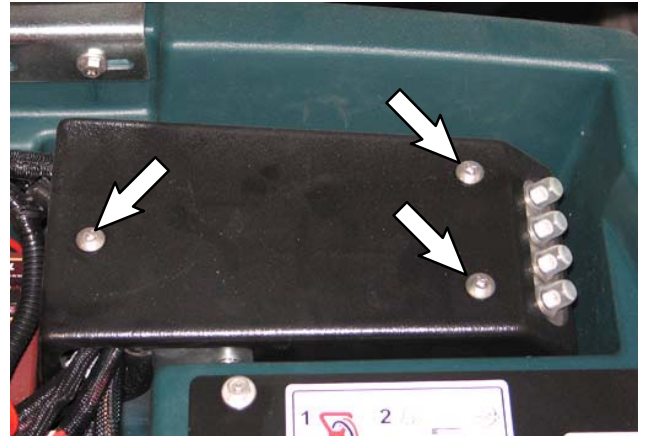


FIG. 1

3. Disconnect telemetry wires, Brown/12 and Brown/12A, from circuit breaker box as shown (FIG. 2).

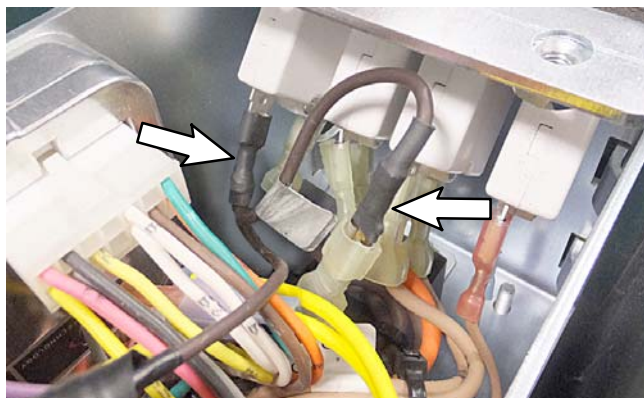


FIG. 2

4. Disconnect telemetry harness from shunt harness (FIG. 3).

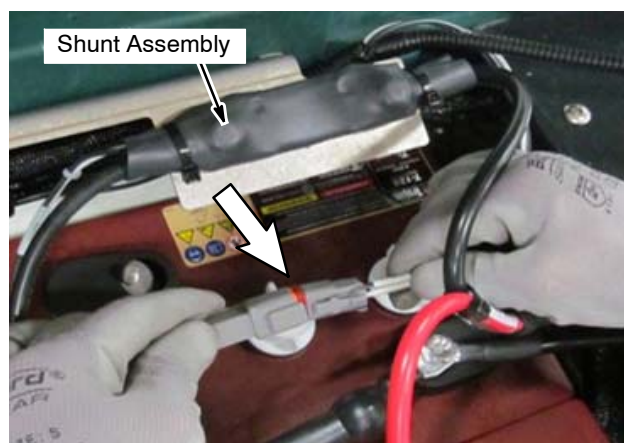


FIG. 3

5. Remove the telemetry harness and battery charger cables routed through clamps as shown (FIG. 4).

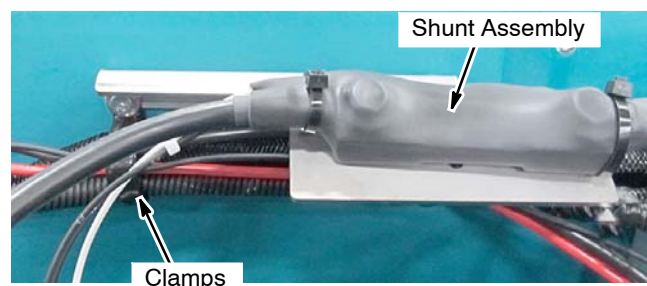


FIG. 4

6. Remove the vacuum motor cover (FIG. 5).

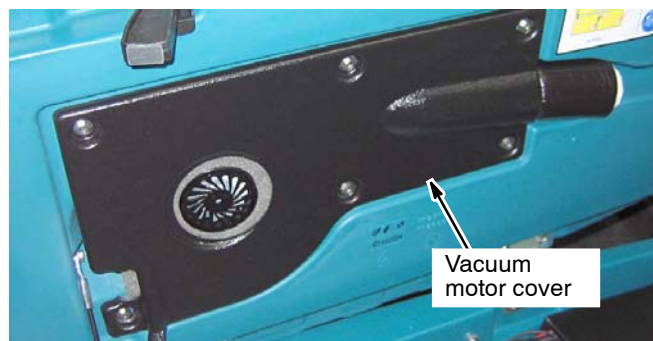


FIG. 5

7. Remove the vacuum motor assembly from machine (FIG. 6).



FIG. 6

