

ET

Cat[®] Electronic Technician



Getting Started

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Introduction

Cat Electronic Technician (Cat ET) is a service tool designed to run on a personal computer (PC) under Microsoft® Windows™.

All service tool documentation assumes the user has some Microsoft Windows experience. Users who do not have Microsoft Windows experience should take time to familiarize themselves with their supported version of Windows before installing the service tool.

The data and menus displayed in the illustrations of this manual may be different from those displayed by the service tool. This is because many different Electronic Control Modules (ECMs) are serviced with Cat Electronic Technician. Additionally, the appearance of Cat Electronic Technician varies between different versions of Windows operating systems.

PC, Communication Hardware, and Cable Requirements

To run the service tool, the following PC, communication hardware, and cable requirements must be met.

NOTE: The minimum PC Configurations should not be used as a standard when buying new personal computers for service tool purposes. If the existing equipment meets these minimum requirements, it will run the service tool.


PC Requirements

Recommended Configurations

- PC containing a 2.0 GHz dual-core processor
- 3GB RAM
- 3GB of available hard disk drive
- DVD-ROM drive
- 15.4 inch XGA Screen (1280x1024 compatible)
- Microsoft® Windows™ 7 Professional or Windows 8 Professional (Note: Windows 8 RT is not supported)
- RS232 port with 16550AF UART or compatible (for use with Comm Adapter II)
- USB 1.1 or 2.0 port (for use with Comm Adapter 3)
- Ethernet RJ45 connector
- Built in pointing device or mouse
- For security purposes, Microsoft® Internet Explorer version 9 or newer is recommended. Note: The most recent version of Microsoft® Internet Explorer may not be validated to work with the service tool.

Minimum Configurations

- PC containing a Pentium 2 GHz processor or greater
- 1GB RAM
- 500MB of available hard disk drive
- CD-ROM drive
- Super VGA monitor or display (1024x768)
- Microsoft® Windows™ 7 Professional or Windows 8 Professional (Note: Windows 8 RT is not supported)
- RS232 port with 16550AF UART or compatible (for use with Comm Adapter II)
- USB 1.1 or 2.0 port (for use with Comm Adapter 3)
- Ethernet RJ45 connector
- Built in pointing device or mouse
- For security purposes, Microsoft® Internet Explorer version 9 or newer is recommended. Note: The most recent version of Microsoft® Internet Explorer may not be validated to work with the service tool.

Note: If the entire screen is not visible, click the  maximize button to fill the screen.

Communication Hardware

Caterpillar offers several options for communication hardware. Communication Adapters are service tools consisting of a portable hardware adapter and a software PC program designed to run under Microsoft® Windows™. MPSI Pro-Link is a portable computer diagnostic analyzer. To service using Cat Electronic Technician, one of the following devices is required:

- **Cat Communication Adapter 3**
For additional requirements, see “[Setting up Cat Communication Adapter 3](#)”.
- OR -
- **Cat Communication Adapter II**
For additional requirements, see “[Setting up Cat Communication Adapter II](#)”.
- OR -
- **Cat Communication Adapter**
For additional requirements, see “[Setting up Cat Communication Adapter](#)”.

NOTE: Engines that do not have the service connector may also require the 140-9442 ATA/CDL T-Adapter.

NOTE: For specific part number information, contact the Parts Department of your local dealership.

Exceptions

The requirements for Hydraulic Excavators B-Series (HEX) are the following:

- **Cable Assembly HEX to PC Adapter cable**
In the Communications tab of the Preferences dialog box, select the Communication Adapter option from the Communication Interface Device drop-down list. Then click the **Advanced** button. Select the 19200 baud rate radio button. Click **OK**.

NOTE: For specific part number information, contact the Parts Department of your local dealership.

Setting Up the Communication Adapter 3

Requirements

317-7484 - Cat Communication Adapter 3 Group

The following equipment is included in this group:

Description
Cat Communications Adapter 3
Data Link Cable
USB PC connector
Carrying Case
Block/Foam for carrying case
Communication Adapter 3 CD-ROM
Communication Adapter 3 User's Manual

NOTE: For specific part number information, contact the Parts Department of your local dealership.

Instructions

To connect the Communication Adapter 3 (“Comm Adapter 3”) to the PC, perform the following steps:

- Step 1 Align and attach the DB25 connector end of the USB PC cable to the “PC cable” end connection on the Comm Adapter 3.



- Step 2 Plug the USB Connector end of the PC cable into the USB port of the PC.



To connect the Comm Adapter 3 to the data link, perform the following steps:

- Step 1 After connecting the Comm Adapter 3 to the PC, connect the DB15-style connector end of the data link cable to the “Data Link” connection on the Comm Adapter 3.



- Step 2 Connect the other end of the data link cable to the service connector on the product.



The lights on the front of the Comm Adapter 3 will glow and then will sequentially turn off from the top (“Data Link” end) to the bottom (“Computer” end) of the device. The Power LED will turn color from orange to red, and then the blue “USB” LED will blink once. The CA3 will not be operational until this sequence has occurred. The sequence can take up to 10 seconds. The service tool is now ready to be started. the LED lights on the front of the device.

NOTE: The Power light on the Comm Adapter will glow if the data link is powered (machine power is on) or if the USB connector is plugged into the PC.

NOTE: For more information on the Comm Adapter 3, please refer to the Caterpillar Communications Adapter 3 Tool Operating Manual.

