Wiring Illuminator Quick Start Guide

Wiring Illuminator Foreign Military Sales Demo

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Installing & Running Wiring Illuminator

This documents contains instructions for quickly and easily installing and running Wiring Illuminator with the Foreign Military Sales demo database. It also takes you through some basic examples of how to use Wiring Illuminator to view wiring information contained in the demo database.

System Requirements

The Wiring Illuminator FMS Demo requires a Windows based PC with a CD drive. Listed below are the software requirements for the PC:

- Operating System - Windows NT 4.x, 9X, 2000, XP

- ODBC database drivers for Microsoft Access (most machines should already have this)

- NOTE: The Microsoft Access application is *not* required on your system.

- Java Runtime Environment 1.3.1_02 (Provided on the demo CD and installed automatically.)

The Microsoft Access ODBC Driver will be installed and connected to the database file (.mdb) used by Wiring Illuminator. The database file is wifmsdemo.mdb.

How to Install Wiring Illuminator

Insert the Wiring Illuminator FMS Demo CD into your CD drive and close the drive. A window should automatically pop and run InstallShield to install the Wiring Illuminator software and the FMSDemo database.

When prompted for information by InstallShield during the installation process, simply select the default options.

Documentation

A Wiring Illuminator User's Manual and a set of Release Notes will be available on your computer after installation. These files will be located in the Wiring Illuminator directory: C:\wi\FMSDEMO_WI\data\documents. (This assumes that you installed Wiring Illuminator on the C drive of your computer.)

Additionally, on-line Help is available from within the Wiring Illuminator program. From the "Context View" window select the "Wiring Illuminator Help" menu item from the "Help" menu.

Running Wiring Illuminator

After InstallShield runs, there will be a Wiring Illuminator icon placed on your desktop. Double-clicking the icon will launch Wiring Illuminator.

You can also start wiring Illuminator via the Windows "Start" menu. The Wiring Illuminator application is accessed via Start->Programs->Wiring Illuminator->Wiring Illuminator.

Selecting Wiring Illuminator Display Views

When the Context View window appears (after starting Wiring Illuminator) the Window menu can be used to select which views are displayed. Simply check the check box for any windows that you want displayed, or uncheck the check box for any windows you do not want displayed.

If not already displayed, a good set of default views to have displayed would be:

- **Wire List View** - Displays a tabular view of the RefDes', pins, and wires in the current circuit or wire run.

- **Pin List View** - Displays a tabular list of all of the pins and connecting wires for the current RefDes.

- **Parts List View** - Displays a tabular list of parts that compose the current RefDes.

- **Wire Diagram View** - Displays a wiring diagram of the RefDes', pins, and wires in the current circuit or wire run. It contains a status panel that displays wire information.

- **Locator View** - Displays a graphic of the location of the current RefDes on the aircraft or system

- **Pin Arrangement View** - Displays a graphic of the pin arrangement of the current RefDes.
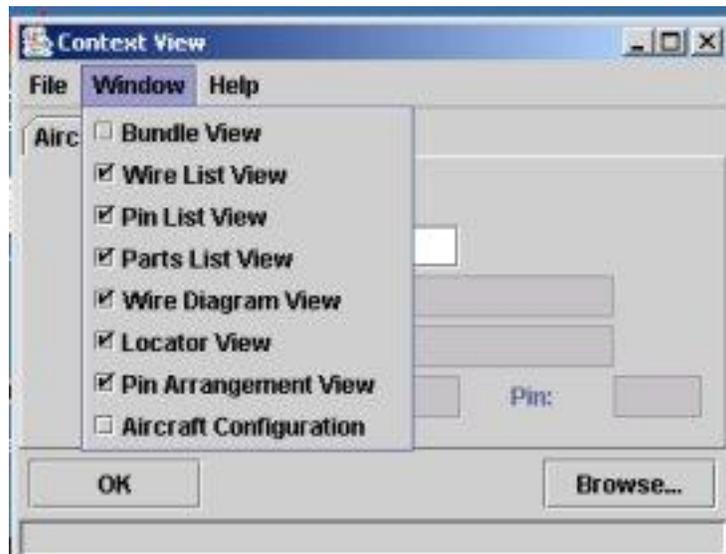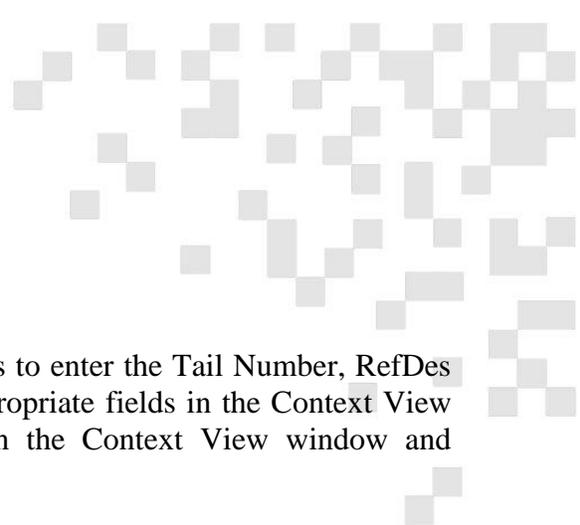

