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8.4   Operations

This section describes configuring the scope or meter and performing tests.

8.4.1 Starting the Scope and Multimeter

Use the following procedure to set up the scope multimeter for performing tests.

▶ **To start the scope multimeter:**

1. Select the **Scope Multimeter** icon on the Home screen.

   The Scope Multimeter main menu, a list of setup options, displays;
   – Lab Scope
   – Ignition Scope
   – Graphing Meter
   – Digital Multimeter
   – Presets

2. Select from the menu options.

   A submenu of scope or meter configuration displays, see below for additional information.

3. Select a configuration and the Scope Multimeter opens.

Presets

Presets are factory configured meter settings for common component tests. Selecting opens a list of available setups. Selecting from the list opens the scope multimeter configured to perform the selected test. In addition to the factory presets, you can create your own custom meter configurations and save them as presets.

Lab Scope Options

The following options are available for testing:

- 4 Channel Lab Scope
- Volts DC
- Low Amps (20)
- Low Amps (40)
- Low Amps (60)
- Ignition Probe
- 100 PSI Vacuum
- 100 PSI Pressure
- 500 PSI Pressure
- 5000 PSI Pressure

Ignition Scope Options

The following options are available for testing:

- Parade
- Cylinder
- Raster
- Superimposed
- Single Cylinder Ignition

Graphing Options

The following options are available for testing:

- 4 Channel Graphing
- Volts DC
- Volts DC Average
- Volts AC RMS
- Ohms
- Frequency
- Pulse Width
- Injector Pulse Width
- Duty Cycle
- Low Amps (20)
- Low Amps (40)
- Low Amps (60)
- MC Dwell (60)
- MC Dwell (90)
- 100 PSI Vacuum
- 100 PSI Pressure
- 500 PSI Pressure
- 5000 PSI Pressure

Digital Multimeter Options

The following options are available for testing:

- Volts DC
- Volts DC Average
- Volts AC RMS
- Ohms
- Diode/Continuity
- Low Amps (20)
- Low Amps (40)
- Low Amps (60)

8.4.2 Measurement Out of Range

A group of arrows display when a measurement is out of range for the scale selected:

- Arrows pointing UP—measurement over maximum range
- Arrows pointing DOWN—measurement under minimum range

Voltage measurements also display arrows in place of live values when the voltage exceeds the input rating of the meter.

⚠ **WARNING**

Risk of electrical shock.
- **Do not exceed voltage limits between inputs as indicated on the rating label.**
- **Use extreme caution when working with circuits that have greater than 40 volts AC or 24 volts DC.**
Electrical shock can cause personal injury, equipment damage, or circuit damage.

IMPORTANT:
If arrows are displayed in the live voltage values, discontinue circuit testing.

Correct an out-of-range condition by selecting a scale setting appropriate for the signal being sampled. See "Trace Controls" on page 99 for more information.

8.4.3 Scope and Multimeter Setup

The following sections explain how to adjust the scope and multimeter for the specific type of signal being sampled. Most of these setup operations are available from the toolbar.

Trace Controls

The Trace controls are used to adjust individual characteristics of how the signal is sampled and displayed for each of the four traces.

▶ **To adjust trace controls:**

1. Select **Setup** from the Scope Multimeter toolbar.
    The Scope Multimeter Preferences dialog box opens.
2. Select **Traces** to open the submenu.
3. Select the trace to be configured from the submenu.
    The traces dialog box displays (Figure 8-16).
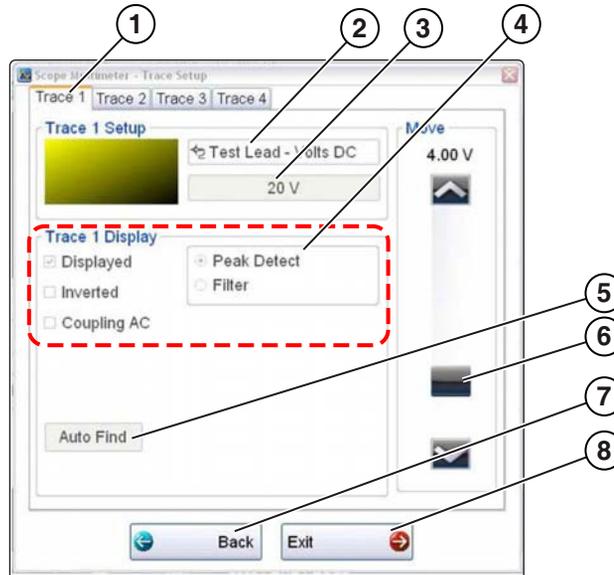
1— **Trace tabs**
2— **Trace Probe icon**
3— **Trace Scale icon**
4— **Trace characteristics check boxes**
5— **Auto Find icon**
6— **Baseline position**
7— **Back icon**
8— **Exit icon**

Figure 8-16 *Traces dialog box*

4. Select the **Trace Probe** icon to open the menu.
5. Highlight a probe on the list and select **OK** to close the window.
6. Select the **Trace Scale** icon to adjust the vertical scale of the display.
   A dropdown menu opens. Menu options vary depending upon which test lead is selected.
7. Select a trace scale option, then close the window.
8. Select or deselect the trace characteristic items as needed:
   – **Displayed**—this trace is on screen when checked, and not visible when not checked.
   – **Inverted**—signal polarity is reversed when checked, normal when not checked.
   – **Coupling AC**—check when sampling an AC signal, uncheck for DC signals.
   – **Peak Detect**—use when trying to capture a fast event or signal glitch.
   – **Filter**—use when radio frequency interference (RFI) may be disrupting the signal.
9. The scope samples the signal and internally calculates the best way to display it when **Auto Find** is selected. A scale and the vertical position for the zero line of the trace that allows the whole waveform to fit on the screen is established when Auto Find is selected. If Auto Find is selected on the trigger channel, it also sets the trigger level halfway between the minimum and maximum value of the sampled signal to provide a stable waveform.
10. The baseline position is the zero line of the trace, use the slider and arrows to adjust it.
11. Select **Back** to return to the Preferences dialog box, or select **Exit** to close the dialog box and return to the scope.

Sweep Controls

Sweep is the amount of time represented by the screen, or the horizontal scale of the display.

▶ **To adjust Sweep controls:**

1. Select **Setup** from the Scope Multimeter toolbar.

    The Scope Multimeter Preferences dialog box opens.

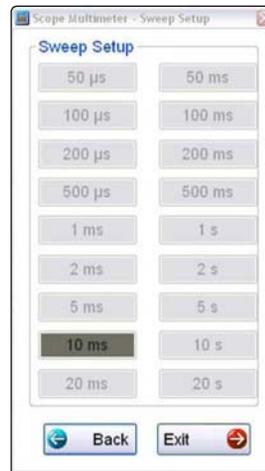2. Select the **Sweep** icon to open the sweep dialog box (Figure 8-17)

Figure 8-17 *Sample Sweep Setup dialog box*

3. Choose an option from the list.

4. Select **Back** to return to the Preferences dialog box, or select **Exit** to close the dialog box and return to the scope.

Trigger Controls

Triggering allows you to set the scope so that it only begins displaying a trace once predetermined signal conditions, or triggers, are met. The trigger point is indicated by a plus sign (+) on the scope grid. The plus sign can be dragged across the grid with the stylus to roughly position it. The trigger controls allow you to precisely position the trigger.

▶ **To adjust trigger controls:**

1. Select **Setup** from the Scope toolbar. The Scope Multimeter Preferences dialog box opens.
2. Select **Trigger** to open the Trigger Setup dialog box (Figure 8-18).
3. Use the dialog box controls to set the trigger.
4. Select **OK** to close the dialog box.
5. Select **Back** twice to close the Scope Multimeter Preferences dialog box.
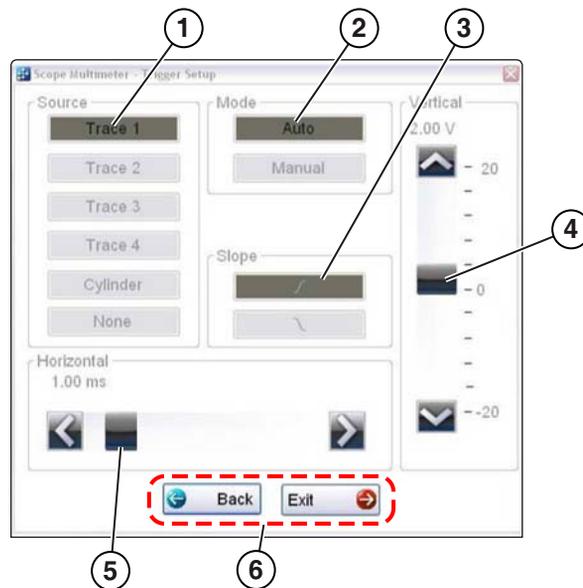
1— Source—selects the triggering event:
  - Trace 1—sets the trigger to channel 1.
  - Trace 2—sets the trigger to channel 2.
  - Trace 3—sets the trigger to channel 3.
  - Trace 4—sets the trigger to channel 4.
  - Cylinder—sets triggering to the firing of a cylinder detected by the optional RPM Pickup or Secondary Ignition Adapter.
  - None—switches triggering off.

2— Mode—sets the method of triggering:
  - Auto (automatic)—if a trigger is found, the waveform displays. If a trigger is not found after about a half second, the waveform and a "trigger not found" message displays.
  - Manual—if a trigger is found, the waveform displays. If a trigger is not found nothing displays (no waveform and no message).

3— Slope—sets triggering to the rising (top icon) or falling (lower icon) slope of the signal waveform.

4— Vertical position—moves the trigger position up and down on the grid.

5— Horizontal position—moves the trigger timing left and right on the grid

6— Select **Back** to return to the Preferences dialog box, or select **Exit** to close the dialog box and return to the scope.

Figure 8-18 *Trigger controls*

View Controls

Use the view controls to set display attributes.

▶ **To adjust view controls:**

1. Select **Setup** from the Scope Multimeter toolbar.

   The Scope Multimeter Preferences dialog box opens.

2. Select **View** to open a submenu.

3. Select an option from the submenu dialog box. Option details are explained below.

   Four options are available on the submenu:

   – **Display**—use to adjust what information displays and how it appears

   – **Layout**—use to set how many traces display and how they display on the screen

   – **Units**—use to adjust time and voltage interval settings

   – **Back**— use to return to the Preferences dialog box, or select **Exit** to close the dialog box and return to the scope.