Configuring Cat Electronic Technician to use the Communication Adapter 3

In order for Cat Electronic Technician to work with the Communication Adapter 3, the settings must be changed to select the Communication Adapter 3 as the Communication Interface Device:

- Step 1 Start Cat Electronic Technician.
- Step 2 Click the **Stop Connect** button when it appears.
- Step 3 Select the Utilities menu.
- Step 4 Choose "Preferences..."
- Step 5 Select the Communications tab.
- Step 6 Select Cat Comm Adapter 3 (RP1210) and click **OK**.

NOTE: Because a growing number of products require multiple data link service, the "Enable Dual Datalink Service" checkbox has been pre-selected. Servicing ECMs on more than one data link requires this checkbox to be enabled. Failure to do this will result in undetected ECMs and reduced functionality.

Setting Up the Wireless CA3 (W-CA3) Radio (optional)

Requirements

317-7493 - Cat Wireless Communication Adapter 3 Radio

The following equipment is included in this group:

Description
Cat Communications Adapter 3
Cat 802.11 Wireless Radio
Wireless Radio CA3 Cable
Wireless Communication Adapter 3 CD-ROM
Wireless Communication Adapter 3 User's Manual

NOTE: For specific part number information, contact the Parts Department of your local dealership.

Instructions

To connect the Wireless CA3 Radio to the Comm Adapter 3, perform the following steps:

- Step 1 Align and attach the round end of the Wireless CA3 Radio cable to the cable connection on the Wireless CA3 radio.



- Step 2 Connect the other end of the cable to the cable connection on the Comm Adapter 3.



To connect the Communication Adapter 3 to the data link, perform the following steps:

- Step 1 After connecting the Communication Adapter 3 to the Wireless CA3 Radio, connect one end of the data link cable to the data link connection on the Communication Adapter 3.



- Step 2 Connect the other end of the data link cable to the service connector on the product.



If the data link is powered (machine power is on), the Power light on the Communication Adapter will glow and the diagnostic test will begin. The lights on the front of the Communication Adapter 3 will sequentially glow from the top ("Data Link" end) to the bottom ("Computer" end) of the device. The service tool is now ready to be started.

NOTE: For more information on the Wireless CA3 (W-CA3) Radio, please refer to the [Wireless Radio for Communication Adapter 3 Manual](#).

Configuring Cat ET to use the Wireless CA3 Radio

In order for Electronic Technician to work with the Wireless CA3 Radio, the settings must be changed to select the Wireless Comm Adapter 3 as the Communication Interface Device:

- Step 1 Start Cat Electronic Technician.
- Step 2 Click the **Stop Connect** button when it appears.
- Step 3 Select the Utilities menu.
- Step 4 Choose "Preferences..."
- Step 5 Select the Communications tab.
- Step 6 Select Wireless Communication Adapter and click **OK**.

Setting Up the Cat Communication Adapter II

Requirements

171-4400 - Cat Communication Adapter II Group

NOTE: The 171-4400 Cat Communication Adapter II may be used; however, it is no longer available for purchase from Caterpillar Inc.

NOTE: For specific part number information, contact the Parts Department of your local dealership.

The following equipment is included in this group:

Requirements:

Description
Cat Communication Adapter II
Data Link Cable (24 inch) <i>This cable must be used for J1939/11 communications.</i>
Serial PC Cable (25 foot)
Carrying Case
Block/Foam for carrying case
Communication Adapter II CD-ROM and User's Manual

Optional Cables:

Description
In-Cab Adapter Cable for ATA
In-Cab Adapter Cable for the J1939/11
Serial PC Cable (10 foot) <i>This cable can only be used with the Cat Communication Adapter II</i>
Parallel PC Cable (25 foot) IEEE 1284 (male to male connector) This cable is for PCs that do not have a serial port. <i>This cable can only be used with the Cat Communication Adapter II</i>
USB to Serial Adapter Kit (16 inches)
ATA/CDL Unicable from a Cat communication adapter to the service connector NOTE: The 7X1412 ATA or 7X1570 CDL cable may also be used. However, these are no longer available for purchase from Caterpillar Inc.
ATA/CDL T-Adapter (not required for all applications)
Cable Assembly used to connect the Service Tool directly to the ECM.
Main Harness
A3 and A4 E4 stub (requires Main Harness)
A4 E1 stub (requires Main Harness)

Instructions

To connect the Communication Adapter II ("Comm Adapter II") to the PC, perform the following steps:

- Step 1 Align and attach the DB25 connector end of the serial cable to the "PC Cable" end of the Comm Adapter II.



- Step 2 Connect the other end (RS-232 end) of the serial cable to the communication port of the PC.



(Shown with optional USB to Serial Adapter)

To connect the Communication Adapter II to the data link, perform the following steps:

- Step 1 After connecting the Comm Adapter II to the PC, connect the DB15-style connector end of the data link cable to the “Data Link” end of the Comm Adapter II.



- Step 2 Connect the other end of the data link cable to the product. If the data link is powered (machine power is on), the Power light on the Comm Adapter II will glow and the diagnostic test will begin. The lights on the front of the Comm Adapter II will sequentially glow from the top (“Data Link” end) to the bottom (“Computer” end) of the device. The service tool is now ready to be started.



NOTE: For more information on installation procedures, consult the [Communication Adapter II Users Manual](#).


Updating the Comm Adapter II Firmware to Serial IP

NOTE: Use the Comm Adapter II Toolkit version 4.0.12 or later to update the Comm Adapter II.

NOTE: Use the serial port only to upgrade the Communication Adapter II. Do not use the Parallel port.