8. Remove the lower control panel (FIG. 7).



FIG. 7

9. Disconnect telemetry harness wires, Tan/40 and Tan/40A, from the ec-H2O switch (FIG. 8). If machine is not equipped with an ec-H2O switch, the two wires will be unused and have electrical tape covering the terminals.

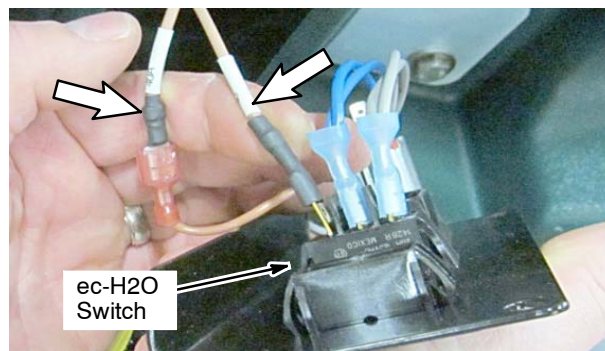


FIG. 8

10. Carefully pull the disconnected telemetry harness wires out through the vacuum motor area (FIG. 9).

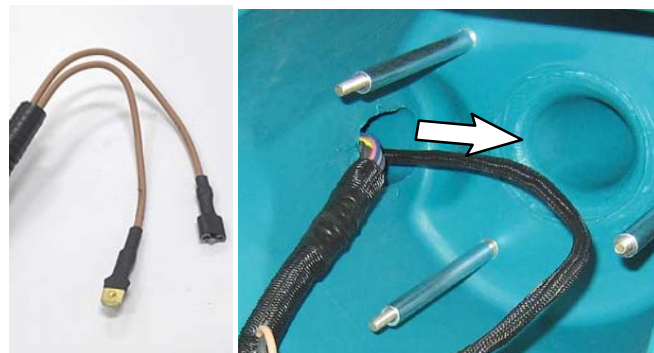
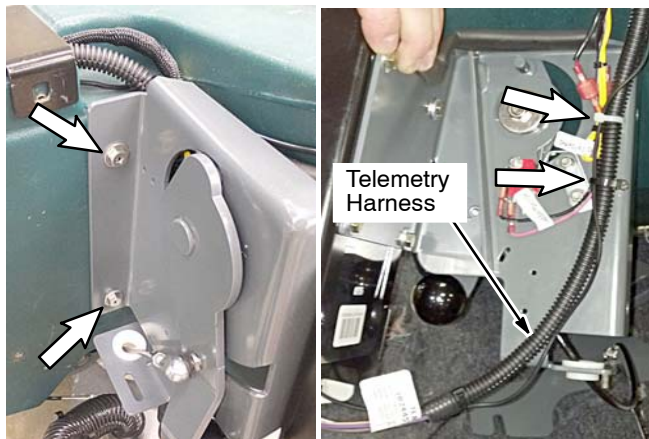


FIG. 9

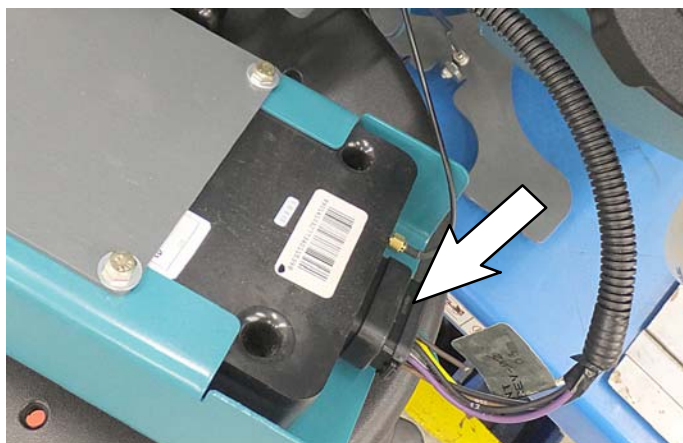
11. Unfasten the on-board charger from machine to access the telemetry harness (FIG. 10). Save screws.