Display Settings

Selecting **Display** from the View submenu opens the Display dialog box (Figure 8-19).
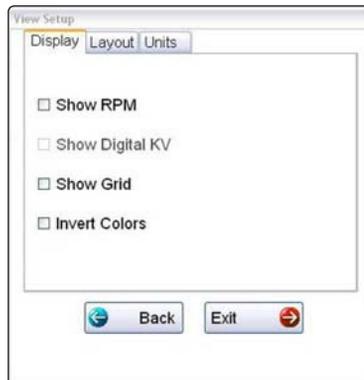

Figure 8-19 *Sample Display dialog box*

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The following options are available from the Display dialog box:

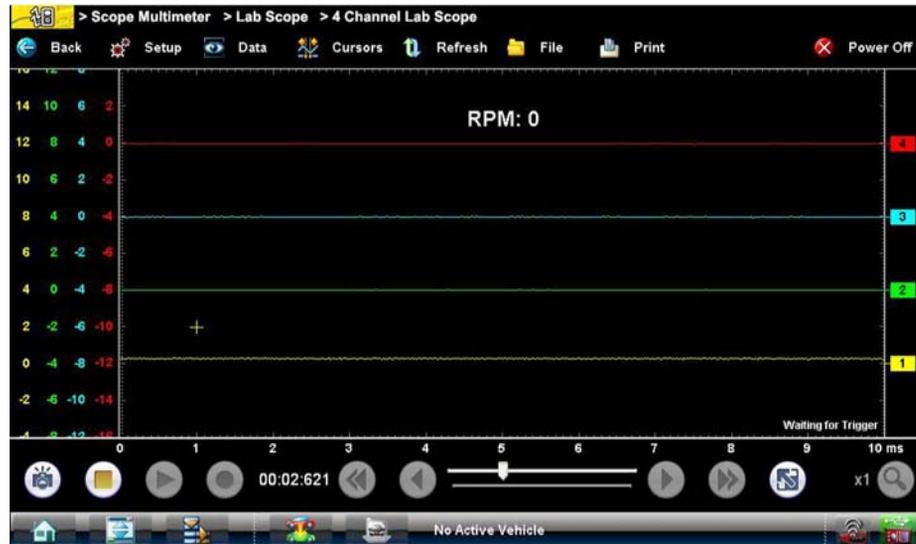- **Show RPM**—adds an engine speed field at the top of the screen (Figure 8-20).

Figure 8-20 *Sample Show RPM selected*

- **Show Digital KV**—available only in ignition scope, displays digital kilovolt readings, rather than waveforms, on the screen (Figure 8-21).

Figure 8-21 *Sample Show Digital KV selected*

- **Show Grid**—switches grid lines on the screen off and on (Figure 8-22).

Figure 8-22 *Sample grid selected*

- **Invert Colors**—switches the screen background to white.

Layout Settings

The selected radio knob on the Layout dialog box shows which setting is active. Use your finger or the stylus to switch between settings:

- **1 window**—shows all traces on the same screen (Figure 8-22).
- **2 windows**—shows two separate traces in two ways: horizontal, one below another (Figure 8-23) or vertical, side-by-side (Figure 8-24).
- **3 windows**—shows three traces, one below another, on the same screen (Figure 8-25).
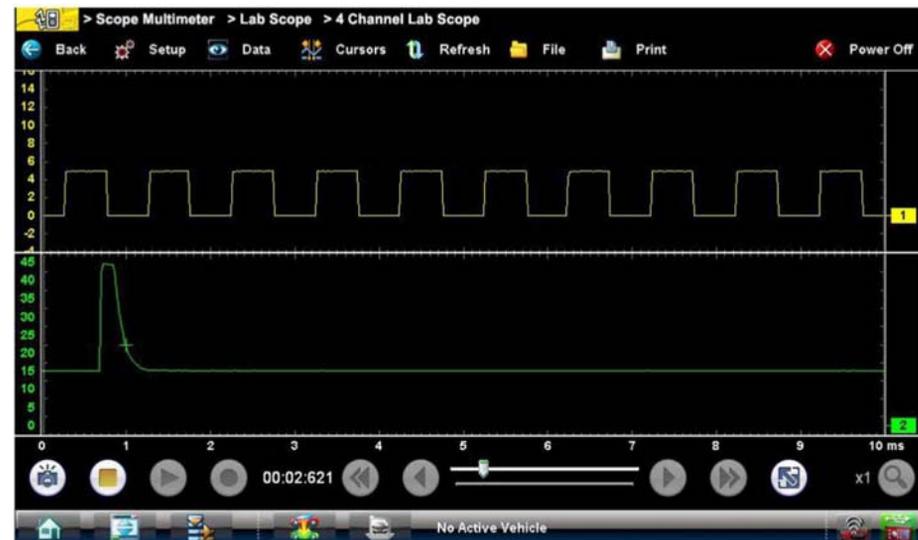- **4 windows**—shows four traces, one below another, on the same screen.

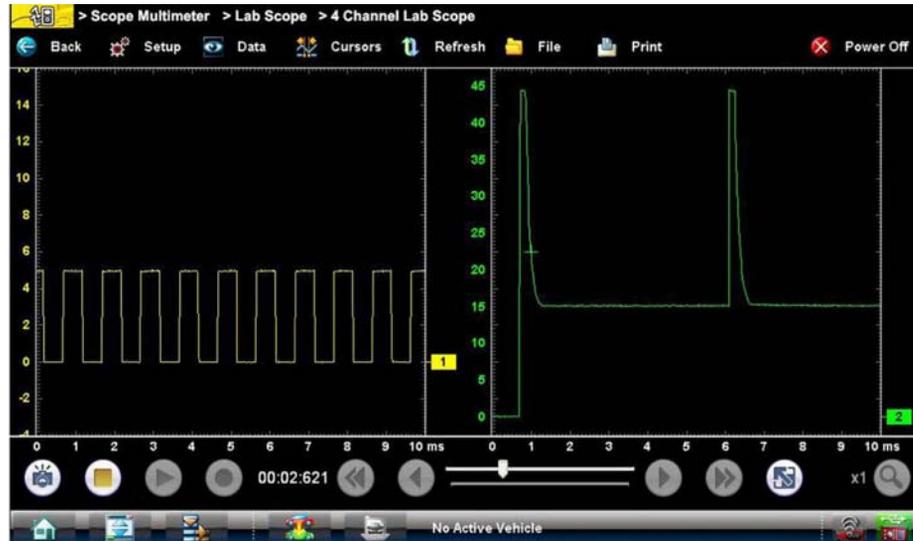

Figure 8-23 *Sample 2 Windows horizontal display*

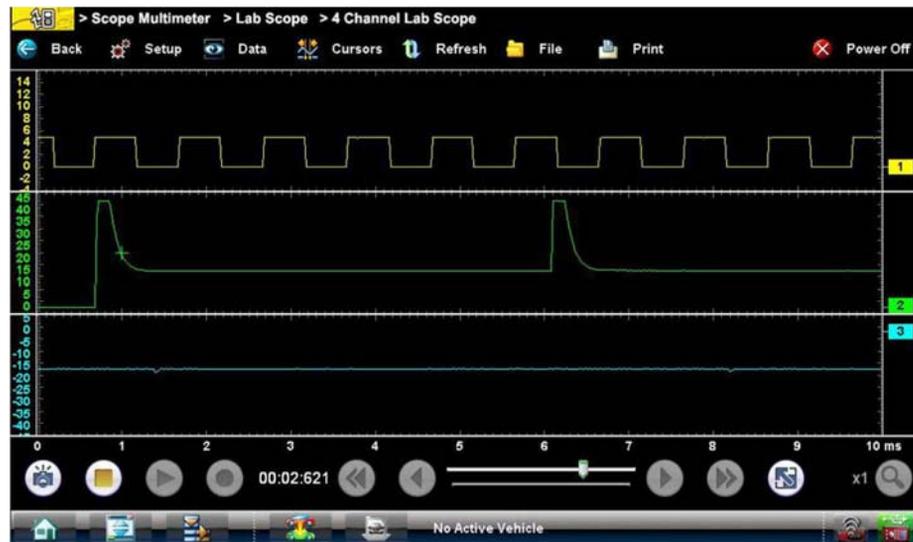**Figure 8-24** *Sample 2 Windows vertical display*

Figure 8-25 *Sample 3 Windows display*

Unit Setup

The Unit Setup dialog box allows you to switch between Full Scale or Per Division settings for the trace setup and the display settings. Selecting Full Scale configures the units to the full viewing area of the screen, while Per Division adjusts the units to a single division (one tenth) of the screen.

The selected radio knob on the Units dialog box shows which setting is active. Use your finger or the stylus to switch between settings (Figure 8-26).
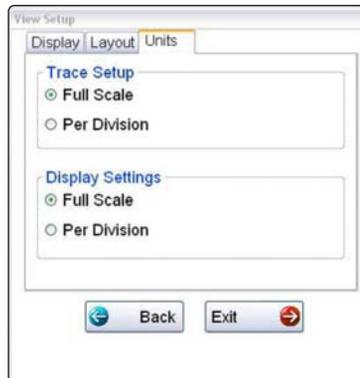

Figure 8-26 *Sample View Units dialog box*

Setup Controls

Basic tool settings are adjusted here.

▶ **To adjust setup controls:**

1. Select **Setup** from the Scope Multimeter toolbar.

    The Scope Multimeter Preferences dialog box opens

2. Select **Setup** from the dialog box.

    A submenu of options displays:

    – **Back**—use to return to the Preferences dialog box.
    – **Units**—use to set how measurement values display, US standard or metric.
    – **Snapshot**—use to adjust the percentage of data captured following a trigger event.
    – **Ignition**—use to configure the ignition scope for the test vehicle.

    Selecting from the submenu opens a dialog box for that item. Dialog box options for each item are discussed in the following sections.

3. Make dialog box selections as needed.

4. Select **Exit** to close the dialog box and return to the scope.

Units

Selecting Units opens the Setup dialog box. The units of measurement can be changed between US customary or metric. The selected radio knobs on the Setup dialog box show which settings are active (Figure 8-27).
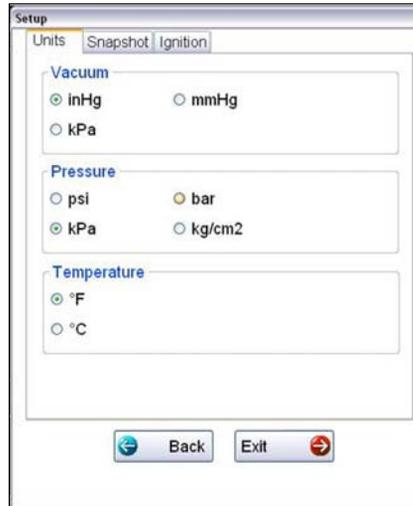

Figure 8-27 *Sample Setup Units dialog box*

Abbreviation	Description
bar	bar
inHg	inches of mercury
kg/cm2	kilograms per centimeter squared
kPa	kilopascal
mmHg	millimeters of mercury
psi	pounds per square inch

Snapshot

The Snapshot tab of the Setup dialog box opens a window that allows you to select how much data is captured after a snapshot is triggered (Figure 8-28). Available selections, which range from ten to ninety percent in ten-percent increments, are shown as icons with the current setting highlighted. Select a icon, then select **Back** or **Exit** to close the dialog box.
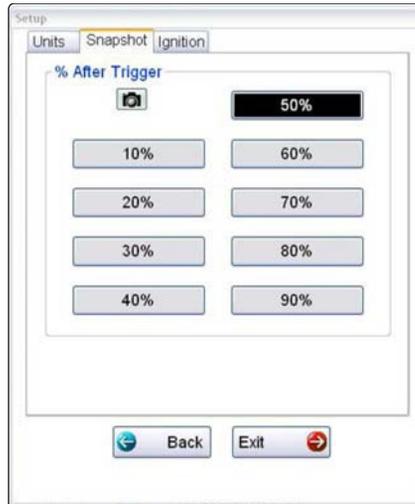
Figure 8-28 *Sample Snapshot dialog box*

Refer to Trigger Controls on page 102 for information on how to setup a trigger.

