

EEHD974001

# PRO-LINK<sup>®</sup> Ultra Hardware and Software User's Manual

Powered by NEXIQ Technologies<sup>TM</sup>



PRO-LINK® Ultra Hardware and Software User's Manual

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# Chapter 1

# Using this Manual



- ▼ Manual Overview, page 2
- ▼ Conventions, page 3

 $T \mbox{his chapter provides an overview of this manual's organization and the conventions used throughout.$ 

#### NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

# Manual Overview

This manual provides basic and detailed information to support you in using the  $PRO-LINK^{\ensuremath{\mathbb{R}}}$  Ultra.

This manual is composed of the following sections:

- *Table of Contents*—helps you to find the information you are looking for quickly and easily.
- Chapter 1: Using this Manual—provides an overview of this user's manual.
- Chapter 2: Hardware and User Interface Overview—provides an overview of the PRO-LINK<sup>®</sup> Ultra hardware, including detailed product specifications. It also includes an overview of the PRO-LINK<sup>®</sup> Ultra user interface and navigational features.
- Chapter 3: Getting Started—explains the process of connecting the PRO-LINK<sup>®</sup> Ultra to a vehicle and scanning the vehicle for faults. It also includes an introduction to tab functions, as well as information on monitoring battery power.
- Chapter 4: Using the PRO-LINK<sup>®</sup> Ultra —provides detailed instructions on using the Diagnostics Menu when the PRO-LINK<sup>®</sup> Ultra is connected to a vehicle, including its various tabs and features.
- Chapter 5: Using the Admin Menu—provides detailed instructions for using the features of the PRO-LINK<sup>®</sup> Ultra Admin Menu. The procedures in this chapter assume that PRO-LINK<sup>®</sup> Ultra is not connected to a vehicle and that a system administrator is performing the procedures in a non-shop setting.
- Chapter 6: Using PRO-LINK<sup>®</sup> Repair-Connect provides detailed instructions for using the features of PRO-LINK<sup>®</sup> Repair-Connect. A subscription to Repair-Connect is required.
- Chapter 7: Utilites—provides information on using PRO-LINK<sup>®</sup> Ultra utility features Record Mode and Playback Mode.

Each chapter begins with an "at-a-glance" list of the chapter contents, along with corresponding page numbers.

# Conventions

This section provides descriptions of the conventions used throughout this guide.

### **Special Messages**

### Note

NOTE provides an explanation, comment, or tip related to the subject matter that is being discussed.

Example:

### NOTE:



Refer to the page number provided for each described component for further details.

### Important

IMPORTANT indicates a situation which, if not avoided, may result in damage to the test equipment or vehicle.

Example:

#### **IMPORTANT:**

 $\mathbb{N}$  Keep all cables clear of moving or hot engine parts.

#### Caution

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury to the operator or to bystanders.

#### Example:

#### CAUTION:

 $\mathbb{N}$  Do not use the unit to perform tests on household or industrial sources.

### Warning

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or bystanders.

Example:

#### WARNING:

V Use appropriate hand protection when handling hot engine components.

#### Troubleshooting

Information intended to help you to address or anticipate potential issues are presented in the following manner:



If the "No ECMs detected" message is displayed, check to make sure that the PRO-LINK<sup>®</sup> Ultra is connected to the vehicle and the key is in the on position.

### Specialized Text

The following specially formatted text is used to help you to differentiate certain elements discussed within this manual:

- *Emphasis:* Used to draw your attention to particularly important information.
- FEATURE: Used to highlight the name of a specific feature.

Example: "Use COPY to save the report to a USB memory stick."

• Field/Line: Used to highlight the name of a field or a line of text from a display.

Example: "A check mark is placed in the check box next to the **Total Fuel Used** parameter."

• Menu Items: Used to highlight a series of menu selections.

• Screen titles: Used to highlight the title of a screen displayed.

Example: "The Manage Reports screen is displayed."

# Chapter 2

# Hardware and User Interface Overview



- Component Checklist, page 6
- ▼ Product Specifications, page 7
- ▼ Hardware Overview, page 8
- ▼ User Interface Overview, page 12
  - ▼ The Main Menu, page 12
  - ▼ The Diagnostics Menu, page 14
  - ▼ The Admin Menu, page 17
  - ▼ Navigational Features, page 18
    - 🔻 Using Tabs, page 18
    - ▼ Using Buttons, page 20
    - ▼ Using Screen Icons, page 22

This chapter provides an overview of the PRO-LINK<sup>®</sup> Ultra hardware, including detailed product specifications. It also includes an overview of the PRO-LINK<sup>®</sup> Ultra user interface and navigational features.

## NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

# **Component Checklist**

The following components are included with your PRO-LINK<sup>®</sup> Ultra Starter Kit. Be sure you have all the items before using the device:

- ✓ PRO-LINK<sup>®</sup> Ultra Scan Tool
- ✓ Heavy Duty Standard (HDS) J1708/J1587 Software Application
- ✓ Heavy Duty Standard (HDS) J1939 Software Application
- ✓ OBD II/EOBD Software Application
- ✓ Data Cable
- ✓ AC/DC Adapter
- ✓ 6-pin Deutsch Adapter
- ✓ 9-pin Deutsch Adapter (non-locking)
- ✓ 16-pin J1962 Adapter
- ✓ CD (includes user guides and manuals)
- ✓ Snap-on Fault Code Guide
- ✓ Carrying Case

# **Product Specifications**

The PRO-LINK<sup>®</sup> Ultra is configured with the following specifications:

Feature	Data
Physical Dimensions	10.00" x 7.25" x 2.00"
	(254 mm x 184.15 mm x 51 mm)
Weight	2.7 lbs (1.2247 kg)
Power Requirements	6 - 32 VDC @ 30W, 3A max
Display	<ul><li>8.4 inch TFT LCD sunlight-readable display with multi-touch screen technology.</li><li>Ambient light sensor; in sunlight ramps up backlight.</li></ul>
Audio	Internal microphone
	Internal speaker
	Headphone/microphone port
Battery	11.1 V, 2.4 A-hr Li-ion
Operating Temperature	32 - 140°F (0 to +60°C)
Vehicle Protocols	J1708/J1587 J1939 Dual CAN (125, 250, or 500 kb/s) Single-wire and fault-tolerant CAN ISO-9141/KW2000 ISO-15765 J1850 VPW J1850 PWM GM 8192/9600 baud ATEC 160 baud
Communications	WiFi 802.11 b/g/n Bluetooth <sup>®</sup> wireless 2.1 + EDR Ethernet 10K and 100K HDMI port (display output) USB Host port (Type A) USB Client port (Type B)
SDIO Card Slot	Type 1 cards only
Vehicle Connector	DB26M (use with NEXIQ™ power/data cable)
AC/DC power adapter	AC input 100 - 240V, 0.9A, 50 - 60 HZ DC output 15V 2.0A

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# Hardware Overview

This section introduces the  $\mathsf{PRO}\text{-}\mathsf{LINK}^{\texttt{R}}$  Ultra hardware, its ports, and connections.

# **Front View**



Figure 2.1 Front View of the PRO-LINK<sup>®</sup> Ultra

- Hardware Overview

# **Top View**

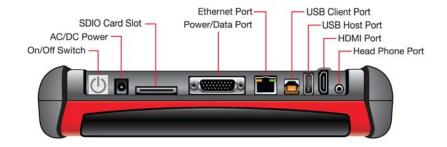


Figure 2.2 Top View of the PRO-LINK<sup>®</sup> Ultra

Chapter 2 • Hardware and User Interface Overview

# **Back View**

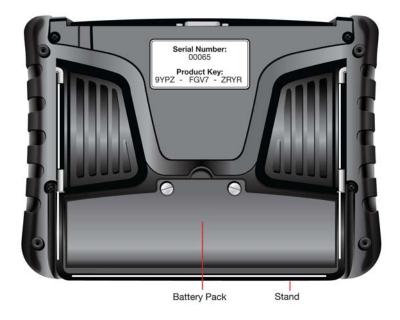


Figure 2.3 Back View of the PRO-LINK® Ultra

WARNING:

The stand on the back of the PRO-LINK<sup>®</sup> Ultra makes it possible to hang the device from the steering wheel. We recommend *strongly* that you refrain from doing this while the vehicle is in motion.

# Back View Showing Battery Pack



Figure 2.4 PRO-LINK<sup>®</sup> Ultra Battery Pack

To remove the battery pack, you must first remove the two screws that hold the battery pack in place.

# **User Interface Overview**

This section provides an overview of the following menus and features:

- The Main Menu (pg. 12)
- The Diagnostics Menu (pg. 14)
- The Admin Menu (pg. 17)
- Navigational features (pg. 18)

## The Main Menu

When you launch the PRO-LINK® Ultra, the first thing you see, after the splash screen, is the Main Menu.

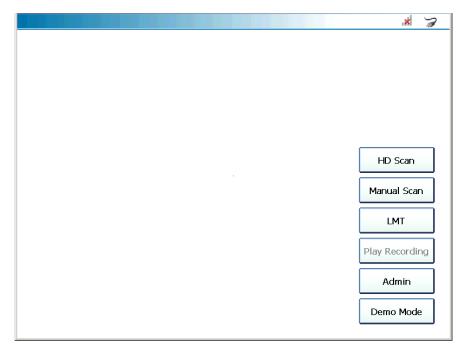


Figure 2.5 Main Menu

### NOTE:

If you are connected to a vehicle, the only way to access the Main Menu is to select **End Session** from the drop-down menu on the Diagnostics Menu.

Menu Item What It Does HD Scan Heavy Duty Scan (Auto): • Scans the vehicle. · Presents a list of ECMs detected during scanning (J1708 and J1939). · Enables you to select up to 6 modules from the list. Manual Scan Heavy Duty Scan (Manual): • Scans the vehicle. • Presents a list of applications; you can only select one application to load. Presents a list of available modules for the application you selected in the first list. LMT Light and Medium Truck Scan: Starts the vehicle scanning process using the Light Medium Truck application. For detailed information on using the LMT application, refer to the Light and Medium Truck (LMT) Application User's Guide. "Beginning the Scanning Process" and "Selecting an Application" in Chapter 2 of the same guide may also be useful. Play Recording Plays back the most recently made recording. Record and Playback modes are described in Chapter 7 of this manual. Admin Displays the Admin Menu. Places the PRO-LINK<sup>®</sup> Ultra in Demo Mode. Demo Mode

The following table introduces the items on the Main Menu:

# The Diagnostics Menu

When the scanning process is complete, the Diagnostics Menu is displayed:

Menu View Specs		ul 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1	NO INACTIVE FAULTS	FAULTS 10 ACTIVE
VSS Signal out of Range LOW		0 INACTIVE
Vehicle Speed Sub-System Error		
SPN 84 - FMI 4 - FLASH CODE 1141		
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
FRP signal Out of Range HIGH		Ch1
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125		Engine
Engine #1 - MaxxForce - Ch1		Retarder
APS Signal out of Range LOW		Ch1
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131		6446
Engine #1 - MaxxForce - Ch1		CALS
Up Down	Up Down	
		·
	Clear All Faults	TESTS

Figure 2.6 Diagnostics Menu

The Diagnostics Menu is composed of a number of tabs along the right side of the screen. You use these tabs to access different types of diagnostic information and features. The following tabs are available:

- · FAULTS tab
- · PARAMETERS tab
- · CALS tab
- EVENTS tab (available only with the CAT<sup>®</sup> ACERT<sup>™</sup> and Caterpillar<sup>®</sup> Electronic Engines applications)
- · TESTS tab

If you have loaded more than one module, there will be multiple PARAME-TERS tabs (e.g., Engine 1 and Engine Retarder as shown in Figure 2.6.

#### NOTE:



For detailed information on the Diagnostics Menu, refer to Chapter 4: Using the Diagnostics Menu, later in this manual.

There are two drop-down menus located in the upper-left corner of the Diagnostics menu.

- Menu (pg. 15)
- View Specs (pg. 16)

## Menu

Menu	View Specs				* 7
🧊 Create	Report 🗧				
Units	•		INACTIVE - 0		FAULTS
<del>ਵ</del> End Se	ssion ov	N	NO INACTIVE FAULTS		10 ACTIVE 0 INACTIVE
About		Sub-System Error			
JT	MOT THE TEAS	H CODE 1141			Engine 1
Engine #1 - Ma	axxForce - Ch1				Engine 1 MaxxForce
FRP signal C	Out of Range HIG	GΗ			Ch1
Fuel Rail Pr	essure s	Sub-System Error			
SPN	164 - FMI 3 - FLAS	H CODE 1125			Engine
Engine #1 - Ma	axxForce - Ch1				Retarder
	out of Range LON	N			HD5 J1939 Ch1
Accelerator	Pedal s	Sub-System Error			
SP	N 91 - FMI 4 - FLAS	H CODE 1131			
Engine #1 - Ma	axxEorce - Ch1				CALS
Up		Down	Up	Down	
				Clear All Faults	TESTS

Figure 2.7 Drop-Down Menu

From the drop-down menu you can access the following options:

- Create Report—Displays the Print Selection menu. Once you make your selections, you can print your customized report.
- **Units**—Enables you to select how you want to display units of measure (English vs. Metric).
- End Session—Ends the session, disconnects from the vehicle, and returns you to the Main Menu (Figure 2.5).
- About—Displays the About PRO-LINK<sup>®</sup> Ultra information box.

# **View Specs**

The View Specs menu displays the Vehicle Specifications page.

ENGINE #1 - MAXXFORCE - CH1 Engine Type Software Identification Vehicle Identification Number Engine Serial Number Engine Family Rating Code Transmission Type Rated Power Total Miles Total Fuel Used Total Engine Hours	MaxxForce 7 (2007 - 2009) PRD2SGH4 4DRBUSKP7AB157741 6.4HM2Y0648970 2131 Allison MD 200 hp 78396 mi 9699.9 gal 0.0 hr	
---	--	--

Figure 2.8 Vehicle Specifications

Once you have finished viewing the information, touch the **Print** button to send the information to a printer.

Touch the green **Back Arrow** at the bottom of the screen to return to the Diagnostics Menu (Figure 2.6).

# The Admin Menu

You access the Admin Menu from the Main Menu (Figure 2.5). It is used to perform various administrative tasks (e.g., configuring your device, registering software applications, installing updates). You can access the Admin Menu only when disconnected from the vehicle.

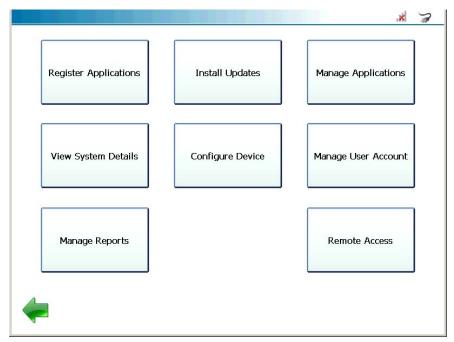


Figure 2.9 Admin Menu



For detailed information on the Admin Menu, refer to *Chapter 5: Using the Admin Menu*, later in this manual.

## **Navigational Features**

The PRO-LINK<sup>®</sup> Ultra is designed for ease of use in on-road conditions, in the service bay, or in test situations. Depending on the circumstances of use, you can make selections, and move from one screen to the next, by:

• Touching the screen with your finger.

or

• Attaching a mouse to the USB type A port on the top of the device, and using the mouse to click on your selections.

On the touchscreen, you navigate and make selections though the following:

- Tabs (pg. 18)
- Buttons (pg. 22)
- Icons (pg. 22)

## **Using Tabs**

Once the scanning process is complete, the Diagnostics Menu is displayed.

Menu View Specs		네 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1	NO INACTIVE FAULTS	FAULTS 10 ACTIVE
VSS Signal out of Range LOW	NO INACTIVE FAOLIS	0 INACTIVE
Vehicle Speed Sub-System Error SPN 84 - FMI 4 - FLASH CODE 1141		
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
FRP signal Out of Range HIGH		Ch1
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125		Engine
Engine #1 - MaxxForce - Ch1		Retarder
APS Signal out of Range LOW		Ch1
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131		CALS
Engine #1 - MaxxForce - Ch1	Up Down	
	Clear All Faults	TESTS

Figure 2.10 Diagnostics Menu

The FAULTS tab is always at the top of the stack (even though it might not be the currently active tab). You use the tabs along the right side of the menu to make your selections and activate the tab of your choice. For example, to activate TESTS, touch the **TESTS** tab.

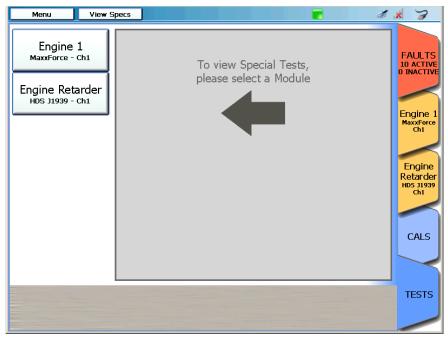


Figure 2.11 TESTS Tab

The tab you selected is activated and moved to the forward position in the stack. To navigate to another tab, just touch the appropriate tab.

#### NOTE:

A

If there are more tabs than can be displayed vertically on one screen, touch the **Down Arrow** beneath the tabs to access the rest of the tabs.

# **Using Buttons**

Buttons are another way to navigate through the system. The PRO-LINK<sup>®</sup> Ultra displays navigational and command buttons at appropriate points in the interface. The following table introduces many of the buttons you will encounter as you use the PRO-LINK<sup>®</sup> Ultra:

Buttons by Location	What the Button Does	
Main Menu		
HD Scan	Starts the automatic vehicle scanning process.	
Manual Scan	Starts the manual vehicle scanning process	
LMT	Starts the Light and Medium Truck vehicle scanning process.	
Play Recording • Exit • Rewind • Play • Previous Bookmark • Next Bookmark	<ul> <li>Plays back previously recorded data.</li> <li>-Exits playback.</li> <li>-Rewinds the recordings to the start.</li> <li>-Plays the recording.</li> <li>-Jumps back to a previous bookmark.</li> <li>-Jumps forward to the next bookmark.</li> </ul>	
Admin	Displays the Admin Menu.	
Demo Mode	Activates Demo Mode.	
All Tabs		
Back Arrow	Returns to previous screen or menu.	
Cancel	Cancels the changes just made.	
Previous Page	Moves back to the previous page of a list.	
Next Page	Moves to the next page of a list.	
ОК	Closes an information pop-up window.	
Print* *On the Print selection screen.	Prints chosen data, for example, Vehicle Info, Faults, Events, Parameters in a given category, the Quick List, and Trip Data.	

Buttons by Location	What the Button Does
Change *On the Print selection screen.	Enables you to select a category of parameters to include on the report (if none are selected). It also enables you to change the parameter category (if one is already selected).
FAULTS Tab	
Clear All Faults	Clears all inactive faults.
Clear	Clears individual fault items (CAT <sup>®</sup> ACERT™ and CAT <sup>®</sup> EE applications only).
Up	Scrolls up the list of faults.
Down	Scrolls down in the list of faults.
EVENTS Tab	The EVENTS tab is available only with the CAT <sup>®</sup> ACERT <sup><math>M</math></sup> and CAT <sup>®</sup> EE applications.
Up	Scrolls up the list of events.
Down	Scrolls down in the list of events.
PARAMETERS Tab	
View Categories	Displays the next page of categories.
Graph Page	Displays parameters in graphed format.
Record Mode <ul> <li>EXIT</li> <li>View Real Time</li> <li>View Results</li> </ul>	Starts Record Mode –Exits Record Mode. –Displays the results in real time. –View the results.
View Quick List	Displays the parameters in a Quick List.
Remove Selected Items	Removes checked items from the Quick List.
Clear Quick List	Clears all parameters in the Quick List.
CALS Tab	
Categories	Returns you to the list of Categories
Close	Closes the datapoint modification screen.

Buttons by Location	What the Button Does	
Update	Updates the ECM with the new calibration.	
Program	Commits the new value to the ECM.	
TESTS Tab		
Activate	Activates a test.	
Deactivate	Deactivates a test condition.	
Previous Result (DDEC application only)	Displays the previous result.	
Quit	Stops the test.	
Start	Starts the test.	
Categories	Returns you to the list of Categories	

## **Using Screen Icons**

The PRO-LINK® Ultra user interface also employs screen icons. Like tabs and buttons, you touch the icon to activate the feature or to open a screen. The following table introduces the available icons.

Icon	What the Icon Does	
Back Arrow 🔶	Takes you back to a previous screen or menu.	
Registration	Indicates that new activation codes have been downloaded from the server. Touch the icon to view a list of the applications with version numbers.	
Ethernet 🧭	Indicates that a cable is connected to the Ethernet port.	
USB Port 🥔	USB Port—Indicates that a USB device is in one of the USB ports.	
Updates	Updates Available—Alerts you that software updates are available for download.	

lcon		What the Icon Does	
WiFi and		WiFi signal bars provide a visual indication of WiFi signal strength.	
		You can touch the icon to open the Wireless Networks screen. Touch the green <b>Back Arrow</b> to close the screen.	
	×	When there is no wireless connection, the icon has a red x superimposed over it.	
Power	2	<ul> <li>Indicates the power source for the device.</li> <li>Battery—When the device is running on internal battery power, the icon appears as a battery. You can tell how charged the internal battery is by the percentage displayed on the icon (e.g., 98%).</li> <li>AC—When the power source is external (i.e., either an AC/DC power adapter or through the vehicle to which the device is connected), the icon appears as a plug.</li> </ul>	
Connect		Indicates that the device is connected to a vehicle.	

# Chapter 3

# **Getting Started**



- ▼ Supplying Power to the PRO-LINK Ultra, page 26
- Connecting to a Vehicle, page 27
- ▼ Scanning a Vehicle, page 29
  - ▼ Heavy Duty Scan, page 30
  - 🔻 Manual Scan, page 36
  - Light and Medium Truck Scan, page 39
- Introduction to Tab Functions, page 40
- Viewing Vehicle Specifications, page 54
- ▼ Monitoring Battery Power, page 56

This chapter explains the process of scanning a vehicle for faults and how to use the information that appears on the tabs once the scan is complete. You also learn how to view vehicle specifications and monitor remaining battery power.

#### NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

# Supplying Power to the PRO-LINK<sup>®</sup> Ultra

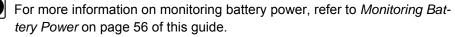
There are three ways to supply power to the PRO-LINK<sup>®</sup> Ultra. You can use the:

• **On-board battery**—An 11.1 volt, 2.4 A-hr Li-ion battery is included with your device.

The PRO-LINK<sup>®</sup> Ultra on-board battery is recharged when:

- The device is turned on and the AC/DC Power Adapter is being used
- The device is turned off and plugged into the AC/DC Power Adapter
- The device is plugged into the vehicle datalink connector

#### NOTE:



- AC/DC power adapter—If you do not wish to use the battery, or the battery power is low, you can use the AC/DC Power adapter to supply power to the device.
- Vehicle itself—In most vehicles, you can use the vehicle's datalink adapter to supply power to the PRO-LINK<sup>®</sup> Ultra.