**FIG. 10**

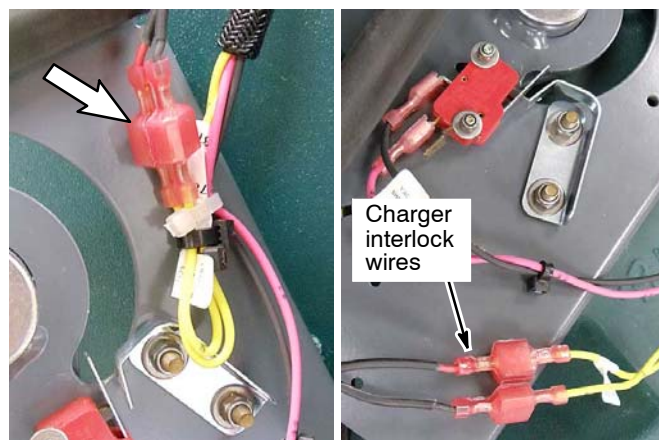
12. Disconnect the squeegee lift bracket from machine (FIG. 11). Cut cable-ties securing the telemetry harness to bracket.

**FIG. 11**

13. Disconnect the telemetry harness from the IRIS module. Remove harness from machine (FIG. 12).

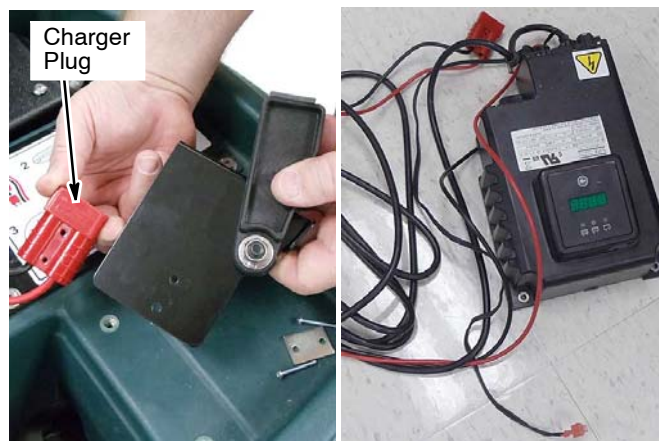
**FIG. 12**

14. Disconnect the two black charger interlock wires from machine harness as shown (FIG. 13).

**FIG. 13**

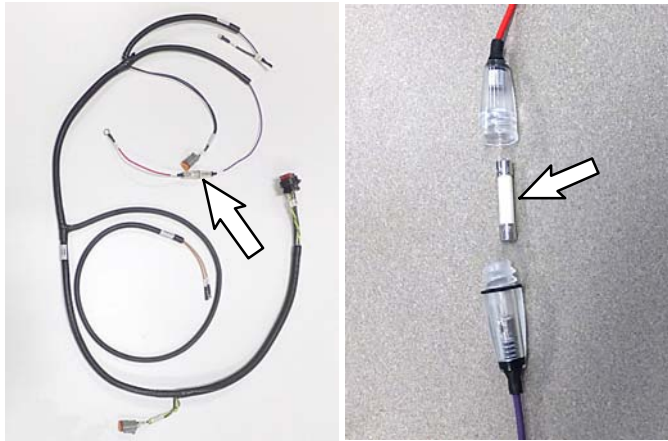
15. Remove the red charger plug from mounting bracket (FIG. 14). Save mounting hardware. Remove existing charger from machine.

Save the AC power cord from old charger. Power cord not supplied with new charger.

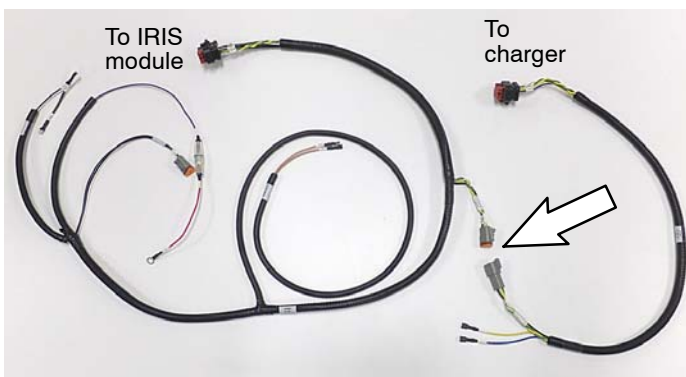
**FIG. 14**

INSTALL AM II UPGRADE KIT:

