T300 IRIS Telemetry Kit

This kit includes the necessary parts to install IRIS telemetry technology on a standard T300 model.

INSTALLATION INSTRUCTIONS:

Installation Time: 1.5 Hours

Kit Installation Requirements:

- Tennant ServiceLink computer or a computer with Wi-Fi connection to access the Tennant Service Application Software, and USB cable (supplied with kit).

Computer System Requirements: Windows® 7 OS, Microsoft .NET Framework 4.5 or later, USB Port.

- The IRIS Telemetry Kit MUST be activated to complete installation. After kit is installed CALL Technical Support to activate as described on page 6.

Special Tools Required: T-25 torque screwdriver

PREPARE MACHINE FOR KIT INSTALL:

1. Drain the solution and recovery tanks.

2. Park the machine on a level surface and remove key.

3. Disconnect battery cables from battery pack. If model is equipped with the red quick disconnect connector, disconnect connector (Figure 1).

NOTE: If model is equipped with the optional battery lift-out tray, the batteries and tray must be removed from machine to allow space to replace the circuit board.

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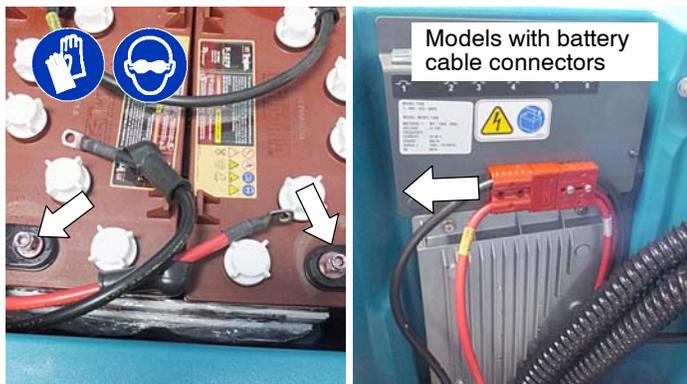

Fig. 1

4. Cut the three cable-ties that secure the vacuum hose, drain hose, and battery cables to the heat- sink panel (Figure 2).
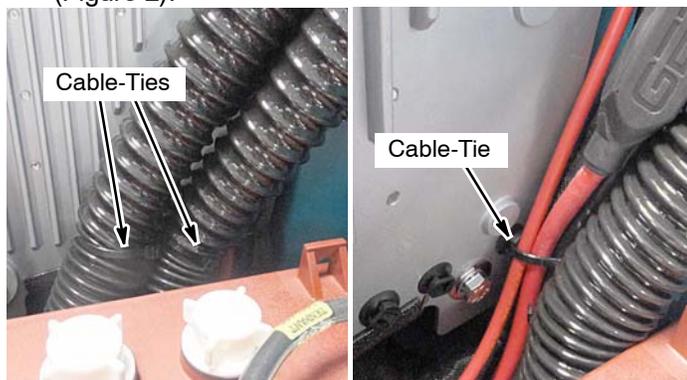

Fig. 2

5. Remove the top two screws from the heat-sink panel and carefully lower panel as shown (Figure 3). Place a piece of cardboard over the battery terminals to prevent contact with metal heat-sink panel.

FOR SAFETY: When servicing machine, keep all metal objects off batteries.
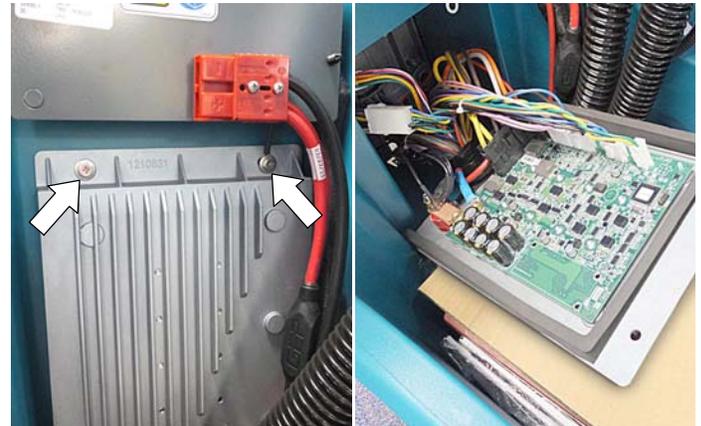

