TENNANT

INSTRUCTION BULLETIN

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 9015633**/**9015042**

SYNOPSIS:

This kit contains the parts needed to replace Pro‑Panel assembly on M17/M20/M30/T20 machines. Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 45‑60 minutes)
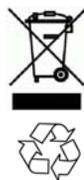
PROTECT THE ENVIRONMENT

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.

PREPARATION (M20/M30/T20 ONLY):

1. If the pod assembly on machine is operable, connect service computer to the pod, turn the key to the ON position, but do not start the machine, start the Capture application, and note machine settings. The new pod assembly (1) will need to be configured to the same settings.

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

2. Disconnect the battery cables from the battery.

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

3. Open the front shroud to access the steering mechanism components.

INSTALLATION (M20/M30/T20 ONLY):

1. Disconnect the pod cables from the main wire harness. (Fig. 1)
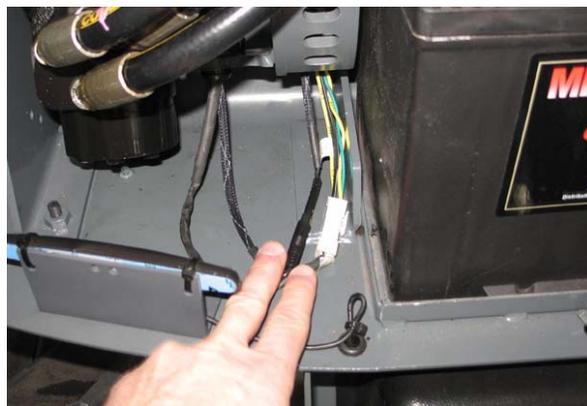
FIG. 1

2. Loosen the socket screws (Qty. 2) securing the pod assembly into the steering tilt bracket. (Fig. 2/Fig. 3)
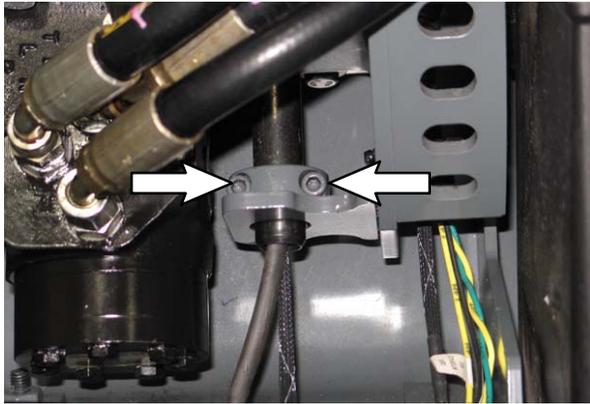
FIG. 2

3. Pull the pod assembly out from the steering assembly. (Fig. 3)

4. Remove the two thrust washers from the pod assembly. Set the thrust washers aside. Discard the removed pod assembly. (Fig. 3)

5. Slide the thrust washers onto the new pod assembly (1). (Fig. 3)

6. Insert the new pod assembly (1) into the steering assembly. (Fig. 3)

7. Orient the pod assembly (1) so the display is positioned correctly in the steering wheel and tighten the two socket screws to secure the pod assembly into the steering tilt bracket. (Fig. 2/Fig. 3)