Selecting Views To Be Displayed

Which views appear at startup, and their layout (location) on the screen, can be set by selecting the Context View window File menu option:

>   File->Save Layout

This will save the current layout for use the next time Wiring Illuminator is executed.

Standard Wire Run Examples

A wire run can be displayed by either of two methods. The first is to enter the Tail Number, RefDes and connector Pin for a specific aircraft and wire run into the appropriate fields in the Context View window. The second is by selecting the "Browse..." button in the Context View window and navigating down the context tree to the desired wire run.
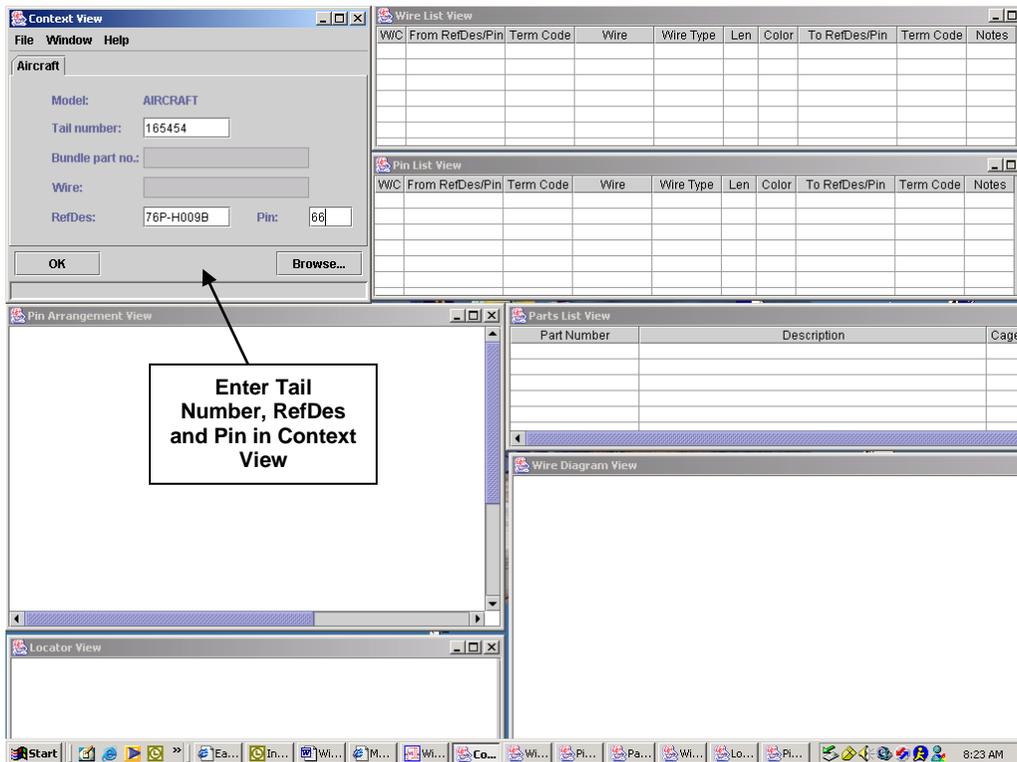
Selecting A Wire Run – Context View

To view a good example of a wire run via the first method (by entering the information directly in the Context View window fields), first enter the number 165454 in the Tail Number field of the Context View window, and hit Enter on the keyboard.

At this point, the RefDes and Pin fields will no longer be grayed out and are now available for data input. Next enter the RefDes and Pin information below in the corresponding fields, and then press the "OK" button. (Note: Entries are case sensitive.)