Fig. 3

6. Disconnect wire connections and remove circuit board from the heat-sink panel (Figure 4). The circuit board is mounted to panel with eight torque head screws and five standoffs. Squeeze standoff flange to release circuit board from panel.
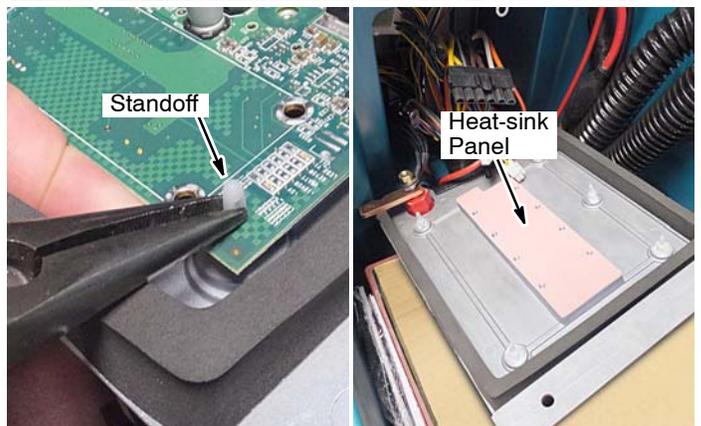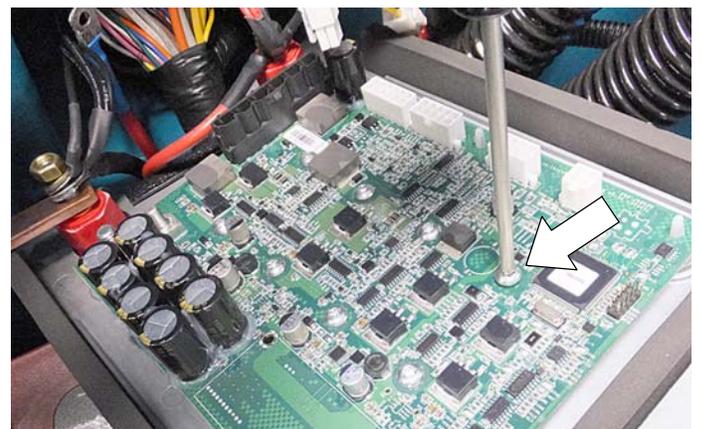

Fig. 4

INSTALL TELEMETRY CIRCUIT BOARD, SIM CARD AND ANTENNA:

1. Use the supplied static ground strap as instructed when handling new circuit board (Figure 5).

Fig. 5

2. Carefully remove the telemetry SIM card from the card holder (Figure 6).

   NOTE: DO NOT dispose the card holder, the bar-code information will be needed to activate the telemetry system as described later to complete installation.

Fig. 6

3. Fully insert the SIM card into the circuit board card slot as shown (Figure 7).
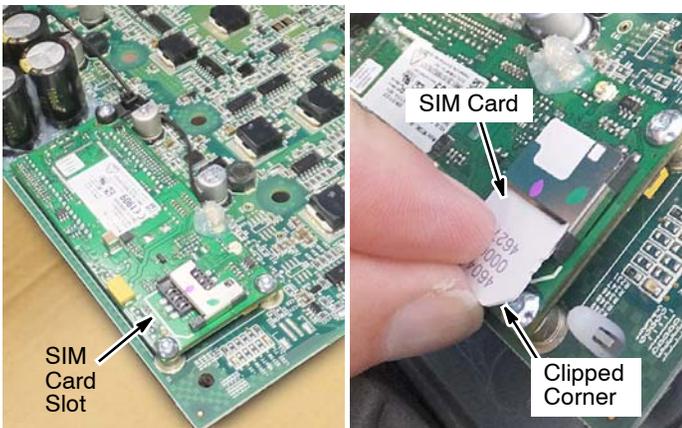

Fig. 7

4. Mount the new circuit board to the heat-sink panel using existing hardware (Figure 8). Install the antenna bracket with two spacers as shown. Reconnect the five wire harness connectors to new circuit board.
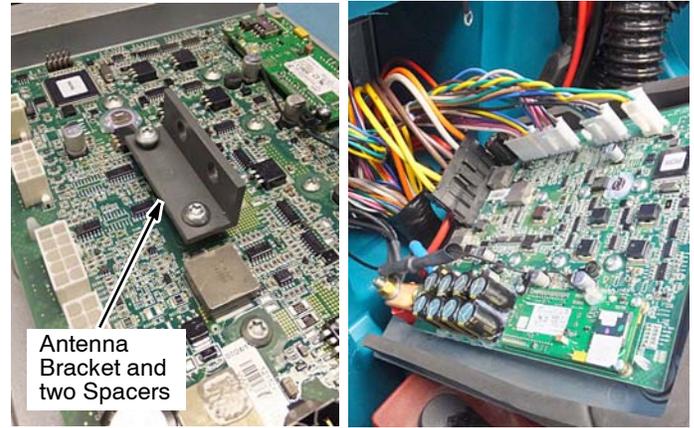

Fig. 8

5. Reconnect the bus-bar and red battery cable to new circuit board. To allow clearance to remount panel to machine, position the wires that are connected to the stand-off as shown (Figure 9).
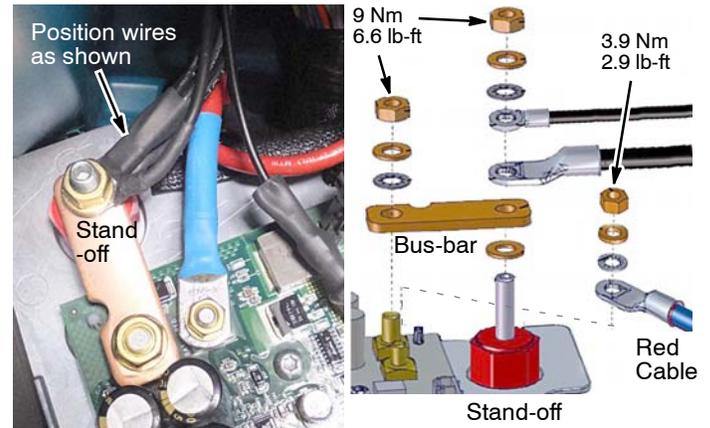