Ignition

The Ignition tab of the Setup dialog box is used to configure the scope for displaying secondary ignition patterns. There are two main selection fields (Type and Cylinders) and the fields vary depending upon the type of ignition system selected in dialog box (Figure 8-29).

Figure 8-29 *Sample Setup Ignition dialog box*

▶ **To setup Ignition tests**

1. Select the **Setup** icon to open the Setup dialog box.
2. Select the **Ignition** tab of the dialog box.
3. Highlight the ignition system for the test vehicle in the "Type" field:
   - **Standard**—use for systems with a distributor
   - **Waste Spark**—use for coil pack systems that fire 2 plugs simultaneously
   - **Direct**—use for coil-on-plug systems
   - **Other**—use for systems that do not fit any of the above categories
4. Select the number of cylinders for the test vehicle in the "Cylinders" field.
   Scroll through the list using the up and down arrows on either side of the number.
5. This step varies depending upon the type of ignition system:
   - If testing a Standard system, select the Firing Order.
   - If testing an Other system, select the RPM Factor.
     Scroll through the list of available choices using the up and down arrows below the displayed firing order or RPM factor.
6. This step also varies depending upon the type of ignition system:
   - On a Standard or Direct system, choose between Coil and Plug for the Number 1 Trigger.
   - On a waste Spark system, select the polarity of the firings using the +, –, and arrow icons.
7. Select **Back** to return to the Preferences dialog box, or select **Exit** to close the dialog box and return to the scope.

Data

The **Data** icon on the toolbar switches the trace details information at the base of the screen through three states as previously explained in Trace Details on page 94.

Cursor Controls

Select **Cursors** from the toolbar to open the Cursors dialog box (Figure 8-30).
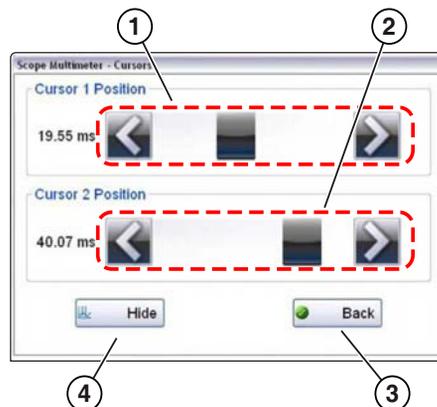
1— Cursor 1 controls
2— Cursor 2 controls
3— Show or Hide icon
4— Back icon

Figure 8-30 *Cursor controls*

Cursor 1, the top slider and arrows, is the left-hand cursor on the screen. Cursor 2, the lower set of controls, is the right-hand cursor on the screen. Drag the slider or select the arrows to position the cursors. Each tap of the stylus moves the cursor incrementally in the direction of the arrow.

Select **Show** to display the cursors (the icon changes to Hide).

Select **Hide** to conceal the cursors (the icon changes to Show).

Select **Back** to close the dialog box.

Refresh Controls

Selecting the **Refresh** icon from the Scope Multimeter Toolbar clears the minimum and maximum digital values and updates the viewing screen.

File Controls

Selecting **File** from the toolbar opens a dialog box with a menu of save options:

- **Save Configuration**—saves the current setup values as a preset.
- **Save Single Frame**—saves the data currently on the screen only.
- **Save All Frames**—saves the current screen plus all the data stored in the buffer.

▶ **To save a file or configuration:**
1. Select **File** from the toolbar.
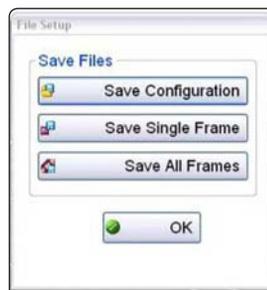2. Select a save option from the dialog box.

Figure 8-31 *Sample file setup dialog box*

The Save As dialog box and the virtual keyboard open.

3. Use the keyboard to name the file to be saved, then either select the **Save** icon or select **return** on the keyboard.

A configuration description dialog box opens.

ℹ️ **NOTE:**
The description entered here is what displays in the information panel of the Data Manager.

4. Use the keyboard to enter a description of the file to be saved.
5. Select the **OK** icon or select **return** on the keyboard.
6. Select **OK** to close the file setup dialog box.

Once a configuration is saved, it becomes available as a preset. Files are saved to the Scope Multimeter Data Folder and can be retrieved through the **Data Manager**.

Print Controls

Selecting Print from the toolbar opens a standard Windows Print dialog box set up to print the current screen. A printer must be connected and setup on the Diagnostic Tool. If not, the "Add Printer Wizard" opens and guides you through the procedure. Select from the menus as needed.

Repair Information Operations

After using the Scanner, Guided Component Test, and Scope Multimeter to diagnose and locate the source of a problem, select **Repair Information** on the Home screen to link to resources that help you fix the problem and get the vehicle back in service (Figure 9-1).

Figure 9-1 *Sample Home screen Repair Information icon*

ShopKey® Pro and ProDemand® subscriptions are available as an option for North America. An internet connection is required. When installed, simply select the Repair Information icon on the Home screen to start the program. Refer to the on-line help within the program for additional information.

| Chapter 10 | # Technical Service Bulletins |

Selecting the Technical Service Bulletins (TSB) icons (Figure 10-1), provides the following (if available) for the identified vehicle:

- Original Equipment Manufacturer (OEM) technical service bulletins and campaigns
- National Highway Traffic and Safety Administration (NHTSA) recalls

The Technical Service Bulletins icons become active after a vehicle has been identified, see Vehicle Identification on page 39. The Technical Service Bulletins feature can be selected from the:

- **Home** screen, or
- Toolbar

**Figure 10-1** *Technical Service Bulletins Icons*

NOTE:
The Technical Service Bulletins feature is included with current Diagnostic Tool system software. To use the Technical Service Bulletins feature you must have the current software upgrade installed on your Diagnostic Tool.

Available Technical Service Bulletins are displayed in a listed order, select the desired file to display the results (Figure 10-2).

Figure 10-2 *Typical Technical Service Bulletin*

Chapter 11   Vehicle History Operations

Vehicle History refers to any work in progress, such as a repair order, estimate or invoice, that has customer, vehicle, and repair information for a vehicle in your shop. The Vehicle History is the starting point for using the Diagnostic Tool.

The Scanner and Guided Component Test software gets vehicle information from the Vehicle History, and can only start after a Vehicle History is opened.

11.1   Screen Layout

There are two main parts to the Vehicle History screen:
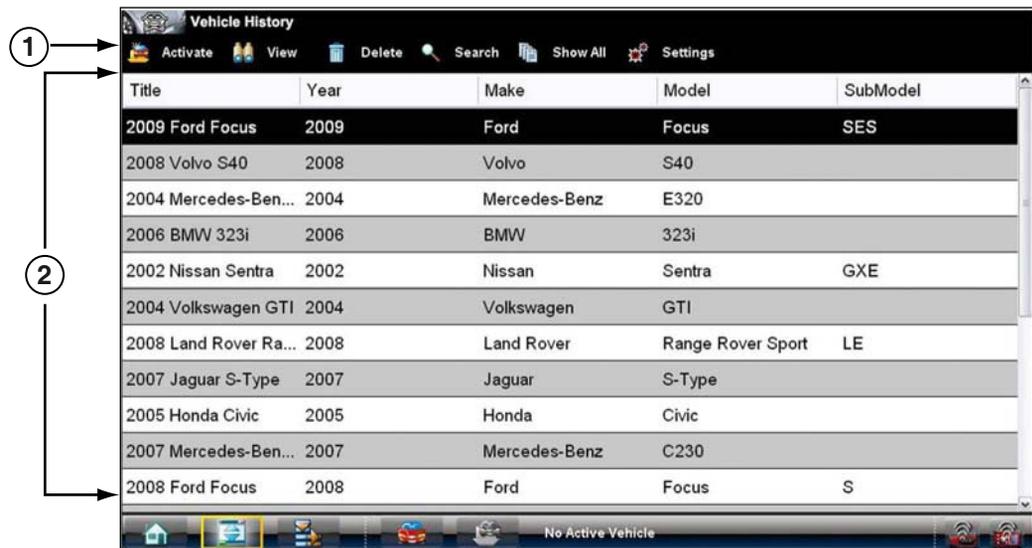
1.   **Vehicle History Toolbar**—lets you manage the vehicle data
2.   **Main Body**—lists all open Vehicle History records

Figure 11-1 *Sample Vehicle History screen*

11.1.1 Vehicle History Main Body

The main body of the screen lists all of the available Vehicle History items. By default, items are shown in the order in which they are entered. However, you can resort them by any of the categories shown as column headings. You can also resize the individual columns.

▶ **To sort Vehicle History items:**

1. Select a category heading.

   The listed items resort according to the selected category. A triangle appears alongside the name of the column that was used for the sort.

2. Select the triangle in the heading to reverse the sort order.

▶ **To resize a Vehicle History column:**
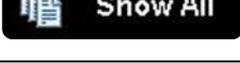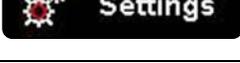
1. Select the line separating two columns.

   A line with arrowheads appears to show the column is ready for resizing.

2. Drag the line left or right to increase or decrease the column width.

11.1.2 Vehicle History Toolbar

The table below gives brief descriptions of the control icons on the toolbar:

Table 11-1 *Toolbar icons*

Name	Icon	Description
Back	Back	Returns to the previously viewed screen.
Activate	Activate	Loads the highlighted vehicle history.
View	View	Opens the worksheet for the currently highlighted vehicle history.
Delete	Delete	Erases the currently highlighted vehicle history.
Search	Search	Opens a window that allows you to locate a particular vehicle history.
Show All	Show All	Available only after a search, use to return to a complete Vehicle History list.
Settings	Settings	Opens a window that allows you to configure which fields display on main Vehicle History screen.

Activate

Use this icon to load an existing vehicle history when servicing a vehicle that you have previously worked on. The Diagnostic Tool uses the identification characteristics stored in the vehicle history to load the correct database, so there is no need to identify the test vehicle.

▶ **To activate a vehicle:**

1. Locate and highlight the desired Vehicle History in the main body of the screen.
2. Select **Activate** on the Vehicle History toolbar.

   The Activate icon is removed from the toolbar once a vehicle has been selected.
3. Select the **Home** icon on the Toolbar.

   The Home screen displays with the activated vehicle shown on the toolbar.
4. Select any Function icon on the Home screen to begin testing.

View

Use this selection to open, edit, add notes, and print the work sheet for an existing Vehicle History.

▶ **To modify an existing Vehicle History:**

1. Highlight the Vehicle History be opened in the main body of the screen.
2. Select **View** on the Vehicle History toolbar.