Tail Number: 165454
RefDes: 76P-H009B
Pin: 66

The screen shot below shows the Wiring Illuminator Context View window with the appropriate fields filled in. Note that this screen shot was taken prior to the OK button being selected, so none of the other views have any data in them yet.
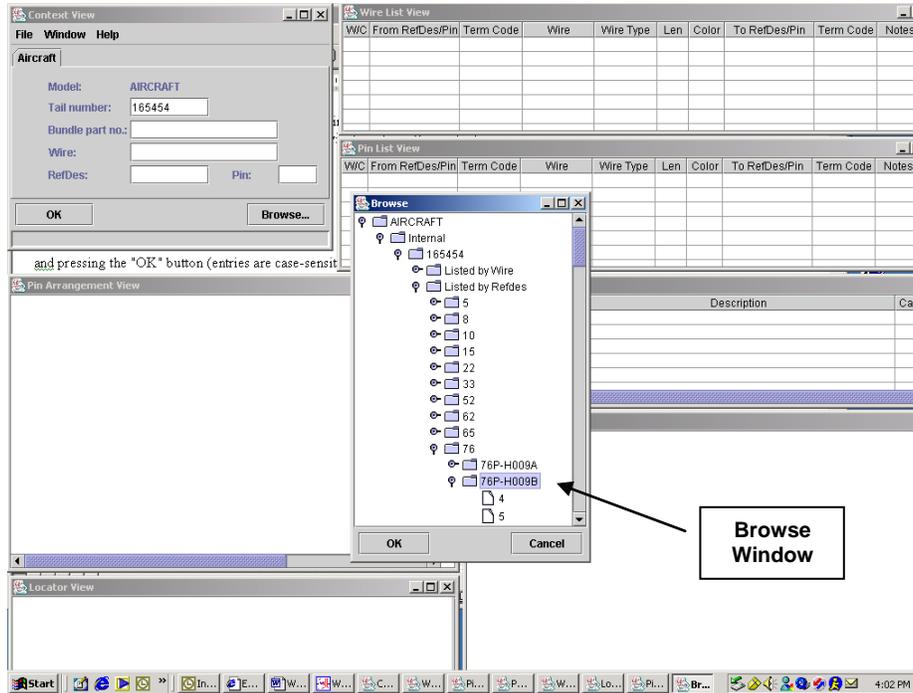

Selecting A Wire Run In Context View

Selecting A Wire Run – Browse Function

Optionally, you can also view this same example by navigating the context tree. Click on the Browse button in the Context View window. The Browse window will be displayed containing the high-level Aircraft folder.

Wiring Illuminator Browse Window

Now double click on the folders that are displayed in the Browse window in the order shown below. After double clicking on the last folder (Pin 66), all of the other views will be populated with aircraft wiring data.

AIRCRAFT	-- Model of aircraft
Internal	-- Internal aircraft wiring (as apposed to pylon wiring)
165454	-- Tail number of the specific aircraft
Listed by RefDes	-- Can enter via bundle, wire, or RefDes
76	-- All the RefDes's beginning with the number "76"
76P-H009B	-- RefDes 76P-H009B (some views should display data)
66	-- Pin 66 (all views should populate)

The screen shot on the next page shows what you will see on your screen after the views are populated with wiring data. You may not see anything in the Locator View, and may need to adjust the vertical slider on the right hand side of the Locator View window to view the diagram that is displayed in this view.

Context View

File Window Help

Aircraft

Model:	AIRCRAFT
Tail number:	165454
Bundle part no.:	76X920201-1001
Wire:	RU156D26
RefDes:	76P-H009B	Pin:	66

OK   Browse...

Wire List View

W/C	From RefDes/Pin	Term Code	Wire	Wire Type	Len	Color	To RefDes/Pin	Term Code	Notes
	76P-H009B - 110		RU156A26	AE	59	02	52J-L427 - 77		*
	52P-L427 - 77		RU156B22	AA	60	02	76P-J008A - S001		
	52P-L427 - 63		RU156C22	AA	60	02	76P-J008A - S001		
	76P-H009B - 66		RU156D26	AE	59	02	52J-L427 - 63		
	76P-H009B - 104		RU156E26	AE	59	02	52J-L427 - 54		
	76P-H009B - 121		RU156ESH		SH		52J-L427 - 66		*
	52P-L427 - 54		RU156F22	AA	60	02	76P-J008A - S001		