Fig. 9

6. Connect the new circuit board's antenna wire to the antenna bracket as shown (Figure 10). Then connect the antenna wire to circuit board wire as shown .
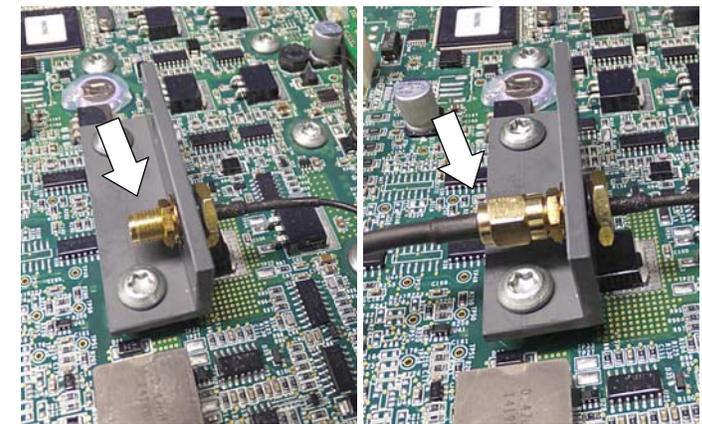

Fig. 10

7. Adhere the cable clip to machine as shown. Secure antenna wire within clip. Using two cable clamps and two shelf-tapping screws, mount the antenna to machine as shown (Figure 11).
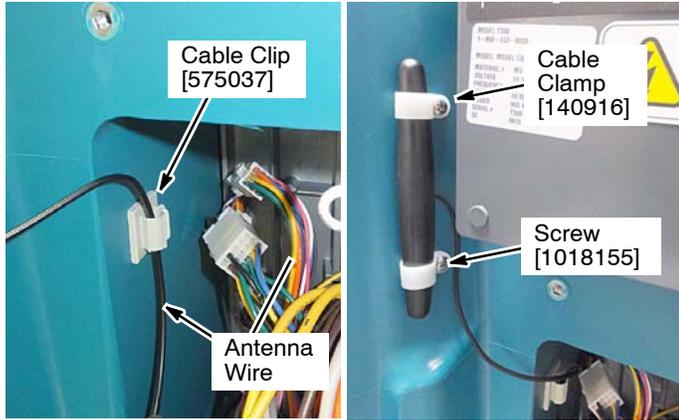

Cable Clip [575037]

Cable Clamp [140916]

Screw [1018155]

Antenna Wire

Fig. 11

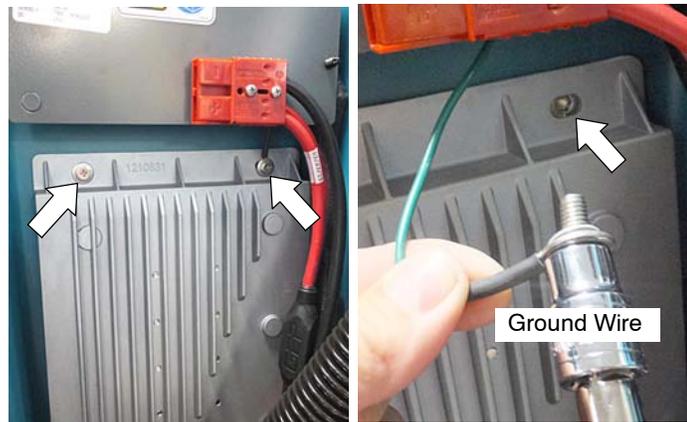8. Re-install the heat-sink panel to machine. Make sure to reconnect ground wire to panel (Figure 12).

Ground Wire

Fig. 12

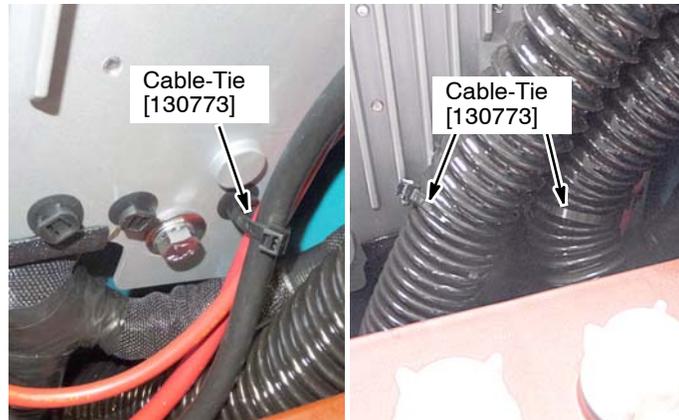9. Reconnect cables, vacuum hose and drain hose to the heat-sink panel with cable-ties (Figure 13).

Cable-Tie [130773]

Cable-Tie [130773]

Fig. 13

INSTALL AM II BATTERY CHARGER COMMUNICATION ADAPTOR HARNESS:

Diode Plug [222290]

Adaptor Harness [1075195]

1. Remove the two lower torque screws at bottom of control console and carefully lower the console cover as shown (Figure 14).