   The worksheet for the selected vehicle opens, and there are now Back and Save & Close icons available on the toolbar.

Figure 11-2 *Sample vehicle history worksheet*

NOTE:
The virtual keyboard automatically opens the first time you select within one of the data fields.

3. Use the virtual keyboard to enter information in the data fields.
4. Select **Save & Close** on the toolbar to save the changes you made and return to the Vehicle History screen.

   Use the **Back** icon on the toolbar to return to the Vehicle History screen without saving the changes you made.

Delete

Use the Delete icon to remove unwanted items from the Vehicle History list. Simply highlight the item to remove, then select **Delete**.

Search and Show All

Selecting Search opens a dialog box that allows you to search Vehicle History items by category. You can search for data in the following categories:

- Year
- Make
- Model
- Color
- Customer
- License
- State
- Technician

▶ **To search:**

1. Select **Search** on the Vehicle History toolbar to open the search window.
2. Select within the text field of the search window to open the virtual keyboard (Figure 11-3).
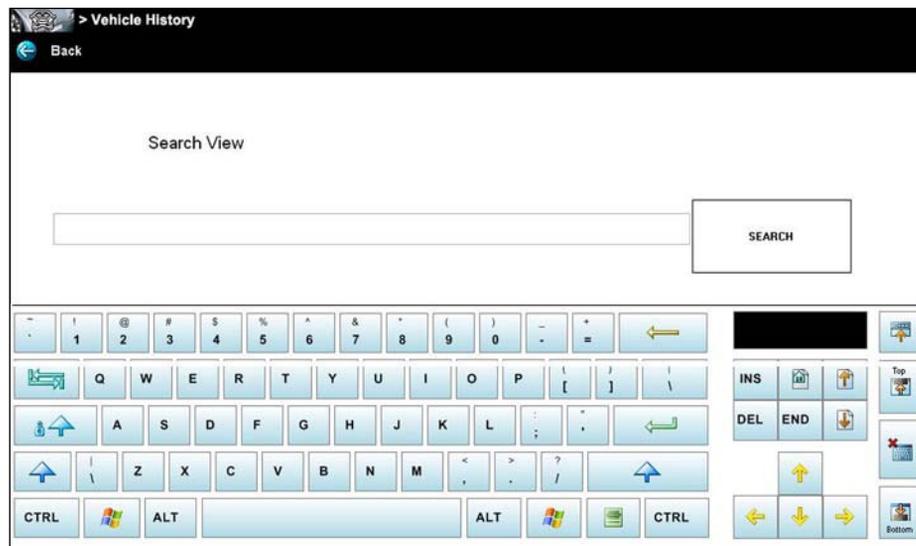
Figure 11-3 *Sample Search dialog box*

3. Enter the search criteria using the keyboard. There is no need to identify the category, just enter the search item.
4. Select **Search** twice. The first tap closes the keyboard, the second tap starts the search.

   The display returns to the Vehicle History screen with only the records fitting the search criteria showing.
5. Select **Show All** on the toolbar to restore the complete Vehicle History list.

Settings

Use Settings to determine which categories of information display in the main body of the Vehicle History screen. Selecting the Settings icon opens a dialog box.

▶ **To change Settings:**

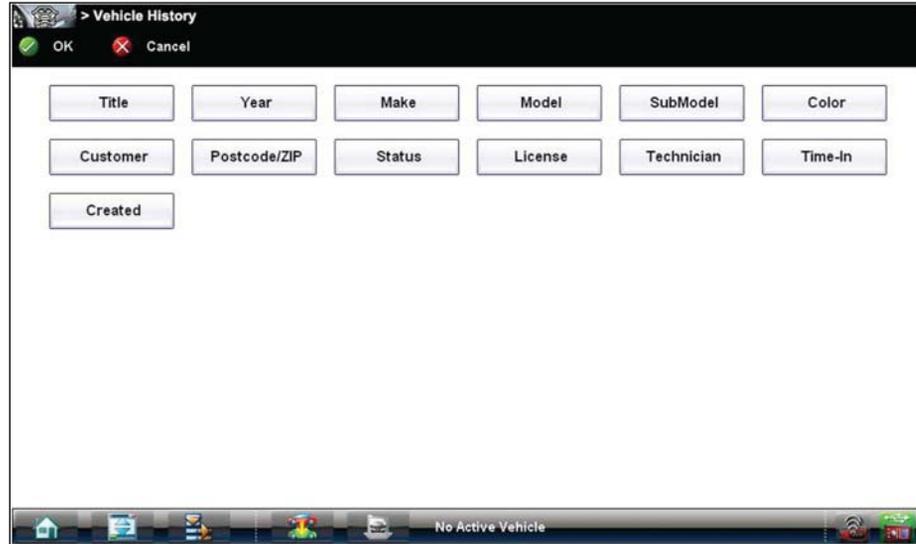1. Select **Settings** on the Vehicle History toolbar to open the dialog box.

Figure 11-4 *Sample Settings dialog box.*

2. Select to highlight the categories that you do not want to display on the main screen, remember:
   – Items that are highlighted do not display
   – Items that are not highlighted display
3. Select **OK** on the toolbar to implement the changes, select **Cancel** to disregard the changes. The dialog box closes and the screen updates.

Chapter 12 — Data Manager Operations

The Data Manager is used to store, sort, and review saved files. Most operations are controlled through the toolbar.

12.1 Screen Layout

Select **Data Manager** on the Module toolbar to open the file system. Use the toolbar at the top of the screen to navigate through the data. The folders panel below the toolbar displays the contents of the Windows *My Documents > ShopStream* folder, which is the Data Manager main screen. The information panel on the lower-left portion of the screen shows a summary of the saved file when available, and the preview panel on the lower right displays an image if the selected file is a graphic.
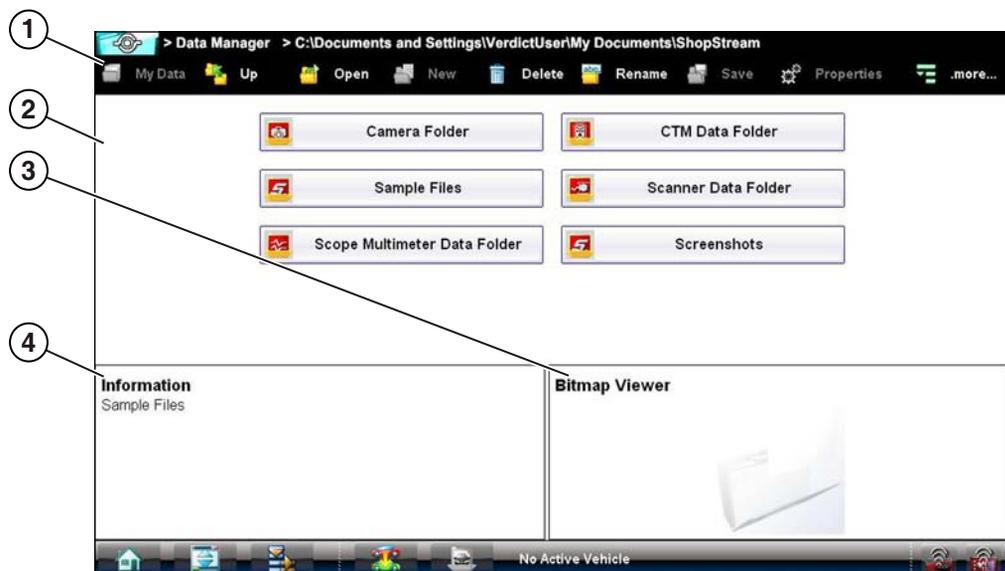
1— **Data Manager Toolbar**
2— **Folders Panel**
3— **Preview Panel**
4— **Information Panel**
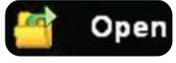
Figure 12-1 *Sample Data Manager main screen*

The main screen includes folders for saved files from the various modules:

- Camera Folder—contains photographs taken with the built-in camera.
- CTM Data Folder—contains files saved while working in the Guided Component Test module.
- Sample Files—contains an assortment of example saved data files.
- Scanner Data Folder—contains files saved while working in the Scanner function. See Scanner DataViewer Operation on page 129.
- Scope Multimeter Data Folder—contains files saved while working with the Scope Multimeter.
- Screenshots—contains images saved by pressing the Shortcut (S) button.

12.2   Navigation

Use the toolbar icons as shown in the table below to navigate through the Data Manager:

Table 12-1 *Data Manager toolbar icons*

Name	Icon	Description
My Data	My Data	Returns to the Data Manager main screen.
Up	Up	Moves the items displayed in the folders panel up one level in the file structure.
Open	Open	Opens the highlighted folder or file.
New	New	Creates a new folder.
Delete	Delete	Moves the highlighted file or folder to the recycling bin.
Rename	Rename	Opens a dialog box and the virtual keyboard for renaming the selected file or folder.
Save	Save	The Save function is not implemented at this time. See Saving Files on page 138 for information.
Properties	Properties	Opens a dialog box and the virtual keyboard for renaming the selected file or folder.
More	.more...	Opens a menu of additional options.

12.3   Operations

Data Manager operations based on toolbar selections are explained in the following sections.

12.3.1 My Data

The My Data icon is a shortcut that quickly returns you to the main Data Manager screen. Select the icon at any time to instantly return. Note the location of the page being viewed is shown near the top of the screen just above the toolbar.

12.3.2 Up

This icon reflects the items shown in the folders panel of the screen up in the file structure one level at a time. For example; one tap of the Up icon when viewing the contents of the Scanner Data

Folder returns you to the main screen. A second tap would display the contents of the "My Documents" folder.

12.3.3 Open

The Open icon is only active (displays in color) when an item in the folders panel is highlighted.

▶ **To open a folder:**
1. Highlight the file to open in the folders panel.
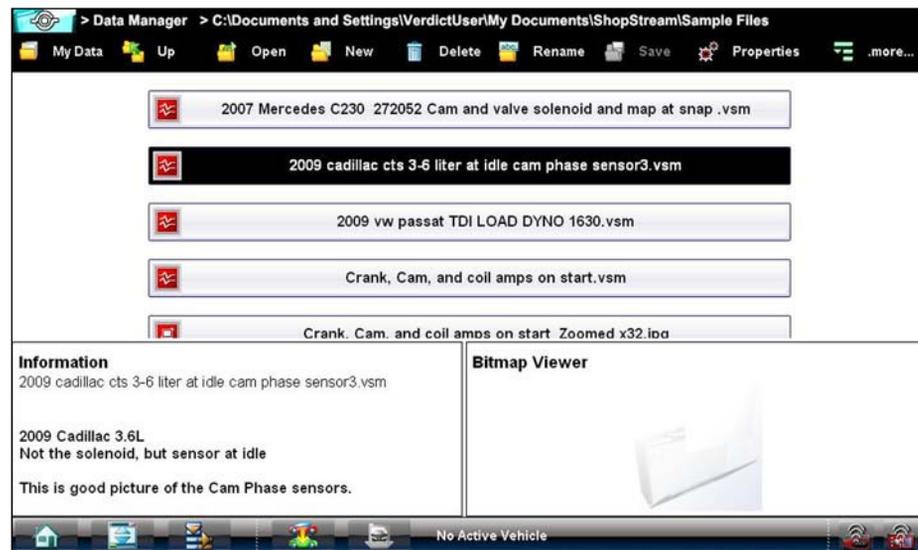2. Select the **Open** icon to load the highlighted file.