### NOTE:

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When not connected to an external power source, the device will automatically go into **Standby Mode** after 10 minutes. To exit Standby mode, tap the screen. To enter Standby Mode, lightly press the On/Off switch on the top of the device.

To turn on the PRO-LINK<sup>®</sup> Ultra, press and briefly hold the **On/Off** switch on the top of the device. To turn it off, hold down the On/Off switch for approximately four (4) seconds, or until the display goes blank.

# Connecting to a Vehicle

Prior to using the PRO-LINK<sup>®</sup> Ultra for diagnostics, you must connect to a vehicle using the power data cable and the appropriate adapter. **The vehicle should be in a key-on, engine-off state.** 

#### To connect to a vehicle:

- 1 Make sure the vehicle ignition is in the **ON** position, however, the engine does not have to be running.
- 2 Connect the power data cable to the **Power/Data Port** on the top of the PRO-LINK<sup>®</sup> Ultra.
- 3 Select the appropriate adapter for the vehicle to which to want to connect.

Choices include the following:

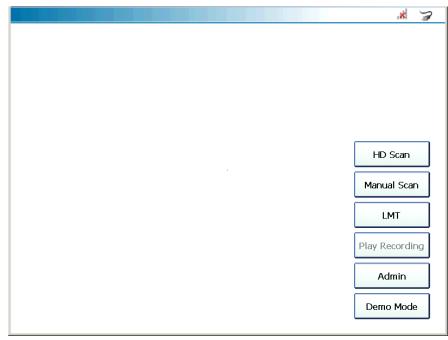
- 6-pin Deutsch adapter
- 9-pin Deutsch adapter
- 16-pin J1962 adapter
- 4 Connect one end of the adapter to the power and data cable.
- 5 Attach the other end of the adapter (e.g., the Deutsch connector end) to the vehicle's diagnostic connector.
- 6 Press and briefly hold the **On/Off** switch on the top of the tool.

### NOTE:

To power down the PRO-LINK<sup>®</sup> Ultra, press and hold the On/Off switch.

#### NOTE:

**Standby Mode**—You can place the device in Standby Mode by quickly pressing and releasing the On/Off switch. When not connected to an external power source, the device will automatically go into Standby Mode after 10 minutes. Lightly tap the screen to exit Standby Mode.



When you power up the PRO-LINK<sup>®</sup> Ultra, the following screen is displayed.

Figure 3.1 Main Menu

7 To begin scanning, move on to **Scanning a Vehicle**, next in this manual.

# **Scanning a Vehicle**

The following scanning options are available:

- HD Scan (Auto)—Scans the vehicle, presents a list of ECMs detected during scanning (J1708 and J1939), and enables you to select up to six (6) modules from the list.
- **Manual Scan** (Manual)—Scans the vehicle, presents a list of applications, and enables you to select one application from the list to load. Then available modules for the selected application are highlighted for your selection.
- LMT—Begins the Light and Medium Truck scanning process.

#### To scan a vehicle:

- 1 Verify that the connections are tight and solid before scanning begins.
- 2 From the Main Menu (Figure 3.1), select one of the following:
  - HD Scan (pg. 30)
  - Manual Scan (pg. 36)
  - LMT (pg. 39)

# **Heavy Duty Scan**

If you selected HD Scan on the Main Menu (Figure 3.1), the device scans the vehicle to identify available modules; during this process the **Scanning Vehicle...** indicator light flashes yellow.

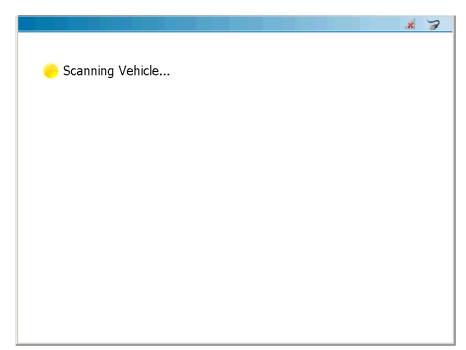


Figure 3.2 Scanning Vehicle Screen

3 Wait for a moment or two for the next screen to display.

The Module Selection screen is displayed.

	×.
lect up to 6 modules to load:	
Engine #1	
Navistar MaxxForce Engines - Ch1 Retarder - Engine Heavy Duty Standard - 31939 - Ch1	
Heavy Duty Standard - J1939 - Ch1	
Cancel	OK

Figure 3.3 Module Selection Screen

#### NOTE:

- The device displays the available modules (e.g., **Engine #1**,) followed by the name of the software application that will be used to communicate with the module (e.g., **Navistar MaxxForce Ch1**).
- 4 Depending on the size of the list, touch the screen and drag your finger to navigate down the list.
- 5 Touch the screen to make your selection (e.g., Engine #1 Navistar Maxx-Force - Ch1 and Retarder Engine - Heavy Duty Standard J1939 - Ch1).

### NOTE:

You can select up to six (6) modules from the list

Your selections are highlighted.

X 🦼
<

Figure 3.4 Module Selection Screen with Item Highlighted

6 Click OK.

If the vehicle scan is successful, the following screen is displayed.

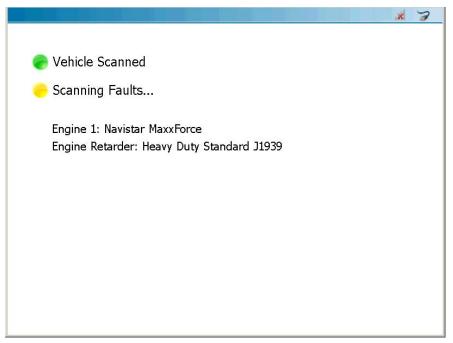


Figure 3.5 Vehicle Scanned Screen

The Vehicle Scanned indicator becomes solid green, and the modules you selected are listed (e.g., Engine 1: Navistar MaxxForce and Engine Retarder: Heavy Duty Standard J1939).

The PRO-LINK® Ultra scans for faults for each of the selected modules. The **Scanning Faults...** indicator flashes yellow while the scan is in progress.

When a module's faults are scanned successfully, a green check mark appears to the left of the module in the list.

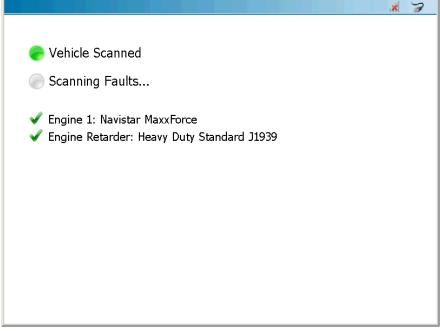


Figure 3.6 Check Mark Indicating Faults Scanned for Navistar MaxxForce

When all the faults of all the modules are scanned successfully, the **Scanning Faults..** indicator changes to a solid green **Faults Scanned** indicator.

The Diagnostics Menu is displayed with the FAULTS tab on the top of the tab stack.

Menu View Specs		al 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1	NO INACTIVE FAULTS	FAULTS 10 ACTIVE
VSS Signal out of Range LOW	NO INACTIVE FAULTS	0 INACTIVE
Vehicle Speed Sub-System Error		
SPN 84 - FMI 4 - FLASH CODE 1141		
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
FRP signal Out of Range HIGH		Ch1
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125		Engine
Engine #1 - MaxxForce - Ch1		Retarder HD5 J1939
APS Signal out of Range LOW		Ch1
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131		CALS
Engine #1 - MaxxForce - Ch1		CALS
Up Down	Up Down	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
		TESTS
	Clear All Faults	

Figure 3.7 Diagnostics Menu



The square green icon at the top of the display indicates that the PRO-LINK<sup>®</sup> Ultra is connected to a vehicle.

#### **Manual Scan**

Manual Scan is used in instances where you want to load an application that was *not presented* for selection during HD Scan (e.g., Heavy Duty Standard J1708). Manual Scan is also used by Technical Support in resolving customer support issues.

If you selected Manual Scan on the Main Menu (Figure 3.1), the following screen is displayed once initial scanning is complete.

Application	Status
ACERT Engines	Registered
Allison 1K 2K	Registered
Allison CEC I	Registered
Allison Gen 4	Registered
Allison WTEC	Registered
Bendix ABS	Registered
Module	Protocol
Engine #1 (Ch1)	J1939
Engine #1	J1708
Retarder - Engine (Ch1)	J1939

Figure 3.8 Manual Scan Module Selection Screen

Direct your attention to the Application list at the top of the screen.

You can touch and drag the scroll bar on the right side of the screen to scroll through the list until you find the application you want to load (e.g., **Heavy Duty Standard J1708**).

	* 3
• • • •	
Application	Status
Haldex ABS	Registered
Heavy Duty Standard J1708	Registered
Heavy Duty Standard J1939	Registered
International Engines (1, 2, 3 Box)	Registered
MBE	Registered
Navistar MaxxForce	Registered
Module	Protocol
Engine #1	J1708
Engine #1 (Ch1)	J1939
Retarder - Engine (Ch1)	J1939
	PC611

Your selection is highlighted and the available module is displayed in bold.

Figure 3.9 Heavy Duty Standard J1708 Selected

After selecting the application, move to the list of modules and select the available module (**Engine #1 - J1708**).

When you have finished making your selections, touch Load.

The following screen is displayed.

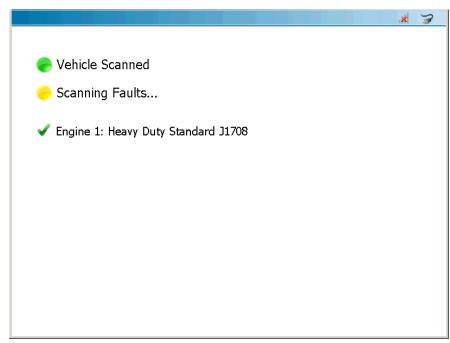


Figure 3.10 Vehicle Scanned Screen

When the faults scanning process is complete, the **Diagnostics Menu** is displayed (Figure 3.7)

#### Light and Medium Truck Scan

If you selected LMT from the Main Menu (Figure 3.1), the following screen is displayed.

OBDII/Light Medium Truck	
Live Vehicle	
O Reconnect to Last Vehicle Selected	
Application: Generic OBDII	
ок	CANCEL

Figure 3.11 OBD II/Light Medium Truck Screen

You use this screen to select the application, year, and other selection criteria to load the appropriate data for the selected vehicle.

#### NOTE:

For detailed information on using the LMT application, please refer to the *Light and Medium Truck (LMT) Application User's Guide*.

For information on using the screen in Figure 3.11, please refer to "Beginning the Scanning Process" and "Selecting an Application" in Chapter 2 of the same guide.

#### **Introduction to Tab Functions**

Once the PRO-LINK<sup>®</sup> Ultra has scanned the vehicle for faults, the **Diagnostics Menu** is displayed (Figure 3.12). A number of menu-selection tabs are displayed on the right side of the screen.

- FAULTS (pg. 40)
- EVENTS (pg. 42)
- PARAMETERS (pg. 43)
- CALS (pg. 46)
- TESTS (pg. 50)

Touch the tab to display the appropriate screen for that feature.

#### The FAULTS Tab

The **FAULTS** tab displays the faults detected on the vehicle for all modules. The faults are separated into two lists, ACTIVE faults on the left side and INACTIVE faults on the right side.

Menu View Specs		al 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1	NO INACTIVE FAULTS	FAULTS
VSS Signal out of Range LOW	NO INACTIVE FAULTS	10 ACTIVE 0 INACTIVE
Vehicle Speed Sub-System Error		
SPN 84 - FMI 4 - FLASH CODE 1141 - Active		Engine 1
Engine #1 - MaxxForce - Ch1		MaxxForce
FRP signal Out of Range HIGH		Ch1
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125 - Active		
Engine #1 - MaxxForce - Ch1		CALS
APS Signal out of Range LOW		
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131 - Active		TESTS
Engine #1 - MaxxEnrce - Ch1		TESTS
Up Down	Up Down	
	Clear All Faults	

Figure 3.12 Active and Inactive Fault Codes

<sup>40</sup> PRO-LINK<sup>®</sup> Ultra Hardware and Software User's Manual

When faults are detected during scanning, they are listed in either the ACTIVE or INACITVE fault lists. The heading of each list includes the number of faults in the list (e.g., ACTIVE - 10).

You can use the **Up** and **Down** buttons to move up and down the list.

Each item in the list contains the following information about an active fault:

Line Number	What's Displayed
1 (top, gray line)	The name of the module where the fault was found (e.g., <b>Engine #1</b> ) followed by the name of the software application being used to communi- cate with the module (e.g., <b>Navistar MaxxForce</b> - <b>Ch1</b> ).
2	A short description of the fault (e.g., VSS Signal out of Range LOW).
3	Parameter information associated with the fault (e.g., Vehicle Speed, Sub-System Error).
4 (bottom line)	SAE/DTC information about the fault (e.g., SPN 84 - FMI 4 -FLASH CODE 1141)

#### NOTE:

Complete information about SAE/DTC information can be found in the *Snap-on Fault Code Guide* (*EEHD903008*).

#### The EVENTS Tab

The EVENTS tab displays the events detected on vehicles with CAT<sup>®</sup> ACERT<sup>™</sup> and Caterpillar<sup>®</sup> Electronic Engines.

#### NOTE:

The EVENTS tab is available only with the CAT<sup>®</sup> Engines with ACERT<sup>®</sup> Technology and Caterpillar<sup>®</sup> Electronic Engines applications.

The events are separated into two lists:

- · CRITICIAL events on the left side
- · LOGGED events on the right side

N	1enu 🛛	View Specs				.ul 🍃
CR		• 0		LOGGED - 0		
N	O CRIT	ICAL EVENT	s	NO LOGGED EV	/ENTS	FAULTS 10 ACTIVE 0 INACTIVE
						Engine 1 HDS J1939 Ch1
						CALS
						$\boldsymbol{\triangleleft}$
						TESTS
	Up		Down	Up	Down	

Figure 3.13 The Events Tab

Use the Up and Down buttons to navigate up and down in the list.

If events from more than one electronic control module (ECM) are detected, the name of the ECM is listed in the first line of each fault item (e.g., **Engine #1**). The top line of the event item will change to match the specific module (e.g., "Engine #2" or "Transmission #1)".

#### The PARAMETERS Tab

The PRO-LINK<sup>®</sup> Ultra creates a PARAMETERS tab for each module loaded (e.g., **Engine 1 - MaxxForce - Ch1** and **Engine Retarder - HDS J1939 Ch1**). So, depending on the number of modules loaded, you may, or may not, have multiple PARAMETERS tabs displayed.

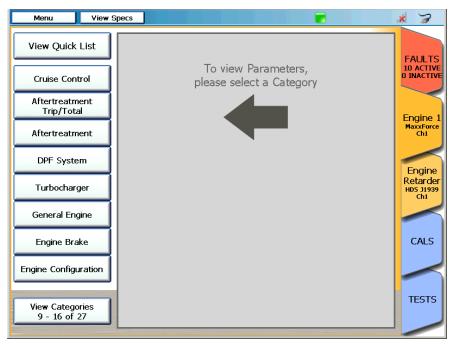


Figure 3.14 Category Selection Screen

The first time the PARAMETERS tab is selected during your session the you are prompted to select a parameter category. The categories displayed depend upon the module and application.

Use the **View Categories** button at the bottom of the list to scroll through all the categories in the list. The button also indicates how many items are in the list and your current location in the list (e.g., **9 - 16 of 27**).

Touch the screen to select a category (e.g., **Cruise Control)** and display the parameters for that category.

Menu View S	pecs			* 3
View Quick List	Add to Quick List	Parameter	Value	FAULTS
Cruise Control		Brake Switch	Depressed	10 ACTIVE 0 INACTIV
Aftertreatment Trip/Total		Cruise Control Accelerate Sw	Released	Engine :
Aftertreatment		Cruise Control Active	Off	MaxxForce Ch1
DPF System		Cruise Control Coast Switch	Released	Engine
Turbocharger		Cruise Control Set Speed	0 mph	Retarder HDS 31939 Ch1
General Engine		Cruise Control State	Off/Disabled	
Engine Brake		Road Speed Limit Status	Not Active	CALS
Engine Configuration		Two Speed Axle Switch	High speed range	
View Categories 9 - 16 of 27	Grapi Page			TESTS

The **Parameters** screen is displayed.

Figure 3.15 Parameters Screen

Use the **Next Page** and **Previous Page** buttons to scroll through all the items in the list.

Other features available on the Parameters tab include the following:

Feature	How to Use It
Add to Quick List	To create a Quick List, touch the box in the Add to Quick List column next to the parameter you want to add to your list.
	There can be only one Quick List per session and the Quick List is limited to eight (8) parameters.
	<b>Note:</b> For detailed information on creating a Quick List, refer to "Creating and Viewing a Quick List" in <i>Chapter 4: Using the Diagnostics Menu,</i> later in this manual.
View Quick List	Touch the View Quick List button at the top left of the display to view the Quick List you have created.

Feature	How to Use It
Graph Page	Touch the Graph Page button to view the parame- ters on the current page in a graph. Touch the green <b>Back Arrow</b> button at the bottom of the graph display to return to the list of parameters.
	You can also create a Quick List and then view the parameters in the list as a graph.
	<b>Note:</b> For detailed information on the Graph Page feature, refer to "Graphing Data" in <i>Chapter 4: Using the Diagnostics Menu</i> , later in this manual.
Record Mode	Touch the Record Mode button to create a real time recording, which you can save and play back at a later time.
	<b>Note:</b> For detailed information on the Record Mode feature, refer to "Record Mode" in <i>Chapter 7: Utilities</i> , later in this manual.

#### The CALS Tab

The CALS tab lists the calibrations available for each module and displays the screens you need to calibrate those parameters. If a module does not contain any calibrations, a message is displayed.

#### NOTE:

For some parameters a password is required.

The first time the CALS tab is selected during a session, a message instructs you to select a module.

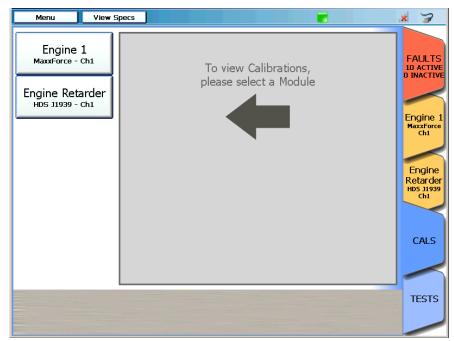


Figure 3.16 Select a Module Screen

Select a module (e.g., Engine 1 - MaxxForce - Ch1).

View Specs Menu × 7 **Available Categories** Engine 1 FAULTS MaxxForce - Ch1 10 ACTIVE 0 INACTIVE EECM Manufacturing Data Engine Retarder HDS J1939 - Ch1 Engine Warmup Device Engine 1 MaxxForce Ch1 Engine Crank Inhibit Engine Idle Shutdown Control Engine Retarder HDS J1939 Ch1 Engine Speed Control Cruise Control CALS Previous Next Page 1 of 4 Page Page TESTS Program

The Available Categories screen is displayed.

Figure 3.17 Available Categories Screen

#### NOTE:

You can use the **Next Page** and **Previous Page** buttons to page through the list.

Touch the screen to make your selection (e.g., **Cruise Control**), and view the datapoints for that category.

Menu View	Specs		* 3
Engine 1	Cruise Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
Engine Retarder HDS J1939 - Ch1	Cruise Control Mode	Enable	
	Cruise Control Vehicle Speed Low L	33 mph	Engine 1 MaxxForce Ch1
	Cruise Control Vehicle Speed High	65 mph	
			Engine Retarder HDS 31939 Ch1
			CALS
	Categories Previous Page Page 1 of 1 Next Page		
	F	Program	TESTS

The Cruise Control screen is displayed.

Figure 3.18 Cruise Control Screen

You can touch and hold a datapoint to display its full description (e.g., **Cruise Control Vehicle Speed High...**).

A pop-up is displayed with the full description	۱.
---	----

Menu View	Specs		ul 🍃
Engine 1	Cruise Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Cruise Control Mode	Enable	
	Cruise Control Vehicle Speed Low L	33 mph	Engine 1 MaxxForce Ch1
	Cruise Control Vehicle Speed High	65 mph	
	Cruise Control Vehicle Speed High Lin	mit	CALS
			TESTS
	Categories Previous Page 1 of 1 Next Page		
		Program	

Figure 3.19 Datapoint with Pop-Up Description

This feature can be helpful if the datapoint description is too long to fit on the screen.

#### The TESTS Tab

The **TESTS** tab is used to perform special tests. Some of the tests you can run include the following:

- Histograms
- · Injector actuation pressure tests
- · Injector solenoid tests

A typical test enables you to perform a function or test to aid in the diagnostics of a vehicle or system. For example, the **Cylinder Cutout Test** enables you to turn on or turn off the cylinders in an engine to help diagnose problems with an individual cylinder or group of cylinders.

The PRO-LINK<sup>®</sup> Ultra enables you to perform the special tests that have been programmed into the ECM by the original equipment manufacturer (OEM).

When you select the **TESTS** tab, the Caution screen is displayed.

<b>!</b> Caution
To avoid personal injury
Observe all safety precautions in operator and service manuals.
• Put vehicle in park or neutral and set parking brake.
• Chock wheels.
<ul> <li>If vehicle is in motion, operator must maintain control of the vehicle while an assistant uses this diagnostic tool.</li> </ul>
Don't show this again OK

Figure 3.20 Caution Screen

Read the warning and perform any of the necessary precautions; then touch **OK** to continue.

The Module Selection screen is displayed.

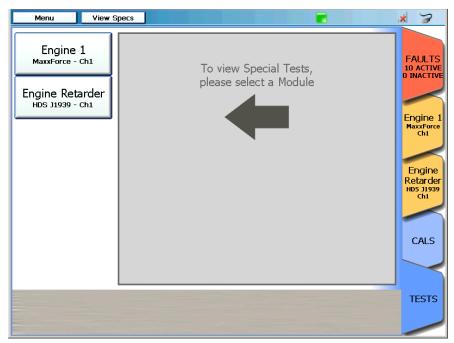


Figure 3.21 Module Selection Screen

Select the module on which you want to run tests (e.g., **Engine 1 - Maxx-Force - Ch1**).

Menu View	Specs	🗶 🛪
Engine 1 MaxxForce - Ch1	Available Categories	FAULTS 10 ACTIVE
Engine Poterder	Key On Engine Off Tests	0 INACTIVE
Engine Retarder HDS J1939 - Ch1	Key On Engine Running Tests	Engine 1
	Aftertreatment Tests	MaxxForce Ch1
		Engine Retarder HDS J1939 Ch1
	Previous Page 1 of 1 Next Page	CALS
		TESTS

The Available Categories screen is displayed.

Figure 3.22 Available Categories Screen

Touch the screen to select a category from the list (e.g., **Key On Engine Off Tests**).

A list of **Available Tests** is displayed.