Fig. 14

2. Remove the two upper torque screws from bezel assembly and lower bezel (Figure 15)

Fig. 15

3. Disconnect the large harness connector from control board and route the connector down through harness opening as shown (Figure 16).
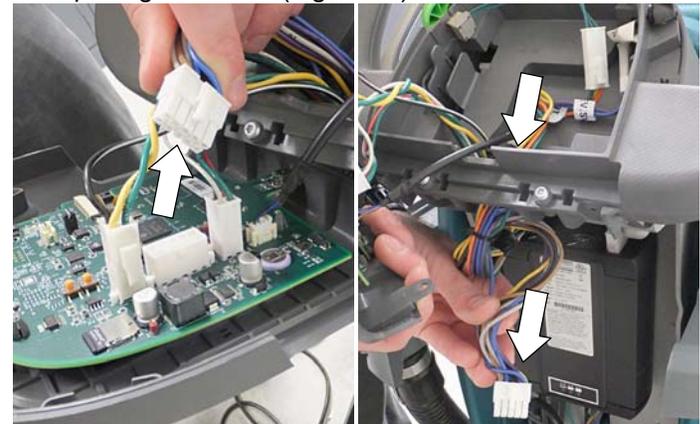

Fig. 16

4. Plug the adaptor harness into the routed connector. Plug the diode, supplied with kit, into adaptor harness as shown (Figure 17)
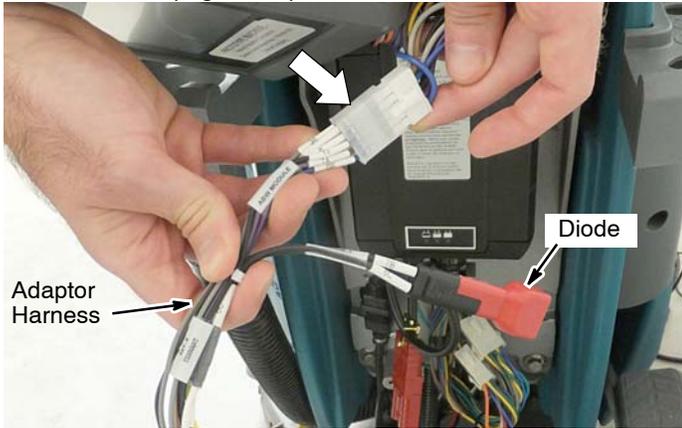

Fig. 17

5. Route the adaptor harness up through the harness opening and connect to control board (Figure 18)
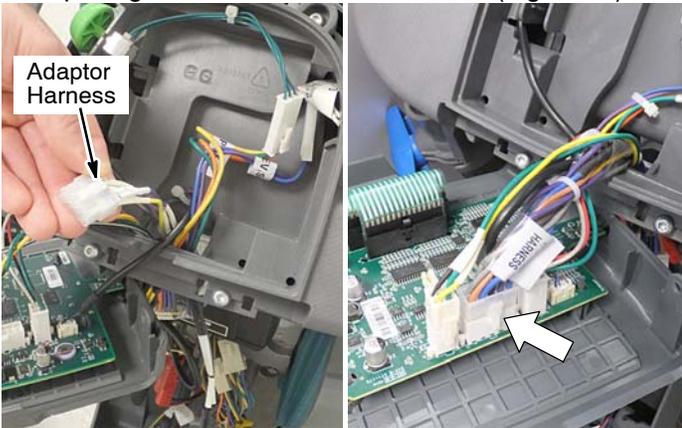

Fig. 18

6. Replace the bezel and the lower console cover (Figure 19).

Fig. 19

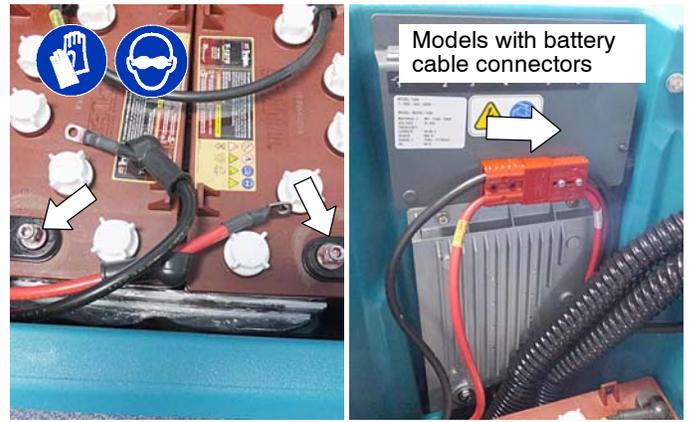7. Reconnect battery cables to battery pack (Figure 20).

Fig. 20

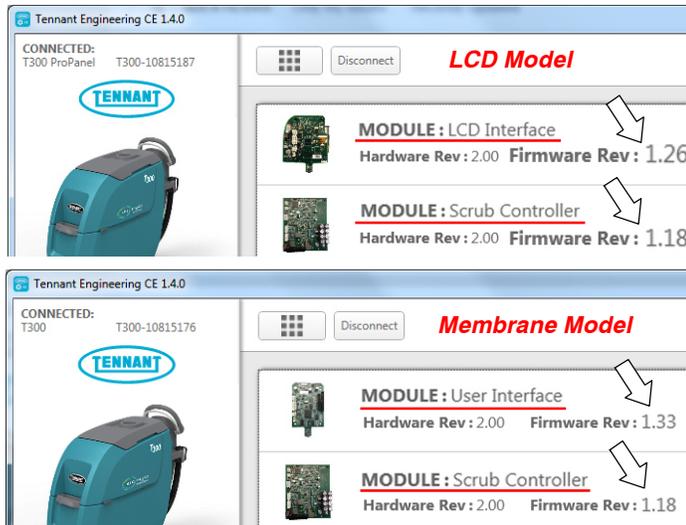8. Apply the FCC label to machine as shown (Figure 21).

Fig. 21

9. See TENNANT SERVICE APPLICATION SOFTWARE to reconfigure the machine's control board to recognize the IRIS Telemetry installed kit.