Figure 12-2 *Sample open folder showing information*

The screen advances and the contents of the open folder are shown in the folders panel. Highlight an item in the folders panel and the information or preview displays, if available, in the lower portion of the screen (Figure 12-2).

3. To exit the current folder:
   – Select **My Data** on the toolbar to return to the main Data Manager screen.
   – Select **Up** on the toolbar to return to the previous page.

12.3.4 New

The New icon allows you to create a new folder. This option is only available when the icon displays in color.

► **To create a new folder:**

1. Select the **New** icon on the toolbar.

   The New Folder Name dialog box opens (Figure 12-3).

2. Select the entry field on the dialog box to open the virtual keyboard.

3. Type a name for the new folder using the virtual keyboard.

4. Select the **OK** icon to create the new folder and return to the previous page. The **Cancel** icon returns you to the previous page without creating a new folder.

Figure 12-3 *Sample New Folder name dialog box*

12.3.5 Delete

The Delete icon moves folders or items within folders to the Recycling bin. A confirmation displays when a file is selected for deletion. Select **Yes** to delete the file or **Cancel** to exit.

▶ **To delete an item:**

1. Select to highlight the item or folder to be deleted.
2. Select the Delete icon on the toolbar.
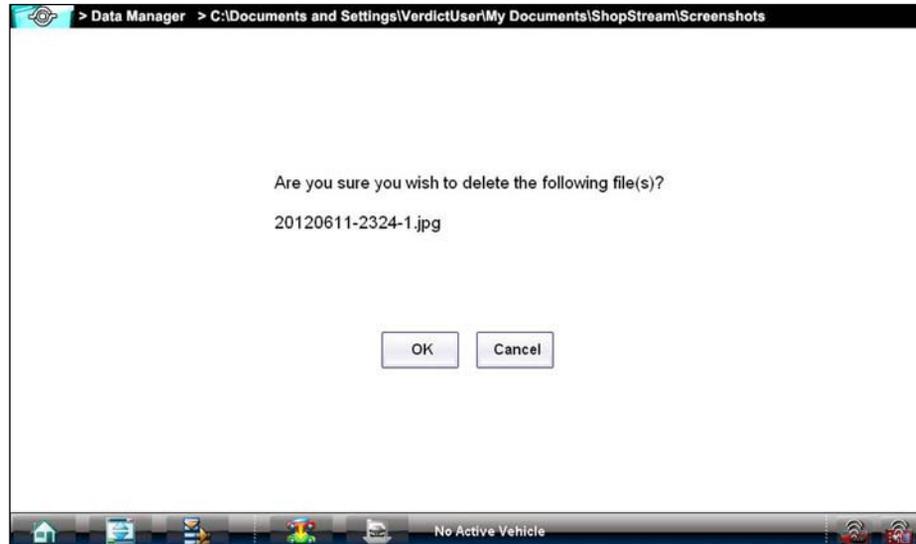
   A confirmation message displays (Figure 12-4).

Figure 12-4 *Sample delete confirmation message*

3. Select **OK** to delete the selected item and return to the previous page. The **Cancel** icon returns you to the previous page without deleting the selected item.

12.3.6 Rename

The Rename icon allows you to change the name of a folder or items within a folder.

▶ **To rename an item:**

1. Highlight the item or folder to be renamed.
2. Select the **Rename** icon on the toolbar.
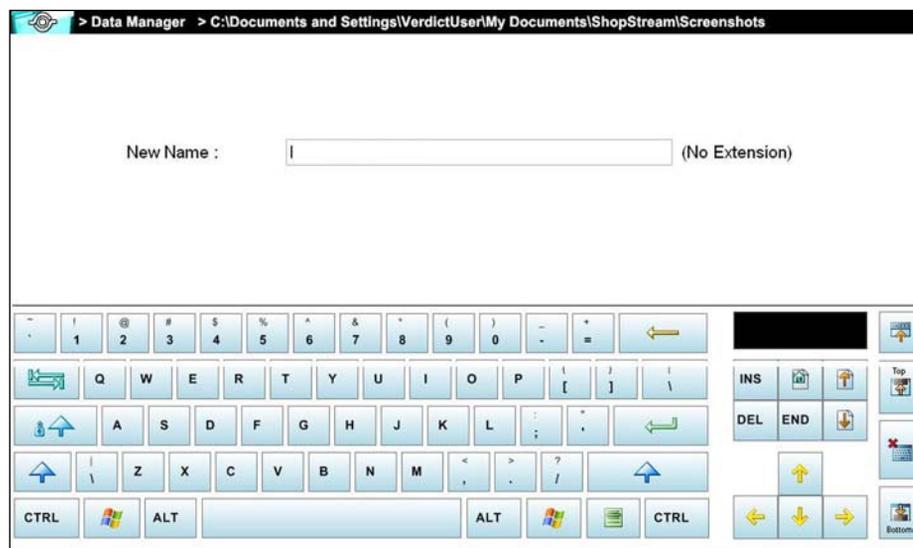
   The New Name dialog box opens (Figure 12-3).

Figure 12-5 *Sample new name dialog box*

3. Select the entry field on the dialog box to open the virtual keyboard.
4. Type the new name into the entry field using the virtual keyboard.
5. Select the **OK** icon to change the name and return to the previous page. The **Cancel** icon returns you to the previous page without changing the name.

12.3.7 Properties

The Properties icon function allows you to change the name and assign identifying attributes to saved Scope Multimeter files. Operation is similar to renaming a file as discussed above, except there are additional fields for entering descriptive information.

▶ **To assign properties to an item:**
1. Highlight the item or folder.
2. Select the **Properties** icon on the toolbar.

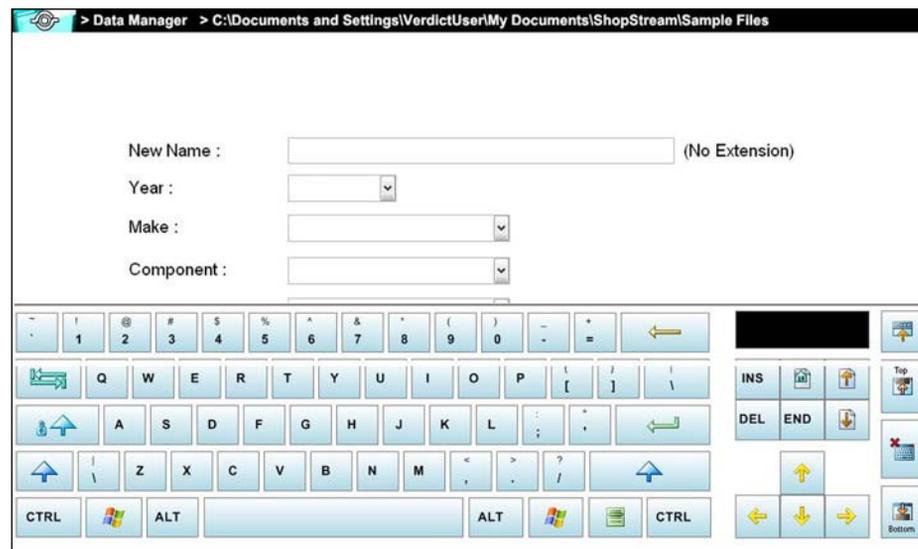   The Properties dialog box and the virtual keyboard open (Figure 12-3).

Figure 12-6 *Sample Properties dialog box without the virtual keyboard*

3. Type a new name into the field using the virtual keyboard if you want to rename the file.
4. Use either the virtual keyboard or the dropdown menus to fill in the Year, Make, Component, and Condition fields.
5. Select the **OK** icon to change the name and return to the previous page. The **Cancel** icon returns you to the previous page without changing the name.

12.3.8 More

Selecting the More icon opens a dropdown menu with two options:

- Shortcut—creates a shortcut to the highlighted item on the Data Manager main screen. A confirmation message displays when this option is selected.
- Email—opens a new e-mail message with the selected file attached. The Diagnostic Tool must have an active e-mail account to use this feature.

12.4 Saved File Structure

The Diagnostic Suite automatically creates folders to manage saved files. Whenever 60 files are saved into any of the Data Manager menu option folders, a new folder is created. Folders may contain files for a day, week, month, or a year. An older folder, when available, goes to the next higher level in the files structure menu (Figure 12-7).
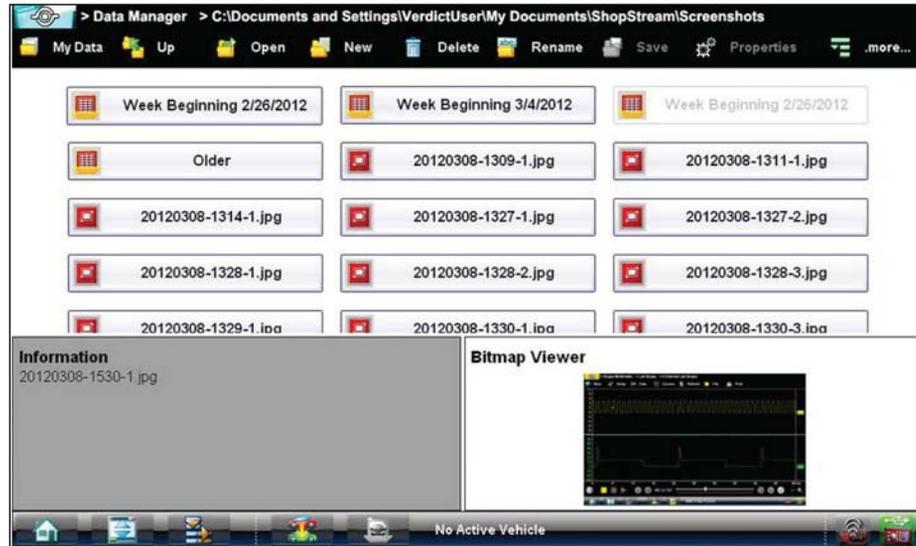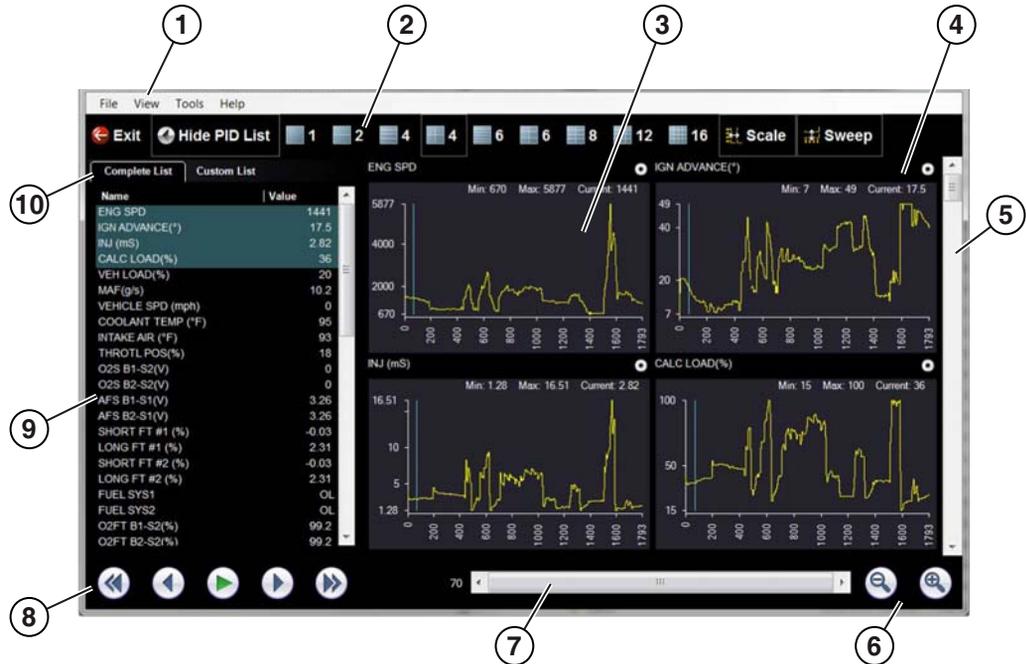