Instructions

To update the Comm Adapter II Firmware, perform the following steps:

- Step 1 Make sure the Comm Adapter II is connected to the PC and the Power light is on.
- Step 2 Go to the Start menu on the computer. Choose All Programs -> Caterpillar Comm Adapters -> Comm Adapter Toolkit.
- Step 3 The Toolkit application will start up and display the Summary screen.
- Step 4 Choose the Application Firmware Flash icon . Then click the **Select File** button. The Select Firmware Flash File dialog box is displayed.
- Step 5 The following files should be listed on the right:
 - ca2vi2.apf – application firmware
 - cav3i0.0.apf – application firmware
 - ca2v3i1.0.apf – SIP application firmware
- Step 6 Highlight the ca2v3i1.0.apf file and click the **OK** button.
- Step 7 Click the **Begin Flash** button to start the download.
- Step 8 A dialog box showing the download progress will appear. The download should take less than 45 seconds.

NOTE: All protocol lights on the front of the Comm Adapter II will blink while the firmware is flashed.
- Step 9 When the download is complete, a dialog box will appear, allowing a return to the Toolkit Summary screen, a return to the Flash screen, or an Exit from the toolkit.
- Step 10 Click the **Exit** button.

Configuring Cat ET to use the Communication Adapter II

In order for Electronic Technician to work with the Communication Adapter II, the settings must be changed to select the Comm Adapter II as the Communication Interface Device:

- Step 1 Start Cat Electronic Technician.
- Step 2 Click the **Stop Connect** button when it appears.
- Step 3 Select the Utilities menu.
- Step 4 Choose "Preferences..."
- Step 5 Select the Communications tab.
- Step 6 Change the Communication Interface Device to "Caterpillar Comm Adapter II (Dual Data Link/Serial IP)" and click **OK**.
- Step 7 Select the appropriate COM port (for example, "COM1", "COM2", etc). This application firmware only supports Serial communications.

Setting Up the Cat Communication Adapter

Requirements

7X1700 - Cat Communication Adapter Group

NOTE: The 7X1701 Cat Communication Adapter may be used; however, it is no longer available for purchase from Caterpillar Inc.

NOTE: The 7X1701 Cat Communication Adapter does not support the J1939 data link.

Other Requirements:

NOTE: For specific part number information, contact the Parts Department of your local dealership.

Description
Communication Adapter Software SPM (Service Program Module) Version 1.2 or greater
RS232 Serial PC Cable <i>This cable can only be used with the Cat Communication Adapter 7X1701</i>
ATA/CDL Unicable from a Cat communication adapter to the service connector NOTE: The 7X1412 ATA or 7X1570 CDL cable may also be used. However, these are no longer available for purchase from Caterpillar Inc.
ATA/CDL T-Adapter (not required for all applications)
Cable Assembly used to connect the service tool directly to the ECM

Instructions

To connect the Communication Adapter ("Comm Adapter) to the PC, perform the following steps:

- Step 1 Connect the 7X-1425 RS232 cable to an available Serial Port on the PC and to the Service Tool connector on the Communication Adapter.



- Step 2 Connect the 139-4166 Unicable to the control connector on the Communication Adapter and to the service connector on the product being serviced. The service tool is now ready to be started.



Installing Cat Electronic Technician

Purpose

The installation procedure described below is for Cat Electronic Technician. The installation program is designed to run under Microsoft Windows XP/VISTA/Windows 7. The installation requires one (1) Install CD-ROM or access to an Infocast website (see page 45). This process will upgrade the current service tool and preserve files previously created in the service tool, such as defined Status Groups or service tool report documents.

NOTE: While the installation will run from a server or over a network, the service tool will not.

NOTE: To install the service tool in Windows XP, VISTA, or Windows 7, administrative rights on the computer system are required.

Instructions

Perform the following steps to install Cat Electronic Technician from the Install CD-ROM:

- Step 1 Close any open applications, including any connections to mainframe computers or networks. Only Windows should be running.
- Step 2 Insert the Cat Electronic Technician Install CD-ROM into the computer's CD-ROM drive.
- Step 3 Click the **Start** button on the Task Bar. From the menu, select **Run**. The Run dialog box is displayed:



- Step 4 Type **z:\setup.exe** in the text box. If the CD is in a CD-ROM drive other than "z," substitute "z" with the appropriate drive letter.

Step 5 Click **OK**. The Choose Setup Language dialog box is displayed:



Select the language in which the InstallShield® Wizard Setup will be displayed.

Step 6 Click **OK**. The InstallShield Wizard Setup status box is displayed. This status box displays the progress status of the InstallShield Wizard setup.

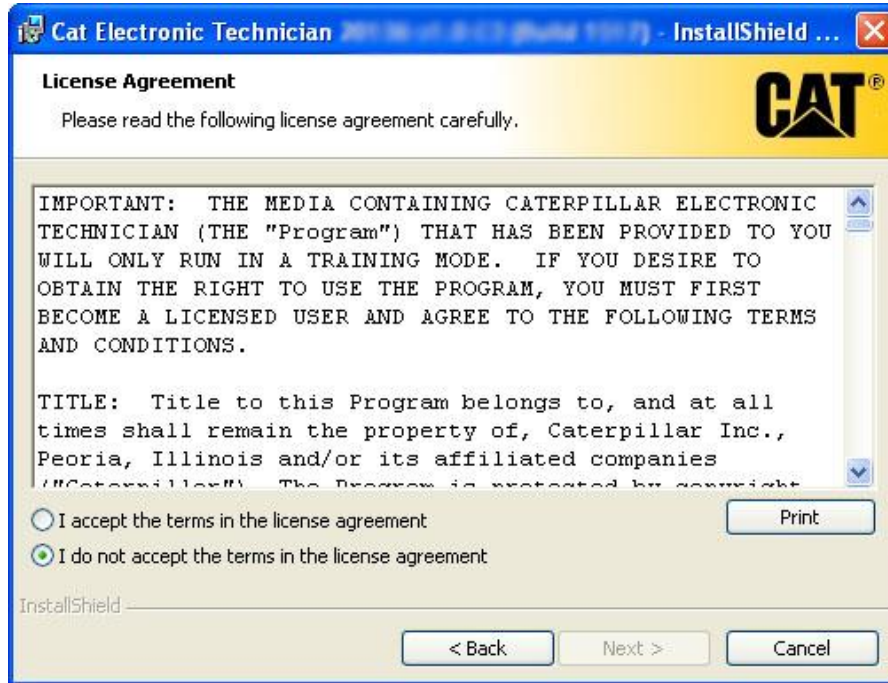
Note: For installations 2011B and greater, the InstallShield Wizard will install Microsoft .Net Framework 4.0 if it has not previously been installed on the PC. This process may take several minutes and may require a reboot before the installation of Cat Electronic Technician can continue.