TENNANT SERVICE APPLICATION SOFTWARE:

The Tennant Service Application Software is required to reconfigure the machine's control board to recognize the IRIS Telemetry installed kit. The software can be accessed or installed as described in this section.

NOTICE: If the Service Application Software is currently installed on your computer, confirm or re-install the software to ensure latest software version is installed.

IMPORTANT: This kit requires the following firmware revisions or higher to activate the AM II charger interlock feature (Figure 22).

Images from the Service Diagnostics Software Application

Fig. 22

To confirm the firmware versions for models equipped with LCD displays, go to the "About" screen as shown below (Figure 23). If the User Interface and Scrub controller firmware revisions are less than specified below, Service Application software update may be required to update firmware revisions. For models with membrane panels, the Service Application software is required to confirm firmware version as shown above.
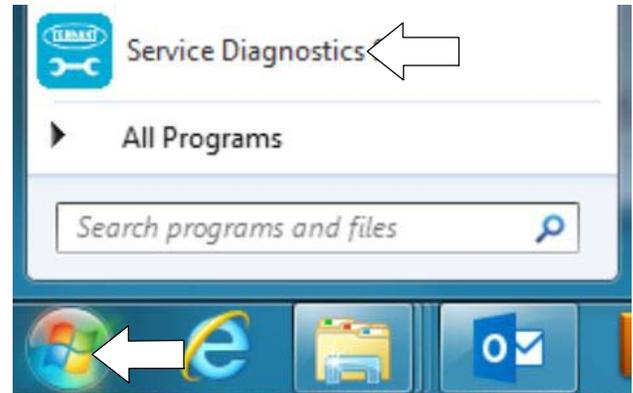

Fig. 23

For Tennant service personnel equipped with ServiceLink computers, the software is pre-installed on your computer as described below.

The software application is titled **"Service Diagnostics"**. (Figure 24).

Icon on Desktop

From Start menu

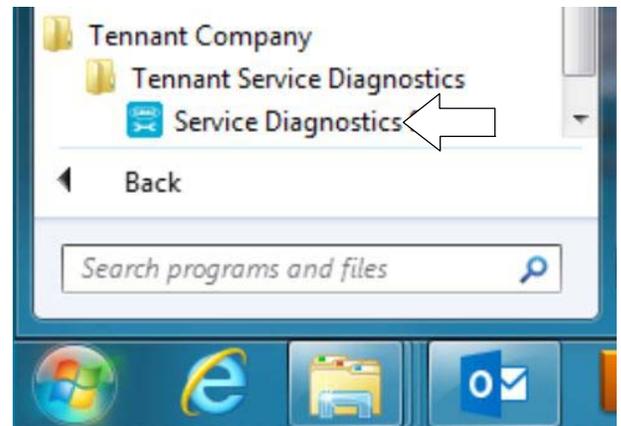**From Start menu > All Programs > Tennant Company > Tennant Service Diagnostics**

Fig. 24

For other Service Groups, the Service Application Software can be downloaded from the "My Tennant™" website as described below.

1. Go to www.tennantco.com and click on the **"My Tennant Customer Sign In"** tab in the upper left corner (Figure 25).

Fig. 25

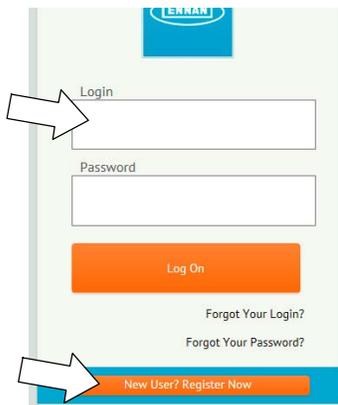2. Log on to the "My Tennant™" website or register as a new user (Figure 26).

Fig. 26

3. Once logged on to the "My Tennant™" website, click on the **"Service Application Software"** link under the "Product Support & Solution" section as shown below (Figure 27).
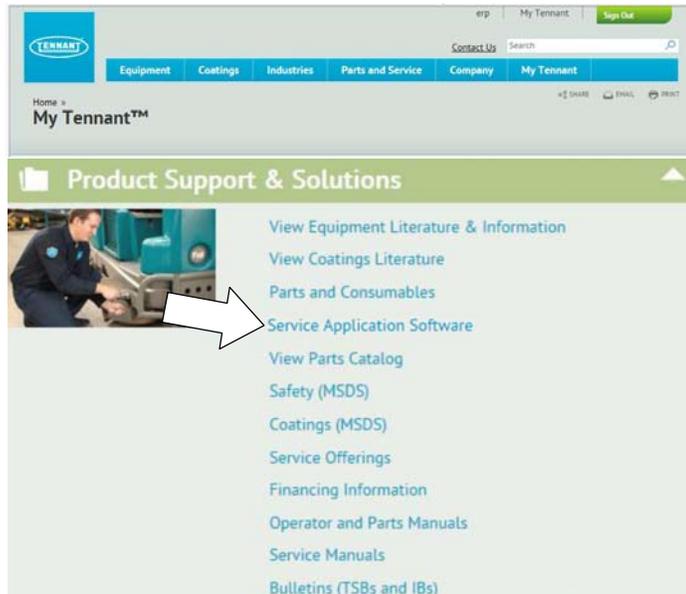