Pin List View

W/C	From RefDes/Pin	Term Code	Wire	Wire Type	Len	Color	To RefDes/Pin	Term Code	Notes
	76P-H009B - 60		RU316H26	AE	42		52J-H032 - 52		
	76P-H009B - 61		RU3A26	AE	42	01	52J-H032 - 111		
	76P-H009B - 62		RU20S26	AE	42	02	52J-H032 - 16		
	76P-H009B - 63		RU317C26	AE	136		52J-L427 - 97		
	76P-H009B - 64		RU9B26	AE	42	01	52J-H032 - 84		
	76P-H009B - 65		RU82BSH		SH		52J-L427 - 52		
			RU156D26	AE	59	02	52J-L427 - 63		

Pin Arrangement View

Parts List View

Part Number	Description	Cage
440FW056NF24	ADAPTER KIT,CONTAIN (76301 SPEC 5M2920-1JW)	06324
74A920201-3041	MARKER	76301
JT5M2920-1JW	ADAPTER KIT,CONTAIN (76301 SPEC 5M2920-1JW)	0BW78
MS27467T25B35SA	CONNECTOR,PLUG,ELEC	96906
S3957R24-34	ADAPTER KIT,CONTAIN (76301 SPEC 5M2920-1JW)	07418

Locator View

Wire Diagram View

52P-L427

76P-H009B

76P-J008A

77   110

63   66

S001

54   104

52J-L427

Start ... 3:57 PM

Wiring Illuminator – Standard Views

Note that any of the views can be relocated, resized or closed by using your mouse and the window controls that are provided for each view, just like any other MS Windows application.

Navigating To A New Wire

Navigation to a new wire can be done either by entering a new wire run in the Context View RefDes and Pin fields (as in the previous example), or by selecting with your mouse and clicking with the left mouse button on specific wires, RefDes, or pins in the Wire Diagram view, or by clicking on any other hot text or graphics in the other views.

For example, in the wire diagram the focus can be switched to the wire between RefDes J6P-J008A-S001 and plug J6P-J008A, pin T, by clicking on the wire in the Wire Diagram View. Using your mouse, left-click on the wire (red wire) indicated in the screen shot below.

Note that all of the views are updated to display the data for the new wire – the Pin Arrangement View is displaying a new connector, the Locator View is showing a different section of the aircraft, and the Wire List View and Pin List View have been updated to display new wiring data as well.

Selecting A New Wire

Note also that all fields displayed with blue text in the Wire List View or Pin List View are "hot" and selectable simply by clicking on them with the mouse. This includes "From RefDes/Pin", "Wire", and "To RefDes/Pin". Clicking on these table entries will change focus in the same manner that clicking on the wire in the Wire Diagram View did. For additional details, see the Wiring on-line Help, accessed by selecting "Wiring Illuminator Help" from the Help menu of the Context View window.
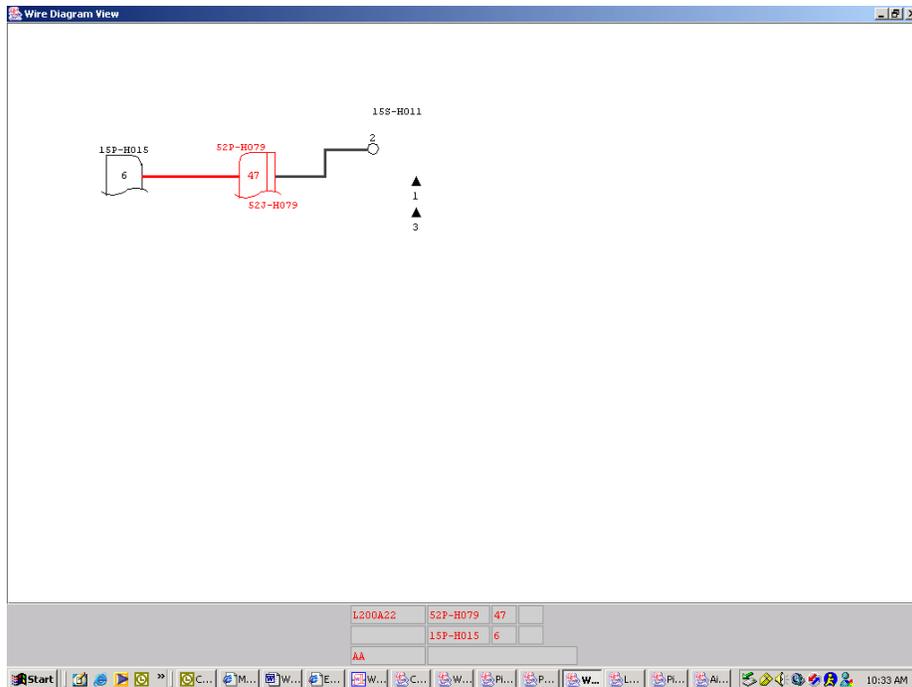
Aircraft Configuration Examples

Wiring Illuminator displays the wiring in all of its views as it exists for a given aircraft and aircraft configuration. Consequently, as you would expect, different configurations of the same aircraft may have wiring differences that should be reflected in Wiring Illuminator. The following examples demonstrate this.