8. Connect the pod assembly (1) to the main wire harness.

9. Reconnect the battery cables to the battery.
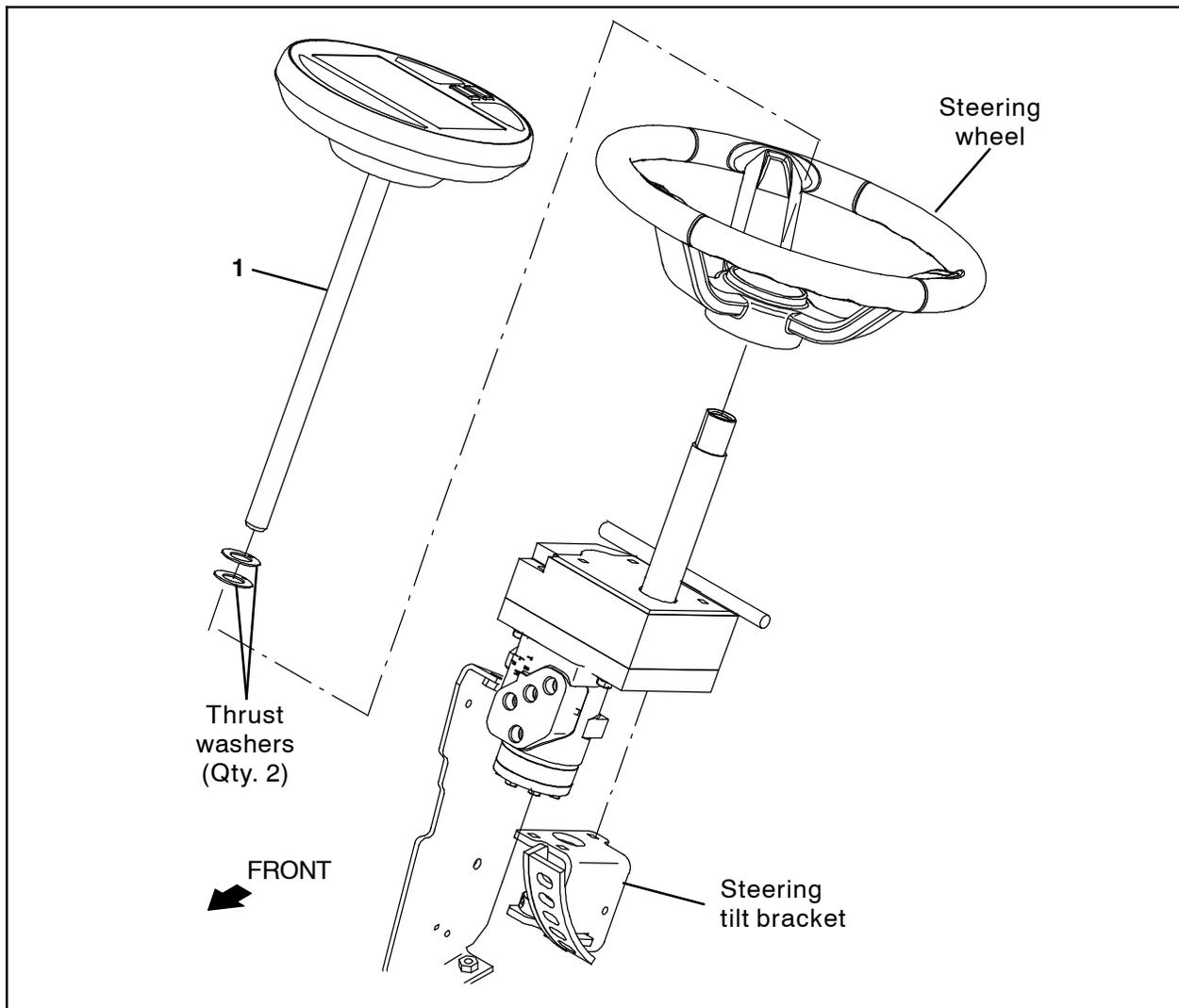
FIG. 3

PREPARATION (M17 ONLY):

1. If pod assembly on machine is operable, connect service computer to the pod, turn the key to the ON position, start the Capture application, and note machine settings. The new Pro-Panel pod assembly (1) must be configured to the same settings.

NOTE: If Pro-Panel pod assembly is completely inoperable, the machine configuration settings will need to be set to the optional equipment on the machine and / or set to the standard default settings.

2. If pod assembly on machine is operable, record the hours from the hour meter.

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

3. Disconnect the battery cable from the machine.

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

4. Remove the electrical access panel from the machine. Set the electrical access panel and all hardware aside. (Fig. 4)

FIG. 4

INSTALLATION (M17 ONLY):

1. Disconnect the main wire harness and rear view camera cable from the Pro-Panel pod assembly. (Fig. 6)

2. Loosen the M6 set screws securing the Pro-Panel pod assembly in the bearing plate. (Fig. 5/Fig. 6)
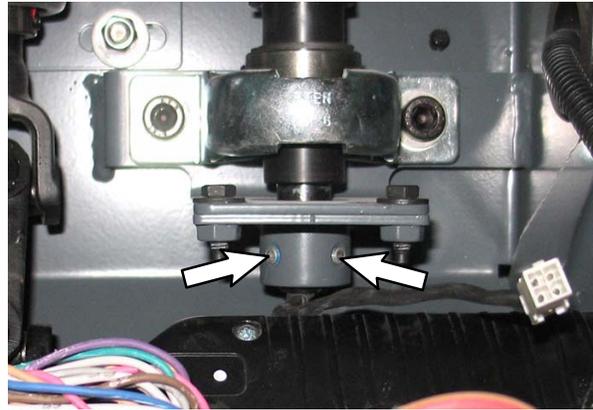
FIG. 5

3. Pull the Pro-Panel pod assembly from the steering mechanism. (Fig. 6)

4. Remove both thrust washers from the Pro-Panel pod assembly. Set the thrust washers aside. Discard the Pro-Panel pod assembly. (Fig. 6)