Figure 12-7 *Sample saved file folder structure*

12.5 Scanner DataViewer Operation

The Scanner DataViewer allows you to review saved scanner data files (Figure 12-8). To open saved Scanner data files, select the **Scanner Data Folder** menu option from the Data Manager main menu.

Scanner DataViewer - Opens .pids, .scm, .scs, .scp and .spm file extensions

1— **Menu bar**

2— **Display toolbar**

3— **Graph display**

4— **Properties icon**

5— **Vertical Scroll bar**

6— **Zoom controls**

7— **Slider bar**

8— **Navigation toolbar**

9— **Parameter text list**

10—**Parameter configuration tabs**

Figure 12-8 *Scanner Data Viewer*

12.5.1 Menu Bar

The menu bar at the top of the screen contains the File, View, Tools, and Help menus.

File Menu

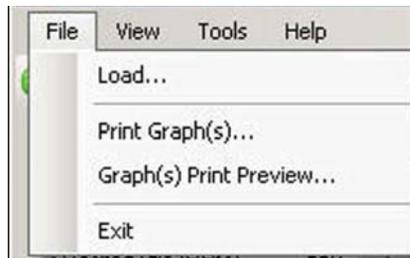The File menu offers the following selections (Figure 12-9):

Figure 12-9 *Scanner DataViewer File menu*

- **Load**—locate and open data files, launches a navigation window
- **Print Graph(s)**—print selected graphs
- **Graph(s) Print Preview**—preview graphs before printing
- **Exit**—closes Scanner DataViewer

When Print Graph(s) or Graph(s) Print Preview is selected, a dialog box opens that allows you to choose which graphs to include, how many graphs appear on a page, and the text font (Figure 12-10).
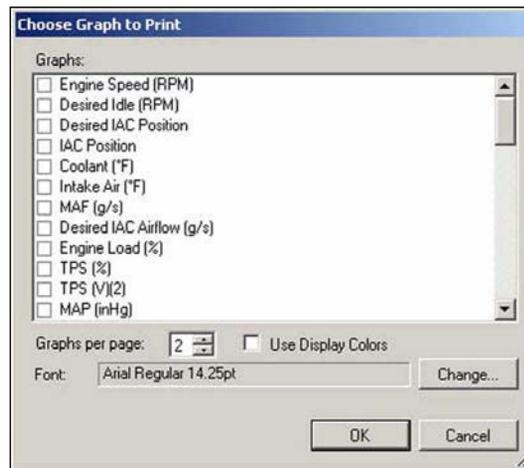

Figure 12-10 *Choose Graphs dialog box*

▶ **To print graphs:**

1.   Select the desired parameters. A checked box indicates the graph will be printed. Select again to deselect the parameter.

2.   Select Change to modify the font, this opens a standard Windows font dialog box.

 – a. Modify the font as desired.

 – b. Select **OK** to close the font dialog box.

3.   Once all selections are made, select **OK**.

 A print dialog box opens.

4.   Select **OK**.

 a.   If Print Graph(s) was selected, the file is sent to the printer.

 b.   If Graph(s) Print Preview was selected, a preview window opens. Select the printer icon (Figure 12-11) to send the file to the printer.
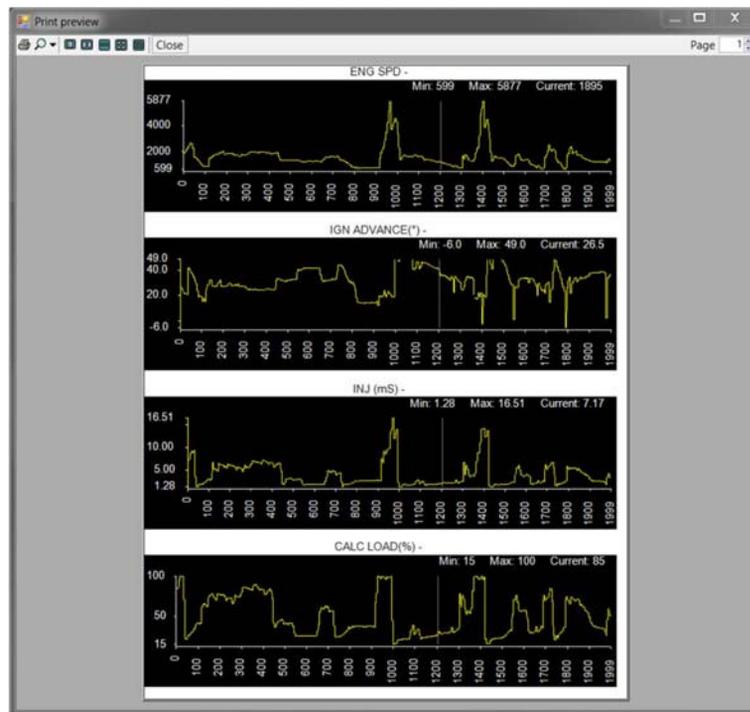

Figure 12-11 *Print preview window*

View Menu

The View menu allows you to change how data is displayed on the screen (Figure 12-12).
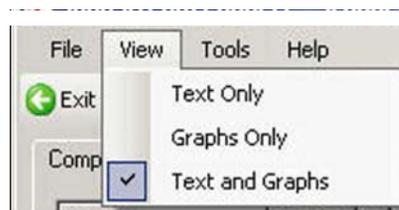

Figure 12-12 *Scanner DataViewer View menu*

Select from the following menu options:

- **Text Only**—shows all parameters and their values as text only
- **Graphs Only**—shows all parameters as graphs only
- **Text and Graphs**—shows all parameters and their values as text in the left panel of the screen, and shows them as graphs in the right panel of the screen

Tools Menu

The Tools menu opens the Properties dialog box.

The Properties dialog box has two sections (Figure 12-13); Shared Graph Properties and Individual Properties. Shared Graph Properties apply to all graphs and Individual Properties apply to the selected graph only.
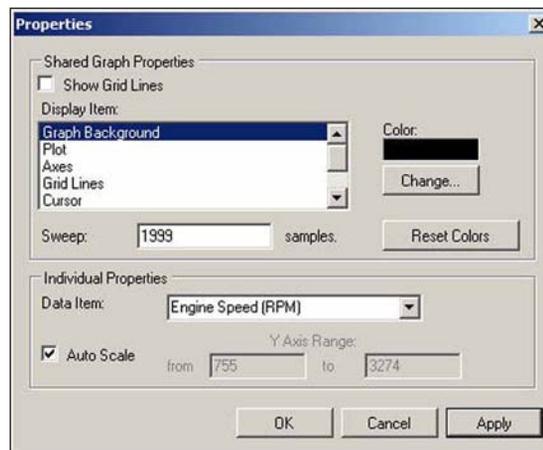

Figure 12-13 *Properties dialog box*

Properties dialog box selections include:

- **Grid Lines**—when selected, a line displays at each major division of the graphs.
- **Display Item**—use to view the display color of the listed items. Highlight an item and the current color appears in the Color box.
- **Change**—use to change the color of the highlighted item, select to open a color palate.
- **Sweep**—use to adjust the number of data frames that appear on the screen (zoom in or out), highlight and type in the desired number.
- **Reset Colors**—use to restore the default color settings.
- **Data Item**—use this pulldown menu to select individual graphs for modification.
- **Auto Scale**—minimum and maximum (Y axis) values automatically adjust to the signal when the box is checked, uncheck the box if you want to custom set the values.
- **Y Axis Range**—use to type desired minimum (from) and maximum (to) values in the selection boxes. This field is only active when Auto Scale is deselected.
- **OK**—applies the changes and closes the properties dialog box.
- **Cancel**—closes the properties dialog box without making changes.
- **Apply**—applies the changes and leaves the properties dialog box open.

NOTE:

*The Properties icon on each graph also opens the Properties dialog box (*Figure 12-8*).*

Help Menu

The Help menu provides Scanner Viewer software version information.

12.5.2 Display Toolbar

The Display toolbar provides the following controls (Figure 12-14).

- **Exit**—closes Scanner DataViewer.
- **Hide PID List**—toggles display between parameter text and graph views.
- **Display Views (1 to 16)**—determines how many graphs display at a time.
- **Scale**—switches the scale values shown to the left of the graph off and on.
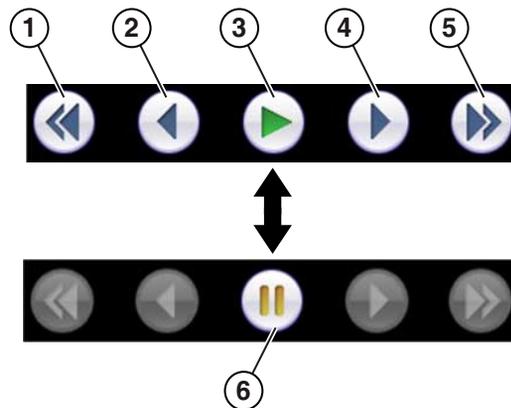- **Sweep**—switches the sweep values shown below the graph off and on.

Figure 12-14 *Display toolbar*

12.5.3 Navigation Tools

Playback Controls

The playback controls allow you to navigate through saved data (Figure 12-15).

1— **Skip Back**—Allows backward movement in multiple steps.
2— **Step Back**—Allows backward movement in singular steps.
3— **Play**—Select to play.
4— **Step Forward**—Allows forward movement in singular steps.
5— **Skip Forward**—Allows forward movement in multiple steps.
6— **Pause**—Select to pause playback.

Figure 12-15 *Playback controls*

Zoom Controls

The zoom controls allow you to incrementally increase or decrease the screen magnification (Figure 12-16).