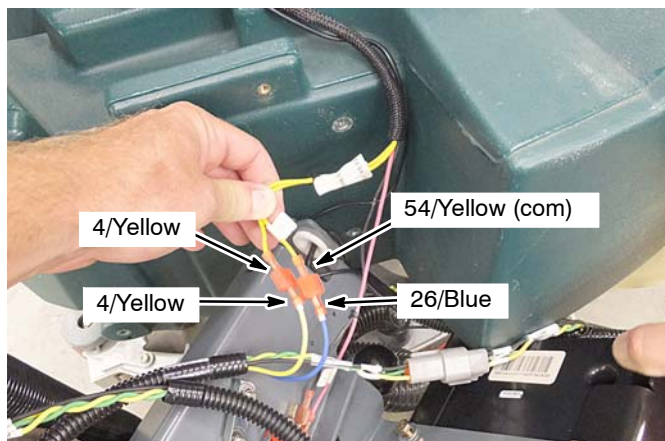
1. **IMPORTANT:** To prevent possible damage to telemetry system during kit kit, remove the in-line fuse from the telemetry harness. Do not misplace fuse (FIG. 15).

**FIG. 15**

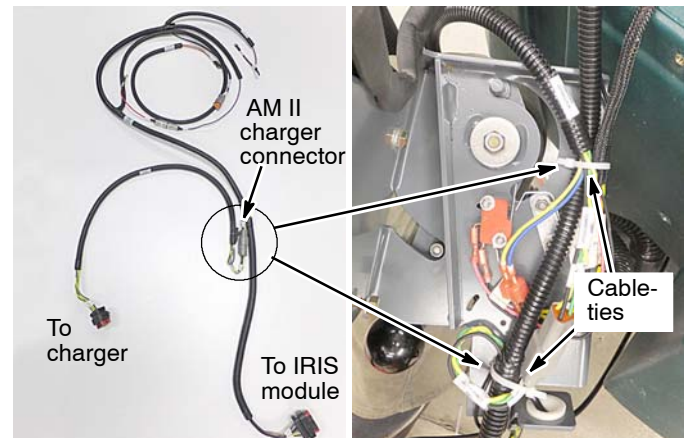
2. Connect the two new telemetry harnesses together as shown (FIG. 16).

**FIG. 16**

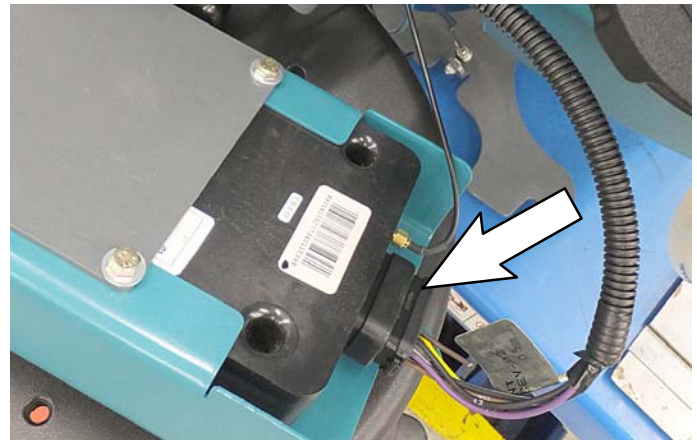
3. Connect the telemetry harness wires, 26/Blue and 4/Yellow, into the two yellow charger interlock wire connectors located at the squeegee lift bracket as shown (FIG. 17).