5. Slide the thrust washers onto the new Pro-Panel pod assembly (1). (Fig. 6)

6. Carefully insert the Pro-Panel pod assembly (1) into the steering mechanism. **Do Not** damage cables when inserting the Pro-Panel pod into the steering mechanism. (Fig. 6)

7. Position the Pro-Panel pod assembly (1) so it is properly aligned on the steering wheel. (Fig. 6)

8. Tighten the two M6 set screws to secure the Pro-Panel pod assembly (1) inside the bearing plate. (Fig. 5/Fig. 6)

9. Connect the main wire harness and the rear view camera cable to the Pro-Panel pod assembly (1). (Fig. 6)

10. Reinstall the electrical access panel onto the machine.

11. Reconnect the battery cable to the machine.

FRONT

1

Thrust washers (Qty. 2)

Inductor (CE / Australia Only): Install onto new Pro- Panel pod assembly (1)

To: Main wire harness

To: Rear view camera

Loosen M6 set screws (Qty. 2)

*Bearing plate

*_Do Not_ remove bearing plate from machine/steering mechanism when replacing Pro- Panel pod assembly (1). Parts shown disassembled to better show part locations
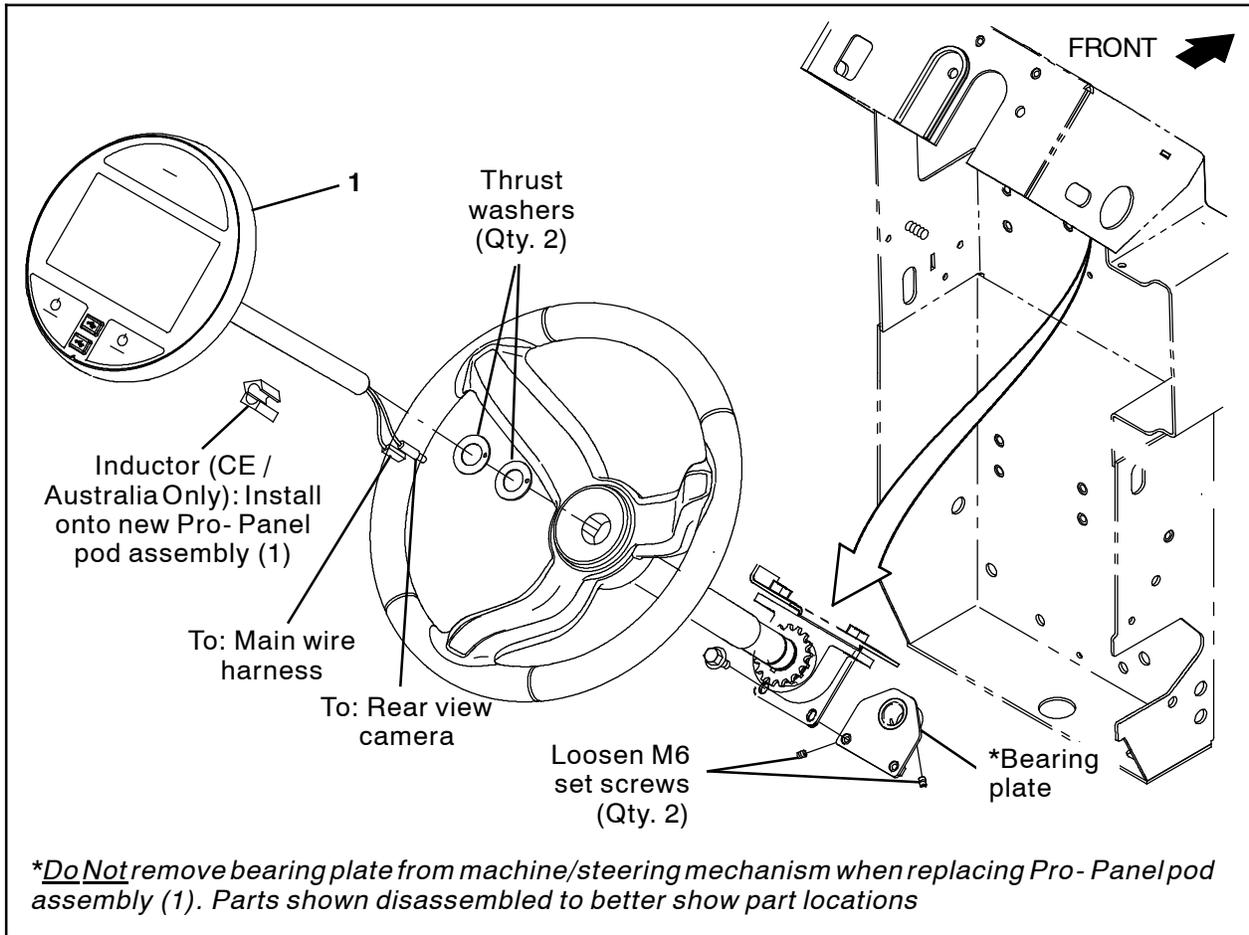
FIG. 6

TENNANT SERVICE APPLICATION SOFTWARE (ALL MACHINES):

Download the service application software as described below.