Retrofit Configuration

This first example will show the change to the wiring of an aircraft that resulted from a retrofit to an aircraft that resulted in a wiring change. You will see some of the wiring changes that were made to an aircraft based upon the "AFC_001" configuration item.
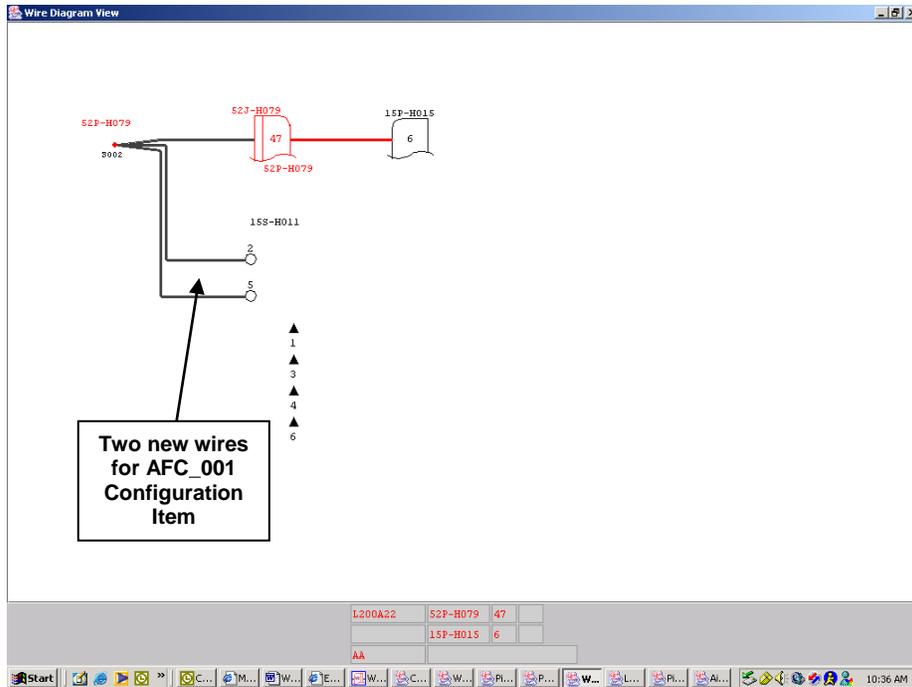
1) Shut down Wiring Illuminator if you already have it up - select Exit from the File menu in the Context View.

2) Restart Wiring Illuminator by double clicking on the Wiring Illuminator icon on your desktop.

3) Using the Window menu in the Context View, bring up the Wire Diagram, Wire List, and Pin List views, as a minimum. (These may already be displayed.)

4) Enter the number 165454 in the Tail Number field of the Context View and then hit the Enter key on your keyboard. Enter L200A22 in the Wire field of the Context View. Select the OK button. Shown below is the Wire Diagram View that is displayed as a result.

5) Bring up the Aircraft Configuration View. (From the "Window" menu in the Context View.)

6) For the "AFC_001" Configuration Item, change its current value to "true" (click the Current Value - a choice of "true" or "false" will be made available, select "true").

7) Press the "Apply" button. (This applies the change, but does not dismiss the Aircraft Configuration View. Pressing the OK button would apply the changes and dismiss the view.)

8) Notice that as shown in the screen shot below, the Wire Diagram has gotten more complex, with the addition of two new wires – L200C22 and L200D22. Also notice that the Wire List View has gone from listing the two wires "L200A22", and "L200B22" to now listing four wires, "L200A22" up to "L200D22".

Change Incorporated During Manufacturing

The previous example shows a retrofit configuration – a wiring change that was made after the aircraft was put into service. Later models may have such a change manufactured in.