Menu View	Specs	× 7
Engine 1 MaxxForce - Ch1	Key On Engine Off Tests Available Tests	FAULTS 10 ACTIVE
Engine Retarder HDS J1939 - Ch1	KOEO Standard Test	
	KOEO Injector Test	Engine 1 MaxxForce Ch1
	Output State High	
	Output State Low	Engine Retarder HDS J1939
	Output State Air Heater Control	Ch1
	Continuous Monitor Test	CALS
	Categories Previous Page 1 of 1 Next Page	
		TESTS

Figure 3.23 Available Tests Screen

Select a test from the list; the appropriate test screen is displayed. Follow the on-screen prompts to run the test.

#### NOTE:

For detailed information on running a particular test, refer to the application user's guide for the software title in question (e.g., NAVISTAR MaxxForce Application User's Guide). User's guides are available in portable document format (PDF) on the CD that shipped with your PRO-LINK<sup>®</sup> Ultra.

#### **Viewing Vehicle Specifications**

The View Specs button is always displayed at the top of the Diagnostics Menu.

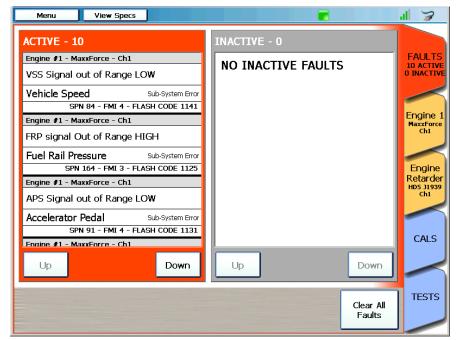


Figure 3.24 Diagnostics Menu Showing the View Specs Button

When you touch the View Specs button, the following information is displayed for the vehicle to which you are connected:

- Module (e.g., Engine #1 MaxxForce Ch1)
- Engine Type
- Software Identification
- Vehicle Identification Number (VIN)
- · Engine Serial Number
- · Engine Family Rating Code
- Transmission Type
- Rated Power
- Total Miles
- Total Fuel Used
- Total Engine Hours

The Vehicle Specifications screen is displayed.

Menu View Specs		× ×
Vehicle Specifications ENGINE #1 - MAXXFORCE - CH1		
ENGINE #1 - MAXAFORCE - CHI Engine Type Software Identification Vehicle Identification Number Engine Serial Number Engine Family Rating Code Transmission Type Rated Power Total Power Total Miles Total Fuel Used Total Engine Hours	MaxxForce 7 (2007 - 2009) PRD2SGH4 4DRBUSKP7AB157741 6.4HM2Y0648970 2131 Allison MD 200 hp 78396 mi 9699.9 gal 0.0 hr	
¢		Print

Figure 3.25 Vehicle Specifications Screen

Touch the **Print** button to save the information to a file, or to print directly to a printer if you are connected to a printer.

#### NOTE:

For information on setting up a printer, refer to "Managing Printers" in *Chapter 5: Using the Admin Menu,* later in this guide

When you have finished viewing the information, touch the green **Back Arrow** at the bottom of the screen to go back to the list of Available Tests (Figure 3.23).

#### **Monitoring Battery Power**

The PRO-LINK<sup>®</sup> Ultra obtains power from any of the following sources:

- Its own internal battery pack
- The vehicle (when connected to a vehicle)
- AC/DC power adapter (when plugged into a power source)

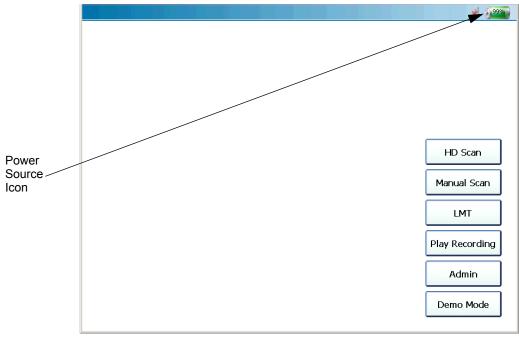


Figure 3.26 Main Menu Showing the Power Source Icon

The Power Source icon has two states:

When the device is either connected to a vehicle or plugged into a power a power source via the AC/DC power adapter.

When the device is obtaining power from the battery pack.

Use the battery version of the icon to monitor remaining battery power when your power source is the internal battery. The icon displays a number indicating the percentage of power left (e.g., 99%).

The battery version of the icon also changes color as the status of the remaining power on the battery changes.

- Green = High (between 100 and 50% power remaining)
- Yellow = Low (between 50 and 26% power remaining)
- Red = Critical (between 25 and 0% remaining)

When the indicator gets down to 25%, you need to switch to another power source (e.g., the AC/DC power adapter).

# Chapter 4

## Using the Diagnostics Menu



- ▼ The Diagnostics Menu, page 60
- ▼ The FAULTS Tab, page 61
- ▼ The EVENTS Tab, page 65
- ▼ The PARAMETERS Tab, page 66
- ▼ The CALS Tab, page 81
- ▼ The TESTS Tab, page 92
- Using the Features Available on the Menu Button, page 98
  - ▼ Ending Your Diagnostics Session, page 106
- Viewing Vehicle Specifications, page 110

This chapter provides detailed instructions on using the diagnostic features found on the Diagnostics Menu when PRO-LINK<sup>®</sup> Ultra is connected to a vehicle.

#### NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

#### The Diagnostics Menu

Once the PRO-LINK<sup>®</sup> Ultra has successfully scanned the vehicle for faults, the **Diagnostics Menu** is displayed.

#### NOTE:

For detailed information on connecting to a vehicle and the scanning process, refer to "Connecting to a Vehicle" and "Scanning a Vehicle" in *Chapter 3: Getting Started*, earlier in this manual.

Menu View Specs		al 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - HDS J1939 - Ch1	NO INACTIVE FAULTS	FAULTS 10 ACTIVE
Undefined		0 INACTIVE
No Associated Parameter		
SPN 7137 - FMI 10 Engine #1 - HDS J1939 - Ch1		Engine 1
Vehicle Speed		HD5 J1939 Ch1
Vehicle Speed Sub-System Error		
SPN 84 - FMI 4	· ·	
Engine #1 - HDS J1939 - Ch1		CALS
Engine Injection Control Pressure		
Engine Injection Control Sub-System Error		
SPN 164 - FMI 3 Engine #1 - HDS 11939 - Ch1		TESTS
Up Down	Up Down	
	Clear All Faults	

Figure 4.1 Diagnostics Menu

At this point, you are ready to start using the features available from the Diagnostics Menu. A number of menu-selection tabs are displayed on the right side of the screen.

- FAULTS tab (pg. 61)
- EVENTS tab (pg. 65)
- PARAMETERS tab (pg. 66)
- CALS tab (pg. 81)
- TESTS tab (pg. 92)

#### The FAULTS Tab

The FAULTS tab is the red tab located at the top of the stack of menu-selection tabs. From the FAULTS tab, you can:

- View active and inactive faults (pg. 61)
- View more information on a particular fault (pg. 62)
- Clear all inactive faults (pg. 64)

#### **Viewing Active and Inactive Faults**

When the scanning process is complete, the Diagnostics Menu (Figure 4.2) is displayed with the FAULTS tab in the top position. Faults are displayed in two categories:

- · ACTIVE faults on the left side
- · INACTIVE faults on the right side

Menu View Specs		.ul 🍃
ACTIVE - 10	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1		FAULTS
VSS Signal out of Range LOW	NO INACTIVE FAULTS	10 ACTIVE 0 INACTIVE
Vehicle Speed Sub-System Error		
SPN 84 - FMI 4 - FLASH CODE 1141 - Active		
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
FRP signal Out of Range HIGH		Chi
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125 - Active		
Engine #1 - MaxxForce - Ch1		CALS
APS Signal out of Range LOW		
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131 - Active		тесте
Engine #1 - MaxxEnrce - Ch1		TESTS
Up Down	Up Down	
	Clear All Faults	

Figure 4.2 FAULTS Tab

Use the **Up** and **Down** buttons to navigate up and down within the two lists.

Line Number	Contents
1 (top, gray line)	The name of the module where the fault was found (e.g., Engine 1 - MaxxForce Ch1)
2	Either the name of the parameter experienc- ing the fault, or a combination of the name and a description of the fault (e.g., VSS Signal out of Range LOW).
3 (not displayed for INACTIVE faults)	Parameter value associated with the fault (e.g., Vehicle Speed - Sub-System Error)
4 (bottom line)	SAE/DTC information about the fault (e.g., SPN 84 - FMI 4 - FLASH CODE 1141 - Active)

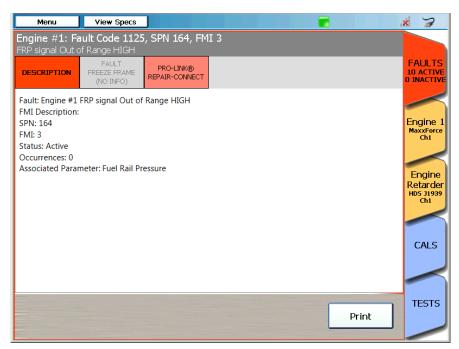
Each fault listed contains the following information for that fault:

#### Viewing More Info

You can view more information on a particular fault (e.g., Freeze Frame Data and PRO-LINK<sup>®</sup> Repair-Connect troubleshooting information) by touching the fault to display the More Info screen.

To view more information on a particular fault:

1 Touch the screen to select the fault for which you want to view more information (e.g., **Vehicle Speed**).



The More Info screen is displayed with the DESCRIPTION pane activated.

Figure 4.3 More Info Screen

- 2 Touch the FAULT FREEZE FRAME button at the top of the display to view freeze frame information (if available).
- 3 Touch the **DESCRIPTION** button to go back to the description pane.

#### NOTE:

If you have purchased a subscription to Repair-Connect, touch the **PRO-LINK**<sup>®</sup> **REPAIR-CONNECT** button at the top of the screen to display the Repair-Connect login screen. For detailed information on using Repair-Connect, refer to *Chapter 6: Using* PRO-LINK<sup>®</sup>*Repair-Connect*, later in this manual.

- 4 Touch the **Print** button to send the page to the printer.
- 5 Touch the red FAULTS tab to go back to the list of faults (Figure 4.2).

#### **Clearing Inactive Faults**

Inactive faults can be cleared by touching the Clear All Faults button at the bottom of the screen. Faults may not be cleared individually.

#### NOTE:

When you clear all faults, both ACTIVE and INACTIVE faults are cleared. Then the PRO-LINK<sup>®</sup> Ultra re-scans the vehicle and re-lists the ACTIVE faults found during the re-scan.

To clear all inactive faults:

Menu View Specs		ul 🍃
ACTIVE - 3	INACTIVE - 5	
Engine #1 - HDS J1939 - Ch1	Engine #1 - HDS J1939 - Ch1	FAULTS 3 ACTIVE
Vehicle Speed	Engine Oil Temperature 1	5 INACTIVE
No Associated Parameter	SPN 175 - FMI 6	
SPN 84 - FMI 6	Engine #1 - HDS J1939 - Ch1	
Engine #1 - HDS J1939 - Ch1	Engine Percent Load At Current Speed	Engine 1 HDS J1939 Ch1
Engine Speed	SPN 92 - FMI 6	Chi
No Associated Parameter	Engine #1 - HDS J1939 - Ch1	
SPN 190 - FMI 6	VIN	
Engine #1 - HDS J1939 - Ch1	SPN 237 - FMI 6	CALS
Accelerator Pedal Position 1	Engine #1 - HDS J1939 - Ch1	
No Associated Parameter	ECL	
SPN 91 - FMI 6	SPN 111 - FMI 6	TEOTO
	Engine #1 - HDS J1939 - Ch1	TESTS
Up Down	Up Down	$\sim$
	Clear All Faults	

Figure 4.4 Sample FAULTS Tab

#### 1 Touch Clear All Faults.

An "Are you sure you want to clear all faults?" question box is displayed.

2 To confirm your decision to clear all faults, touch Yes.

All faults are cleared, the vehicle is re-scanned, and any faults that are still active will be re-displayed.

#### The EVENTS Tab

The EVENTS tab displays how many critical and logged events were detected during scanning. Events are classified as either CRITICAL or LOGGED.

#### NOTE:

The EVENTS tab is available only with the CAT<sup>®</sup> Engines with ACERT™ Technology and Caterpillar<sup>®</sup> Electronic Engines applications.

From the EVENTS tab you can:

- · View critical events
- View logged events
- · View more information on both critical and logged events
- · Clear logged events

Menu	View Specs			al 🍃
CRITICAL	- 0		LOGGED - 0	
NO CRIT	ICAL EVENTS		NO LOGGED EVENTS	FAULTS 10 ACTIVE 0 INACTIVE
				Engine 1 HDS 31939 Ch1
				$\boldsymbol{\triangleleft}$
				CALS
				$\triangleleft$
	_			TESTS
Up	Dow	'n	Up Down	

Figure 4.5 EVENTS Tab

#### NOTE:

For detailed information on using the EVENTS tab, refer to the *PRO-LINK*<sup>®</sup> Ultra CAT<sup>®</sup> Engine with ACERT<sup>TM</sup> Technology Application User's Guide.

### The PARAMETERS Tab

The PARAMETERS tab is the yellow tab in the stack of menu-selection tabs.

Menu View	Specs			ill 🎽
View Quick List	Add to Quick List	Parameter	Value	FAUL
General Engine Data		Accelerator Pedal Position 1	Sub-System Error	10 ACT
Fuel Data		Engine IAT	Sub-System Error	Engine
Emission Data		Engine Demand - Percent T	0 %	HDS 319 Ch1
Hard Start No Start		Engine Speed	0 rpm	
White Smoke		Fan Drive State	Fan Off	CAL
Low Power no Power		Engine Injection Control Pre	Sub-System Error	/
SmartWay		Engine Intake Air Mass Flow	0 lb/h	TEST
Pressures		Engine Intake Manifold 1 Te	Sub-System Error	/
Vie <del>w</del> Categories 9 - 16 of 28	Grap Page			

Figure 4.6 Sample PARAMETERS Tab

#### NOTE:

The PRO-LINK<sup>®</sup> Ultra creates a PARAMETERS tab for each module (e.g., **Engine 1 - MaxxForce Ch1** and **Engine Retarder- HDS J1939 Ch1**) loaded during the scanning process.

From the PARAMETERS tab you can:

- View parameters (pg. 67)
- Manage Quick Lists (pg. 69)
- Create and view a Quick List (pg. 70)
- Remove parameters from a Quick List (pg. 75)
- Graph data (pg. 79)

#### **Viewing Parameters**

To view parameters:

1 From the Diagnostics Menu (Figure 4.1), select the **PARAMETERS** tab.

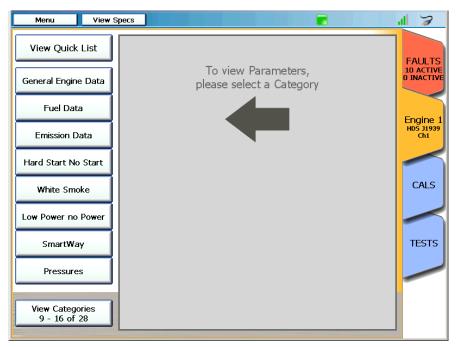


Figure 4.7 Select a Category Screen

#### NOTE:

In most cases there will bemore categories that will display on one screen. Touch the **View Categories** button at the bottom of the list to display more categories. The button indicates the number of categories available (e.g., **9 - 16 of 28**).

2 Touch the name of the parameter category you want to view (e.g., **General Engine Data**).

Menu View	Specs			11 3
View Quick List	Add to Quick List	Parameter	Value	FAULTS
General Engine Data		Accelerator Pedal Position 1	Sub-System Error	10 ACTIV 0 INACTIV
Fuel Data		Engine IAT	Sub-System Error	Engine
Emission Data		Engine Demand - Percent T	0 %	HD5 J193 Ch1
Hard Start No Start		Engine Speed	0 rpm	
White Smoke		Fan Drive State	Fan Off	CALS
Low Power no Power		Engine Injection Control Pre	Sub-System Error	-
SmartWay		Engine Intake Air Mass Flow	0 lb/h	TESTS
Pressures		Engine Intake Manifold 1 Te	Sub-System Error	/
View Categories 9 - 16 of 28	Grap Page			

A list of parameters for the selected category is displayed.

Figure 4.8 List of Parameters

All parameters available for the category you selected (e.g., General Engine) are displayed in the list to the right of the categories. Values, if available, are also displayed.

3 Use the **Next Page** and **Previous Page** buttons to move up and down the list of parameters.

#### NOTE:

The **Record Mode** feature is discussed in *Chapter 7: Utilities*, later in this manual.

## **Managing Quick Lists**

You can create a Quick List to store parameters and display them side by side from either one or both of the following:

- Different categories (i.e., the categories on the left side of the display)
- Different modules (e.g., Engine 1 HDS J1939, Engine Retarder, etc.)

Menu View Specs al 7 View Quick List - 3 from Quick List Value Parameter FAULTS 10 ACTIVE 0 INACTIVE Maintanence Maximum Vehicle Speed Limit 155 mph Life Data CC High Set Limit Speed 65 mph Engine 1 HDS 31939 Ch1 CC Settings CC Low Set Limit Speed 33 mph Idle Shutdown CALS Vehicle Parameters Speeds TESTS Trip Data Engine Protection Remove Clear View Categories 25 - 28 of 28 Graph Page Record Quick Selected Mode Items

The Quick List is limited to eight (8) parameters.

Figure 4.9 Sample Quick List

### NOTE:

There can be only one Quick List. You may, however, clear the Quick List and create a new one when you need to compare other parameters.

### **Creating and Viewing a Quick List**

A Quick List is created by checking individual parameters from one or more categories in the list of parameters. If no parameters are yet in the Quick List, the PRO-LINK<sup>®</sup> Ultra displays a screen explaining how to add parameters to the Quick List.

To create a Quick List:

1 Touch the View Quick List button at the top left of the screen.

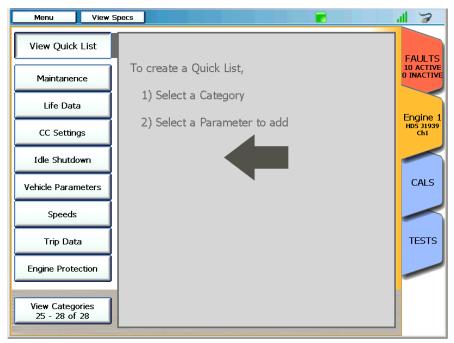


Figure 4.10 Create a Quick List Screen

2 Touch the screen to select a category (e.g., Speeds).

Menu	View S	pecs			11 3
View Quick	List	Add to Quick List	Parameter	Value	FAULTS
Maintanen	ice		CC High Set Limit Speed	65 mph	10 ACTIVE 0 INACTIVE
Life Data	a		CC Low Set Limit Speed	33 mph	Engine 1
CC Setting	gs		CC Set Speed	0 mph	HD5 J1939 Ch1
Idle Shutdo	own		Engine Speed	0 rpm	
Vehicle Param	neters		Engine Speed At Idle, Point 1	700 rpm	CALS
Speeds			Maximum Vehicle Speed Limit	155 mph	
Trip Dat	a		Engine Percent Load At Curr	Sub-System Error	TESTS
Engine Prote	ection		Power Takeoff Set Speed	700 rpm	
View Catego 25 - 28 of		Grap Page		Record Mode	

A list of parameters for the selected category is displayed.

Figure 4.11 Parameter List for Speeds Category

3 Touch the **Next Page** button to navigate down the list.

Menu View	Specs	📕 🔋
View Quick List	Add to Quick List	Value
Maintanence	Engine Rated Speed	2600 rpm
Life Data	Vehicle Speed	Sub-System Error Engine 1
CC Settings		HDŠ 31939 Ch1
Idle Shutdown		
Vehicle Parameters		CALS
Speeds		
Trip Data		TESTS
Engine Protection		
View Categories 25 - 28 of 28	Graph Page Page Page 2 of 2	Next Page Record Mode

Page 2 of the list of parameters is displayed.

Figure 4.12 Page 2 of Parameter List

4 Select a parameter (e.g., **Engine Rated Speed**) by touching within the Add to Quick List column next to the parameter name you want to add.

#### NOTE:

You may also select parameters from other categories (e.g., **Engine Pro-tection**) or from other modules, if present.

A red check mark indicates that the parameter has been added to the Quick List.

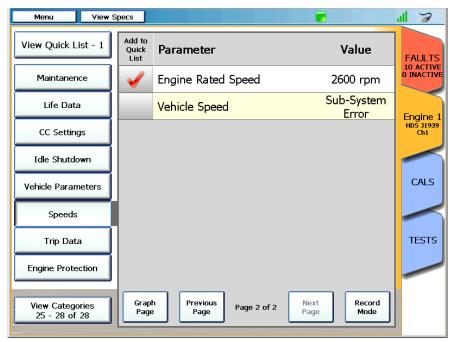


Figure 4.13 A Parameter Selected

The View Quick List button at the top left of the screen displays the number of parameters currently in the Quick List (e.g., View Quick List - 1).

5 Continue adding parameters to the list.

#### NOTE:



M

The Quick List is limited to eight (8) parameters.

Menu View 9	Specs			11 3
View Quick List - 4	Add to Quick List	Parameter	Value	FAULTS
Maintanence	-	CC High Set Limit Speed	65 mph	10 ACTIVI 0 INACTIV
Life Data	-	CC Low Set Limit Speed	33 mph	Engine
CC Settings		CC Set Speed	0 mph	HDS J1939 Ch1
Idle Shutdown		Engine Speed	0 rpm	
Vehicle Parameters		Engine Speed At Idle, Point 1	700 rpm	CALS
Speeds	$\checkmark$	Maximum Vehicle Speed Limit	155 mph	
Trip Data		Engine Percent Load At Curr	Sub-System Error	TESTS
Engine Protection		Power Takeoff Set Speed	700 rpm	
View Categories 25 - 28 of 28	Grap Page			

Figure 4.14 Additional Parameters Added

6 To view the Quick List you just created, touch the **View Quick List** button at the top left of the screen.

The Quick List is displayed.

Menu View	Specs			11 Z
View Quick List - 4	Remove from Quick List	Parameter	Value	FAULTS
Maintanence		Engine Rated Speed	2600 rpm	10 ACTIVE 0 INACTIVE
Life Data		Maximum Vehicle Speed Limit	155 mph	Engine 1
CC Settings		CC High Set Limit Speed	65 mph	HDS J1939 Ch1
Idle Shutdown		CC Low Set Limit Speed	33 mph	
Vehicle Parameters				CALS
Speeds				
Trip Data				TESTS
Engine Protection				
View Categories 25 - 28 of 28	Grap Page		k Record	

Figure 4.15 Quick List

# **Removing Parameters from the Quick List**

You can remove parameters form the Quick List at any time.

To remove a parameter from the Quick List:

1 Touch the **View Quick** List button to display the current Quick List.

Menu View 9	Specs			al 🍃
View Quick List - 4	Remove from Quick List	Parameter	Value	FAULTS
Maintanence		Engine Rated Speed	2600 rpm	10 ACTIVE 0 INACTIVE
Life Data		Maximum Vehicle Speed Limit	155 mph	Engine 1
CC Settings		CC High Set Limit Speed	65 mph	HD5 J1939 Ch1
Idle Shutdown		CC Low Set Limit Speed	33 mph	
Vehicle Parameters				CALS
Speeds				
Trip Data				TESTS
Engine Protection				
View Categories 25 - 28 of 28	Grap Page		k Record	

The Quick List is displayed.