Figure 12-16 *Zoom controls*

Slider / Scroll Bars and Cursor

Use the slider bar to quickly navigate through the data (Figure 12-17). During playback the number displayed on the left side of the slider bar indicates the current position of the cursor in the data file. The cursor can be repositioned during playback or when paused, by selecting and dragging.

Use the scroll bar (right side) to vertically scroll through the parameter list and graphs.

1— **Cursor**
2— **Scroll bar**
3— **Slider bar**

Figure 12-17

12.5.4 Customizing the Display

The parameter text list (left side) displays parameter names and current values.

The display can be customized by selecting and dragging parameters from the text list or graph display to a different location in the text list or in the graph display (Figure 12-18). The highlighted parameters in the text list indicate which parameters are displayed as graphs.

NOTE:

The parameter text list is sortable by name and value. Select Name or Value at the top of the list to change the sorted view.
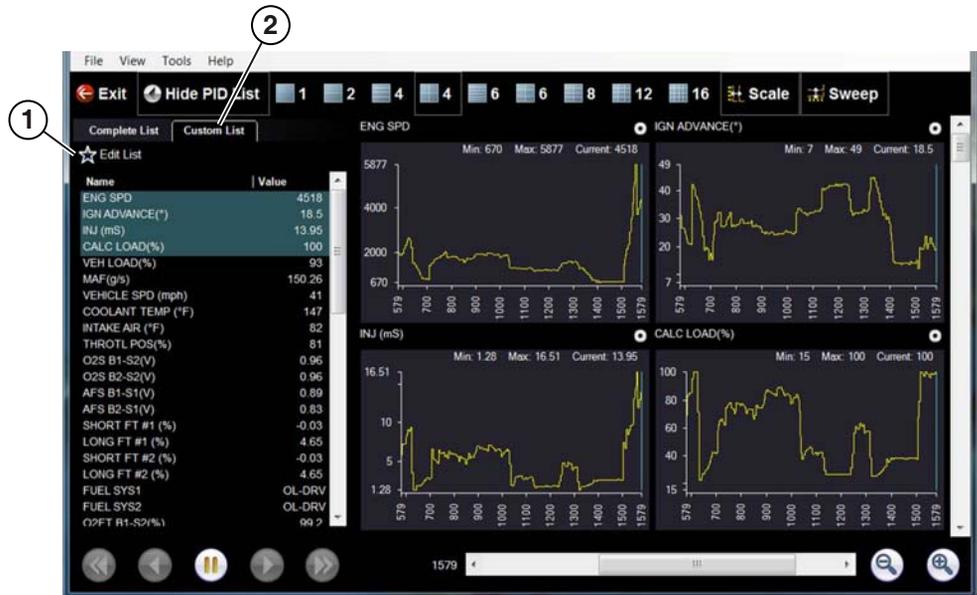

Figure 12-18

12.5.5 Customizing the Parameter List

1. The parameter configuration tabs allow you to choose between displaying all available parameters (Complete List), or only those from a (Custom List) (Figure 12-19).

▶ **To customize the parameter list:**

1. Select the **Custom List** tab (Figure 12-19).
2. Select **Edit List** in the custom window.

1— **Edit List**
2— **Custom List tab**

Figure 12-19

A list of available parameters displays (Figure 12-20).

3. Select the parameters to include in your custom list. Select All and Deselect All controls are also available to assist in the selection process.

Figure 12-20 *Creating a custom parameter list*

4. Select **Save & Exit** to close the window.

Only the parameters selected in your custom list are displayed.

12.6 Saving Files

As mentioned in the beginning of this section, the data and image files in the Data Manager folders are also accessible from the Windows *My Documents > ShopStream* folder. You may access, copy or move the files you save in the ShopStream Diagnostic Suite program from the Windows *My Documents > ShopStream* folder at anytime.

The files may also be transfered to portable USB drives and then transfered to your PC. All copy, move and save functions are accomplished using standard Windows operations.

Camera images and screenshots are saved as JPEG files and are viewable on most PCs. Data files are saved using propriety file extensions and are not viewable on a PC. An alternative viewing method can be used to view select data files on a PC, see ShopStream Connect™ on page 138.

12.7 ShopStream Connect™

Data files saved on your Diagnostic Tool are designed and intended to be reviewed using the Data Manager functions as described earlier in this section. An alternative method can be used to review select data files on a PC using ShopStream Connect.

ShopStream Connect is PC-based program that allows you to manage and view data files on a PC. ShopStream Connect is a free program available for download at:
http://diagnostics.snapon.com/ssc

See the ShopStream Connect user manual for basic installation and operational instructions.

Chapter 13 # Help Operations

Selecting **Help** from the Home screen opens this manual in a dedicated screen viewer. Navigate through the file either by gesture scrolling on the touch screen, or with the scroll bar along the right edge of the viewing screen. A left-to-right scroll bar appears at the bottom of the screen when magnification is increased.

All listings in the Contents and Index are active links. Select an entry with the stylus to go directly to that point of the document. Additional links within the text, shown in blue-colored type, also take you to the referenced section of the manual.

13.1 Using the Help Toolbar

A simple toolbar at the top of the screen is used to adjust screen magnification and to exit Help:

Table 13-1 *Help toolbar icons*

Name	Icon	Description
Back	Back	Closes the help file and returns you to the previously viewed screen.
Zoom +	Zoom+	Incrementally increases the screen magnification.
Zoom –	Zoom-	Incrementally decreases the screen magnification.
Reset	Reset	Restores the default screen magnification.
Previous Page	Previous Page	Moves back one page in the document.
Page Counter	11/128	Shows the current page over the total number of pages in the document.
Next Page	Next Page	Moves forward one page in the document.
More	.more...	Opens a menu of the additional options (Hide TOC or Show TOC) shown below.
	Hide TOC	
	Hide TOC	Closes the contents and search column so the document fills the screen.
	Show TOC	
	Show TOC	Opens the contents and search column if they have been hidden.
Exit	Exit	Closes the help file, and any other open modules, and returns you to the Home screen.

Chapter 14 # System Settings Operations

Selecting System Settings from the Home screen opens a menu with two options:

- Paired Devices - Paired Devices allows you to check the status and pair wireless devices to the Diagnostic Tool.
- Shop Information - Shop Information allows you to create and edit a personalized header that is included on printed documents.

14.1 Paired Devices

Wireless devices communicate with the Diagnostic Tool to allow you work and access data remotely while working on a vehicle. Wireless devices such as the Scan Module and M2 Scope/Meter need to be paired, or synchronized, the first time they are used together.

▶ **To check the devices paired to your Diagnostic Tool:**

1. Select **System Settings > Paired Devices**.

   The paired devices screen opens (Figure 14-1).

The Paired Devices screen lists all of the devices paired to the Diagnostic Tool, and also indicates whether or not there is active communication occurring.

Figure 14-1 *Typical Paired Devices screen*

The Hardware Status indicators in the lower-right corner of the Home screen provide a quick reference to wireless device operations. The background color of the status indicator icon represents the condition of the wireless connectivity to that device. Icon status is shown in the table below:

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Hardware Icon	Background Color	Condition	Action
Scan Module			
	Red	Not Paired	Pair the Scan Module to the Diagnostic Tool. See Pairing The Scan Module on page 55 for instructions.
	Grey	Paired, but Not Communicating	You may have moved out of range. Move the Diagnostic Tool closer to the Scan Module to reestablish communications. If connectivity is not restored, perform the Recovery Procedure on page 60.
	Green	Paired and Communicating	Hardware status is good and Bluetooth should be functional. Verify that the green Bluetooth LED on the front of the Scan Module is flashing. If there is no connectivity, perform the Recovery Procedure on page 60.
M2 Scope/Meter			
	Red	Not Paired	Pair the M2 to the Diagnostic Tool. See Paring the M2 Scope/Meter on page 141 for instructions.
	Grey	Paired, but Not Communicating	You may have moved out of range. Move the M2 closer to the Diagnostic Tool to reestablish communications.
	Green	Paired, and Communicating	Hardware status is good and Bluetooth is communicating.

14.1.1 Scan Module Pairing

For detailed information on the use and pairing of the Scan Module, see Scan Module Operation on page 54.

14.1.2 Paring the M2 Scope/Meter

NOTE:
The M2 Scope/Meter is optional equipment for some Diagnostic Tools and may not be included with your Diagnostic Tool kit. For detailed operation instructions, see the M2 Scope/Meter instructions supplied with your M2 and/or Diagnostic Tool. M2 operation instructions can also be found on our website, see the Contact Information section in the front of this manual for website address information.

Pairing is the wireless connection (identification) process used to connect the M2 Scope/Meter to your Diagnostic Tool. The M2 Scope/Meter needs to be paired (connected) to the Diagnostic Tool for remote operation.

The M2 Scope/Meter only needs to be paired once before it's initial use. The connection configuration should remain in memory for all future uses. If the connection configuration is removed or lost the pairing procedure will need to be repeated.

Before pairing, make sure the M2 Scope/Meter and the Diagnostic Tool have fully charged batteries, or are connected to their AC/DC power supplies. It is highly recommended that both devices be powered by their respective AC/DC power supplies during the paring operation. The two devices to be paired should also be in close proximity to each other, and in an area that is relatively free of radio frequency interference.

NOTE:
The M2 Scope/Meter can only be paired with one Diagnostic Tool at a time.

To pair the M2 Scope/Meter with the Diagnostic Tool:
1. Turn on the Diagnostic Tool and M2 Scope/Meter.
2. Set the M2 Scope/Meter **Rotary Switch** to the **oscilloscope** position.
3. Press and hold the **F1** key of the M2 Scope/Meter to open the alternate menu.
   An alternate menu option for the F4 key is now displayed.
4. Press the **F4** key (once) to enable Bluetooth Discovery. Enabling Bluetooth Discovery allows the M2 Scope/Meter to be identified and paired to the Diagnostic Tool.
   The F4 field on the screen switches to inverse video (white on black) when the Bluetooth Discovery mode becomes enabled (Figure 14-2).
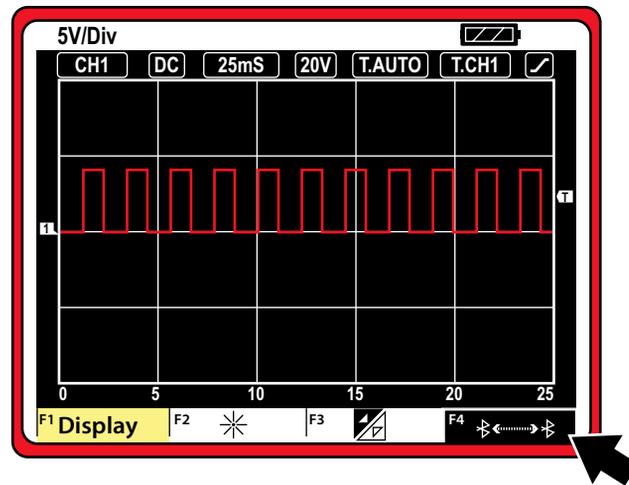

Figure 14-2 *Bluetooth Discovery (shown enabled "on")*

5. With Bluetooth Discovery enabled, turn the M2 Scope/Meter Rotary Switch to the Remote Functions position (Figure 14-3).
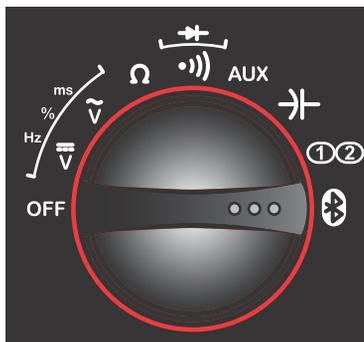

Figure 14-3 *Rotary switch Remote Functions setting*

6. Select the **System Settings** icon on the Home screen of the Diagnostic Tool.
7. Select **Paired Devices** from the menu.
8. From the Paired Devices menu select **Add** from the toolbar.
9. When prompted select **OK** from the toolbar.