When the setup is complete, the Welcome dialog box is displayed:



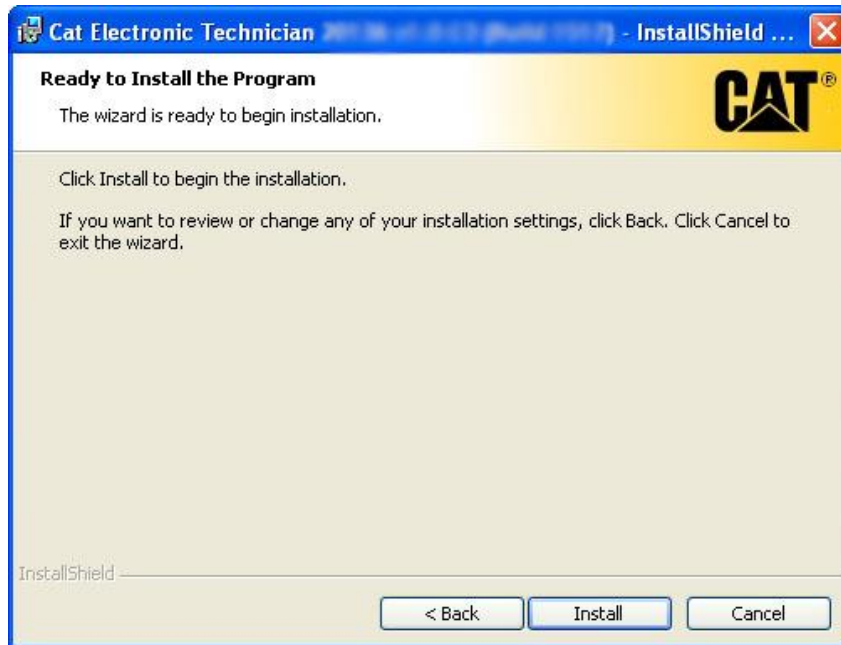
-
- Step 7 Read through the Welcome message, and then click the **Next>** button to continue the setup.

The Software License Agreement dialog box is displayed. Clicking **Cancel** will abort the setup process.



- Step 8 Read through the license agreement. Click the "I accept the terms in the license agreement" radio button to accept the terms and conditions. Click **Next>** to continue the setup.

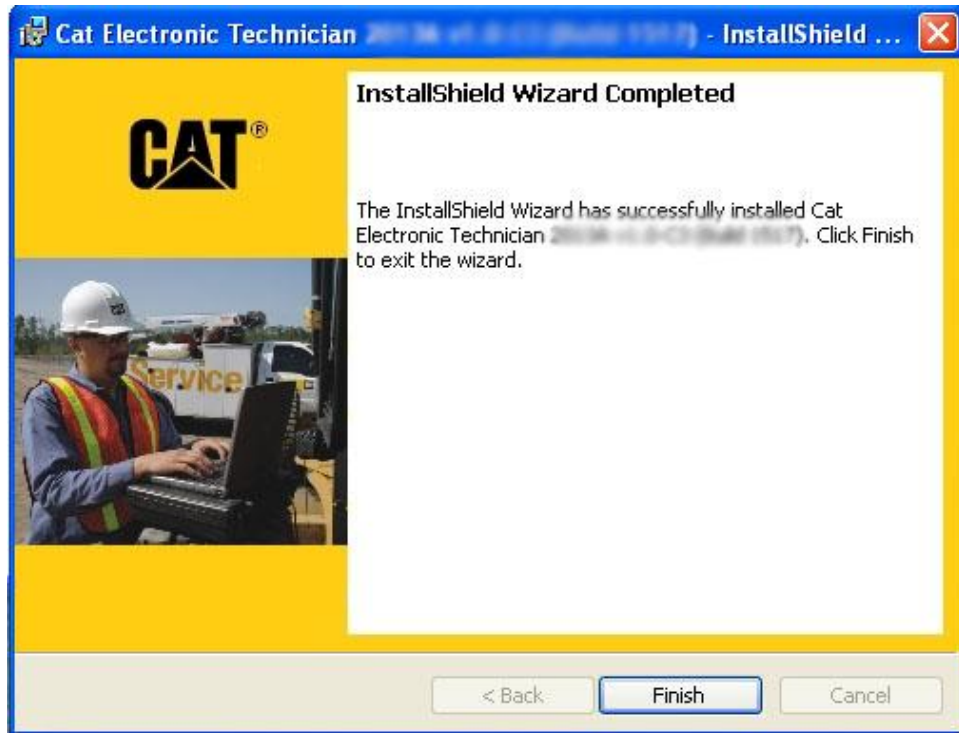
-
- Step 9 Click **Next>** to continue the setup. The Ready to Install the Program dialog is displayed.