Figure 4.16 Quick List

2 Select one or more parameters to remove from the Quick List by touching within the **Remove from Quick List** column next to the parameter name you want to remove (e.g., Engine Rated Speed).

A red check mark is displayed to the left of the parameter to indicate your intention to remove it from the Quick List.

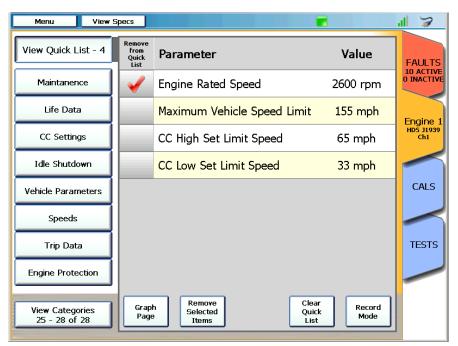


Figure 4.17 Removing Parameters from the Quick List

3 Touch the Remove Selected Items button.

Menu	View S	Specs			ul 🍃
View Quick L	.ist - 3	Remove from Quick List	Parameter	Value	FAULTS
Maintanen	ice		Maximum Vehicle Speed Limit	155 mph	10 ACTIVE 0 INACTIVE
Life Data	a		CC High Set Limit Speed	65 mph	Engine 1
CC Setting	gs		CC Low Set Limit Speed	33 mph	HD5 J1939 Ch1
Idle Shutdo	own				
Vehicle Paran	neters				CALS
Speeds					
Trip Data	а				TESTS
Engine Prote	ction				
View Catego 25 - 28 of		Grap Page		k Record	

The Quick List is updated.

Figure 4.18 Updated Quick List

4 To remove all parameters form the Quick List, touch the **Clear Quick List** button.

The Create a Quick List screen is displayed again (Figure 4.10).

# **Graphing Data**

You can view a visual representation (i.e., a graph) of the parameters displayed on a page by using the Graph Page button. Only scalable parameters (i.e., parameters that have values that can vary over time) will be displayed, for example, temperatures.

In addition, you can create a graph from various parameter categories by first creating a Quick List, and then viewing the graph by touching the Graph Page button located at the bottom of the screen (Figure 4.18).



Like the Quick List, the graphing feature is limited to eight (8) parameters.

To view a graph of the parameters listed on a page:

1 Start at the list of available parameters for a selected category (e.g., **Temperature**).

Menu	View Specs			제 🏾
View Quick Lis	t Add to Quick List	Parameter	Value	FAULTS
Engine Coolant		Inlet Air Temperature	Sub-System Error	10 ACTIVE 0 INACTIVE
Pressure		Engine Coolant Temperature	Sub-System Error	Engine 1
Temperature		Engine Fuel Temperature	Sub-System Error	MaxxForce Ch1
Signal Volts		Engine Oil Temperature	Sub-System Error	
Vehicle Identificat	ion	Exhaust Gas Temperature 1	32.0 °F	CALS
Lamps		Exhaust Gas Temperature 2	32.0 °F	
Shutdown		Exhaust Gas Temperature 3	32.0 °F	TESTS
Continuous Monit	or	Manifold Air Temperature	Sub-System Error	
View Categorie: 25 - 27 of 27	Graj Pag		indebi d	

Figure 4.19 List of Parameters

2 If the list is composed of multiple pages, select the page you would like to graph.



3 Touch the Graph Page button at the bottom of the screen.

Figure 4.20 Sample Graph

4 Touch the green **Back Arrow** to return to the list of parameters (Figure 4.19).

To create a graph using the Quick List:

1 Create a Quick List of up to eight parameters that you would like to view as a graph.

You can add parameters to the Quick List from different parameter categories.

### NOTE:

For detailed instructions on creating a Quick List, refer to *Creating and* Viewing a Quick List on page 70, earlier in this manual.

2 When your Quick List is complete, touch the Graph Page button at the bottom of the Quick List.

Your graph is displayed.

3 Touch the green Back Arrow at the bottom of the graph to return to the Quick List.

# The CALS Tab

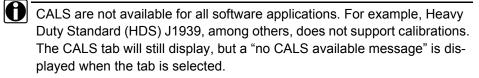
From the CALS tab, you can:

- Select a calibration category and view the associated datapoints (pg. 82)
- Calibrate a datapoint (pg. 86)

Menu View 9	Specs		al 🍃
Engine 1	Engine Idle Shutdown Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Engine Idle Shutdown Timer Mode	Tamper Proof	
	Engine Idle Shutdown Time	60 min	Engine 1 MaxxForce Ch1
	Engine Idle Shutdown Maximum In	111.2 °F	
	Engine Idle Shutdown Minimum Int	60.8 °F	CALS
	Engine Idle Shutdown CARB	CARB IST Disabled	
			TESTS
	Categories Previous Page Page 1 of 2 Next Page		
		Program	

Figure 4.21 CALS Tab

### NOTE:



# Select a Calibration Category

A calibration category is a collection of related calibrations. The first time you select the CALS tab during a session, the PRO-LINK<sup>®</sup> Ultra prompts you to select a module, and then displays the available calibration categories for that module.

To select a calibration category and view the associated datapoints:

1 From the Diagnostics Menu (Figure 4.1), select the CALS tab.

If you have not yet used the CALS tab during your current session, the **Select a Module** screen is displayed.

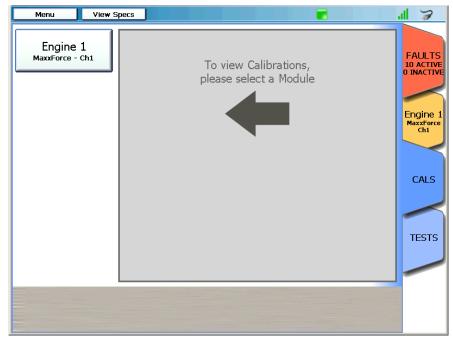


Figure 4.22 Select a Module Screen

Touch the screen to select the module you want (e.g., **Engine 1 - Maxx-Force - Ch1**).

#### NOTE:

If there are more modules that can be displayed in the list on the left side of the screen, the **View Modules** button is displayed in the lower left corner of the screen. Use this button to scroll through all the available modules.

Menu View 9	Specs	× 7
Engine 1 MaxxForce - Ch1	Available Categories	FAULTS
<b> </b> /	EECM Manufacturing Data	10 ACTIVE 0 INACTIVE
	Engine Warmup Device	Engine 1
	Engine Crank Inhibit	MaxxForce Ch1
	Engine Idle Shutdown Control	
	Engine Speed Control	CALS
	Cruise Control	
		TESTS
	Previous Page Page 1 of 4 Next Page	
	Program	

The Available Categories screen is displayed.

Figure 4.23 Available Categories Screen

- 2 Use the **Next Page** and **Previous Page** buttons to navigate up and down in a multi-page list.
- 3 Touch the screen to select the category you want (e.g., **Engine Idle Shutdown Control**).

The PRO-LINK<sup>®</sup> Ultra displays a list of the datapoints you can calibrate for the selected category. The list is composed of two columns:

- Datapoints
- Value

Menu View	Specs		al 🍃
Engine 1	Engine Idle Shutdown Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Engine Idle Shutdown Timer Mode	Tamper Proof	
	Engine Idle Shutdown Time	60 min	Engine 1 MaxxForce Ch1
	Engine Idle Shutdown Maximum In	111.2 °F	
	Engine Idle Shutdown Minimum Int	60.8 °F	CALS
	Engine Idle Shutdown CARB	CARB IST Disabled	
			TESTS
	Categories Previous Page 1 of 2 Next Page		
		Program	

Figure 4.24 List of Datapoints within a Category

The Datapoints column displays a descriptive name for the calibration. The Value column displays the current value, and will change to reflect any changes made during the calibration process.

- 4 Use the **Next Page** and **Previous Page** buttons at the bottom of the screen to navigate through the list.
- 5 Touch and hold a datapoint to display its full description (e.g., **Engine Idle Shutdown Maximum In...**).

A pop-up is displayed with the full description.

Menu View :	Specs		11 3
Engine 1	Engine Idle Shutdown Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Engine Idle Shutdown Timer Mode	Tamper Proof	
	Engine Idle Shutdown Time	60 min	Engine 1 MaxxForce Ch1
	Engine Idle Engine #1 - 0 Engine Idle Shutdown Maximu	ım Intake Air Te	mperature
	Engine Idle Shutdown Minimum Int		CALS
	Engine Idle Shutdown CARB	CARB IST Disabled	
			TESTS
	Categories Previous Page 1 of 2 Next Page		
		Program	

Figure 4.25 Datapoint with Pop-Up Description

This feature can be helpful if the datapoint description is too long to fit on the screen.

6 Touch the **Categories** button to return to the Available Categories screen (Figure 4.23).

## **Calibrating a Datapoint**

When you select a datapoint to calibrate the PRO-LINK<sup>®</sup> Ultra immediately starts the calibration process for that datapoint.

### NOTE:

Each calibration screen is unique to the type of module and the type of calibration being performed. In addition, some applications (e.g., CAT<sup>®</sup> ACERT<sup>™</sup>) do not include the Program button.

To calibrate a datapoint:

Menu View	Specs		ul 🍃
Engine 1	Cruise Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Cruise Control Mode	Enable	
	Cruise Control Vehicle Speed Low L	33 mph	Engine 1 MaxxForce Ch1
	Cruise Control Vehicle Speed High	65 mph	
			CALS
			TESTS
	Categories Previous Page 1 of 1 Next Page	]	
		Program	

Figure 4.26 List of Datapoints for the Cruise Control Category

1 Touch the screen to select the datapoint you want to calibrate (e.g., **Cruise Control Vehicle Speed High...**).

#### NOTE:

Not all datapoints will be available for calibration (i.e., they are grayed out). Datapoints can be unavailable because the datapoint is read-only (i.e., non programmable), or, in some applications, due to password level protections.

Cruise Control Vehicle Speed High Limit Current Value: 65 New Value: Range: 30 - 127 mph Tattletale: 11	Menu	View Specs		11 a
New Value: Range: 30 - 127 mph		Cruise Control Vehicle Speed H	High Limit	
New Value: Range: 30 - 127 mph				
New Value: Range: 30 - 127 mph				
Range: 30 - 127 mph		Current Value: 65		
		New Value:		
Tattletale: 11		Range: 30 - 127 mph		
		Tattletale: 11		
Close Update	Close			Update

The calibration screen for the datapoint you selected is displayed.

Figure 4.27 Calibration Screen

2 Touch within the **New Value** data entry field.

### NOTE:

When a calibration is running, the CALS tab is locked. Touch the Close button to exit the calibration.

The keyboard is displayed.

Menu	View Specs	)		11 🍃
	(	ruise Control Vehicle Speed H	ligh Limit	
	Curre	nt Value: 65		
	Ne	w Value:		
		Range: 30 - 127 mph		
	-			
	Tattletale: 11			
	<u> </u>			
Tab 1	2 3	4 5 6	7 8 9	0 🗲
ABC	# \$	% & * -	+ ( )	- L
ADC	" +	<i>*</i>		
~\{	< >	= : ; ,	.   !	? ~\{
~	/ @		• -	~

Figure 4.28 Keyboard

- 3 Use the keyboard to enter the new value (e.g., **70**).
- 4 Touch the **Down Arrow** on the keyboard to hide the keyboard.

Menu	View Specs			al 🏹
	Cruise Con	trol Vehicle Speed Hig	gh Limit	
	<b>a</b>			
	Current Value:	65		
	New Value:	70		
	Range:	30 - 127 mph		
	Tattletale:	11		
Close				Update

The screen is displayed without the keyboard.

Figure 4.29 Calibration Screen with New Value Entered

5 Touch the **Update** button at the bottom of the screen.

Menu View S	Specs		al 🍃
Engine 1	Cruise Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Cruise Control Mode	Enable	
	Cruise Control Vehicle Speed Low L	33 mph	Engine 1 MaxxForce Ch1
	Cruise Control Vehicle Speed High	70 mph	
			CALS
			TESTS
	Categories Previous Page 1 of 1 Next Page	]	
		Program	

The list of datapoints is displayed, showing the new value.

Figure 4.30 List of Datapoints for the Cruise Control Category

6 To complete the calibration and accept the new value, touch the **Program** button at the bottom of the screen.

If you choose *not* to program the calibration at this time, you can continue to make additional calibrations, and then program all of your calibrations at the same time. If you attempt to leave the CALS tab, a Question box is displayed reminding you that there are unprogrammed calibrations and warning you that they will be lost if you continue.

### NOTE:

In the event that you are prompted to enter a password or passwords, follow the prompts. The PRO-LINK<sup>®</sup> Ultra in most cases will automatically enter the password, if required, for you.

If you touched **Program**, the final step in the calibration process begins.

- 7 When prompted, turn **OFF** the ignition.
- 8 When prompted, turn **ON** the ignition.

9 Wait while the calibration is verified.

The list of datapoints is displayed again.

Menu View S	Specs		al 🍃
Engine 1	Cruise Control		
MaxxForce - Ch1	Datapoints	Value	FAULTS 10 ACTIVE 0 INACTIVE
	Cruise Control Mode	Enable	
	Cruise Control Vehicle Speed Low L	33 mph	Engine 1 MaxxForce Ch1
	Cruise Control Vehicle Speed High	70 mph	
			CALS
			TESTS
	Categories Previous Page 1 of 1 Next Page	]	
		Program	

Figure 4.31 List of Datapoints for the Cruise Control Category

- **10** Do one of the following:
  - -Continue to calibrate other datapoints.
  - —Touch the **Categories** button to return to the Available Categories screen (Figure 4.23).

## The TESTS Tab

Most tests require you to connect the PRO-LINK<sup>®</sup> Ultra to a running vehicle. The tests available will differ depending on the module to which you are connected.

From the TEST tab you can:

- View a list of Available Tests (pg. 93)
- Select a test and run it (pg. 96)

Menu View S	Specs	ul 🍃
Engine 1 MaxxForce - Ch1	Available Categories	FAULTS
P	Key On Engine Off Tests	10 ACTIVE 0 INACTIVE
	Key On Engine Running Tests	Engine 1
	Aftertreatment Tests	MaxxForce Ch1
		CALS
		TESTS
	Previous Page Page 1 of 1 Next Page	$\sim$

Figure 4.32 TESTS Tab

### NOTE:

Not all software applications support tests. For example, Heavy Duty Standard (HDS) J1939, among others, does not support tests. The TESTS tab still displays, but a "tests not supported" message is displayed when the tab is selected.

# Viewing a List of Available Tests

The first time you select the TESTS tab during the current session, the PRO-LINK<sup>®</sup> Ultra prompts you to select a module. If the selected module does not have any special tests associated with it, a message box is displayed.



### NOTE:

The screen associated with each test is unique to that test. Availability of tests is dependent on both the vehicle concerned and the module loaded.

To view the Available Tests:

1 From the Diagnostics Menu (Figure 4.1), select the **TESTS** tab.

If you have not yet used the TESTS tab during your current session, the **Select a Module** screen is displayed.

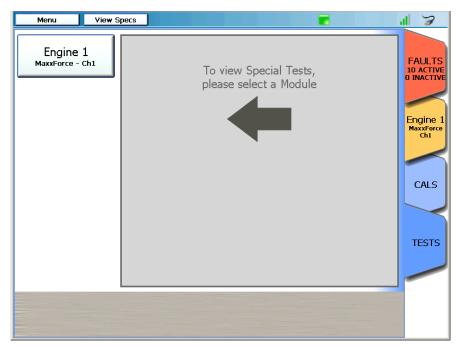


Figure 4.33 Select a Module Screen for Tests

2 Select a module from the list on the left (e.g., Engine 1 - MaxxForce CH1).

The **Caution** screen is displayed.

💶 Caution
To avoid personal injury
• Observe all safety precautions in operator and service manuals.
• Put vehicle in park or neutral and set parking brake.
• Chock wheels.
<ul> <li>If vehicle is in motion, operator must maintain control of the vehicle while an assistant uses this diagnostic tool.</li> </ul>
Don't show this again OK

Figure 4.34 Caution Screen

- 3 Carefully read the on-screen instructions and follow them.
- 4 Touch OK.

The Available Categories screen is displayed.

Menu View S	Specs	al 🍃
Engine 1 MaxxForce - Ch1	Available Categories	FAULTS
ļ <b>.</b> )	Key On Engine Off Tests	10 ACTIVE 0 INACTIVE
	Key On Engine Running Tests	Engine 1
	Aftertreatment Tests	MaxxForce Ch1
		CALS
		TESTS
	Previous Page 1 of 1 Next Page	

Figure 4.35 Available Categories Screen

5 Select a category from the list (e.g., **Key On Engine Running Tests**).

Menu View S	pecs	11 🥱
Engine 1	Key On Engine Running Tests	
Engine 1 MaxxForce - Ch1	Available Tests	FAULTS 10 ACTIVE 0 INACTIVE
	KOER Standard Test	
	Cylinder Cutout	Engine 1 MaxxForce Ch1
	Air Management Test	
VGT Output State Low		CALS
VGT Output State Medium		
	VGT Output State High	TESTS
	Categories Previous Page Page 1 of 1 Next Page	

A list of Available Tests for the selected category is displayed.

Figure 4.36 KOER Available Tests Screen

6 Touch the screen to select a test from the list (e.g., Cylinder Cutout).

#### NOTE:

Some tests require the vehicle to be in a particular state (e.g., Engine Coolant Temperature greater than 160.0°). If this is the case for the test you select, the PRO-LINK<sup>®</sup> Ultra will provide specific prerequisites that must be met before starting the test.

Once you have met the prerequisites for the test, the screen for that test is displayed.

- 7 Touch the Start button to begin the test.
- 8 Follow the on-screen prompts and instructions until you reach the end of the test.
- 9 Touch the Quit button to end the test.

Menu View S	pecs	al 🍃
Engine 1 MaxxForce - Ch1	Key On Engine Running Tests Available Tests	FAULTS 10 ACTIVE 0 INACTIVE
	KOER Standard Test	
	Cylinder Cutout	Engine 1 MaxxForce Ch1
	Air Management Test	
	VGT Output State Low	CALS
	VGT Output State Medium	
	VGT Output State High	TESTS
	Categories         Previous Page         Page 1 of 1         Next Page	

The list of Available Tests for the selected category is displayed.

Figure 4.37 KOER Available Tests Screen

**10** Touch the **Categories** button at the bottom of the screen to display the list of Available Categories (Figure 4.35).

# Using the Features Available on the Menu Button

Several features are available from the Menu button at the top of the Diagnostics Menu.

- Create Report (pg. 98)
- Units (pg. 105)
- End Session (pg. 106)
- About (pg. 108)

## **Creating a Report**

To create a report:

1 Touch the Menu button at the top of the screen.

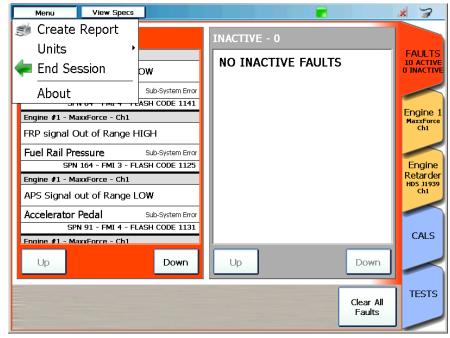


Figure 4.38 Diagnostics Menu

2 Select Create Report.

The Information Selection screen is displayed.

Menu	View Specs	al 🍃
Pleases	elect the information you would like to print	
	Vehicle Info	
	Faults	
	Events	
	Parameters [Engine #1: Pressure]	Change
	Quick List	
	Trip Data	
	Calibrations	
	System Details	
-		Print

Figure 4.39 Information Selection Screen

3 Touch the screen to select the type of information you want to display on your report (e.g., **Vehicle Info, Faults, System Details**).

 Menu
 View Specs

 Please select the information you would like to print...

 Vehicle Info
 Faults
 Events
 Parameters [Engine #1: Pressure]
 Quick List
 Trip Data
 Calibrations
 System Details

 Print

Red check marks are displayed next to your selections.

Figure 4.40 Check Marks Indicate Selections Made

4 Touch the **Change** button to select a different module or parameter category for the data you want to include.

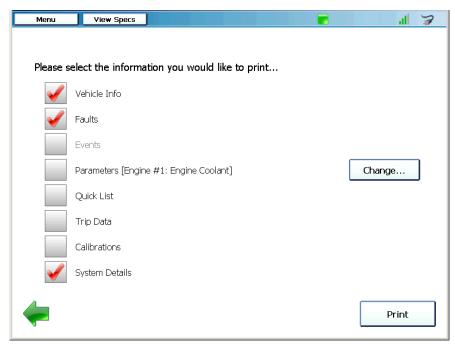
For example, you want to include different parameters on your report than the parameters for the listed module and category (i.e., **Engine #1: Pressure**).

The following screen is displayed.

Menu	View Specs		al 🍃
Select the	parameters you want to print		
Controller			~
Category:	Pressure		~
-		[	ОК

Figure 4.41 Change Selection Screen

- 5 Touch the **Category** drop-down to display a list of available parameter categories for the selected Controller.
- 6 Select a different parameter category from the list (e.g., Engine Coolant).
- 7 Touch the **OK** button at the bottom of the screen.



The Information Selection screen is displayed again reflecting the change.

Figure 4.42 Information Selection Screen Updated

- 8 Touch the screen to select the **Parameters** for the category you selected in Step 6 of this procedure.
- 9 Touch the Print button.

The Select Printer screen is displayed.

r				
to File				
ole printer (net	work)			
			[	Next
		to File	to File	to File

Figure 4.43 Select Printer Screen

10 Touch the screen to select the printer installed (e.g., example printer).

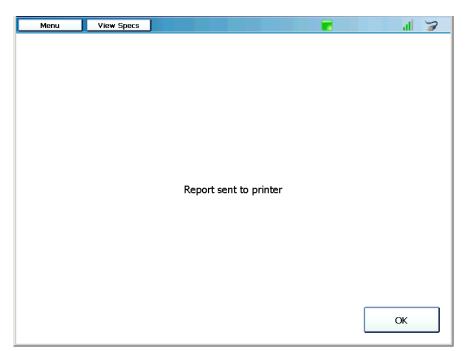
Your report is sent to the selected printer.

#### NOTE:

You can also save the report to a file in portable document format (PDF) for later viewing or printing. Refer to "Managing Saved Reports" in *Chapter 5: Using the Admin Menu*, later in this manual.

### NOTE:

For instructions on using the Add Printer button, refer to "Managing Printers" in *Chapter 5: Using the Admin Menu*, later in this manual.



The following screen is displayed.

Figure 4.44 Report Sent to Printer Screen

11 Touch OK.

The Select Information screen is displayed again (Figure 4.42).