Tail Number 234000 is an aircraft that had the wiring change from the previous example incorporated when the aircraft was manufactured, rather than as a retrofit. Execute the following steps to see this.

1) Shut down Wiring Illuminator if you already have it up - select Exit from the File menu in the Context View.

2) Restart Wiring Illuminator by double clicking on the Wiring Illuminator icon on your desktop.

3) Using the Window menu in the Context View, bring up the Wire Diagram, Wire List, and Pin List views, as a minimum. (These may already be displayed.)

4) Enter the number 234000 in the Tail Number field of the Context View and then hit the Enter key on your keyboard. Enter L200A22 in the Wire field of the Context View. Select the OK button. Shown below is the Wire Diagram View that is displayed as a result
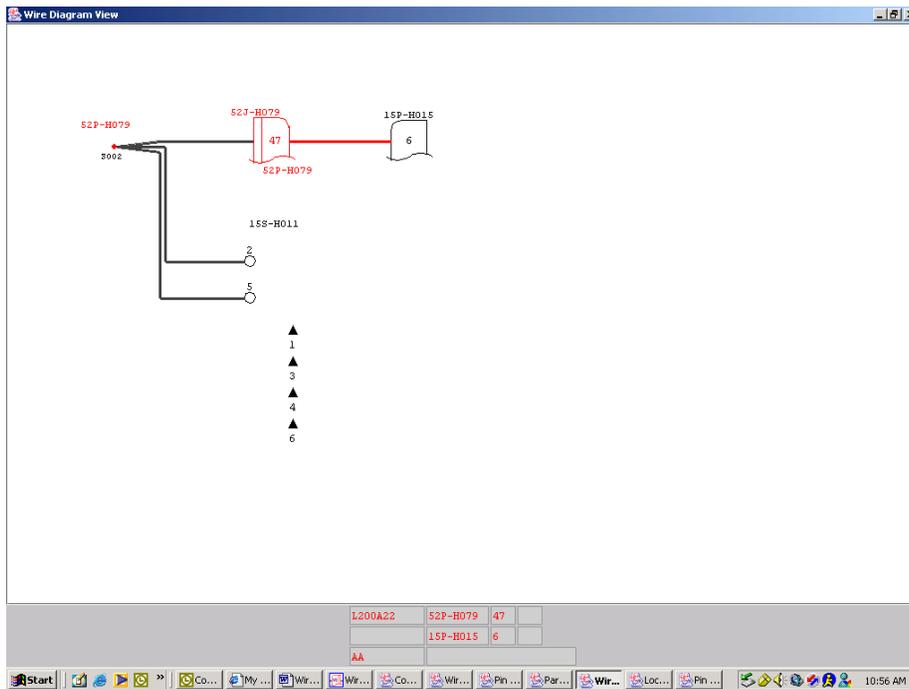
Note that the Wire Diagram View for aircraft 234000 shows the additional two wires (L200C22 and L200D22) without having to select a retrofit Configuration Item from the Configuration Item View. This is unlike aircraft 165454 for which you had to select the AFC_001 Configuration Item in order to see these wires. This indicates that the additional two wires were installed when aircraft 234000 was manufactured, as opposed to being a retrofit change.
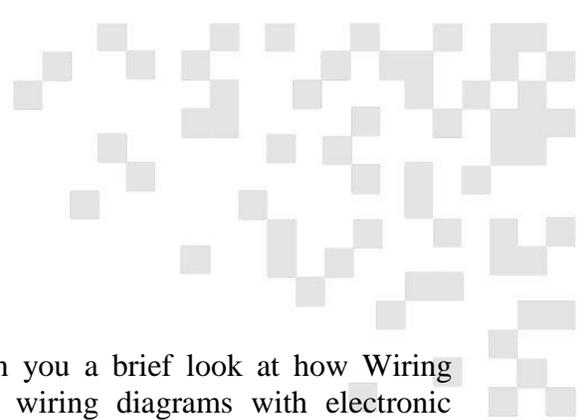
Getting More Information

This "Quick Start" tour of Wiring Illuminator should have given you a brief look at how Wiring Illuminator can simplify maintenance tasks by replacing paper wiring diagrams with electronic diagrams. If you have questions about Wiring Illuminator and how it works, see the online Help function, or consult the Wiring Illuminator Users Manual that was installed on your computer (C:\wi\FMSDEMO_WI\data\documents) along with the software.

Additionally, please contact Continental DataGraphics if you have any questions that are not covered in the product documentation, including inquiries about product pricing.

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