Click **Install** to continue. Click **<Back** to return to the previous screen. Click **Cancel** to abort the setup process.

- Step 10 The setup process begins copying files. Click **Cancel** to abort the setup/installation process.

Step 11 When the installation has completed, the Installation Complete dialog box is displayed.



Click **Finish** to close the Installation Complete dialog box. The ReadMe file is displayed. If prompted, the computer must be rebooted in order for the finalization to complete and for the software to work.

Removing Cat Electronic Technician

Purpose

To remove the service tool, use the steps outlined below. Instructions vary depending upon the Microsoft operating system installed on the computer. This will safely remove the service tool program and should not invalidate the current license.

Instructions

To uninstall the service tool software in Microsoft XP, perform the following steps:

- Step 1 Click the **Start** button on the Task Bar. Select "Control Panel" from the menu.
- Step 2 Double-click on **Add or Remove Programs**. The Add or Remove Programs dialog box is displayed.
- Step 3 Select "Caterpillar Electronic Technician" in the Currently Installed Programs box.
- Step 4 If the service tool being uninstalled is the latest version, click the **Remove** button.
- Step 5 If an older version of the service tool is being uninstalled
 - a) Click the **Change or Remove Programs** button. This prompts the InstallShield Wizard to initialize and load the Cat Electronic Technician Setup Maintenance Program.
 - b) Select the radio button to completely remove the service tool and all of its components from the computer. Click **Next>** to continue.
- Step 6 Close the Add or Remove Programs dialog box.

To uninstall the service tool software in Microsoft VISTA or Windows 7, perform the following steps.

- Step 1 Click the **Start** button on the Task Bar. Select "Control Panel" from the menu.
- Step 2 Click on **Programs and Features**.
- Step 3 Select "Caterpillar Electronic Technician" in the Currently Installed Programs box.
- Step 4 Click the **Uninstall** button.
- Step 5 Close the Programs and Features dialog box.

Licensing Cat Electronic Technician

NOTE: The contents of this section apply only to Dealer Coordinators. Contact a Dealer Coordinator for information on licensing the service tool.

Accessing

There are two (2) different opportunities to license the service tool:

- 1) Running the service tool without an active license.
- 2) Selecting License Cat ET... from the Utilities drop-down menu in the service tool program.

1) Running the Service Tool without an active license

- Step 1 When Cat Electronic Technician is launched without an active license, the Electronic Technician License message box is displayed.
- Step 2 Click the **Yes** button to license the service tool. The Licensing dialog box is displayed.

2) Selecting License Cat ET... from the Utilities drop-down menu

- Step 1 In the service tool main screen, select the Utilities menu.
- Step 2 Select **License Cat ET...** The Licensing dialog box is displayed.

Steps to License Cat ET

The Licensing dialog box can be used to **activate** or **deactivate** a license. This may be done through an [Online](#) or [Manual](#) process.

Once the service tool is registered, both the Activation ID and the Serial Number should be recorded and kept in a safe place. The Activation ID will be necessary to deactivate the license (part of the transfer process). The Activation ID or the Serial Number is necessary to re-license.

Activation ID _____
Service Tool Serial Number _____

To license Cat Electronic Technician online:

- Step 1 Select "Online" as the connection method in the Connection Method screen of the Licensing wizard. Click **Next>**. The Choose Action screen is displayed.
- Step 2 Select "Activate" as the type of action to perform.
Click **Next>**. The Activate screen is displayed.
- Step 3 Obtain an Activation ID.
a) Open an Internet browser window and type in the following url:
<https://dealersoftwarelicensing.cat.com>. The Corporate Web Security (CWS) webpage is displayed.
b) Enter CWS Logon ID and Password in the text boxes. NOTE: This option cannot be used without a CWS Logon ID.
c) Click the Login button. The Service Systems Software Online Licensing screen is displayed. The screen will direct the steps necessary to obtain an Activation ID.
- Step 4 Enter the Activation information in the Activate screen of the Licensing wizard.

Note: The information entered into the Name and PC Serial Number text boxes should be descriptive enough that they can be used in the future to identify this license in DSL.

Click **Activate**. The License Granted message box is displayed. Click **OK**.

To license Cat Electronic Technician manually:

- Step 1 Select "Manual" as the connection method in the Connection screen of the Licensing wizard. Click **Next>**. The Choose Action screen is displayed.
- Step 2 Select "Activate" as the type of action to perform. Click **Next>**. The Activate screen is displayed.
- Step 3 Enter the Activation information in the Activate screen of the Licensing wizard.

Note: The information entered into the Name and PC Serial Number text boxes should be descriptive enough that they can be used in the future to identify this license in DSL.

Click the **Save Request** button to save the License Request file.

- Step 4 Provide the License Request file to the appropriate license administrator. The License Administrator will generate a response file necessary to complete the licensing process.
- Step 5 When the License Administrator has generated and returned a response file, access the Response File screen in the Licensing wizard. This screen may be accessed by clicking Next from the Activate screen of the Licensing wizard, or by selecting the Utilities → Load License Response File menu option.

Click the **Load Response File** button and load the response file from the appropriate location. When the Response File loads successfully, the following message is displayed:

The response file has been successfully processed.

Click **OK**.

Transferring a License

Important:

To transfer the service tool license from another computer, the **Activation ID** from the original license is required.