For Tennant service personnel equipped with ServiceLink computers, the software is already installed on the service computer. The software application is titled **"Service Diagnostics"**. (Fig. 7)

Icon on Desktop

From Start menu
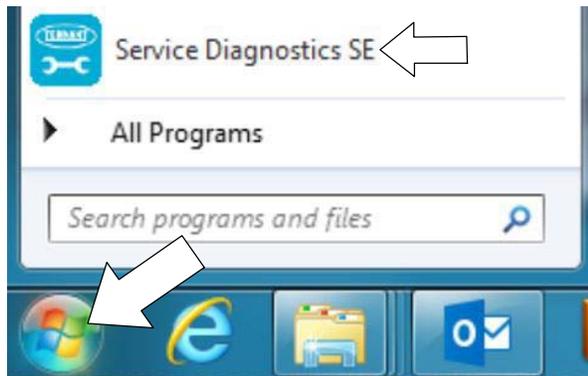
From Start menu > All Programs > Tennant Company > Tennant Service Diagnostics
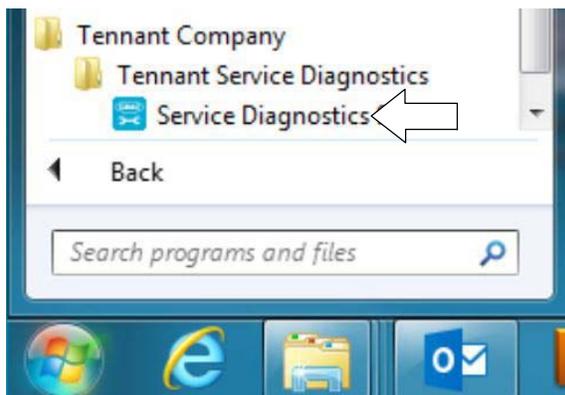
FIG. 7

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

NOTE: If the Service Application Software is currently installed on the service computer, confirm or reinstall the software to ensure latest software version is installed.

To access the Service Application Software, go to www.tennantco.com. Depending on geographic location, the website may have a "Log in/Sign Up" button at the upper right or a "My Tennant Customer Sign In" tab at the upper right of the Tennant website. (Fig. 8)

Proceed with the software download instructions as described on the following pages.

Website with "Log In / Sign Up" button (Access to "My Account")

OR

Website with "My Tennant Customer Sign In" tab (Access to My Tennant)

FIG. 8

Website with "Log In / Sign Up" button: (Access to "My Account") (ALL MACHINES):

1. Log in or Sign Up to create an account. (Fig. 9)
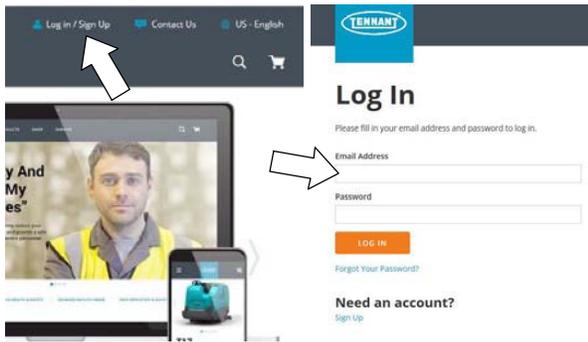
FIG. 9

2. Once logged in to the "My Account" website, click on the **"INTERNAL RESOURCES"** link. (Fig. 10)
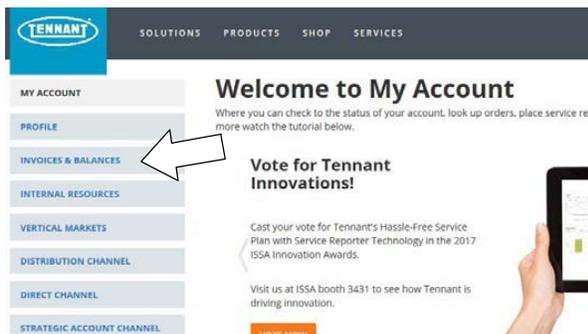
FIG. 10

3. Click on the **"SERVICE APPLICATION SOFTWARE"** link. (Fig. 11)

FIG. 11

4. Within the Service Application Software page, click on the link titled **"Service Diagnostics LE version 1.5.12" or later.** (Fig. 9)