**12** Touch the green **Back Arrow** to return to the Available Categories screen (Figure 4.35).

# **Changing Units of Measure**

To change units of measure:

1 Touch the **Menu** button at the top of the screen.

Menu	View Specs				× 7
🧊 Create Re	eport 🛛 🗖		INACTIVE - 0		
Units	•		INACTIVE - 0		FAULTS
<del>ਵ</del> End Sessi	ion ow		NO INACTIVE FAULTS	;	10 ACTIVE 0 INACTIVE
About		tem Error			$\leq$
Engine #1 - MaxxF					Engine 1 MaxxForce
FRP signal Out	of Range HIGH				Ch1
Fuel Rail Press	ure Sub-Syst	tem Error			
SPN 164	4 - FMI 3 - FLASH COD	E 1125			Engine
Engine #1 - MaxxF	Force - Ch1				Retarder HDS J1939
APS Signal out	of Range LOW				Ch1
Accelerator Peo		tem Error			
	1 - FMI 4 - FLASH COD	E 1131			CALS
Engine #1 - MaxxE	Force - Ch1	_			
Up	D	own	Up	Down	$\triangleleft$
				Clear All	TESTS
				Faults	

Figure 4.45 Diagnostics Menu

2 Select Units.

Two options are available:

- English (lbs., mph, °F)
- Metric (kg, kph, ° C)
- 3 Select the unit of measure you want PRO-LINK<sup>®</sup> Ultra to use.

The Menu closes.

# **Ending Your Diagnostics Session**

To end your diagnostics session and disconnect from the vehicle, you use the Menu button at the top of the screen.

To end your diagnostics session:

1 Touch the **Menu** button at the top of the screen.

Menu View Specs		* 3
🧊 Create Report	INACTIVE - 0	
Units		FAULTS
< End Session 🛛 👦	NO INACTIVE FAULTS	10 ACTIVE 0 INACTIVE
About Sub-System Error		
JIN OF THE FILASH CODE 1141		Engine 1
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
FRP signal Out of Range HIGH		Ch1
Fuel Rail Pressure Sub-System Error		
SPN 164 - FMI 3 - FLASH CODE 1125		Engine
Engine #1 - MaxxForce - Ch1		Retarder
APS Signal out of Range LOW		HDS J1939 Ch1
Accelerator Pedal Sub-System Error		
SPN 91 - FMI 4 - FLASH CODE 1131		
Engine #1 - MaxxEorce - Ch1		CALS
Up Down	Up Down	
	Clear All Faults	TESTS

Figure 4.46 Diagnostics Menu

2 Select End Session.

The Main Menu is displayed.

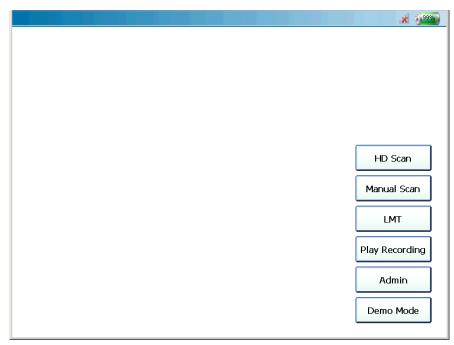


Figure 4.47 Main Menu

From this menu you can:

- —Scan again and start another diagnostic session (see "Scanning a Vehicle" in *Chapter 3: Getting Started*, of this manual).
- -Play a recording (see Chapter 7 of this manual).
- -Navigate to the Admin menu (see Chapter 5 of this manual)
- —Power down the PRO-LINK<sup>®</sup> Ultra
- -Navigate to Demo Mode

#### NOTE:

To power down the PRO-LINK<sup>®</sup> Ultra, press and hold the power button on the tool. Touch the screen to make sure that you have powered down all the way and not just entered Standby Mode.

## About PRO-LINK Ultra

To view information about PRO-LINK Ultra:

1 Touch the **Menu** button at the top of the screen.

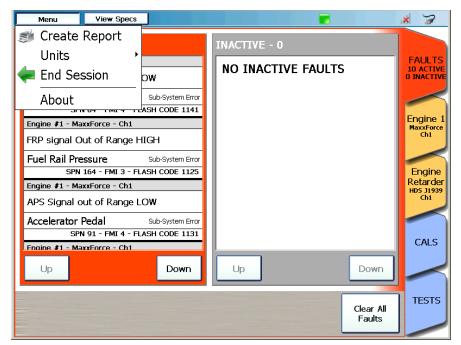


Figure 4.48 Diagnostics Menu

2 Select About.

The **About** information box is displayed.

ſ	Menu View Spa	cs			× 7
	ACTIVE - 10		INACTIVE - 0		
	Engine #1 - MaxxForce - Ch	1	NO INACTIVE FAULT	·c	FAULTS
l	VSS Signal out of Rang	e LOW	NO INACTIVE FAULT	5	10 ACTIVE 0 INACTIVE
	Vehicle Speed	Sub-System Error			
	SPN 84 - FMI 4	FLASH CODE 1141			Engine 1
	Engine #1 - MaxxForce - Ch				MaxxForce
	FRP signal Out of Rang	e PRO-LINK® Bundle Version: 2.			Ch1
	Fuel Rail Pressure				
	SPN 164 - FMI 3	Total Physical M	emory: 847,244 KB		Engine
	Engine #1 - MaxxForce - Ch	1 Used Virtual Mei	nory: 40,960 KB		Retarder
	APS Signal out of Rang	Copyright Shap-			Ch1
	Accelerator Pedal	Incorporated 20			
	SPN 91 - FMI 4	FLASH CODE 1131			CALC
	Engine #1 - MaxxForce - Ch	1	I		CALS
	Up	Down	Up	Down	
				Clear All Faults	TESTS

Figure 4.49 About Information Box

3 Touch **OK** to close the information box.

# **Viewing Vehicle Specifications**

To view vehicle specifications:

1 Touch the **View Specs** button at the top of the screen.

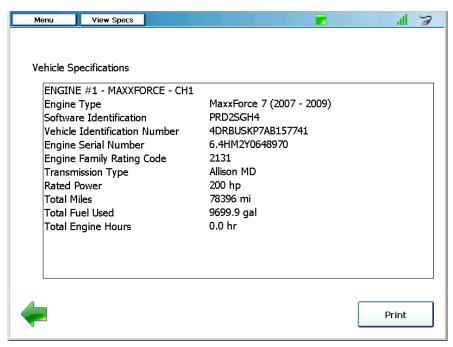


Figure 4.50 Vehicle Specifications

- 2 (optional) Once you have finished viewing the information, touch the **Print** button to send the information to a printer.
- 3 Touch the green **Back Arrow** at the bottom of the screen to return to the Diagnostics Menu (Figure 4.1).

# Chapter 5

# Using the Admin Menu



- ▼ Introduction to the Admin Menu, page 112
- Registering Your Software Applications, page 114
- ▼ Installing Updates, page 127
- ▼ Installing Applications, page 130
- Viewing System Details, page 134
- ▼ Configuring the Device, page 136
- ▼ Uninstalling Applications, page 160
- ▼ Managing Saved Reports, page 161
- Managing Your User Account, page 170
- Enabling Remote Access, page 175

This chapter provides detailed instructions for using the PRO-LINK<sup>®</sup> Ultra Admin Menu.

## NOTE:

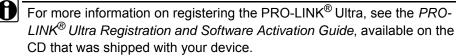
Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

# Introduction to the Admin Menu

The procedures in this chapter assume the following:

- The PRO-LINK<sup>®</sup> Ultra is not connected to a vehicle.
- You are performing the procedures as a system administrator in a nonshop setting.
- You have previously registered your PRO-LINK<sup>®</sup> Ultra, and activated your software applications.

## NOTE:



The Admin Menu is accessed from the Main Menu.

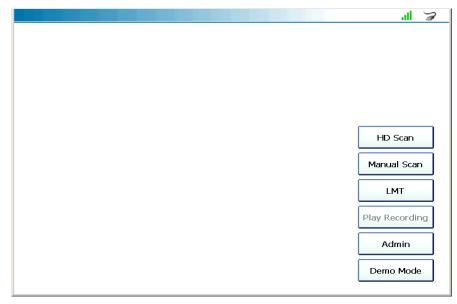


Figure 5.1 Main Menu

#### NOTE:



For an overview of the options available on the Main Menu, see "The Main Menu," in *Chapter 2: Hardware and User Interface*, earlier in this Manual.

		11 A
Register Applications	Install Updates	Install Applications
View System Details	Configure Device	Uninstall Applications
Manage Reports	Manage User Account	Remote Access
-		

Figure 5.2 Admin Menu

You use the Admin Menu to perform the following administrative tasks:

- Register Applications (pg. 114)
- Install Updates (pg. 127)
- Install Applications (pg. 130)
- View System Details (pg. 134)
- Configure Device (pg. 136)
- Uninstall Applications (pg. 160)
- Manage Reports (pg. 161)
- Manage User Account (pg. 170)
- Remote Access (pg. 175)

## NOTE:



Touch the green **Back Arrow** at the bottom of the screen to return to the Main Menu (Figure 5.1).

# **Registering Your Software Applications**

You use the Register Applications feature to activate software applications for use on the PRO-LINK<sup>®</sup> Ultra. There are two options:

- Registering an Application Using PRO-LINK<sup>®</sup> Ultra (pg. 114)
- Registering an Application Using the Website (pg. 118)

# Registering an Application Using PRO-LINK<sup>®</sup> Ultra

The following procedure assumes that you have:

- Internet access
- · Previously created a User Account and Password
- · Previously registered your device

#### NOTE:



For detailed instructions on creating a user account and registering your PRO-LINK<sup>®</sup> Ultra, refer to PRO-LINK<sup>®</sup> Ultra Registration and Software Activation Guide, available on the CD that was shipped with your device.

# To Register an Application Using PRO-LINK<sup>®</sup> Ultra:

1 Navigate to the Admin Menu.

		<u>چ</u> الا
Register Applications	Install Updates	Install Applications
View System Details	Configure Device	Uninstall Applications
Manage Reports	Manage User Account	Remote Access
<b></b>		

Figure 5.3 Admin Menu

2 Select Register Applications.

	<u> </u>	al 🍃
Register Application		
Enter the product key located on the inside of the application software CD case:		
I don't have a CD case		
	Re	gister lication
•	- vht	noution

The Register Application screen is displayed.

Figure 5.4 Register Application Screen

3 Touch within the first data entry field.

The pop-up keyboard is displayed.

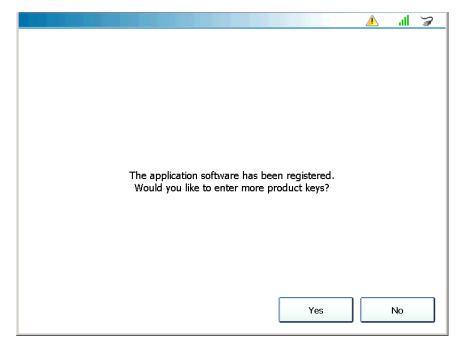
4 Use the keyboard to enter the **Product Key** for the application you want to register (e.g., Heavy Duty Standard J1939).

## NOTE:

The **Product Key** is printed on a sticker on the inside of the CD case shipped with your device.

The Product Key is not case sensitive. You can enter it in all lower-case letters.

- 5 Touch the **Down Arrow**  $\sim$  on the keyboard to hide the keyboard.
- 6 Touch Register Application.



PRO-LINK<sup>®</sup> Ultra checks the Product Family website, verifies the Product Key, and automatically downloads the required **Activation Code**.

Figure 5.5 Application Registered Message

The Activation Successful screen is displayed.

### NOTE:

H

You may, or may not, see the **Updates Available** icon *A* at the top of the screen. This icon indicates that software updates are available.

Click on the icon to go to the Install Updates screen where you can download the updates. You can also wait and perform this task after you have activated your software applications.

7 Do one of the following:

—Touch **Yes** to continue registering more applications.

—Touch **No** to return to the Admin Menu (Figure 5.3).

# Registering an Application Using the Website

The following procedure assumes that you have:

- Internet access
- · Previously created a User Account and Password
- Previously registered your PRO-LINK<sup>®</sup> Ultra

## NOTE:



For detailed instructions on creating a user account and registering your PRO-LINK<sup>®</sup> Ultra, refer to PRO-LINK<sup>®</sup> Ultra Registration and Software Activation Guide, available on the CD that was shipped with your device.

There are two options for copying the Activation Codes:

- To a USB memory stick (pg. 118)
- Copying the codes manually (pg. 122)

## Copying Activation Codes to a Memory Stick

You copy the required Activation Code to a USB memory stick, place the memory stick into the USB port on the PRO-LINK<sup>®</sup> Ultra, and then activate the software.

To copy Activation Codes to a memory stick:

1 Visit the iQ<sup>™</sup> Product Family website at the following address: prolinkiq.nexiq.com.

#### NOTE:

For more information on using the iQ<sup>™</sup> Product Family website, see the iQ<sup>™</sup> Companion and iQ<sup>™</sup> Product Family Website User's Manual.

- 2 Click Log In from the iQ<sup>™</sup> Family menu on the left side of the page.
- 3 Enter your User ID.
- 4 Enter your Password.
- 5 Click the Login button, located under the Password field.
- 6 Navigate to the **Device Registration** page.
- 7 Locate the **Registered Devices** section near the bottom of the page.

8 Click the plus sign (+) for the PRO-LINK<sup>®</sup> Ultra.

A Product Activation History for the device lists applications by product key, software title, software version, activation code, and activation file.

- 9 Click the link Add New Software / Product Key at the bottom of the page.
- 10 Enter the Software Serial Number and the Software Product Key.

#### NOTE:



The Software Serial Number and the Software Product Key are printed on a sticker on the inside of the CD case shipped with your device.

#### 11 Click Activate.

The application is added to the device's Product Activation History, which displays the activation code and the activation file name for each application.

#### NOTE:

The activation file name is a link. Clicking this link enables you to save the file to a USB memory stick and then install the file on your PRO-LINK<sup>®</sup> Ultra.

12 Click the application file name link.

A File Download dialog box is displayed.

- 13 Insert the memory stick into a USB port on your PC.
- 14 Click Save to save the file to a USB memory stick.

#### NOTE:

You must save the file to the root directory of the USB memory stick (i.e., not in a folder).

- 15 Remove the memory stick from the PC.
- 16 Insert the memory stick into the USB port on the top of the PRO-LINK<sup>®</sup> Ultra.
- 17 Navigate to the Admin Menu.

The Admin Menu is displayed.

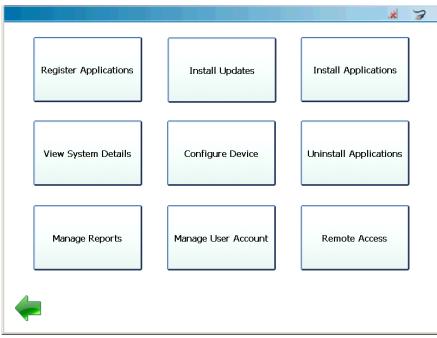


Figure 5.6 Admin Menu

18 Select Register Applications.

The PRO-LINK  $^{\ensuremath{\mathbb{R}}}$  Ultra displays a list of unregistered applications currently on the device.

	ж.
nregistered Applications	
Navistar Engine MaxxForce	
Version 2.7.0.0	
Unregistered, 6 tries remaining	
Heavy Duty Standard J1939	
Version 3.2.0.5	
Unregistered, 6 tries remaining	
	Register
	Application
	Application

Figure 5.7 Unregistered Applications Screen

- **19** Touch the application you want to register to highlight it (e.g., **Heavy Duty Standard J1939**).
- 20 Touch Register Application.

A "software application registered" message is displayed.

21 Do one of the following:

-Touch **Yes** to continue registering other applications.

-Touch No to return to the Admin Menu (Figure 5.6).

## **Copying Activation Codes Manually**

The following procedure assumes that you have:

- Internet access
- · Previously created a User Account and Password
- Previously registered your PRO-LINK<sup>®</sup> Ultra

## NOTE:

For detailed instructions on creating a user account and registering your PRO-LINK<sup>®</sup> Ultra, refer to *PRO-LINK<sup>®</sup>* Ultra Registration and Software Activation Guide, available on the CD that was shipped with your device.

#### To copy Activation Codes manually:

1 Visit the iQ<sup>™</sup> Product Family website at the following address: **prolinkiq.nexiq.com**.

#### NOTE:

For more information on using the iQ<sup>™</sup> Product Family website, see the *i*Q<sup>™</sup> Companion and *i*Q<sup>™</sup> Product Family Website User's Manual.

- 2 Click **Log In** from the iQ<sup>™</sup> Family menu on the left side of the page.
- 3 Enter your User ID.
- 4 Enter your Password.
- 5 Click the Login button, located under the Password field.
- 6 Navigate to the **Device Registration** page.
- 7 Locate the **Registered Devices** section near the bottom of the page.
- 8 Click the **plus sign (+)** for the PRO-LINK<sup>®</sup> Ultra.

A Product Activation History for the device lists applications by product key, software title, software version, activation code, and activation file.

- 9 Click the link Add New Software / Product Key at the bottom of the page.
- 10 Enter the Software Serial Number and the Software Product Key.



The **Software Serial Number** and the **Software Product Key** are printed on a sticker on the inside of the CD case shipped with your device.

11 Click Activate.

The application is added to the device's **Product Activation History**, which displays the activation code and the activation file name for each application.

12 Copy the Activation Codes from the website, and retain them for later use.

#### NOTE:

- The website sends you an e-mail containing the Activation Code. The Activation Code is also displayed on the **Product Activation History** screen on the website. For more information on the website, see the  $iQ^{TM}$  Companion and  $iQ^{TM}$  Product Family Website User's Manual.
- 13 Navigate to the Admin Menu.

		* 3
Register Applications	Install Updates	Install Applications
View System Details	Configure Device	Uninstall Applications
Manage Reports	Manage User Account	Remote Access
-		

Figure 5.8 Admin Menu

14 Select Register Applications.

The Unregistered Applications screen is displayed.

	× 7
prodictored Applications	
Inregistered Applications	
Navistar Engine MaxxForce	
Version 2.7.0.0 Unregistered, 6 tries remaining	
Heavy Duty Standard J1939	
Version 3.2.0.5 Unregistered, 6 tries remaining	
	Register Application
	Application

Figure 5.9 Unregistered Applications Screen

- **15** Touch the application you wish to register to highlight it (e.g., **Navistar Engine MaxxForce**).
- 16 Touch Register Application.

The PRO-LINK<sup>®</sup> Ultra searches the storage device for activation files. If no activation files are found, the PRO-LINK<sup>®</sup> Ultra asks if you want to enter the activation code manually.

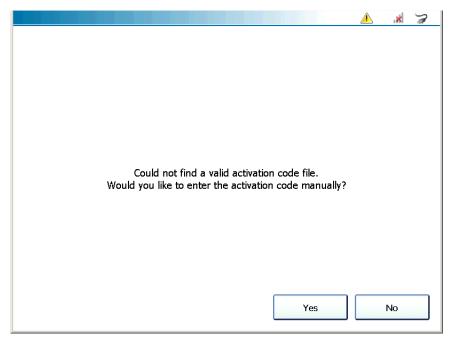


Figure 5.10 Enter the Activation Code Manually?

17 Touch Yes.

	🔺 🗼 🏹
Posister Application	
Register Application	
Enter the activation code for 'Navistar Engine MaxxForce':	
	Register Application

The Register Application screen is displayed.

Figure 5.11 Register Application Screen

18 Touch within the first data entry field.

The pop-up keyboard is displayed.

- **19** Use the keyboard to enter the **Activation Code** (see Step 12 of this procedure on page 123).
- 20 Touch the **Down Arrow** on the keyboard to hide the keyboard.
- 21 Touch Register Application.

A "software application registered" message is displayed.

- 22 Do one of the following:
  - -Touch **Yes** to continue registering other applications.
  - -Touch No to return to the Admin Menu (Figure 5.8).

# **Installing Updates**

You will be notified when software updates are available in two ways;

- The Updates Available icon \land is displayed at the top of the display.
- The Admin Menu feature changes appearance

For example:

		✓ III ∑
Register Applications	Install Updates	Install Applications
View System Details	Configure Device	Uninstall Applications
Manage Reports	Manage User Account	Remote Access
<b></b>		

Figure 5.12 Admin Menu Indicating Updates Available

In addition, the Updates Available screen is displayed periodically when there is no activity on the Main Menu (Figure 5.1).



Depending on the number of updates, this process may take several minutes. Also, you *cannot* install updates individually. You can, however, install software applications individually (as opposed to a system bundle for example) but you must do this from the Install Applications screen (see Figure 5.15, on page 130). To install available updates:

1 Select Install Updates on the Admin Menu (Figure 5.12).



The Updates Available screen is displayed.

			lla 🔺
The following updates are availa	ble at no charg	je:	
Allison Transmission WTEC			
Version 1.5.0.2			
CAT ACERT Engines			
Version 2.1.0.3			
CAT Electronic Engines			
Version 1.4.0.2			
Demo			
Version 1.4.0.2			
International Engines			
Version 2.6.0.4			
MBE			
Version 1.4.0.4			

Figure 5.13 Available Updates Screen

- 2 Touch and drag your finger up to scroll down the list of available updates.
- 3 Touch Install to accept the updates and install them on your device.

The installation process begins.

Allison Transmission WTEC	Installed	
Version 1.5.0.2		•
CAT ACERT Engines	Installed	
Version 2.1.0.3		•
CAT Electronic Engines	Installed	
Version 1.4.0.2	Tristened	•
Demo	Installed	
Version 1.4.0.2	In Islanicu	•
International Engines		
Version 2.6.0.4	Installed	×
MBE	• - to llad	
Version 1.4.0.4	Installed	

Figure 5.14 Installation in Process

A green check mark is displayed as each update is successful.

4 When all the updates are installed, touch the green **Back Arrow**.

A message is displayed indicating that a **Restart** is required.

5 Follow the on-screen prompts to restart the PRO-LINK<sup>®</sup> Ultra.

When the restart is complete, the Main Menu is displayed (Figure 5.1).

# **Installing Applications**

When software application updates are available, they can be installed one at a time from the Install Applications screen. You can also install all the applications at the same time.

To install applications individually:

1 Select Install Applications from the Admin Menu (Figure 5.2).

	🔺 📶 🍃
Install Applications	0 of 5 Selected
Allison Transmission 1K/2K Version 1.5.0.6	
Allison Transmission CEC 1 Version 1.4.0.5	
Allison Transmission Gen4 . Version 2.1.0.5	
Allison Transmission WTEC Version 1.5.0.5	
Bendix ABS Version 1.4.0.4	
<b>~</b>	Install

Figure 5.15 Install Applications Screen

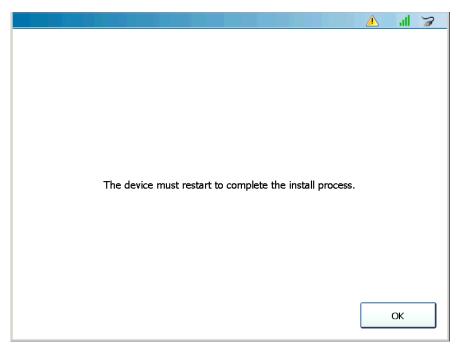
- 2 Select the application, or applications, you wish to install (e.g., Bendix ABS).
- 3 Touch Install.