Activation ID _____

Instructions

Transferring a license is a two-step process. First, the existing license must be deactivated on the original PC. This may be done online or manually. Second, the license must be activated on the new PC using the existing activation ID.

To deactivate the license in Online mode:

- Step 1 From the Utilities menu, select License Cat ET. The Connection Method screen is displayed.
- Step 2 Select Online, and then click **Next>**. The Choose Action screen is displayed.
- Step 3 When a license is active, the only option in the Choose Action screen is Deactivate. Click **Next>**. The Deactivate screen is displayed.
- Step 4 Click the **Deactivate** button. The License is deactivated. The Activation ID can then be used to activate a license on a different PC by following the [Steps to License Cat ET](#).

To deactivate the license in Manual mode:

- Step 1 From the Utilities menu, select License Cat ET. The Connection Method screen is displayed.
- Step 2 Select Manual, and then click **Next>**. The Choose Action screen is displayed.
- Step 3 When a license is active, the only option in the Choose Action screen is Deactivate. Click **Next>**. The Deactivate screen is displayed.
- Step 4 Click the **Save Request** button to save the License Request file. The following warning will be displayed:

Warning! This operation will deactivate your license. The Cat ET service tool will no longer function with any applications. Are you sure you want to proceed?

Click **Yes** on the warning box to save to save the License request file. This will cause the license to be deactivated.

- Step 5 Provide the Deactivation Request file to the appropriate license administrator. The License Administrator will generate a response file necessary to complete the deactivation process.
- Step 6 When the License Administrator has generated and returned a response file, access the Response File screen in the Licensing wizard. This screen may be accessed by clicking Next from the Activate screen of the Licensing wizard, or by selecting the Utilities → Load License Response File menu option.
- Step 7 Click the **Load Response File** button and load the response file from the appropriate location. When the Response File loads successfully, the following message is displayed:

The response file has been successfully processed.

- Step 8 Click **OK**. The License is deactivated. The Activation ID can then be used to active a license on a different PC by following the Steps to License Cat ET.

Trainer

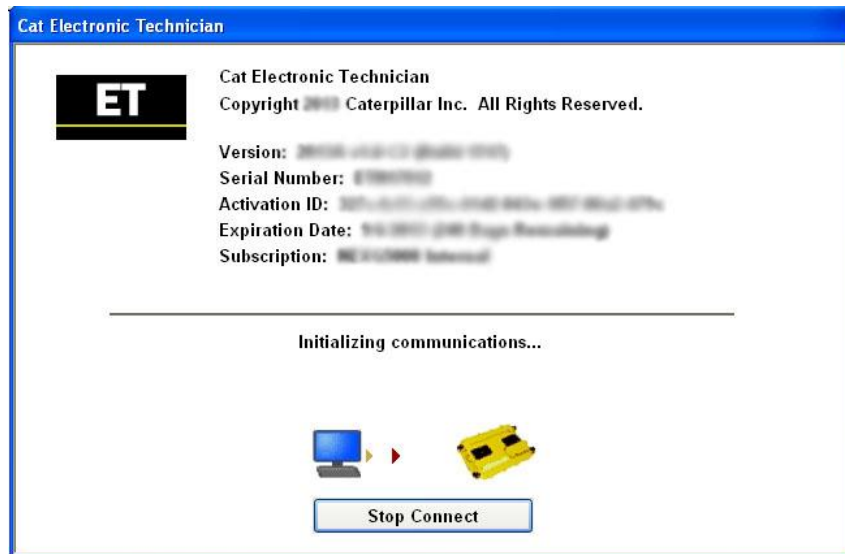
Purpose

Trainer runs the service tool in a training mode. This provides an opportunity to become familiar with the service tool without connecting to an Electronic Control Module (ECM) or a Communication Adapter. There is no charge for Trainer, and authorization is not required.

Instructions

Using Trainer:

- Step 1 Click the **Start** button on the Task Bar. Select "Caterpillar ET" from the Programs menu, and then select "Electronic Technician" from the submenu. The Connection message box is displayed:

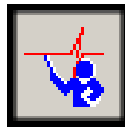


- Step 2 Click the **Stop Connect** button. The Service Tool main screen is displayed.

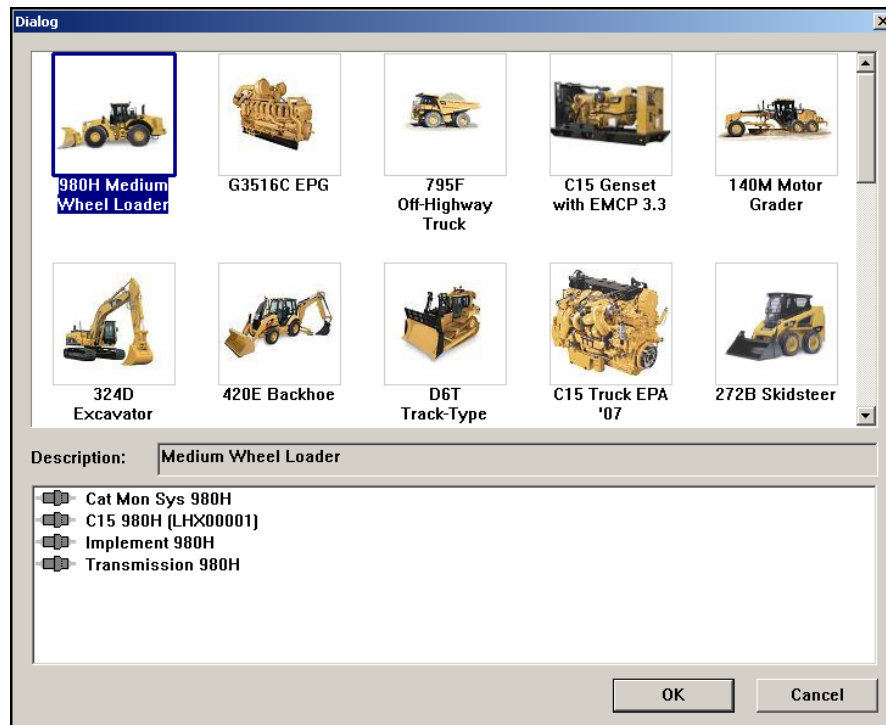
Step 3 Select "Trainer" from the Help menu, and then select "Enable" from the submenu.