FIG. 12

5. To download the service software continue to click as instructed then click the Save button. (Fig. 13)
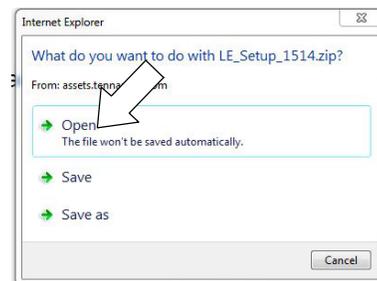
FIG. 13

6. Open the "Downloads" folder and locate the "LE_Setup_xxxx" zip file. Open the zip file and double click on the "LE_Setup_xxx" file to install the application software on service computer. Follow instructions on screen to install. (Fig. 14)

FIG. 14

7. Proceed to *PROGRAM THE CONTROL BOARD*.

PROGRAM THE CONTROL BOARD (ALL MACHINES):

If any problems are encountered during the programming process, contact the Technical Service Department for support.

1. Access the software through either the desktop icon or the Start Menu. The software application is titled **"Service Diagnostics"**. (Fig. 15/Fig. 16/Fig. 17)

FIG. 15

From Start menu
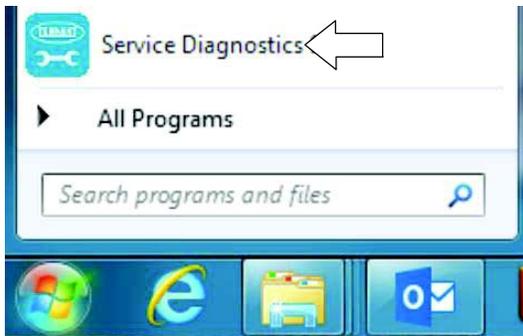
FIG. 16

Start menu > All Programs > Tennant Company > Tennant Service Diagnostics
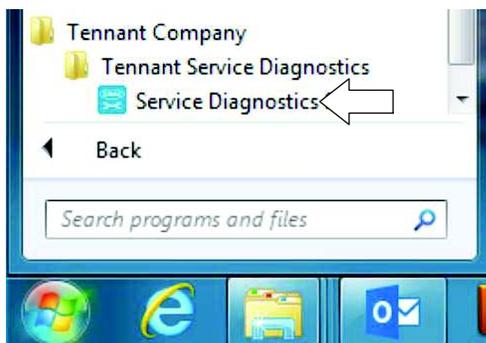
FIG. 17

2. Start the Service Software Application program. The following screen will appear. (Fig. 18)
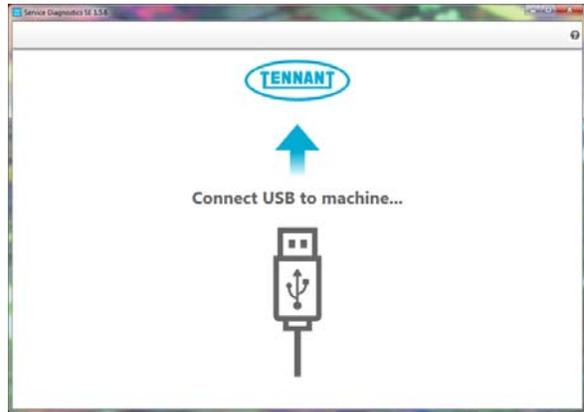
FIG. 18

3. Connect the USB cable to the computer and the USB port on machine. Turn the key switch to the ON position.

4. The application software will connect to the machine. (Fig. 19)

FIG. 19

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.

5. The following screen appears when the application software is connected to machine (Fig. 20). Enter the machine serial number from the label on machine (ex. M17- 12345678). Select the appropriate model from the drop- down menu. Press the arrow button to advance to next screen.
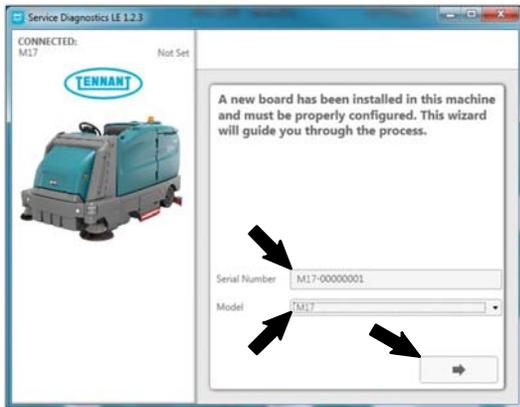
FIG. 20

6. Carefully select the correct installed options on the machine (Fig. 21). This may require visually inspecting the machine to confirm all installed options. Press the arrow button to advance to next screen.