The application is downloaded to the device, and your selection is indicated with a green check mark.

		ill 🍃
Install Applications	0 0	of 5 Selected
Allison Transmission 1K/2K Version 1.5.0.6		
Allison Transmission CEC 1 Version 1.4.0.5		
Allison Transmission Gen4 Version 2.1.0.5		
Allison Transmission WTEC Version 1.5.0.5		
Bendix ABS Version 1.4.0.4 Registered		✓
<b></b>	Ι	nstall

Figure 5.16

4 Touch the green **Back Arrow** at the bottom of the screen.



The following screen is displayed.

Figure 5.17 Device Restart Message

5 Touch OK.

The device closes down and then restarts.

The Main Menu is displayed.

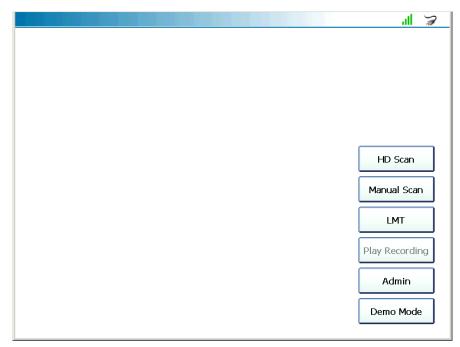


Figure 5.18 Main Menu

#### NOTE:

To register applications, refer to *Registering Your Software Applications* on page 114, earlier in this manual.

# **Viewing System Details**

The System Details screen displays a list of all the software applications currently on the PRO-LINK<sup>®</sup> Ultra. It also includes the following details for each application:

- · Software version
- Status (i.e., Registered or Unregistered)
- · Number of tries remaining

#### NOTE:



The PRO-LINK<sup>®</sup> Ultra comes with pre-loaded software applications. For each application you have six (6) tries before you must purchase the application and register it.

#### To view system details:

1 Select View System Details from the Admin Menu (Figure 5.2).

System Details				
Serial Number:	2	OS Version:	7.0.9	
Product ID:	7	Bootloader Version:	01.07	
Bundle Number:	1	Firmware Version:	2.000009	
Bundle Version:	2.0.9	Registry Version:	1.1	
Allison 1K 2K				
Registered				
Version 1.5.0.0 Registered				
Allison Gen 4 Version 2.1.0.0 Registered				
Allison WTEC Version 1.5.0.0 Registered				
Dondiy ADC				

Figure 5.19 System Details Screen

- 2 Lightly touch the screen and drag your finger up to scroll down the list.
- 3 When you are finished viewing the information, touch the green Back Arrow at the bottom of the screen.

The Admin Menu is displayed.

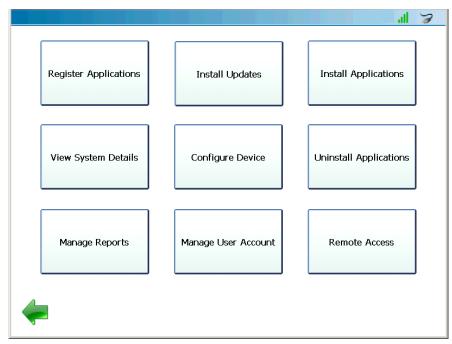


Figure 5.20 Admin Menu

# **Configuring the Device**

You access the Configure Device Menu from the Admin Menu (Figure 5.20).

		al 🍃
Manage Networks	Manage Printers	Set Date/Time
Calibrate Touchscreen	Register Device	
<b></b>		

Figure 5.21 Configure Device Menu

The following features and submenus are available:

- Manage Networks (pg. 137)
- Manage Printers (pg. 149)
- Set Date/Time (pg. 154)
- Calibrate Touchscreen (pg. 156)
- Register Device (pg. 158)

## NOTE:



The following procedures assume that you have Internet access and that you have previously made your network settings. For detailed information on connecting to your network as a first time user, and making the appropriate settings, refer to PRO-LINK® Ultra Registration and Software Activation Guide (available in portable document format (PDF) on the CD that was shipped with your device).

# Managing Networks

You access the Manage Networks menu from the Configure Device Menu (Figure 5.21).

		1 3
Wireless Networks SBSPUBLIC	Configure Wireless Adapter	Configure Ethernet Adapter
Configure Proxy	Network Adapter Statistics	
<b></b>		

Figure 5.22 Manage Networks Menu

The following options are available:

- Wireless Networks (pg. 137)
- Configure Wireless Adapter (pg. 139)
- Configure Ethernet Adapter (pg. 141)
- Configure Proxy (pg. 146)
- Network Adapter Statistics (pg. 148)

## **Wireless Networks**

To connect to or disconnect from a wireless network:

1 Select Wireless Networks from the Manage Networks menu (Figure 5.22).

SBSPUBLIC Connected		al
SBSPUBLIC_EXT		all
Linksys20791 Secured with WPA-PSK / WPA2-PSK		all
Linksys20791-guest		al

The Wireless Networks screen is displayed.

Figure 5.23 Wireless Networks Screen

The network to which you are currently connected is indicated (i.e., Connected). Touch the green **Back Arrow** to go back to the Manage Networks Menu (Figure 5.22).

#### NOTE:

You can also add a wireless network if the network to which you want to connect does not appear in the list. Touch the Add Wireless Network link near the bottom of the screen and follow the prompts. It is recommended that you employ the assistance of the designated IT person or network administrator at your location prior to adding a wireless network.

- 2 From the list displayed, touch the screen to highlight the network to which you want to connect.
- 3 Touch the **Connect** button.
- 4 (optional) To modify network settings, select the network and touch the **Modify** button.
- 5 (optional) To disconnect from the wireless network to which you are currently connected, select the network and touch the **Forget** button.

## **Configure Wireless Adapter**

You use the Configure Wireless Adapter screen if you want to change what type of IP address your PRO-LINK<sup>®</sup> Ultra will have:

- Dynamic IP address (automatically selected and variable)
- Static IP address (you assign an address that does not change)

## NOTE:

For a dynamic IP address, you don't need to change the settings; the default is **Automatically**.

To assign a static IP address:

1 Select **Configure Wireless Adapter** from the Manage Networks menu (Figure 5.22).

		all 🍃
Configure Wireless A	lapter	
Obtain IP Address and DNS		
Automatically		
O Manually		
IP Address:		
Subnet Mask:		
Gateway:		
DNS Server:		
Adapter Enabled		
		Apply

Figure 5.24 Configure Wireless Adapter Screen

2 Select Manually.

# NOTE:

You will need to obtain this information (i.e., IP Address, Subnet Mask) from the designated IT person or network administrator for your location. You may also need to enter Gateway and DNS information.

- 3 Touch within the **IP Address** data entry field. The keyboard is displayed.
- 4 Use the keyboard to enter the information.
- 5 Touch within the Subnet Mask data entry field, and enter the information.

#### NOTE:

The keyboard stays in place for your use.

- 6 Touch within the Gateway data entry field, and enter the information.
- 7 Touch within the **DNS Server** data entry field, and enter the information.
- 8 Touch the **Down Arrow**  $\checkmark$  on the keyboard to hide the keyboard.
- 9 Leave the Adapter Enabled check box activated.
- 10 Touch Apply.

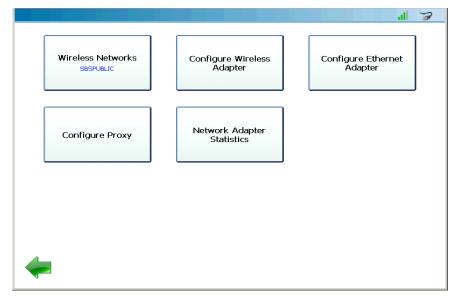


Figure 5.25 Manage Networks Menu

## **Configure Ethernet Adapter**

You use the Configure Ethernet Adapter screen if you want to connect to your local network using an Ethernet connection. Prior to making an Ethernet connection, you must decide how you are going to set up the IP address for PRO-LINK<sup>®</sup> Ultra. There are two choices:

- Dynamic (pg. 141)
- Static (pg. 143)

### NOTE:

The following procedures assume that you have an Ethernet cable and Internet access. They also assume that your local network is *not* configured using a proxy server. For information on proxy settings, refer to *Configure Proxy*, on page 146 of this manual.

### With a Dynamic IP Address

If you want to letPRO-LINK<sup>®</sup> Ultra automatically assign a dynamic IP address, you need to plug your network cable (i.e., the Ethernet cable you plug into your PC or laptop if you are not running wireless) into the Ethernet port on the top of the PRO-LINK<sup>®</sup> Ultra *prior* to making your IP settings.

To connect to the network with a dynamic IP address:

- 1 Insert one end of the Ethernet cable into the Ethernet port on the top of the PRO-LINK<sup>®</sup> Ultra.
- 2 Insert the other end of the Ethernet cable into your network.
- 3 Select Configure Ethernet Adapter from the Manage Networks menu (Figure 5.25).

				al 🍃
Configure Ethernet Ac	dapter			
Obtain IP Address and DNS:				
Automatically				
IP Address:				
Subnet Mask:				
Gateway:				
DNS Server:				
Adapter Enabled				
4				
			A	pply
V			·	

The Configure Ethernet Adapter screen is displayed.

Figure 5.26 Configure Ethernet Adapter Screen

## NOTE:

Depending on how your local network is set up, *you may* need to enter proxy settings (e.g., Domain, Username, and Password) prior to making an Ethernet connection. See *Configure Proxy*, on page 146 of this manual.

The default is Automatically.

- 4 Leave the **Adapter Enabled** check box activated (i.e., with the check mark in the box).
- 5 Touch Apply to accept the default.

The Manage Networks menu is displayed.

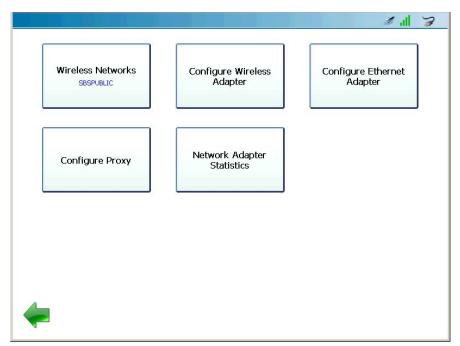


Figure 5.27 Manage Networks Menu

### NOTE:

The Ethernet icon *st* at the top of the display indicates that you are physically connected to an Ethernet cable.

6 Touch the green Back Arrow at the bottom of the screen to return to the Configure Device menu (Figure 5.21).

### With a Static IP Address

To connect to the network with a static IP address:

- 1 Insert one end of the Ethernet cable into the Ethernet port on the top of the  $\mbox{PRO-LINK}^{\mbox{\ensuremath{\mathbb{R}}}}$  Ultra.
- 2 Insert the other end of the Ethernet cable into your network.
- 3 Select **Configure Ethernet Adapter** from the Manage Networks menu (Figure 5.25).

			al 🍃
Configure Ethernet A	dapter		
Obtain IP Address and DNS	:		
Automatically			
O Manually			
IP Address:			
Subnet Mask:			
Gateway:			
DNS Server:			
🗹 Adapter Enabled			
4		_	
-			Apply
V			

The Configure Ethernet Adapter screen is displayed.

Figure 5.28 Configure Ethernet Adapter Screen

### NOTE:

Depending on how your local network is set up, *you may* need to enter proxy settings (e.g., Domain, Username, and Password) prior to making an Ethernet connection. See *Configure Proxy*, on page 146 of this manual.

4 Select Manually.

### NOTE:

You will need to obtain this information (i.e., IP Address, Subnet Mask) from the designated IT person or network administrator for your location. Depending on how your local network is configured, you may also need to enter Gateway and DNS Server information.

5 Touch within the first field (i.e., IP Address).

The pop-up keyboard is displayed.

6 Use the keyboard to enter the **IP Address**.

- 7 Touch within the next field, and enter the Subnet Mask.
- 8 Touch within the **Gateway** data entry field, and enter the information (if required).
- 9 Touch within the DNS Server data entry field, and enter the information (if required).
- 10 Touch the **Down Arrow**  $\sim$  on the keyboard to hide the keyboard.
- 11 Leave the Adapter Enabled check box enabled.
- 12 Touch Apply.

The Manage Networks menu is displayed.

Wireless Networks SBSPUBLIC	Configure Wireless Adapter	Configure Ethernet Adapter
Configure Proxy	Network Adapter Statistics	
-		

Figure 5.29 Manage Networks Menu

NOTE:

The Ethernet icon *solution* at the top of the display indicates that you are connected.

Touch the green **Back Arrow** at the bottom of the screen to return to the Configure Device menu (Figure 5.21).

## **Configure Proxy**

If your local network is configured using a proxy server, you will need to enter information to tell PRO-LINK<sup>®</sup> Ultra how to communicate with it.



If your local network is *not configured* using a proxy server, you do not need to enter these settings.

It may be preferable to have the designated IT person or network administrator for your location perform this task for you.

#### To enter proxy settings:

1 Select Configure Proxy from the Manage Networks menu (Figure 5.25).

			all 🍃
Configure Pro	ху		
🗌 Use Proxy Se	erver		
Server:			
Port:			
	de strate service		
🔲 Requires Aut	nentication	_	
Username:			
Password:			
Domain:			
4			Apply

Figure 5.30 Configure Proxy Screen

- 2 Touch the Use Proxy Server check box to activate it (a check mark is displayed in the box).
- 3 Touch within the Server data entry box.

The keyboard is displayed.

		ıl 🍃
Configure I	Proxy	
Use Prox	y Server	
Server:		
Port:		
🗌 Requires	Authentication	
Username:		
Password:		
Domain:		
Tab q	wertyui op	-
123 a	sdfghjkl	←-
Shift	z x c v b n m , .	Shift
~		~

Figure 5.31 Keyboard

- 4 Use the keyboard to enter the server name.
- 5 Touch within the **Port** data entry field, and enter the information.
- 6 Touch the **Requires Authentication** check box to activate it if your proxy server requires a password.
- 7 Touch within the following data entry fields to enter the appropriate information:

  - —Password

—Domain

- 8 Touch the **Down Arrow** on the keyboard to hide the keyboard.
- 9 Touch Apply.

The Manage Networks menu is displayed (Figure 5.22).

### **Network Adapter Statistics**

You use the Network Adapter Status screen to view information about your wireless and Ethernet network settings. The following information is displayed:

- · Address Type
- IP Address
- Subnet Mask
- Default Gateway
- MAC Address

To view information about your network settings:

1 Select **Network Adapter Statistics** from the Manage Networks menu (Figure 5.22).

Address Type:			
Hadrood Typer	Static	Address Type:	DHCP
IP Address:	192.168.8.180	IP Address:	192.168.255.242
Subnet Mask:	255.255.255.0	Subnet Mask:	255.255.254.0
Default Gateway:	0.0.0	Default Gateway:	192.168.254.1
MAC Address:	26:02:19:87:26:02	MAC Address:	00:19:88:52:6C:EF

Figure 5.32 Network Adapter Status

2 Touch the green **Back Arrow** at the bottom of the screen to return to the Manage Networks menu (Figure 5.22).

## **Managing Printers**

You use the Manage Printer screen to add a printer, print a test page once you've selected a printer, and to set your print default to either print the information to a printer or to save it to a file. You can add multiple printers.

Prior to starting this procedure, you may need to gather the following information:

- · Network path for the printer you want to print to
- Network security information, if required:
  - Username
  - Password
  - Domain

To add a printer so that you can print to it:

1 Select Manage Printers from the Configure Device menu (Figure 5.21).

	al 🍃
Manage Printers	
	]
Save to File	
Add Printer	
Print Test Page Set as Default Delete Chan	ge Settings

Figure 5.33 Manage Printers Screen

2 Touch the Add Printer link.

			all 🍃
Add Printer			
Printer Name:		Driver:	HP PCL 3 / PCL 3 GUI 🗸
Port:	USB	<ul> <li>Network Path:</li> </ul>	eg. \\server\printer or 192.168.0.21
Authentication			
Username:			
Password:			
Domain:			
-			Add

The Add Printer screen is displayed.

Figure 5.34 Add Printer Screen

3 Touch within the **Printer Name** data entry box.

The keyboard is displayed.

							al 🍃
Add Print	er						
Printer Na	me:			Driver:	HP	PCL 3 / PCL 3	gui 🗸
Port:	U	SB	~	Network Pa			
					eg. \	\server\printer	or 192.168.0.21
🗖 Auther	itication						
Username							
Password							
Domain:							
Tab q	w	е	r t	y i	u i	o	р 🗲
123	a s	d	f g	<u> </u>	j k	Ī	-
Shift	z	x c	v	b n	m	,	. Shift
~					·	-	~

Figure 5.35 Keyboard

- 4 Use the keyboard to give the printer name (e.g., example printer).
- 5 Select **Network** from the Port drop-down list.

Select USB if you plan to connect to the printer by means of a USB cable.

- 6 From the Driver drop-down list, select the driver that most closely matches the type of printer you have (e.g., HP PCL 3/PCL 3 GUI).
- 7 Use the keyboard to enter the network path (e.g., **192.168.123.123**).
- 8 Touch the **Authentication** check box to activate it (if your network server requires a password).
- **9** Touch within the following data entry fields to enter the appropriate information:
  - -Username
  - —Password

-Domain

10 Touch the **Down Arrow**  $\sim$  on the keyboard to hide the keyboard.

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11 Touch Add.

		11 A
anage Print	ers	
🜪 Save to	File	
🧊 exampl	e printer (network)	
Add Printer		
	Print Test Page Set as Default Dele	te Change Settings

Figure 5.36 Manage Printers Screen with Printer Added

**12** Touch the screen to highlight the printer you just added.

	al 🍃
Manage Printers	
Save to File	
🚅 example printer (network)	
Add Printer	
Print Test Page Set as Default Delete Char	nge Settings

Figure 5.37 Printer Highlighted

- 13 Touch **Print Test Page** to make sure you can print to the printer.
- 14 Touch OK.
- 15 (optional) If you could not connect to the printer, touch **Change Settings** and check the information you entered on the Add Printer screen (Figure 5.35).

Make any necessary changes, and touch **Update**. Then print a test page again to make sure you can print to the printer.

	7
Manage Printers	
😨 Save to File	
🔹 example printer (network)	
Add Printer	
Print Test Page Set as Default Delete Change Set	tings

Figure 5.38 Printer Highlighted

16 Touch Set as Default to make this printer your default printer.

## NOTE:

You can also select Save to File and then set that option as the default.

- 17 (optional) To delete the printer (for example, you no longer wish to use that printer), highlight the printer (e.g., example printer network), and touch **Delete**.
- **18** Touch the green **Back Arrow** at the bottom of the screen to return to the Configure Device menu (Figure 5.21).

# Setting the Date and Time

From time to time, you may need to adjust the date and time settings.

To adjust the date and time settings:

1 Start at the **Configure Device Menu**.

		1 A
Manage Networks	Manage Printers	Set Date/Time
Calibrate Touchscreen	Register Device	
-		

Figure 5.39 Configure Device Menu

2 Select Set Date/Time.

	all 🍃
Set Date / Time	
Date Year: 2014 ✔ Month: 3 ✔	Day: 5 🗸
-	
Time Hour: 2 V Minutes: 18 V	() AM (● PM
Time Zone	
(UTC-08:00) Pacific Time (US & Canada)	
Automatically adjust clock for daylight time	
-	Apply

The Set Date/Time screen is displayed showing the current device settings.

Figure 5.40 Set Date/Time Screen

- 3 Use the drop-down arrow at the right of each field to change the **Year**, **Month**, and/or **Day** as needed.
- 4 Follow the same procedure to change the **Hour** and **Minutes** to match the current time.
- 5 Select AM or PM.
- 6 Use the drop-down box to select the appropriate **Time Zone** for your location.
- 7 If you want to adjust the clock for daylight savings time, place a check mark in the **Automatically adjust clock for daylight time** check box; otherwise leave it blank.
- 8 Touch Apply.

The Configure Device menu is displayed. (Figure 5.39).

**9** Touch the green **Back Arrow** at the bottom of the screen to return to the Admin Menu (Figure 5.20).

## **Calibrating the Touchscreen**

Occasionally, you may need to calibrate the touchscreen for optimal performance (e.g., if touching the screen does not result in the expected action).

To calibrate the touchscreen:

- 1 Start at the **Configure Device Menu** (Figure 5.21).
- 2 Select Calibrate Touchscreen.

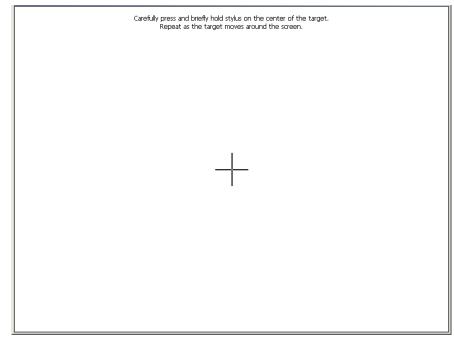


Figure 5.41 Calibration Screen

- 3 Carefully tap the center of the cross hairs at the center of the target.
- 4 Repeat as the target moves around the screen until the target no longer displays.

The following screen is displayed.

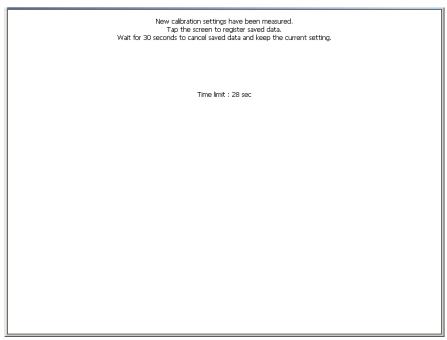


Figure 5.42 Final Calibration Screen

5 Touch anywhere on the screen to save the calibration.

You are returned to the **Configure Device Menu** (Figure 5.21).

## **Registering the Device**

The following procedure assumes that you have Internet access and that you have previously registered your PRO-LINK<sup>®</sup> Ultra as a first-time user.

## NOTE:

For detailed information on registering your device as a first-time user, refer to the *PRO-LINK<sup>®</sup> Ultra Registration and Software Activation Guide,* available in portable document format (PDF) on the CD that was shipped with your device.

To view the user name used to register the device:

1 Select Register Device from the Configure Device menu (Figure 5.21).



Figure 5.43 Register Device Screen

2 Touch OK.

The **Configure Device** menu is displayed.

		al 🍃
Manage Networks	Manage Printers	Set Date/Time
Calibrate Touchscreen	Register Device	
<b></b>		

Figure 5.44 Configure Device Menu

3 Touch the green **Back Arrow** at the bottom of the screen.

The Admin Menu is displayed.

		all 🍞
Register Applications	Install Updates	Install Applications
View System Details	Configure Device	Uninstall Applications
Manage Reports	Manage User Account	Remote Access
4		
•		

Figure 5.45 Admin Menu

# **Uninstalling Applications**

### **IMPORTANT:**

The Uninstall Applications feature should be used only if you are directed to use it by Technical Support.