**FIG. 17**

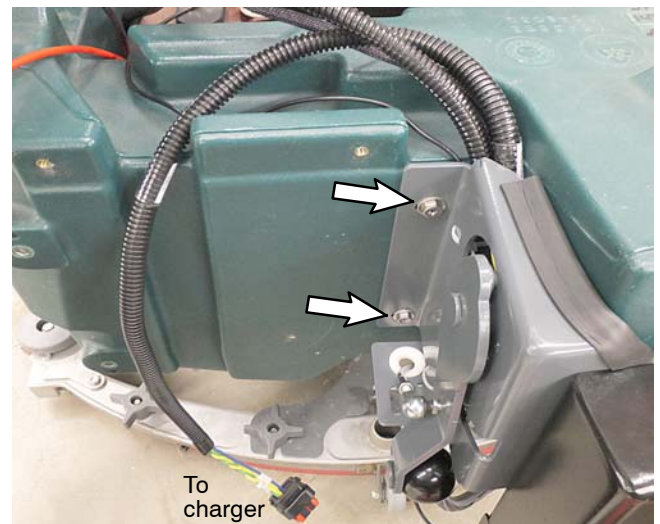
4. Arrange the telemetry harness assembly as shown and attach the harness assembly to the squeegee lift bracket with two cable-ties (FIG. 18). Use the cable-tie holes located in bracket to secure harness.

**FIG. 18**

5. Plug the telemetry harness into the IRIS module (FIG. 19).

**FIG. 19**

6. Reattach the squeegee lift bracket to machine and route the telemetry harnesses, antenna wire and machine harness in the cable channel as shown (FIG. 20).

**FIG. 20**

7. Remove the black cover from new charger and connect the new charger cables to the charger as shown (FIG. 21). Replace cover.

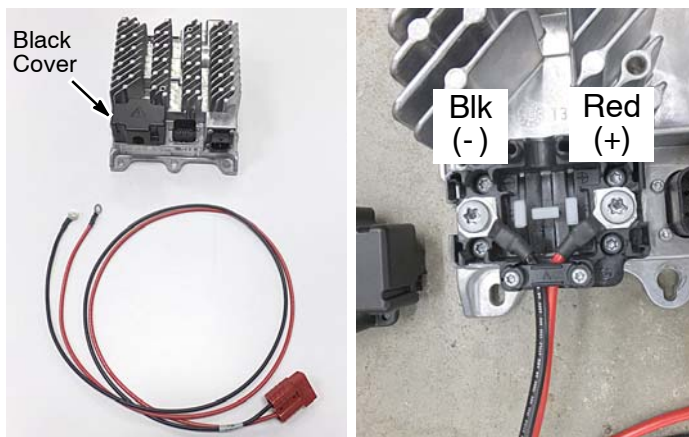


FIG. 21

8. Plug the telemetry harness and AC power cord into the charger as shown (FIG. 22). Route the charger cables and AC power cord into the battery compartment area as shown.

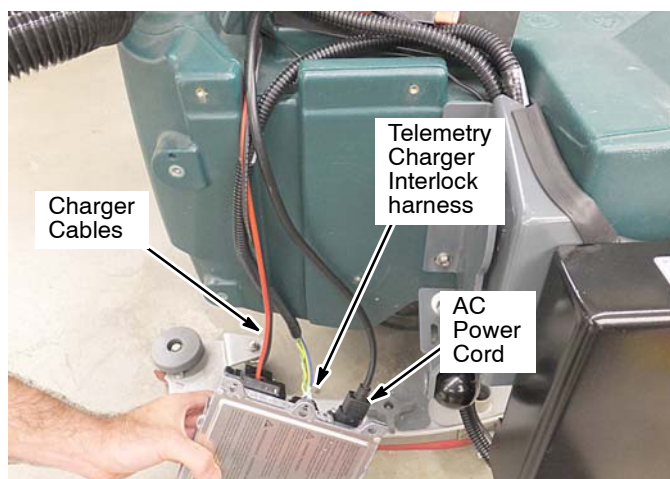


FIG. 22

9. Attach the new battery charger mounting bracket to the machine as shown (FIG. 23). Use existing screws at top and shorter M5 screw, supplied with kit, at bottom.