NOTE: If the machine is configured with an option it does not have, a fault code may appear during machine start up.
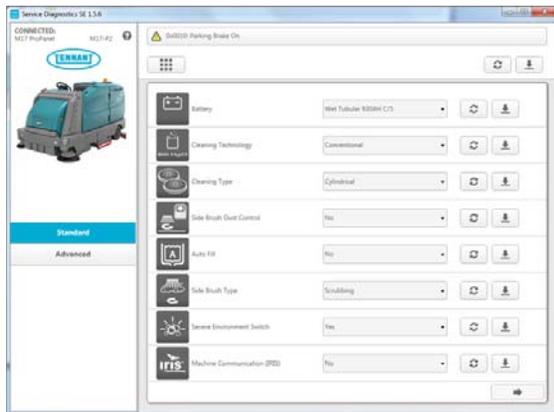
FIG. 21

7. The application will begin configuring the new control board. Allow the configuration process to be completed. (Fig. 22)
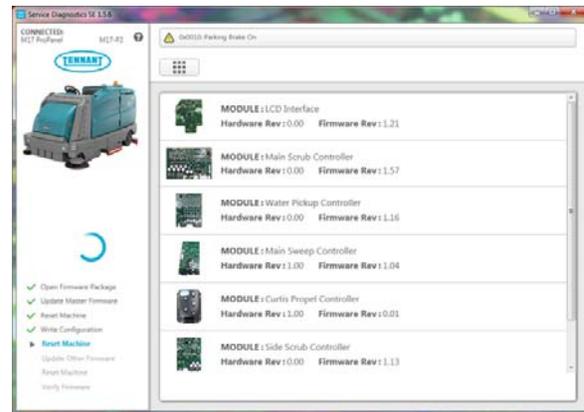
FIG. 22

8. The Machine Setup Complete screen appears after configuration is complete. (Fig. 23)
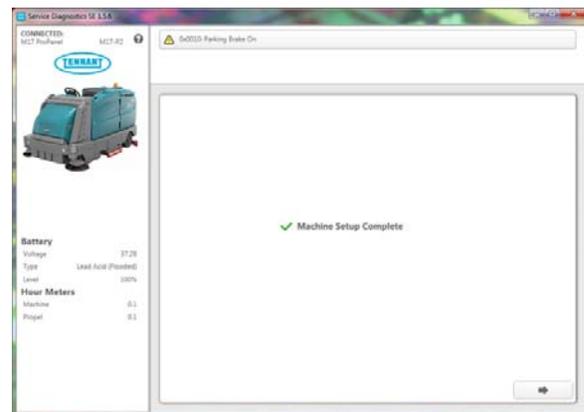
FIG. 23

9. Disconnect the USB cable from the machine and turn key off. The machine is now ready for operation.

10. Test machine to ensure all installed options are functioning and no fault codes appear. If a fault code appears, proceed to next step.

11. Reconnect the USB cable to the computer and the machine. The Main Menu will appear on the computer screen.

12. Check the machine configuration selections for incorrect installed options. Select the Configuration button. (Fig. 24)
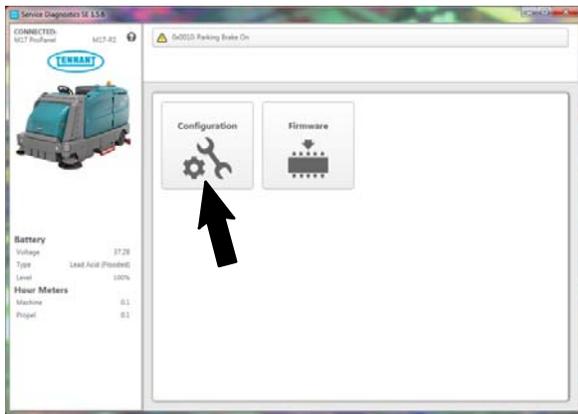
FIG. 24

13. Correct the installed options. (Fig. 25)
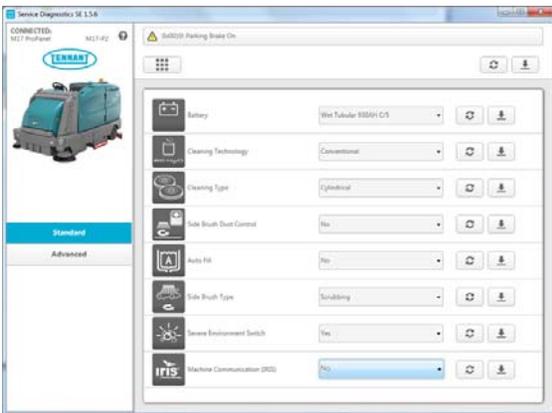
FIG. 25

14. Press the down arrow button to program the machine. A green check appears next to the down arrow button when programmed. (Fig. 25)

15. Cycle key to apply the corrected configuration setting.

NOTE: The hour meter on Gas / LPG does not need to be reset. The newly installed pod will automatically reset to the correct hour meter reading based on the hour setting (engine run time) from the engine.