To uninstall applications:

- 1 Select **Uninstall Applications** from the Admin Menu (Figure 5.45).
- 2 Follow the instructions you receive from Technical Support.

You can reach Technical Support by calling (800) 639-6774.

# **Managing Saved Reports**

You use the Manage Reports feature to administer any reports you have previously saved to your PRO-LINK<sup>®</sup> Ultra (e.g., vehicle and fault information from a diagnostic session). From the Manage Reports screen you can do the following:

- Delete reports (pg. 162)
- Move reports (pg. 163)
- Print reports (if you are connected to a printer) (pg. 165)
- Preview reports (pg. 166)

To manage your saved reports:

1 Select Manage Reports from the Admin Menu (Figure 5.45).

The Manage Reports screen is displayed.

144625.pdf 20140124	Friday, January 24, 2014
145201.pdf	Friday, January 24, 2014
145827.pdf	Friday, January 24, 2014
151846.pdf	Friday, January 24, 2014
10140304 093103.pdf	Tuesday, March 04, 2014
itest 123.pdf	Wednesday, January 22, 201

Figure 5.46 Manage Reports Screen

You can change the order in which your reports are displayed in the list by touching the Sort by drop-down menu and selection an option.

You can sort by:

- Name (A-Z)
- Name (Z-A)
- Creation Date (Old-New)
- Creation Date (New-Old)

This feature can be useful if you have a long list of reports saved to your device and you want to find a particular report quickly (e.g., a report you saved earlier in the day).

## **Deleting a Report**

To delete a report:

1 Touch the screen to select the report you want to delete. Your selection is highlighted.

20140124 144625.pdf	Friday, January 24, 2014
145201.pdf	Friday, January 24, 2014
145827.pdf	Friday, January 24, 2014
151846.pdf	Friday, January 24, 2014
10140304 093103.pdf	Tuesday, March 04, 2014
itest 123.pdf	Wednesday, January 22, 20:

Figure 5.47 Selection Highlighted

2 Touch the **Delete** button.

An Are you sure? message is displayed.

3 Touch Yes.

The report is deleted from the list.

# Moving a Report

You can move a report saved to your PRO-LINK<sup>®</sup> Ultra to a storage device (e.g., a USB memory stick or a secure digital (SD) memory card).

To move a report to a storage device:

1 Touch the screen to select the report or reports you want to move.

Your selection is highlighted.

	al 🍃
Manage Reports	Sort by: Name (A-Z)
144625.pdf 20140124 144625.pdf	Friday, January 24, 2014
145201.pdf	Friday, January 24, 2014
20140124 145827.pdf	Friday, January 24, 2014
151846.pdf	Friday, January 24, 2014
10140304 093103.pdf	Tuesday, March 04, 2014
itest 123.pdf	Wednesday, January 22, 2014
Delete Move	Print Preview

Figure 5.48 Selection Highlighted

2 Insert your storage device (e.g., a USB memory stick) into the appropriate port on the top of your PRO-LINK<sup>®</sup> Ultra.

The **Move** button is activated.

3 Touch Move.

The Select Destination screen is displayed.

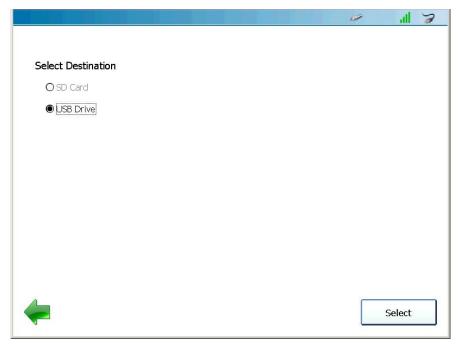


Figure 5.49 Select Destination Screen

You can choose between **SD Card** and **USB Drive**, depending on the type of storage device you have.

4 Touch the Select button to accept the default (i.e., USB Drive).

The report you selected is moved from your PRO-LINK<sup>®</sup> Ultra to your USB memory stick, and you are returned to the **Manage Reports** screen (Figure 5.46).

# **Printing a Report**

The following procedure assumes that you have previously setup a printer and that you are appropriately connected to that printer.



For detailed information on configuring your PRO-LINK<sup>®</sup> Ultra to print to a printer, refer to *Managing Printers* on page 149 of this manual.

#### To print a report:

1 Touch the screen to select the report you want to print.

Your selection is highlighted.

144625.pdf 20140124	Friday, January 24, 2014
145201.pdf	Friday, January 24, 2014
20140124 145827.pdf	Friday, January 24, 2014
151846.pdf	Friday, January 24, 2014
10140304 093103.pdf	Tuesday, March 04, 2014
test 123.pdf	Wednesday, January 22, 20

Figure 5.50 Selection Highlighted

2 Touch the Print button.

The Select Printer screen is displayed.

	al	7
Select Printer		
Shop Floor HPLaserjet		
Add Printer		
<b>~</b>	Print	

Figure 5.51 Select Printer Screen

3 Select a printer from the list of available printers.

#### NOTE:

You can also add a printer to the list of available printers by touching **Add Printer**. Supply the required information (e.g., printer name) and touch the **Add** button.

4 Touch Print.

# **Previewing a Report**

You can preview a report to confirm that it's the report you want.

#### To preview a report:

1 Touch the screen to select the report you want to preview.

Your selection is highlighted.

Manage Reports	Sort by: Name (A-Z)
20140124 144625.pdf	Friday, January 24, 2014
20140124 145201.pdf	Friday, January 24, 2014
20140124 145827.pdf	Friday, January 24, 2014
151846.pdf 20140124	Friday, January 24, 2014
10140304 093103.pdf	Tuesday, March 04, 2014
itest 123.pdf	Wednesday, January 22, 2014

Figure 5.52 Selection Highlighted

2 Touch Preview.

The preview is displayed.



Figure 5.53 Report Preview

You can move from page to page by using the directional arrows at the top of the display.

- 3 When you have finished viewing the information, do one of the following:
  - Touch **Print** to send the report to a printer using the Select Printer screen (Figure 5.51).
  - Touch the green **Back Arrow** at the bottom of the screen return to the Manage Reports screen (Figure 5.52).
- 4 Touch the green Back Arrow again.

The Admin Menu is displayed.

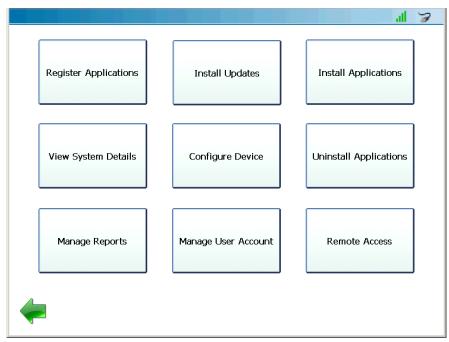


Figure 5.54 Admin Menu

# Managing Your User Account

You use the Manage User Account feature to access your online account. Once on the Update User Account screen, you can change your contact information.

## NOTE:



This procedure assumes that you have Internet access and that you have previously created a user account. For detailed instructions on creating a user account and registering your PRO-LINK<sup>®</sup> Ultra, refer to PRO-LINK<sup>®</sup> Ultra Registration and Software Activation Guide, available on the CD that was shipped with your device.

To access your online account:

1 Select Manage User Account from the Admin Menu (Figure 5.54).

		al 🍃
Login		
Username:	example_user	
Password:		
	Show Password	
<u>I forgot my pa</u>	assword	
<u>Create new a</u>	<u>iccount</u>	
	)	Login
	l	LUYIII

Figure 5.55 Login Screen

If you previously registered your PRO-LINK<sup>®</sup> Ultra, the Username data entry box is pre-filled.

2 Touch within the **Password** data entry box.

The pop-up keyboard is displayed.

										1 3
Login										
Username:	example	_user								
Password:										
	Show	Password								
<u>I forgot my p</u>	assword									
<u>I forgot my p</u> <u>Create new a</u>										
		е	r	t	у	u	i	0	р	•
Create new a	account	e d	r f	t g	y h	u j	i k	o I	p	+ +
<u>Create new a</u>	account W	L	<u> </u>	<u> </u>	<u> </u>	<b>L</b>		<u> </u>	р	← ← Shift

Figure 5.56 Keyboard

3 Use the keyboard to enter your password.

### NOTE:

You can check the **Show Password** check box to display the password as you enter it.

4 (optional) If you cannot remember your password, touch the I forgot my password link. Then, enter your Username in the data entry box, and touch Reset.

A temporary password is sent to the e-mail address associated with your user account. Enter the temporary password, and follow the on-screen prompts.

### NOTE:



To use the forgotten password feature, you must have an e-mail address associated with your user account.

5 Touch the **Down Arrow** on the keyboard to hide the keyboard.

The screen is displayed again.

		al 🍃
Login		
Username:	example_user	
Password:	****	
	Show Password	
<u>I forgot my p</u>	assword	
Create new a	account	
		Login
		Login

Figure 5.57 Login Screen Refreshed

6 Touch Login.

al 🍃 Update User Account \* required Username: \* Full Name: Example User \* Zip Code: 48564 United States \* Address1: 12345 Street × \* Country: Address2: Company: \* City: \* Phone: 123-123-1234 Washington \* State: Michigan Email: Example@mail.com Update

Once your information is validated, the **Update User Account** screen is displayed.

Figure 5.58 Update User Account Screen

7 Review your contact information, and make any required changes.

You can edit the contents of any of the data entry boxes, by touching within the box. Then use the pop-up keyboard to enter your changes.

- 8 Touch the **Down Arrow**  $\sim$  on the keyboard to hide the keyboard.
- 9 When you have finished making your changes, touch **Update**.



An update success message is displayed.

Figure 5.59 Update Success Message

10 Touch OK.

You are returned to the Admin Menu (Figure 5.54).

# **Enabling Remote Access**

The Remote Access feature enables Technical Support to connect to your PRO-LINK® Ultra remotely to assist you in resolving support issues. To contact Technical Support, call (800) 639-6774.



A

To use this feature, you must have Internet connectivity.

To enable Remote Access:

1 Select Remote Access from the Admin Menu (Figure 5.54).

Status:	Disabled		
Gateway:	Available		
Device Name:	NEXPL2_07_00002		
Wireless			
IP Address:	192.168.255.242		
MAC Address:	00:19:88:52:6C:EF		
Ethernet			
IP Address:	192.168.8.180		
MAC Address:	26:02:19:87:26:02		

Figure 5.60 Remote Access Screen

2 Touch Enable.

NOTE:



Your Technical Support representative will connect to your PRO-LINK® Ultra to assist in resolving your support issue.

Chapter 5 • Using the Admin Menu

# Chapter 6

## Using PRO-LINK<sup>®</sup> Repair-Connect



- ▼ PRO-LINK Repair-Connect Overview, page 178
- ▼ Logging In, page 179
- The DESCRIPTION Tab, page 185
- ▼ The TESTING Tab, page 187
- ▼ The SPECS Tab, page 191
- ▼ The WIRING/LOCATOR Tab, page 194
- ▼ The REMOVE & INSTALL Tab, page 199

This chapter provides detailed instructions on using PRO-LINK<sup>®</sup> Repair-Connect to access troubleshooting information related to faults found during scanning. A subscription to PRO-LINK<sup>®</sup> Repair-Connect is required. Please contact your Snap-on dealer for details or to purchase a subscription.

#### NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

## **PRO-LINK<sup>®</sup> Repair-Connect Overview**

PRO-LINK<sup>®</sup> Repair-Connect anticipates the detailed information required to fix the vehicle and retrieves it in seconds. Service times are shortened because you don't have to manually look up repair information to complete the service correctly.

PRO-LINK<sup>®</sup> Repair-Connect provides access to diagnostic trouble code (DTC) - related service information, including the following:

- Trouble code descriptions
- · Related wiring diagrams
- · Component connector views
- · Electrical component locator
- Testing procedures
- · Removal and installation procedures
- · DTC-related specifications

A subscription to PRO-LINK<sup>®</sup> Repair-Connect is required. Please contact your Snap-on dealer for details or to purchase a subscription.



If you already have a subscription to Mitchell 1 REPAIR-CONNECT.net<sup>®</sup>, you can use your existing Username and Password to log in to PRO-LINK<sup>®</sup> Repair-Connect.

The remainder of this chapter covers the following:

- Logging In (pg. 179)
- The DESCRIPTION Tab (pg. 185)
- The TESTING Tab (pg. 187)
- The SPECS Tab (pg. 191)
- The WIRING/LOCATOR Tab (pg. 194)
- The REMOVE & INSTALL Tab (pg. 199)

## Logging In

You access PRO-LINK<sup>®</sup> Repair-Connect from the FAULTS tab on the Diagnostics Menu. Once you have logged in, the PRO-LINK<sup>®</sup> Ultra remembers your login information so you won't have to enter it again.



## NOTE:

If you already have a subscription to Mitchell 1 REPAIR-CONNECT.net<sup>®</sup>, you can use your existing Username and Password to log in to PRO-LINK<sup>®</sup> Repair-Connect.

#### <u>To log in:</u>

1 Start from the **Diagnostics Menu** with the FAULTS tab activated.

Menu Vie <del>w</del> Specs		al 🍃
ACTIVE - 15	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1	NO INACTIVE FAULTS	FAULTS 15 ACTIVE
FVCV Open Load/circuit		0 INACTIVE
Fuel Volume Control Valve 0 %		
SPN 1244 - FMI 5 - Active		Engine 1
Engine #1 - MaxxForce - Ch1		MaxxForce Ch1
DPFOT Signal out of Range HIGH		
DPF Outlet Temperature Sub-System Error		
SPN 3246 - FMI 3 - Active		Engine
Engine #1 - MaxxForce - Ch1		Retarder HDS 31939
DPFDP signal Out of Range LOW		Ch1
DPF Differential Pressure 0.15 psi		
SPN 3251 - FMI 4 - Active		CALS
		CALS
<b>Up</b> Down	Up Down	
	Clear All	TESTS
	Faults	

Figure 6.1 Diagnostics Menu

2 To view more information on a particular fault, touch the screen to select the fault you want to view (e.g., **DPFDP signal Out of Range LOW**).

#### The More Info screen is displayed.

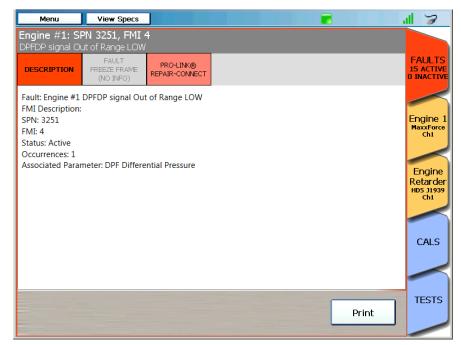


Figure 6.2 More Info Screen

3 Touch the **REPAIR-CONNECT** button at the top of the screen.

#### NOTE:

H

To return to the list of faults, touch the FAULTS tab.

## The **Login** screen is displayed.

Menu	View Specs	)			ul 🍃
	PN 3251, FMI 4 ut of Range LOW	ł			
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	PRO-LINK® REPAIR- CONNECT			FAULTS 15 ACTIVE 0 INACTIVE
	o access PRO-LIN ng Steps, Specs, "		ect troubleshooting in and more.	formation, which	Engine 1 MaxxForce
	Usernam	e:		]	Chi
	Passwore	d: 🗌 Show Passwo	ord	]	Engine Retarder
	C	ould not connec	: to RepairConnect		HD5 J1939 Ch1
					CALS
То	subscribe to PRO	-LINK® Repair-(	Connect, contact your :	Snap-on dealer.	
				Login	TESTS

Figure 6.3 Login Screen

4 Touch within the **Username** data entry field.

#### The keyboard is displayed.

Menu		View Sp	ecs								ul 🍃
Engine #1 DPFDP sign											
DESCRIPTIC		FAULT REEZE FRA (NO INFC	AME F	PRO-LINK® REPAIR- CONNECT							FAULTS 15 ACTIVE 0 INACTIVE
		Steps, Sp Use	oecs, Wiri rname: [ ssword: [ [	Repair-Cc ing diagrai	sword	more.		rmation, v	which		Engine 1 MaxForce Chi Engine Retarder HDS J1939 Chi
			Could	d not conn	iect to Ri	epairConn	iect				
Tab	1	2	3	4	5	6	7	8	9	0	+
ABC	#	\$	%	&	*	-	+	(	)		←
~\{		<	>	-	:	;	,		!	?	~\{
~		1	0					•	_		~

Figure 6.4 keyboard

- 5 Use the keyboard to enter your Username.
- 6 Touch within the Password data entry field.
- 7 Use the keyboard to enter your **Password**.
- 8 (optional) Touch the **Show Password** box to activate it (if you want to display your password in the data entry box so that you can read it).
- 9 Touch the **Down Arrow** on the keyboard to hide the keyboard.
- 10 Touch Login.

Your information is validated and Repair-Connect loads the troubleshooting and repair information.

In the event that Repair-Connect cannot decode the VIN, the following screen is displayed.

Menu	View Specs		al 🍃
	PN 3251, FMI 4 ut of Range LOW		
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	PRO-LINK® REPAIR- CONNECT	FAULTS 10 ACTIVE 0 INACTIVE
PRO-LINK® F	Repair-Connect co	uld not automatically determine the vehicle's specifications.	
Please e	nter the VIN or Ve	whicle Information: VIN $\checkmark$	Engine 1 MaxxForce Ch1
	VIN: 4DR	BUSKP7AB986758	Engine Retarder HDS 11939 Ch1
			CALS
	Could not decod	le VIN. Please retry or enter Vehicle Information.	
		Go	TESTS

Figure 6.5 VIN Not Decoded Screen

- 11 Should you encounter this screen, obtain the VIN off the vehicle.
- 12 Touch within the VIN data entry field.

The keyboard is displayed.

- 13 Use the keyboard to enter the correct VIN.
- 14 Touch the **Down Arrow** on the keyboard to hide the keyboard.
- 15 Touch the Go button at the bottom of the screen to enter the VIN.

#### NOTE:

If for some reason you don't have the VIN, you can use the **Please enter the VIN or Vehicle Information** drop-down menu to select Vehicle Year, Vehicle Make, Vehicle Module, and Engine. When you have made your selections, touch the Go button to perform a manual vehicle lookup. The More Info screen with Repair-Connect tabs is displayed.

Menu	View Specs					.ıl 🍃
	SPN 3251, FMI 4 Out of Range LOW					
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULT 15 ACTIV 0 INACTIV
Fault: Engine #1 FMI Descriptior	L DPFDP signal Out 1:	of Range LOW				
SPN: 3251 FMI: 4						Engine MaxxFord
Status: Active						Ch1
Occurrences: 1						
Associated Para	ameter: DPF Differe	ntial Pressure				Engine
SPN 3251 FMI	3, 4 & 10					Retarde
Code Descriptio	on					Ch1
DPFDP SENSC	DR (DIESEL PARTI	CULATE FILTER D	DIFFERENTIAL PR	ESSURE) REFERE	INCE	
SPN		FMI		Condition		CALS
3251		3		Out of range DPFDI	P signal - HIGH	CALS
3251		4		Out of range DPFDI	P signal - LOW	
3251		10		DPFDP signal abnor	rmal rate of	
				change		
						TESTS
					Print	

Figure 6.6 More Info Screen with Repair-Connect Tabs

Once you have successfully logged in to Repair-Connect, you are ready to start using it to look up additional troubleshooting information.

The **DESCRIPTION** tab is the currently active tab.

## The DESCRIPTION Tab

#### To use the DESCRIPTION tab:

Menu	View Specs	]				ul 🍃
	PN 3251, FMI 4 ut of Range LOW	1				
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIV 0 INACTIV
FMI Description: SPN: 3251 FMI: 4 Status: Active Occurrences: 1 Associated Paran SPN 3251 FMI Code Descriptio	meter: DPF Differe 3, 4 & 10 n	ntial Pressure				Engine MaxxForce Ch1 Engine Retarde HDS J1933 Ch1
DPFDP SENSO SPN	R (DIESEL PARTIO	FMI		ESSURE) REFERE	NCE	CALS
3251		3		Out of range DPFDI	P signal - HIGH	CALS
3251		4		Out of range DPFDI	P signal - LOW	-
3251		10		DPFDP signal abnoi change	rmal rate of	
					Print	TESTS

Figure 6.7 More Info Screen with Repair-Connect Tabs

Note that the code description has been expanded, providing additional information on the selected fault code.

### NOTE:



To access Freeze Frame information, if available, touch the gray FAULT FREEZE FRAME tab.

1 Touch the screen and drag your finger up to move down in the page of information.

네 🍃 View Specs Menu Engine #1: SPN 3251, FMI 4 FAULTS WIRING/ LOCATOR REMOVE DESCRIPTION FREEZE FRAME (NO INFO) TESTING SPECS 15 ACTIV D INACTI & INSTALL change DPFDP sensor circuit consists of: Engine MaxxForce Ch1 1. ECM with Barometric Absolute Pressure (BAP) sensor 2. DPFDP (DPF Differential Pressure) sensor 3. Fuel Injectors (INJ) 4. Engine Lights Engine Retarder SPN 3251 FMI 3, 4 & 10 DPFDP SENSOR END DIAGNOSTICS HDS J1939 Ch1 SPN FMI Condition Possible Causes 3251 Out of range DPFDP signal- Short to power DPFDP 3 HIGH signal Open SIG GND circuit CALS Malfunctioning sensor 3251 4 Out of range DPFDP signal Open or short to ground - LOW DPFDP signal Malfunctioning sensor Defective/missing DPE TESTS Print

Additional information is revealed.

Figure 6.8 Result of Moving Down the Page

- 2 Continue scrolling down the page until you find the required information.
- 3 When you have finished reviewing the information, you can:
  - -Touch the **Print** button to send the information to a printer.
  - -Touch the red FAULTS tab to go back to the list of faults (Figure 6.1), and select a different fault to view the Repair-Connect information for that fault.
  - -Select a different Repair-Connect tab (e.g., TESTING) to view testing information for the same currently selected fault.

## The TESTING Tab

To use the TESTING tab:

1 Touch the **TESTING** tab to view testing information specific to the currently selected fault.

Menu	View Specs					1 7
	PN 3251, FMI 4 ut of Range LOW	1				
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
Trouble Code	e Test: DIESEL	PARTICULATE	FILTER (DPF) I	DIFFERENTIAL	PRESSURE	
Trouble Code	e Test: Engine (	Control Module	(ECM)			Engine 1 MaxxForce Ch1
Component T	fest: DIESEL PA	ARTICULATE FI	ilter (DPF) di	FFERENTIAL P	RESSURE SE	$\$
Component 1	「est: Engine Co	ntrol Module (E	ECM)			Engine Retarder HD5 31939
						Chi
						CALS
						TESTS

Figure 6.9 TESTING Tab Activated

2 Touch the screen to select the test you want to view (e.g., **Trouble Code Test:** DIESELPARTICULATE FILTER (DPF) DIFFERENTIAL PRESSURE...). The information for the selected test is displayed.