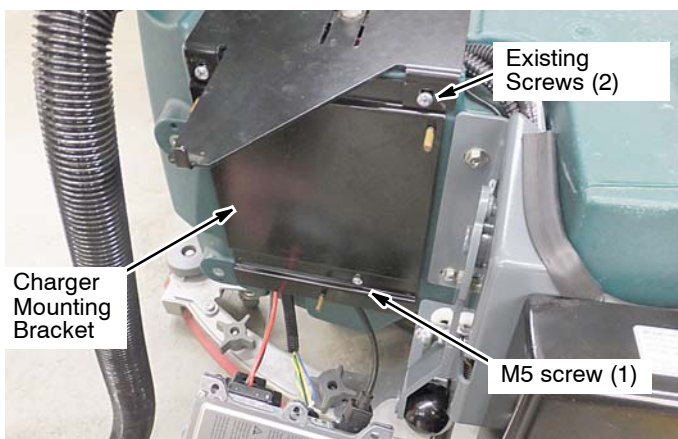


FIG. 23

10. Attach new battery charger to mounting bracket (FIG. 24). Use three lock nuts supplied with kit.

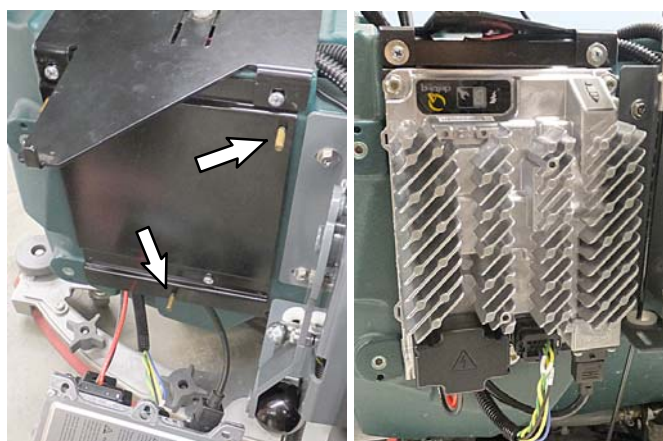


FIG. 24

11. Route telemetry harness wires, 40/Tan and 40A/Tan, up through the vacuum motor location and into the control housing (FIG. 25).

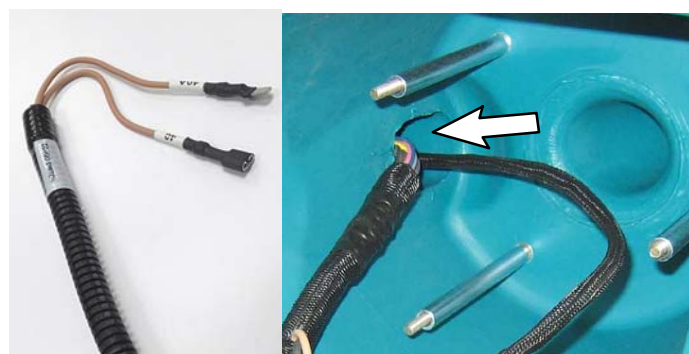


FIG. 25

12. Remove the upper control panel to access the routed telemetry harness wires (FIG. 26).

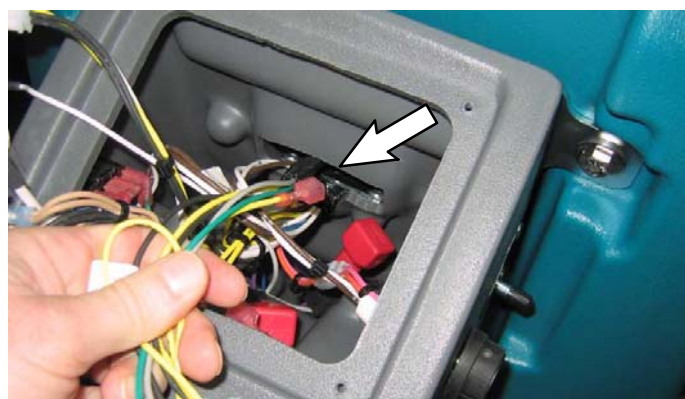


FIG. 26

13. Route the telemetry wires to the lower control panel and connect the wires to the ec-H2O switch as shown (FIG. 27). If machine is not equipped with ec-H2O switch, wrap electrical tape over terminals. Replace the top and lower control panels.



FIG. 27

14. Re-install the vacuum motor, cover and cord hook (FIG. 28). Secure the AC power cord to the machine harness with two cable-ties as shown.

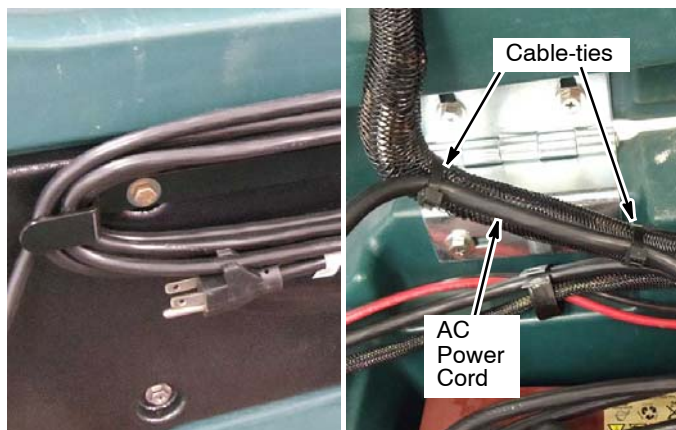


FIG. 28

15. Continue routing the telemetry harness and battery charger cables through the existing cable clamps as shown (FIG. 29). If unable to route all cables through clamps, secure the telemetry harness to the main machine harness using cable-ties.