Fig. 27

5. Within the Service Application Software page, click on the link titled **"Service Diagnostics..."** to download the application installer (Figure 28). Click the Save button.
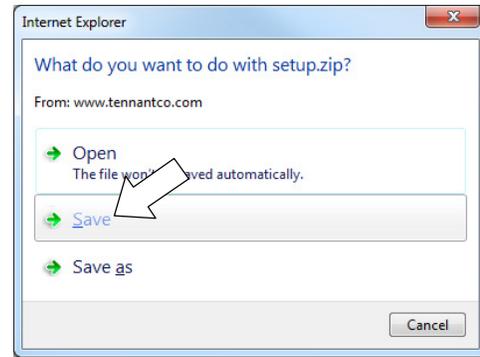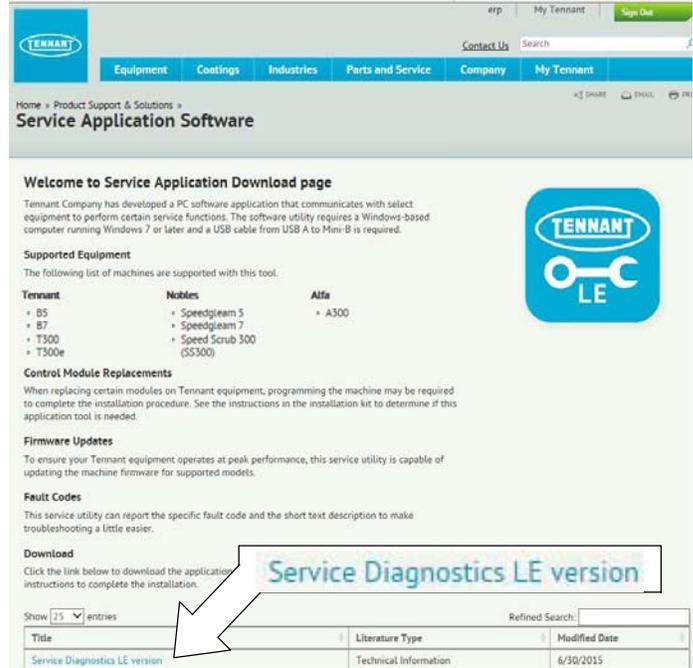

Fig. 28

6. Open the "Downloads" folder and locate the "Firmware_setup" zip file. Open the zip file and click on the "setup" file to install the application software on your computer (Figure 29).
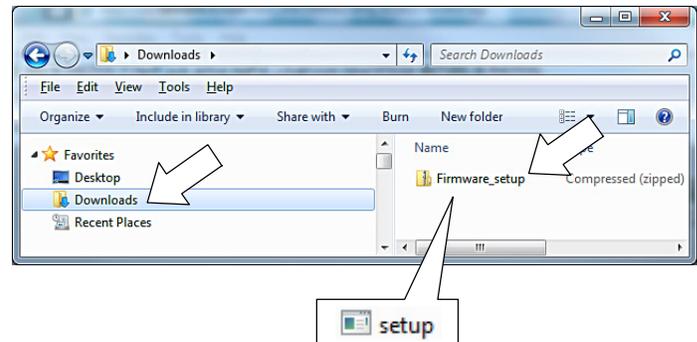

Fig. 29

7. After the application software is installed on your computer, refer to figure 24 to access the program.

REPROGRAM THE CONTROL BOARD:

The following Tennant Service Application Software is required to reconfigure the machine's control board to recognize the IRIS Telemetry installed kit.

See **TENNANT SERVICE APPLICATION SOFTWARE** for further details.

1. Start the Service Software Application program **"Service Diagnostics SE..."** (Figure 30).

Icon on Desktop

Fig. 30

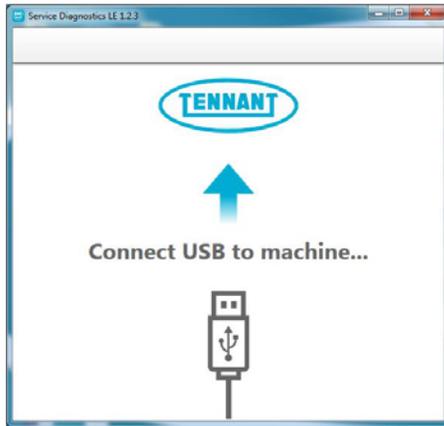2. After start up, the following screen will appear (Figure 31).

Fig. 31

3. Connect the USB cable to computer and to the USB port on machine as shown. Turn the key switch to the on position (Figure 32).
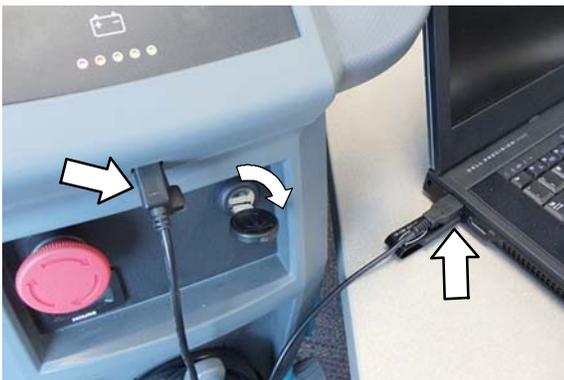
Fig. 32