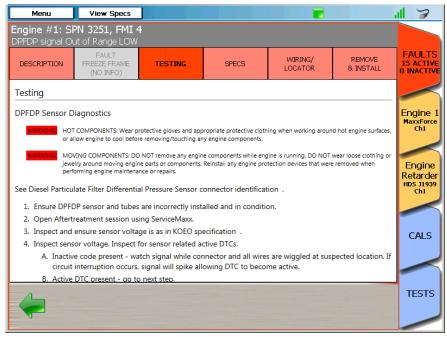


Figure 6.10 Information for a Specific Test

3 Touch the screen and drag your finger up to move down the page.

#### Additional information is revealed.

Menu View S	pecs				ul 🍃
Engine #1: SPN 3251, DPFDP signal Out of Range			_	-	
DESCRIPTION FREEZE FR (NO INF	RAME TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
Sensor Circuit Inspection					
With sensor breakout harness active (use EST with ServiceMa Multimeter. DPFDP SENSOR CIRCUIT	axx software) when corresp				Engine 1 MaxxForce Ch1
Test Point	Specifications	(	Comments		
EST - Inspect DTC	SPN 3251 FMI 3		SPN 3251 and FMI 4 DPFDP signal for sh		Engine Retarder
DMM - Measure voltage 3 to ground	5 ± 0.5 Volts	1	More than 5.5 Volts for short to PWR. Less than 4.5 Volts Open/short to grou	- inspect VREF for ind.	HD5 J1939 Ch1
			Inspect <u>DPFDP SEN</u> <u>RESISTANCE</u> .	SOR HARNESS	CALS
EST - Inspect DTC Short breakout harness across 3	SPN 3251 2 and FMI 4		SPN 3251 and FMI 3 DPFDP signal for O <sub>I</sub> Inspect <u>DPFDP SEN</u>	pen.	
<b></b>					TESTS

Figure 6.11 Additional Test Information Revealed

4 Touch the internal hyper-link (e.g., **DPFDP SENSOR HARNESS RESISTANCE**).

Touching the hyper-link jumps you down the page to the specific information.

The **DPFDP SENSOR HARNESS RESISTANCE INSPECTION** information is displayed.

	AULT		WIRING/	REMOVE	FAU
	ZE FRAME <b>TESTING</b>	SPECS	LOCATOR	& INSTALL	15 AC 0 INA
2 to ground	More than 1 k ohm		Upen. Less than 1 k ohm -	inspect for short	
L to ground			to ground.	inspection short	
3 to ground	More than 1 k ohm		Less than 1 k ohm -	inspect for short	Engi
			to ground.		Ch
With ignition turned OFF, disconnected, inspect res	pection breakout box (180-terminal) and b istance using Digital Multimeter. NESS RESISTANCE INSPECTIO	preakout harnes		ECM and sensor	Eng Retar HDS 3:
disconnected, inspect res	breakout box (180-terminal) and b istance using Digital Multimeter.	oreakout harnes: DN		ECM and sensor	Eng Retai HDS J
With ignition turned OFF, disconnected, inspect res	breakout box (180-terminal) and b istance using Digital Multimeter. NESS RESISTANCE INSPECTIO	oreakout harnes DN	s 4761A connected,		Eng Retai HDS J Ch
With ignition turned OFF, disconnected, inspect res DPFDP SENSOR HAR Test Point	breakout box (180-terminal) and b istance using Digital Multimeter. NESS RESISTANCE INSPECTIO Specifications	oreakout harnes: DN	s 4761A connected, Comment More than 5 Ohms	- inspect SIG GND - inspect DPFDP	Eng Retai HDS J Ch
With ignition turned OFF, disconnected, inspect res DPFDP SENSOR HAR Test Point 1 to C-05	breakout box (180-terminal) and b istance using Digital Multimeter. NESS RESISTANCE INSPECTIO Specifications Less than 5 Ohm	oreakout harnes DN	s 4761A connected, Comment More than 5 Ohms circuit for Open. More than 5 Ohms signal circuit for Op More than 5 Ohms	- inspect SIG GND - inspect DPFDP en.	Eng Retai HDS J Ch
With ignition turned OFF, disconnected, inspect res DPFDP SENSOR HAR Test Point 1 to C-05 2 to C-51	breakout box (180-terminal) and b istance using Digital Multimeter. NESS RESISTANCE INSPECTIO Specifications Less than 5 Ohm Less than 5 Ohm	oreakout harnes DN	s 4761A connected, Comment More than 5 Ohms circuit for Open. More than 5 Ohms signal circuit for Op	- inspect SIG GND - inspect DPFDP en.	Eng Retai HDS J Ch

Figure 6.12 DPFDP SENSOR HARNESS RESISTANCE INSPECTION

- 5 When you have finished viewing the information for this test, you can:
  - -Touch the green **Back Arrow** to go back to the list of tests (Figure 6.9).
  - —Touch the **FAULTS** tab to go back to the list of faults (Figure 6.1).
  - -Select another Repair-Connect tab to view more information about the currently selected fault.

## The SPECS Tab

To use the SPECS tab:

1 Touch the red **FAULTS** tab to go back to the list of faults.

Menu View Specs		all 7
ACTIVE - 15	INACTIVE - 0	
Engine #1 - MaxxForce - Ch1 FVCV Open Load/circuit	NO INACTIVE FAULTS	FAULTS 15 ACTIVE 0 INACTIVE
Fuel Volume Control Valve 0 % SPN 1244 - FMI 5 - Active		-
Engine #1 - MaxxForce - Ch1		Engine 1 MaxxForce
DPFOT Signal out of Range HIGH		Ch1
DPF Outlet Temperature Sub-System Error SPN 3246 - FMI 3 - Active		Engine
Engine #1 - MaxxForce - Ch1		Retarder HDS J1939
DPFDP signal Out of Range LOW		Chi
DPF Differential Pressure 0.15 psi SPN 3251 - FMI 4 - Active		
Gridest Trait Hears		CALS
Up Down	Up Down	
	Clear All Faults	TESTS

Figure 6.13 Diagnostics Menu

2 Use the **Up** button to move up the list of faults.

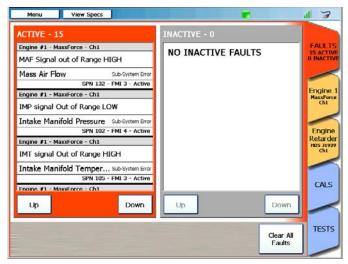


Figure 6.14 Further Down the List of Faults

3 Select a different fault (e.g., MAF Signal out of Range HIGH).

The **DESCRIPTION** tab is activated for the selected fault.

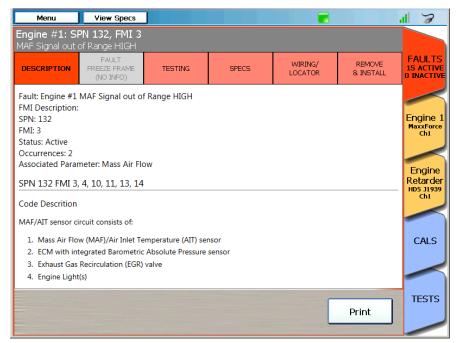


Figure 6.15 DESCRIPTION Tab Activated

4 Touch the SPECS tab to view specifications for the selected fault (i.e., MAF Signal out of range HIGH).

#### The **SPECS** tab is activated.

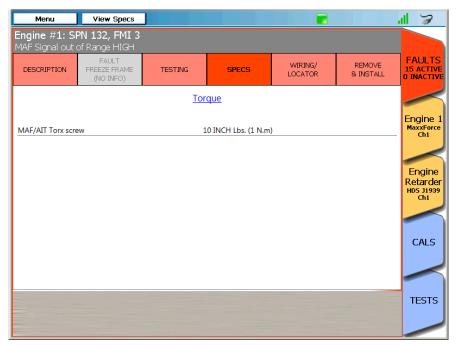


Figure 6.16 SPECS Tab Activated

- 5 When you have finished viewing the information, you can:
  - —Touch the **FAULTS** tab to go back to the list of faults (Figure 6.1).
  - -Select another Repair-Connect tab to view more information about the currently selected fault.

## The WIRING/LOCATOR Tab

The WIRING/LOCATOR tab can be useful if you want to see a wiring diagram or a diagram/photograph showing the location of the component in question (e.g., a sensor).

To use the WIRING/LOCATOR tab:

1 Touch the **WIRING/LOCATOR** tab to view specifications related to the currently selected fault.

Menu	View Specs	)				all 🍃
Engine #1: SP MAF Signal out o						
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
Wiring: Syste	m Diagrams					
Wiring: MASS	5 AIR FLOW (M	AF) SENSOR				Engine 1 MaxxForce Ch1
Connector: M	ass air flow	(MAF) SENSO	R			
Locator: MAS	s air flo <b>w (</b> M	IAF) SENSOR				Engine Retarder HDS J1939 Ch1
						CALS
						TESTS

Figure 6.17 WIRING/LOCATOR Tab Activated

2 Touch the screen to select one of the wiring diagrams from the list (e.g., Wiring: MASS AIR FLOW (MAF) SENSOR).

The selected wiring diagram is displayed.

Menu	View Specs					ul 🍃
Engine #1: SI MAF Signal out	PN 132, FMI 3 of Range HIGH					
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
Component Dia	gram, MASS AIR F	LOW (MAF) SE	NSOR			
						Engine 1 MaxxForce Ch1
						- Chi
						Engine Retarder
						HDS J1939 Ch1
 	AIT  ) <sup>69</sup> NCA				N	
	AF GND  )75 NCA MAF  )76 NCA MAF  )76 NCA R1 GND  )7 NCA	<b>^</b>			N	CALS
	<sup>´E</sup> CONTROL	•	ENGINE/CHASSIS MATING C	INTERFACE ) <sup>16</sup> NC/	+	
4					Print	TESTS

Figure 6.18 Wiring Diagram

3 Use the minus (-) sign button to zoom out (i.e., make the image smaller).

Menu	View Specs					al 🍃
	PN 132, FMI 3 of Range HIGH					
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULT: 15 ACTIV 0 INACTIV
Component Dia	gram, MASS AIR F	FLOW (MAF) SEN	NSOR			
						Engine MaxxFor Ch1
						Engin Retard
						HDS J193 Ch1
	AIT 1) MAE GND 75 N	CA CA			NCA A	
		<u>CA</u> •	ENGINE/CHASSIS INT MATING CONF	ERFACE 16 NCA	NCA C NCA B NCA D	CALS
	ENGINE CONTROL MODULE (ECM)		MATING CON	NECTOR '	- ( +	
4					Print	TESTS
					Print	

Figure 6.19 Zoomed Image

4 Touch and drag to position the diagram in the center of the screen.

The image is now in the center of the screen.

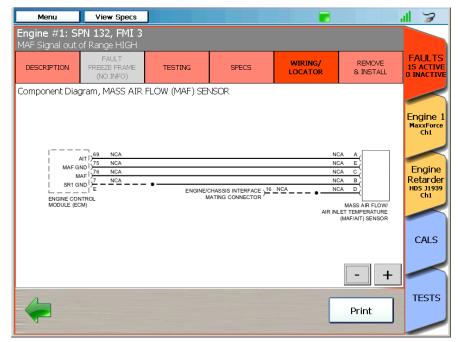


Figure 6.20 Diagram Centered on the Screen

### NOTE:

A

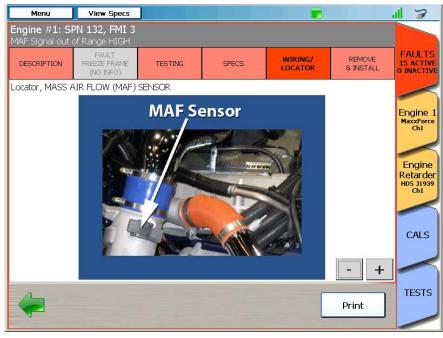
It can be helpful (especially with large and complex wiring diagrams) to position the image in the center of the screen prior to printing it as only the current screen view will print. To do so, touch the screen and drag your finger to position the image.

- 5 (optional) Touch Print to send the current screen view to the printer.
- 6 Use the green **Back Arrow** to return to the list of wiring diagrams.

Menu	View Specs	]				al 🍃
Engine #1: SI MAF Signal out	PN 132, FMI 3 of Range HIGH		_			
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
Wiring: Syste <sup>5 images</sup>	em Diagrams					
Wiring: MASS	s air flow (m	AF) SENSOR				Engine 1 MaxxForce Ch1
Connector: M	iass air flow	(MAF) SENSO	R			
Locator: MAS	65 air flow (M	1AF) SENSOR				Engine Retarder HDS J1939
						Ch1
						CALS
						TESTS

Figure 6.21 WIRING/LOCATOR Tab Activated

7 Touch the screen to select Locator: MASS AIR FLOW (MAF) SENSOR to view a diagram/photograph of the sensor.



The diagram/photograph is displayed.

Figure 6.22 Locator Diagram/Photograph

- 8 Use the plus (+) and minus (-) sign buttons to zoom in and out.
- 9 (optional) Touch Print to send the current screen view to a printer.
- 10 At this point you can:
  - —Use the green **Back Arrow** to return to the list of wiring diagrams (Figure 6.21).
  - -Touch the FAULTS tab to go back to the list of faults (Figure 6.1).
  - -Select another Repair-Connect tab to view more information about the currently selected fault.

## The REMOVE & INSTALL Tab

The REMOVE & INSTALL tab provides access to removal and installation procedures.

To use the REMOVE & INSTALL tab:

1 Touch the **REMOVE & INSTALL** tab to view specifications related to the currently selected fault.

Menu	View Specs					ul 🍃
Engine #1: SI MAF Signal out	PN 132, FMI 3 of Range HIGH		_	_		
DESCRIPTION	FAULT FREEZE FRAME (NO INFO)	TESTING	SPECS	WIRING/ LOCATOR	REMOVE & INSTALL	FAULTS 15 ACTIVE 0 INACTIVE
R&I: Engine	Control Module	(ECM)				$\triangleleft$
R&I: MASS A	IR FLOW (MAF	) SENSOR				Engine 1 MaxxForce Ch1
						Engine Retarder HDS J1939 Ch1
						CALS
						TESTS

Figure 6.23 REMOVE & INSTALL Tab Activated

2 Touch the screen to select R&I: MASS AIR FLOW (MAF) SENSOR.



The removal and installation instructions are displayed.

Figure 6.24 Sample Removal Instructions

3 Touch and drag your finger up to move down the instruction.

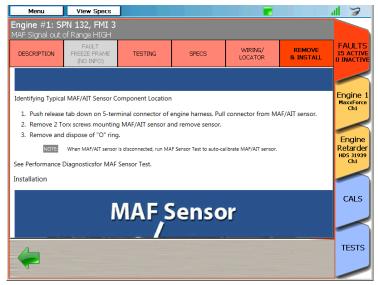


Figure 6.25 Sample Additional Information

4 Use the green **Back Arrow** to go back to the list of instructions (Figure 6.23).

- 5 At this point you can:
  - —Touch the **FAULTS** tab to go back to the list of faults (Figure 6.1).
  - -Select another Repair-Connect tab to view more information about the currently selected fault.

# Chapter 7

## Utilities



- ▼ Utilities Overview, page 204
- ▼ Record Mode, page 205
- 🔻 Playback Mode, page 211

This chapter provides information on using  $\text{PRO-LINK}^{\textcircled{R}}$  Ultra utility features Record Mode and Playback Mode.

### NOTE:

Screen shots used throughout this manual are for illustrative purposes only. All data shown is fictitious in nature.

## **Utilities Overview**

The PRO-LINK<sup>®</sup> Ultra has a number of utilities that can be useful when used in conjunction with Quick Lists (for comparing parameters from different parameter categories or different modules). They include:

- Record Mode (pg. 205)
- Playback Mode (pg. 211)

### NOTE:



For information on creating reports, setting up a printer, or printing a report, refer to the following topics in this manual:

- --- "Creating a Report" in Chapter 4: Using the Diagnostics Menu.
- --- "Managing Printers" in Chapter 5: Using the Admin Menu.
- --- "Managing Saved Reports" in Chapter 5: Using the Admin Menu.

## **Record Mode**

You can record live vehicle data manually for playback at a later time. When you record off the PRO-LINK<sup>®</sup> Ultra, you are creating a file containing parameter information taken from a live connection—a recording taken on a particular date and for a particular vehicle identification number (VIN).

You can save *only one* recording file at a time. If you begin a new recording and the previous recording still exists, the PRO-LINK<sup>®</sup> Ultra asks you if you want to record *over* the previously saved recording file.

The Record Mode button is on each individual PARAMETERS tab screen. Record Mode can assist you in diagnosing vehicles with intermittent problems, as you can quickly refer back to the recording to help diagnose problems.

To launch Record Mode:

Menu	View S	ipecs			ul 🌫
View Quick I	List	Add to Quick List	Parameter	Value	FAULTS
General Engine	Data		Accelerator Pedal Position 1	Sub-System Error	10 ACTIVE 0 INACTIVE
Fuel Data			Engine IAT	Sub-System Error	Engine 1
Emission Da	ata		Engine Demand - Percent T	0 %	HD5 J1939 Ch1
Hard Start No	Start		Engine Speed	0 rpm	
White Smol	ke		Fan Drive State	Fan Off	CALS
Low Power no I	Power		Engine Injection Control Pre	Sub-System Error	$\sim$
SmartWay	·		Engine Intake Air Mass Flow	0 lb/h	TESTS
Pressures	;		Engine Intake Manifold 1 Te	Sub-System Error	
View Categor 9 - 16 of 2		Grapi Page	Page 1 of 2		

1 Start on the **PARAMETERS** tab:

Figure 7.1 List of Parameters

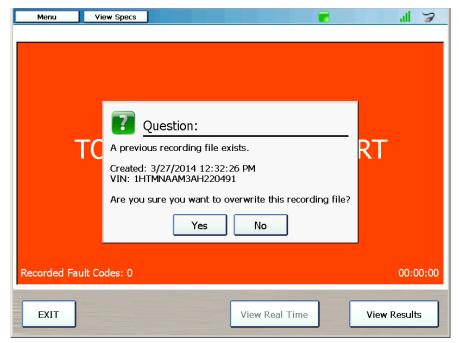
2 Touch the **Record Mode** button to create a recording of all the available parameters for the current diagnostic session.



The Record Mode screen is displayed.

Figure 7.2 Record Mode Screen

3 Touch the screen to start recording.



If a previous recording file exists, the following screen is displayed.

Figure 7.3 Overwrite Existing File Question

4 Touch **Yes** to overwrite the previous recording and start a new one.



The red screen message changes to "Touch Screen to Take Bookmark."

Figure 7.4 Now Recording Screen

#### NOTE:

**(1)** 

A bookmark is a "place holder" in the recording file where you will be able to jump to while in Playback Mode. The message "Bookmark Taken" is displayed briefly a bookmark is created.

For information on Playback Mode, refer to *Playback Mode*, next in this chapter.

5 Touch one of the three buttons at the bottom of the screen (see the table on the next page for a description of what each of the buttons does).

These buttons are on the Now Recording screen (Figure 7.4).

Button	What it does		
STOP	<ul> <li>Ends a recording (you need to confirm that you want the recording to end).</li> <li>Returns you to the Record Mode screen (Figure 7.2).</li> <li>Changes to EXIT once you stop the recording; the EXIT button takes you back to the list of parameters (Figure 7.1).</li> </ul>		
View Real Time	<ul> <li>Warning: Not recommended if you are operating the vehicle.</li> <li>Enables you to view a graph of the selected parameters while the recording file as it is being recorded. You can take a bookmark in Real Time.</li> <li>A number of buttons are available:</li> <li>Change Parameters—takes you to the Select a Category screen. This gives you the ability to change both the category of parameters and/or the parameters you want to view. You can also create a Quick List and view playback for only the parameters on the list. Touch View Results to return to return to the Real Time view.</li> <li>Note: All parameters are being recorded even though they are not currently viewed.</li> <li>Green Back Arrow—takes you back to the Record Mode screen (the recording is still in progress).</li> </ul>		
View Results	<ul> <li>Enables you to review in Playback Mode the recording you created.</li> <li>You must confirm that you want to stop the recording prior to viewing results.</li> <li>A number of buttons are available:         <ul> <li>Rewind—enables you to rewind to the start of the recording.</li> <li>Play—starts the recording. Changes to the Pause button once the playback begins.</li> <li>Previous Bookmark and Next Bookmark—enable you to jump from one bookmark to the next.</li> <li>EXIT—takes you back to the Record Mode screen (Figure 7.2).</li> </ul> </li> </ul>		

6 Touch **STOP** to stop recording.

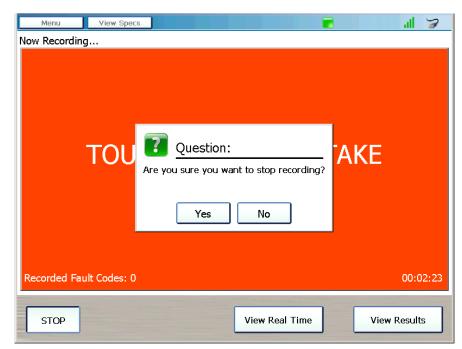


Figure 7.5 Are you sure? Message

7 Touch Yes to confirm that you want to stop recording.

The Record Mode screen is displayed (Figure 7.2).

8 Touch **EXIT** to return to the list of parameters (Figure 7.1).

## **Playback Mode**

Playback Mode can be accessed in two ways:

- By touching the **Play Recording** button on the Main Menu.
- By touching the **View Results** button on the Record Mode screen (Figure 7.2).

The recording file plays back at a rate which simulates the rate at which it originally came from the vehicle bus.

#### NOTE:

For information on accessing Playback Mode from Record Mode, refer to *Record Mode* on page 205 and the table on page 209.

To play back a existing recording:

1 Start at the Main Menu.

* 3	
HD Scan	
Manual Scan	
LMT	
Play Recording	
Admin	
Demo Mode	

Figure 7.6 Main Menu

2 Select Play Recording.

			·11 🍃
Change Paramet	ters		
Turbo Exhaust Te	N/A		
Boost Pressure	Sub-System Error		
Manifold Air Tem	Sub-System Error		
VGT Ctrl	10 %		
VGT Ctrl Offset	0%		
Boost Pressure E	15.72 psi		
Exit		Start Rewind Play	0:00 / 15:58 Previous Next Bookmark Bookmark

The Playback Mode screen is displayed.

Figure 7.7 Playback Mode Screen

The PRO-LINK<sup>®</sup> Ultra keeps you current on the progress of the playback session. You use the following buttons to:

• Change Parameters—go to the Select a Category screen.

This gives you the ability to change both the category of parameters and/ or the parameters you want to view. You can alsocreate a Quick List and view playback for only the parameters on the Quick List. Touch **View Results** to return to return to the Playback Mode screen (Figure 7.7).

- Exit—go back to the Main Menu (Figure 7.6).
- Rewind—rewind to the start of the recording.
- **Play**—start the recording; changes to the **Pause** button once the playback begins.
- **Previous Bookmark**—jump back to the previous bookmark.
- Next Bookmark—jump forward to the next bookmark.
- 3 When you are finished playing the recording, touch **Exit** to go back to the Main Menu (Figure 7.6).