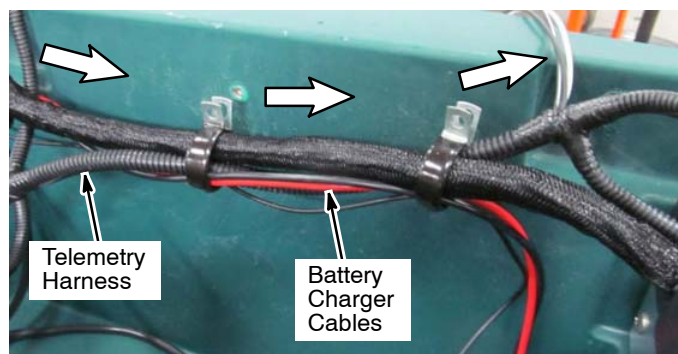


FIG. 29

16. Reinstall the shunt bracket assembly to machine using clamp screws as shown (FIG. 30).

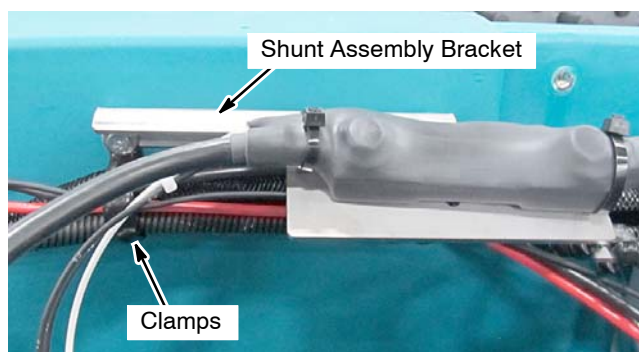


FIG. 30

17. Route telemetry harness wires, 12/Brown and 12A/Brown, to circuit breaker box and connect wires as shown (FIG. 31). Replace the circuit breaker box cover.

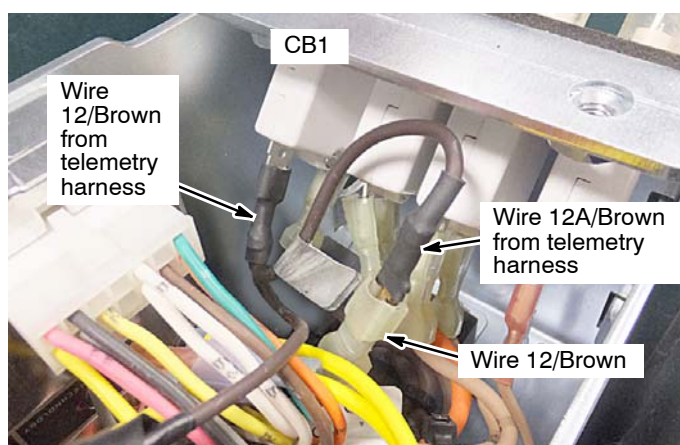


FIG. 31

18. Using existing hardware, connect new battery charger plug to mounting bracket (FIG. 32).

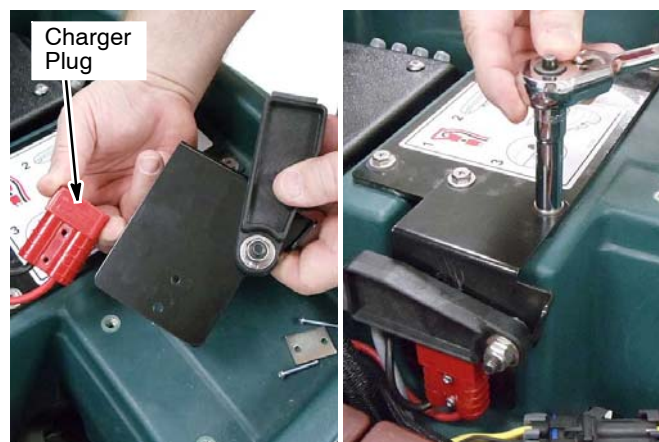


FIG. 32

19. Carefully reinstall batteries and reconnect battery cables. Connect the red fuse wire from the telemetry harness to the positive battery terminal (FIG. 33). Position the ring terminal on top of the battery cable.