Or, click the **Enable Trainer** icon if default toolbar is set.

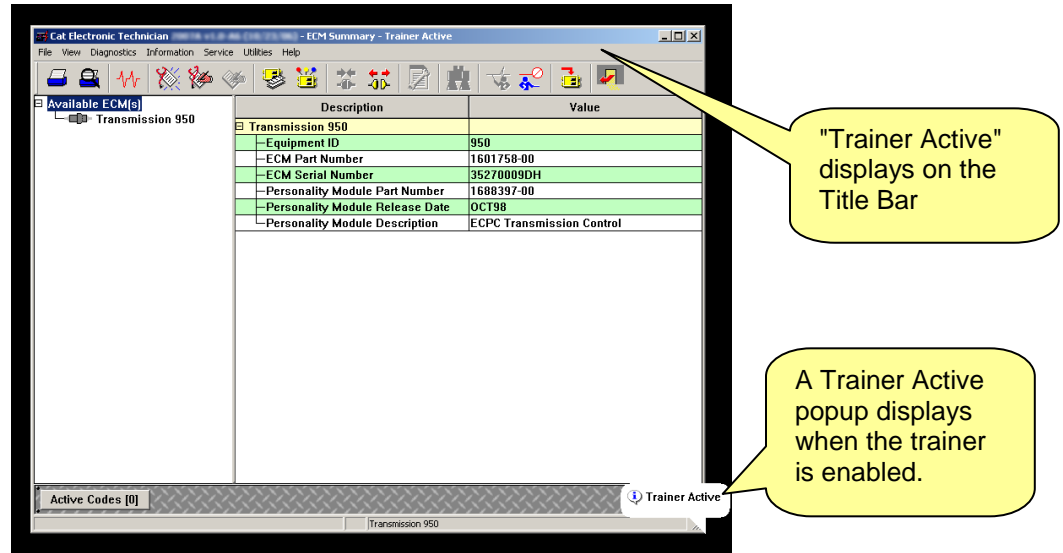


The Trainer dialog box is displayed:



Step 4 Select a product from the Application menu.

- Step 5 To start Trainer, click the **OK** button. The Connection message box is displayed. The ECM Summary screen displays in Trainer Mode if the default startup tool is set. Once started, Trainer simulates some of the service tool functions.



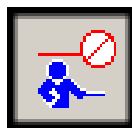
NOTE: When the service tool is operating in training mode, "Trainer Active" displays.

To change the product simulated within Trainer:

- Step 1 Select "Trainer" from the Help menu, and then select "Properties" from the submenu. The Trainer dialog box is displayed.
- Step 2 Select a different product from the Application drop-down list.
- Step 3 Click **OK**. The Connection message box is displayed. The ECM Summary screen for the new product displays in Trainer Mode.

To exit Trainer:

Select "Trainer" from the Help menu and select "Disable" on the submenu, or click the **Disable Trainer** icon.



What's New

Purpose

What's New provides a list of new functions and major enhancements available in the installed version of the service tool.

What's New launches using a browser when it is selected from the Help drop down. It is displayed in the language selected as default in the Select Default Language dialog box during the installation of the service tool.

NOTE: The What's New dialog box will automatically display each time the service tool is launched. Click the "Do Not show this dialog again" checkbox to disable this feature.

Instruction

To view the What's New screen, select "What's New" from the Help menu. The What's New screen is displayed using a browser.

Troubleshooting Tips and Error Code Information

Tips for Common Issues

Power Management - Communication to the ECM may be interrupted if the PC "suspends." Turn off Power management (for example, a screen saver or "sleep" mode) when using the service tool.

Infrared Communication Problems - Computers supporting infrared communication may experience some communication problems with the service tool. Disabling the infrared option is recommended. Please contact the computer manufacturer for help with this procedure.

Disk Defragmentation/Disk Compression - The service tool will remain unaffected by Disk Defragmentation and/or Disk Compression as long as the defragmentation/compression programs do not move hidden files or system files during the process.

Administrative Rights - Administrative rights are required to a) install Cat Electronic Technician for the first time and b) upgrade from a previous release.