4. The application software will then connect to the machine (Figure 33). If the application remains on the "Connecting to Machine..." screen for an extended period, cycle key or close and restart the application software. If it still fails to connect, restart the computer.
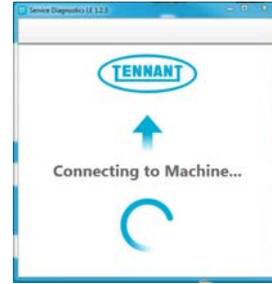
Fig. 33

5. Once connected, the home screen will appear (Figure 34). If firmware updates are required, the "Firmware" button will be highlighted in yellow as shown. Press the button to update the machine's firmware.
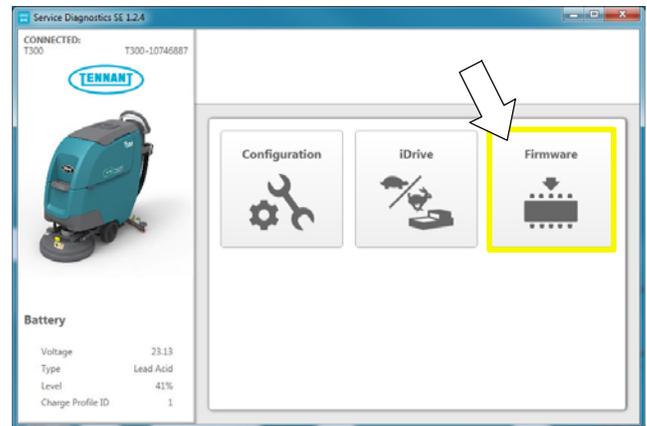
Fig. 34

If the following screen appears, continue with the firmware update by pressing the yellow "Update" button (Figure 35).
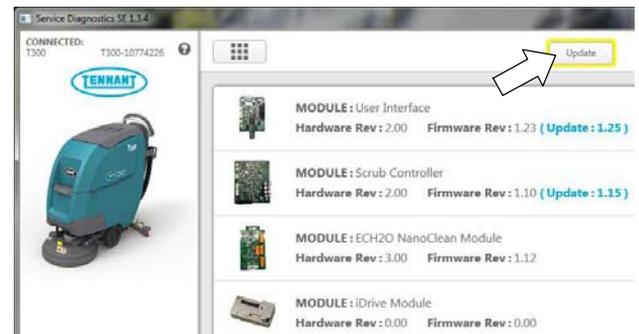
Fig. 35

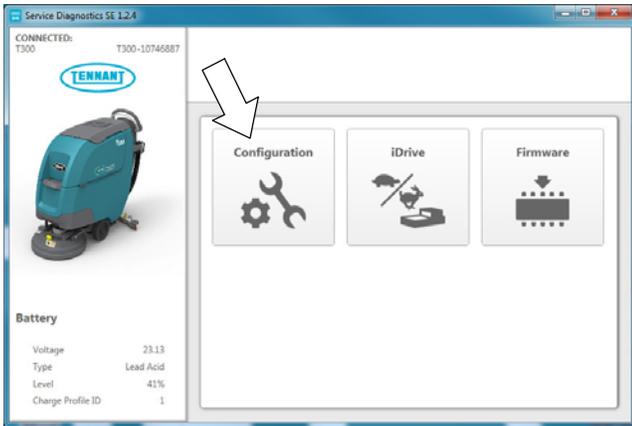6. From the Home screen, press the Configuration button (Figure 36).

Fig. 36

7. From the machine configuration page, select "Yes" from the **IRIS** drop-down menu to configure the machine with telemetry technology (Figure 37). Then press the down arrow button to program the machine. A green check will appear next to the down arrow button when programmed.
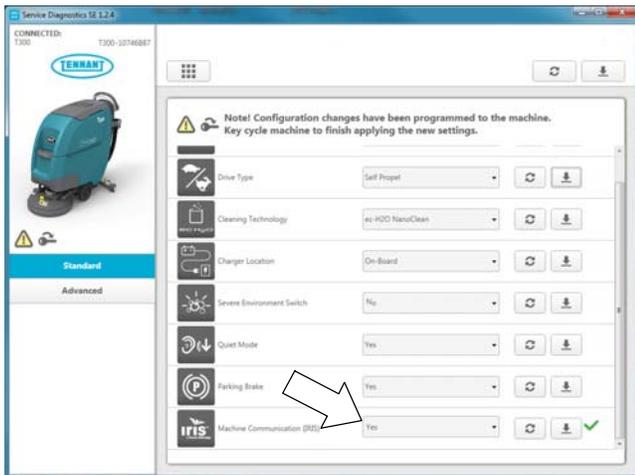

Fig. 37

7. Cycle the key to apply the new machine configuration. Disconnect the USB cable.

ACTIVATE THE IRIS TELEMETRY SYSTEM

NOTE: The IRIS telemetry system must be activated to complete this installation. The system will not function until it is activated.

For assistance to activate the IRIS telemetry system, call your customer service location:

Before calling, be sure to have the machine serial number and the 20 digit SIM card bar-code number ready for activation (Figure 38).

USA Customer Service Location: Call Technical Support between hours 7:00 am and 5 pm CST, Monday through Friday.

Australia Customer Service Location: Call CCC between hours 8:00 am and 5 pm AEST, Monday through Friday. Ask to be routed to the IRIS expert for assistance.