16. Disconnect the USB cable from the machine.

RESET THE HOUR METER (ALL MACHINES):

NOTE: Screens included in this section of the IB are screen from the M17. The same screens exist for the M20/M30/T20 machines but may be different in appearance or have slightly different nomenclature.

1. Use the keypad to enter the supervisor mode log in number into the display above the keypad. Press the enter button when finished entering the log in number. (Fig. 26)

NOTE: If necessary, call Field Service Support for the service log in number.

FIG. 26

2. The supervisor mode screen should appear in the display. Press the settings button to access the settings screen. (Fig. 27)

FIG. 27

3. Select the Service Modes button to access the service modes. If necessary use up and down arrow buttons to scroll to the Service Modes button. (Fig. 28)
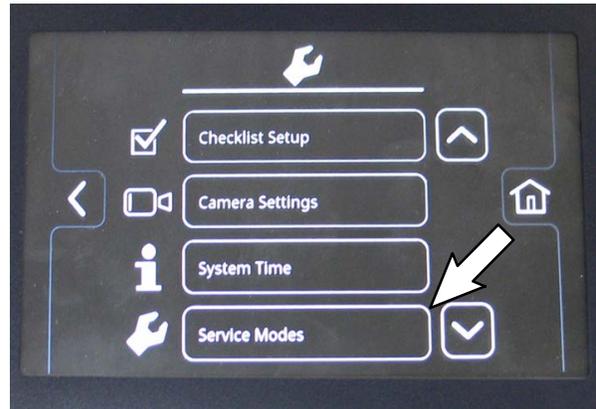
FIG. 28

4. Use the left arrow button and right arrow button to scroll to the Configuration Mode. Press the Check Mark button to access the configuration mode. (Fig. 29)
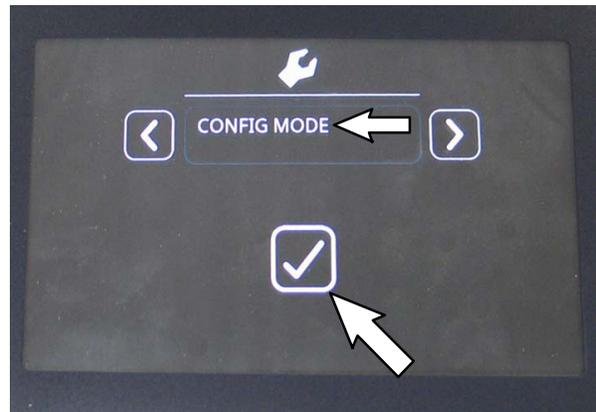
FIG. 29

5. Use the left arrow button and right arrow button to scroll to the C16: Propel H.M.. Press the Check Mark button to access the C16: Propel H.M. log in. (Fig. 30)
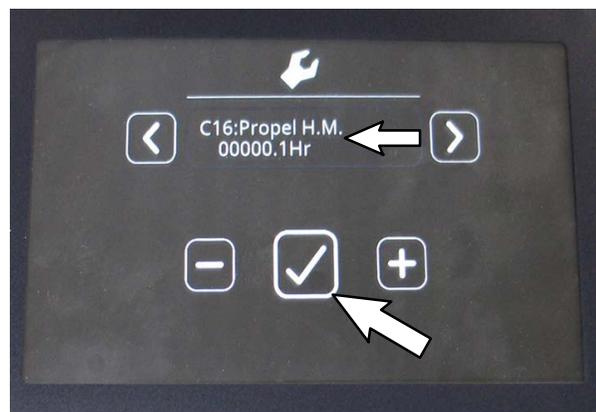
FIG. 30

6. Log in to the C16: Propel H.M. Screen (hour meter reset password is 0000): Use the minus (-) button to enter 0 (zero) at first asterisk. Use right arrow button to move to next asterisk and again use the minus (-) button to enter 0 (zero). Repeat for the remaining asterisks. Press the Check Mark button when finished. (Fig. 31)
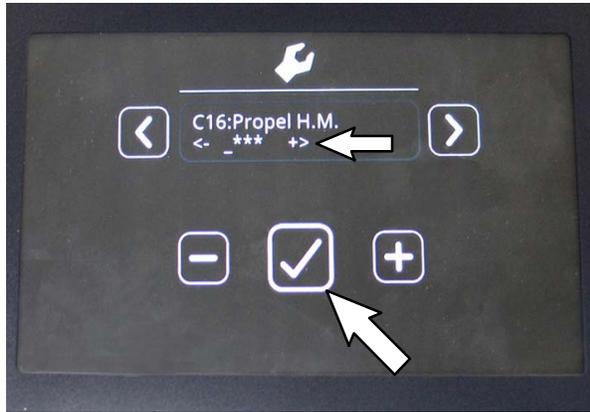
FIG. 31