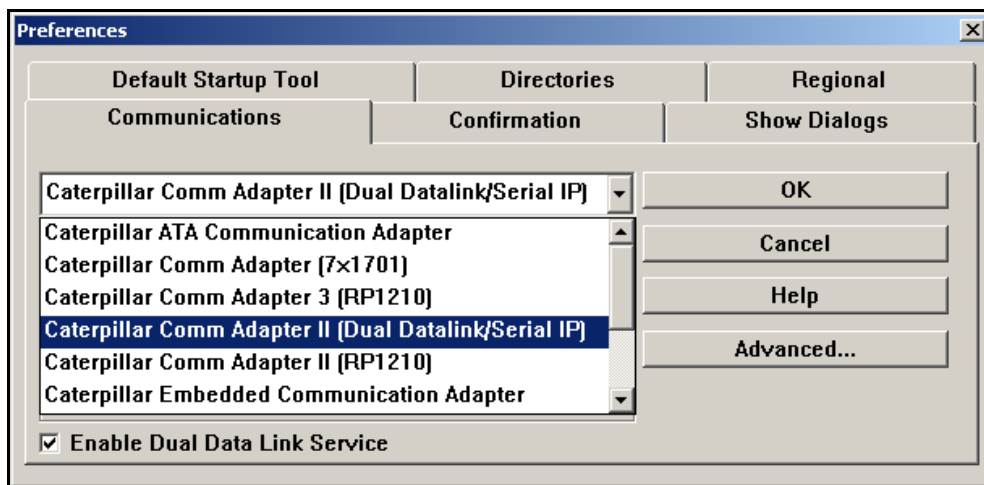
Installation Error

When calling for support, report the error code number to the support staff member. This will aid the support staff member in solving the installation problem. The table below lists the error code and a possible solution.

Error Code	Error Description	Possible Solution
303	License Validation Failed (An old serial number has been detected on this computer and cannot be updated).	Acquire a new license before upgrading.

Selecting the Correct Port

Select "Preferences..." on the Utilities menu. The Preferences dialog box is displayed. Select the Communications tab.



Laptops:

If the laptop's built-in pointing device is being utilized, the first available port is usually COM 1.

Desktop Personal Computer (PC):

If the PC has a mouse with a round plug, the first available port is usually COM 1. If the PC has a mouse that does not have a round plug, the first available port is usually COM 2. If the PC does not have a mouse, the first port is usually COM 1.

Communication Errors

When communication problems occur, one of two error messages will display:

“Unable to Communicate with the Caterpillar Communication Adapter!”

This error refers to a problem between the PC and the Communication Adapter. Suggestions for correcting the problem are as follows:

- Check all connections between the PC and the ECM.
- Check that the Communication Adapter is receiving external power. The product being serviced must have the key switch in the On position to receive power unless it is connected directly to the battery.
- Under the Settings menu, select “Preferences” and verify that the correct port is selected. Also verify that the correct Communication Interface Device is selected.
- If the error displays again, verify the correct cables are being used for the application.
- If a serial port is being utilized, verify that the PC Comm Port is set up correctly and is not in use by another device (for example, Palm Pilot Software). Try using another Comm port, if available.

“Unable to Communicate with an ECM!”

This error refers to a problem between the communication interface device and the ECM; the PC successfully detected the communication interface device.

- Verify that all connections between the communication interface device and the ECM are secure and intact.
- Verify that the ECM has power. If the error displays again, verify the correct cables are being used for the application.

Cat Communication Adapter II Error Codes

When calling for support, report the error code number to the support staff member. This will aid the support staff member in solving the installation problem. The table below lists error codes and possible solutions to those errors.

Error Code	Error Description	Possible Solution
---	No initialization file present.	Install the Cat Communication Adapter II software on the PC and reboot.
---	Unable to read Cat Communication Adapter (RP1210) Initialization file.	If the PC has Cat Comm Adapter II software installed, try rebooting the computer first. If this does not resolve the issue, re-install the Cat Comm Adapter II Software. Reboot the PC after the installation is complete.
---	Unable to load CA2RP32.DLL	If the PC has Cat Comm Adapter II software installed, try rebooting the computer first. If this does not resolve the issue, re-install the Cat Comm Adapter II software. Reboot the PC after the installation is complete.
142*	The interface hardware is not connected.	Check the cables. Make sure the data link cable and the serial or parallel communication cables are properly connected. Verify that the Cat Comm Adapter II "Power" light is on. Check that Cat Electronic Technician has been configured for the correct communications port.
202	A required INI File was not located.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
204	A required INI file key was not found.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
205	A necessary INI file key was not found.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
206	An INI file value was invalid.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.

Error Code	Error Description	Possible Solution
230	Port not open	Another program or device is currently using the comm port or the comm port's resources. Identify the source and remove or disable it, or use a parallel port instead of a serial port. Palm Pilot software commonly causes this error.
231	Invalid Comm Port	The selected comm port is not set up properly in the PC's BIOS or operating system.
301	Cannot open the configuration file.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
302	The session identifier was not found in the configuration file.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
303	An error was found in the configuration file format.	Uninstall the Cat Comm Adapter II software, and then re-install it. Reboot the PC after the installation is complete.
405	The PC had a problem while trying to establish the communication baud rate with the Comm Adapter II.	Power cycle the Comm Adapter II and reboot the PC. If the problem persists, lower the communication baud rate.
406	The PC tried to establish a connection to the Comm Adapter II, but ran into a problem during the communication initialization phase.	This error code occurs during the communication initialization phase when the specific stage is not identified. Error codes 142, 405, 441, or 453 relate to specific stages in the initialization process.
441	The requested protocol is not compatible with an existing data link.	Cycle the power on the Cat Comm Adapter II and ECM. If this does not resolve the issue, reboot the PC and try again. Do not launch the Comm Adapter II Toolkit while Cat ET is running.
443*	The drivers software and the communication adapter Firmware are not compatible.	Install the appropriate Firmware onto the Communications Adapter II.
453*	The Communication Adapter has been detected but is not responding.	Using the Device Manager, Uninstall the COM port, and then detect new hardware to re-install it.

* For more information on Error Codes 142, 443, and 453, consult the Comm Adapter II Read Me file located in the Caterpillar Comm Adapter II Group Box (Select Caterpillar Comm Adapter II from the Programs menu, and then select Read Me from the submenu).