FIG. 33

20. Reinstall fuse into telemetry harness (FIG. 34).

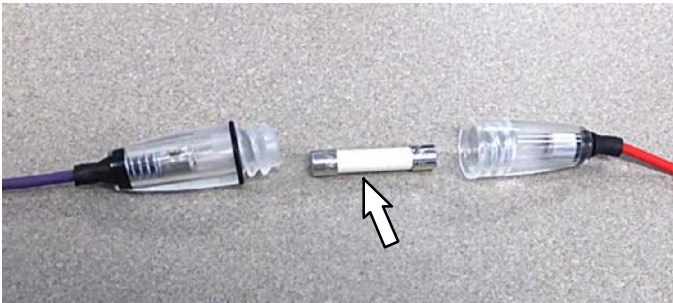


FIG. 34

TEST KIT FOR PROPER OPERATION:

1. Operate machine to confirm proper operation.
2. Operate charger to confirm proper installation as described below.
 - a. Attach battery connector to battery charger connector (FIG. 35).

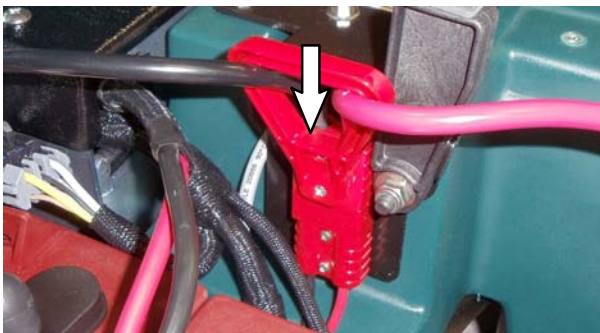


FIG. 35

- b. Plug charger power cord into an AC outlet. Wait up to 30 seconds for charger to start.
- c. Turn key on and pull the start triggers to confirm the charger interlock disables the propel during the charge cycle. The machine's safety shut-off switch **MUST** be compressed during test to confirm (FIG. 36).

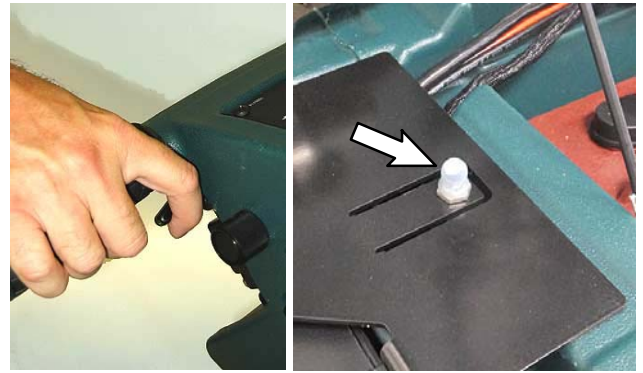


FIG. 36

If the charger interlock does not disable the propel during the charge cycle, check the charger interlock wire connections (FIG. 17). Contact service if necessary. Do not operate machine in this condition.

3. After testing is confirmed, contact Tennant Technical service department as instructed below.

AM II UPGRADE KIT CHARGER PROFILE SETTING:

IMPORTANT: To properly report battery charging data via IRIS, contact Tennant technical service department to set the charging profile to your specific battery type. Please have battery type information available when contacting service.

IRIS TELEMETRY KIT ACTIVATION:

If the complete IRIS telemetry system was installed with the addition of the AM II upgrade kit, call the Tennant technical service department to activate the IRIS module and to set the charging profile. The IRIS telemetry system must be activated to complete the install. Please have machine serial number and IRIS module SIM number available when calling for activation.

NOTE: When batteries reach end of life and must be replaced, Tennant highly recommends that the same battery type be used to continue to maximize the machine performance. In the event a battery with a different amp hour (AH), type (flooded, AGM, Gel), or manufacturer is selected for replacement please contact Tennant technical support department for assistance in determining the feasibility of the replacement batteries and selecting the correct charging profile.