7. Press the Check Mark button when finished entering 0 (zero) at the last asterisk. (Fig. 31)

8. Reset the hour meter at the C17: Chg Prpl Hr screen: Use the minus (-) button and plus (+) button to set/reset numbers and the right arrow button to move to the next number. If necessary, use left arrow button to move back to previous number. (Fig. 32)

FIG. 32

NOTE: *If hour meter can not be viewed due to pod being inoperable call Field Service Support for the hour meter time from last time the machine was serviced.*

9. Press the Check Mark button when finished entering the time for the hour meter. (Fig. 32)

10. Turn key switch to OFF position to turn off the machine/exit the Config Mode.

RESET THE HOPPER ROLL OUT (M17 ONLY):

1. Turn the key to the ON position and ensure hopper is completely lowered and rolled in. The hopper must be completely lowered and rolled in (in the home position) before it can be reset to the factory roll settings.

2. Use the keypad to enter the supervisor mode log in number into the display above the keypad. Press the enter button when finished entering the log in number. The Service Mode screen should appear in the display. (Fig. 33/ Fig. 34)

NOTE: *If necessary, call Field Service Support for the service log in number.*

FIG. 33

3. Press the settings button. The Service Mode setting screen should appear in the display. (Fig. 34/Fig. 35)

FIG. 34

4. Use the down arrow button to scroll down to the Service Modes button and select the Service Modes button to access the service modes. (Fig. 35)

FIG. 35

5. Use the left arrow button and right arrow button to scroll to the Manual Mode. Press the Check Mark button to access the manual mode. (Fig. 36)

FIG. 36
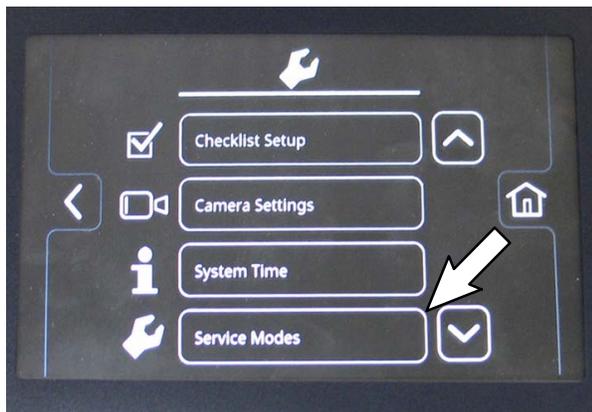
6. Use the left arrow button to scroll to M:35 Fact SetRoll. Press the Check Mark button once to enter M:35 and again to reset the hopper roll out to the factory setting. (Fig. 37)
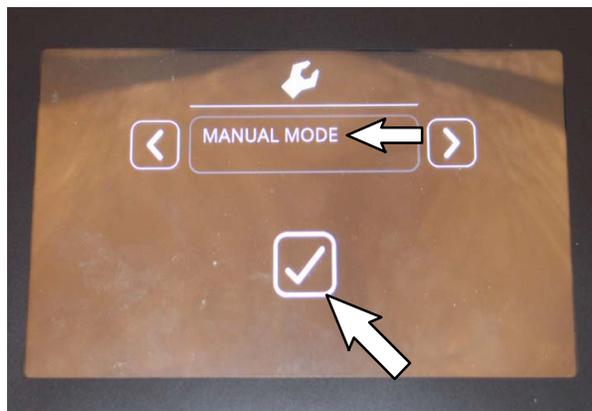
FIG. 37

7. Verify the value on the left closely matches the value in the parentheses. (Fig. 37)

NOTE: The hopper factory roll out setting may fluctuate +/- 0.002 when reset. This is normal.

8. Turn key switch to OFF position to turn off the machine/exit the Manual Mode.

9. Retest machine to ensure all installed options are functioning. Activate the rear view camera to ensure it functions. Operate the machine with the various scrub/sweep functions to ensure all the controls/buttons function. Raise, roll out, lower, and roll in the hopper to ensure all hopper functions are operational.

Bill Of Materials For Panel Kit, Pod, Afmkt [M17, Touch Screen] - 9015042

Ref.	Tennant Part No.	Description	Qty.
1	1215588	Panel Assy [M17, UI, Touch Screen]	1

Bill Of Materials For Panel Kit, Pod, Afmkt [Pro, M20/M30/T20] - 9015633

Ref.	Tennant Part No.	Description	Qty.
1	1225047	Panel Assy [UI, Touchscreen]	1

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