Canada, Europe, Middle East, Africa Customer Service Location: Call local IRIS expert between hours 8:00 am and 5 pm, Monday through Friday.
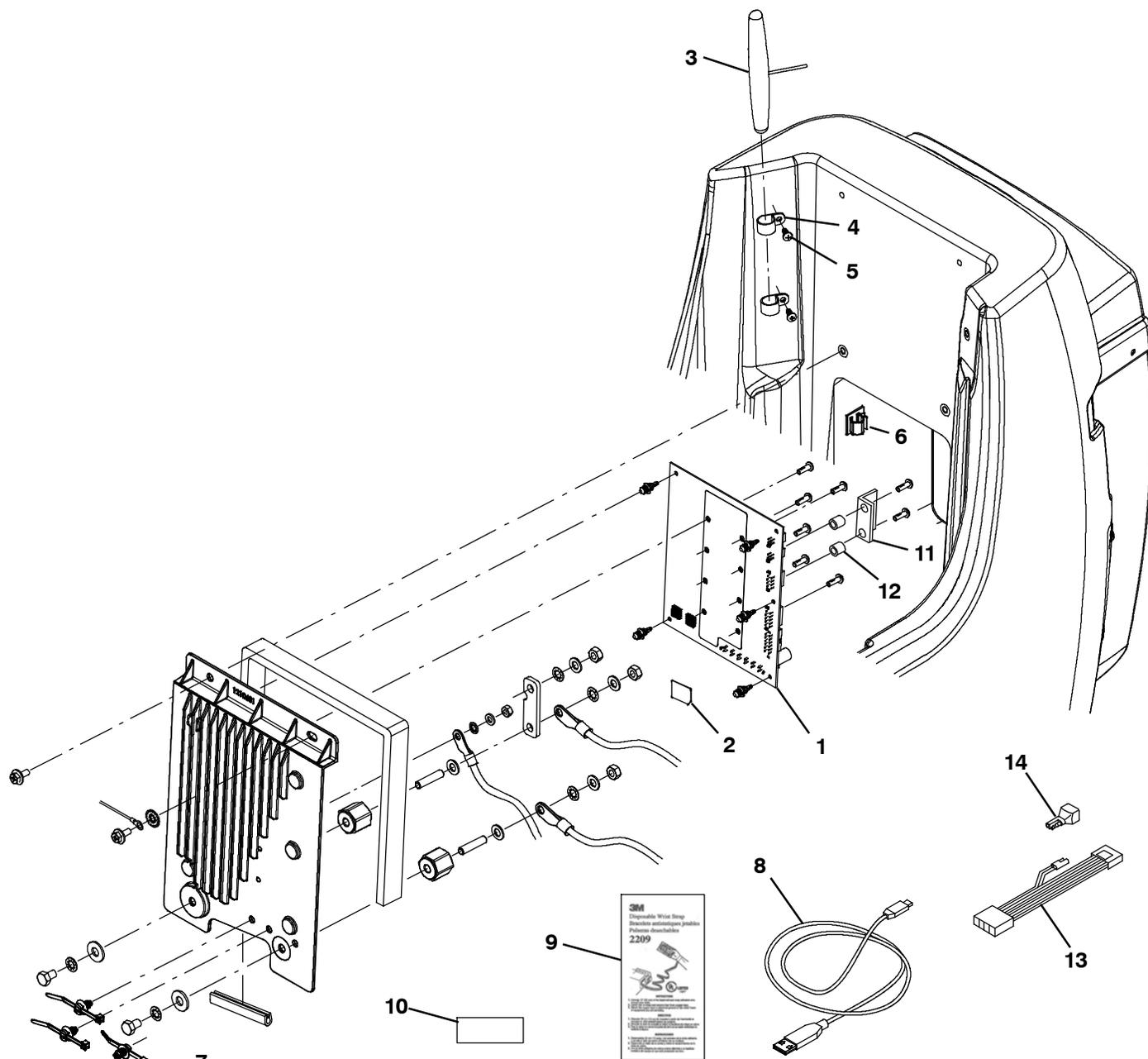

Machine Serial Number

USA SIM Card Bar-Code Number

International SIM Card Bar-Code Number

Fig. 38

T300 IRIS Telemetry Kit Parts List

Ref.	Part No.	Description	Qty.
	9014101	Telemetry Kit, IRIS, International, Di [T300] (Complete Kit)	1
	9014676	Telemetry Kit, IRIS, USA, Di [T300] (Complete Kit)	1
1	1215340	Circuitboard, Assy [Vw, Cntrl, Telem]	1
2	1074365	Controller, Telem [SIM Card, White, Intl., M2m- air] (included in Kit 9014101)	1
2	1074364	Controller, Telem [SIM Card, Yellow, USA., M2m- air] (included in Kit 9014676)	1
3	315724	Cs, Antenna, Telem, 18.0 In [Gprs]	1
4	140916	Clamp, Cable, Nyl, 0.62d, Nat	2
5	1018155	Screw, Pan, Phl, M5 X 0.80 X 16, Tcut,Ss	2
6	575037	Clip, Cable [quick lock]	1
7	130773	Tie, Cable, Nyl, 11.0L, .14W, 3.0 Max. D	3
8	1071235	Cable, USB	1
9	27964	Strap, Ground, Static	1
10	1069580	Label, Machine, Telem [FCC, USA,INTL]	1
11	1227812	Bracket, SMA Connector [Antenna]	1
12	1227815	Spacer, Unthreaded, Alum. [Bracket]	2
13	1075195	Harness, Ele, Adaptor, AM II	1
14	222290	Diode, Ele,Plug	1