   The Diagnostic Tool searches for compatible wireless devices, then displays the results. The M2 Scope/Meter is typically listed as "VERDICT M2-" plus six digits of the unit's serial number.

10. Select the **M2 Scope/Meter** from the search results list (Figure 14-4).

Figure 14-4 *Typical Device selection*

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A "in progress" message displays during the pairing procedure, which takes several seconds. The Paired Devices screen displays once the procedure completes (Figure 14-5).

Figure 14-5 *Typical Paired Devices screen*

11. Select the **Home** icon on the toolbar to return to the Home screen.M2 Scope/Meter
12. After the M2 Scope/Meter has been successfully paired, turn the M2 Scope/Meter **Rotary Switch** to the **oscilloscope** position.
13. Press and hold the **F1** key to open the alternate menu.
14. Press the **F4** key (once) to turn off (disable) Bluetooth Discovery mode.

    The F4 field on the screen switches to normal video (black on white) when the Bluetooth Discovery mode is inactive (Figure 14-6).

    Once the M2 Scope/Meter is initially paired with the Diagnostic Tool, additional pairing is not necessary. Although the discovery mode has been disabled, the two-paired devices automatically seek and find each other when they are both powered on. The M2 Scope/Meter becomes "invisible" to other Bluetooth devices whenever Bluetooth Discovery is disabled.
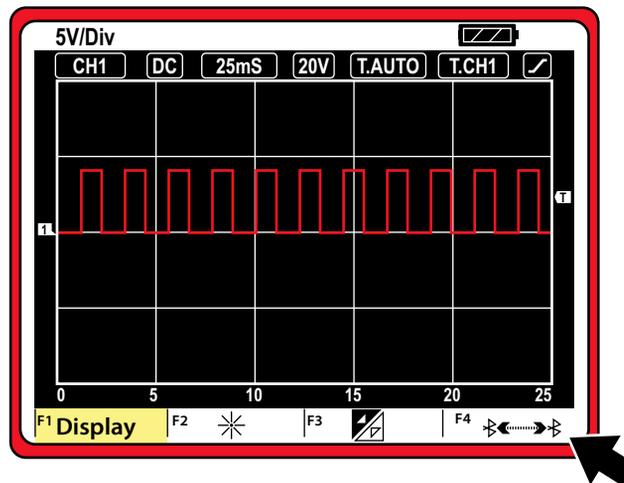

Figure 14-6 *Bluetooth Discovery (shown disabled "off")*

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14.2 Shop Information

This option allows you to add personalized shop information that can be included on printed data files. Selecting opens a form that can be filled in using the virtual keyboard. Select OK when the form is complete and the information is saved.

▶| **To add Shop Information:**

1. From the Home screen select **System Settings**.
2. From the System Settings menu select **Shop Information**.

     The Shop Information dialog box opens (Figure 14-7).

Figure 14-7 *Sample Shop Information dialog box*

3. Select within any of the information fields and the virtual keyboard opens.
4. Use the virtual keyboard to fill in the Shop Information form.

     As an alternative, you can connect a USB keyboard to a USB jack on the Diagnostic Tool and use it to enter information into the form.

NOTE:

The screen does not scroll. Use the Top and Bottom icons on the right side of the virtual keyboard relocate the keyboard on the screen so that you can complete the form (Figure 14-8).

Figure 14-8 *Virtual keyboard Top and Bottom icons*

5. Close the virtual keyboard and review the information once all the fields have been filled in.

6. Select **OK** from the toolbar to save the Shop Information, or **Cancel** to close the Shop Information dialog box without saving.

    The Shop Information screen closes and the screen returns to the System Settings menu.

<table><tr><td>Chapter 15</td><td></td></tr></table>

SureTrack

Designed to help you improve diagnostic accuracy and reduce repair time, SureTrack is a comprehensive source of expert knowledge for professional technicians, combining diagnostic experience and detailed parts replacement records.

SureTrack offers this exclusive list of features:

- Access to multiple resources through a single intelligent lookup
- Verified parts replacement records shows which parts are most frequently replaced to successfully complete repairs for symptoms, codes and vehicles similar to the one in your bay
- Real Fixes harvested from millions of successful repair orders.
- Guided Component Tests and waveform library gathered through on-vehicle tests for a confident diagnosis
- OEM campaign alerts – never forget to check for TSBs and recalls again
- Up-to-the-minute intelligence based on vehicles in service bays nationwide

SureTrack can be accessed in multiple ways:

- While viewing DTCs in Scanner mode
- Selecting the SureTrack icon from the Home screen
- Opening the SureTrack website (askatech.com) using a web browser on your Diagnostic Tool or a device with Internet access

15.1 SureTrack Authorization and Registration

SureTrack is included with current Diagnostic Tool system software. To use SureTrack you must have the current software upgrade installed on your Diagnostic Tool.

As a reminder to keep your software current and retain your access to SureTrack, software upgrade reminder messages will display periodically when new software upgrades are available (Figure 15-1). To purchase software upgrades or join the software subscription program, see your Snap-on Representative.

Selecting **OK** will close the message box until the beginning of the next month when it will appear to remind you again. Selecting **Snooze 1 Week** will close the message box for approximately one week and then it will re-appear.
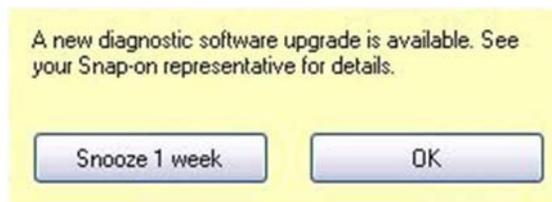

Figure 15-1 *Software Upgrade Reminder Message*

15.1.1 SureTrack Authorization Code

When you purchase a software upgrade from your Snap-on Representative, you will receive a SureTrack authorization code. The authorization code is printed on your sales receipt. Authorization codes are 12 digit alpha-numeric codes (e.g. 123ABCAP4-US).

NOTE:
If you are currently in the Software Subscription program, you will receive your SureTrack authorization code by mail upon the new software upgrade release. Subscription software upgrades are installed using the Subscription Upgrade Manager program installed on your Diagnostic Tool.

Each time you purchase an a diagnostics software upgrade you will be provided a new SureTrack authorization code. The authorization code will expire shortly after the release of the next concurrent software upgrade. To log in with a new authorization code, see SureTrack Log In on page 149.

15.1.2 SureTrack Account Registration

If you are a new member (do not have an existing SureTrack account), you will need to complete the online registration form before you can use SureTrack. Use the following procedure to register. If you have an existing SureTrack account, see SureTrack Log In on page 149.

1. Navigate to the SureTrack website Login page, using one of the following procedures:
   – Select the **SureTrack** icon from the Home screen of your Diagnostic Tool and enter your vehicle information, or
   – Open the SureTrack website using your web browser, see Using the SureTrack Website on page 155.
2. From the SureTrack website Login page, select the **Join Now** icon (Figure 15-2) on the right side of the screen to open the registration form (Figure 15-3).
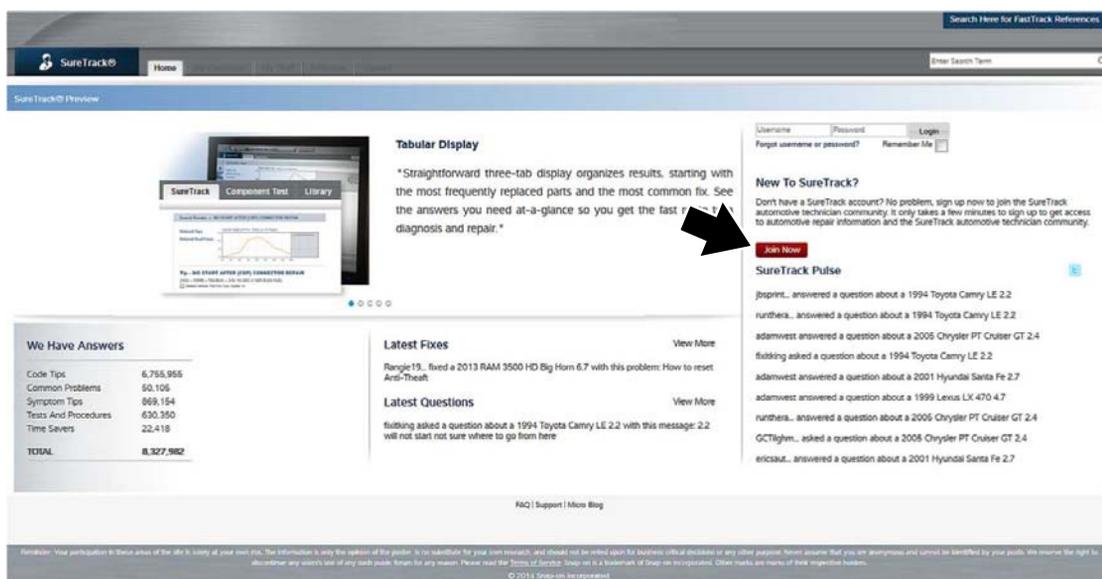

Figure 15-2 *SureTrack Website Login Page (Join Now icon)*

3.   Enter your SureTrack authorization code (Figure 15-3).

Figure 15-3 *SureTrack Website Registration Form*

4.   Enter your personal information and check the license agreement check box.

5.   Select **Submit**.

Upon successful registration, you will be able to access SureTrack. For additional SureTrack information, see the following sections: Using SureTrack in Scanner Mode on page 151, Starting SureTrack from the Home Screen on page 154, and Using the SureTrack Website on page 155.

15.2 SureTrack Log In

Use the following procedure, if you already have an existing SureTrack account and need to:

*   log in normally, or
*   enter a new SureTrack authorization code to log in

If you do not have an existing SureTrack account, see SureTrack Authorization and Registration on page 147 for log in instructions.

1.   Navigate to the SureTrack website Login page, using one of the following procedures:
     –   Select the **SureTrack** icon from the Home screen of your Diagnostic Tool and enter your vehicle information, or
     –   Open the SureTrack website using your web browser, see Using the SureTrack Website on page 155.
2.   From the SureTrack website Login page, enter your username and password (Figure 15-4).
3.   *(Optional)* Select the **Remember Me** check box, to save your login information and stay continually logged in to SureTrack (Figure 15-4).
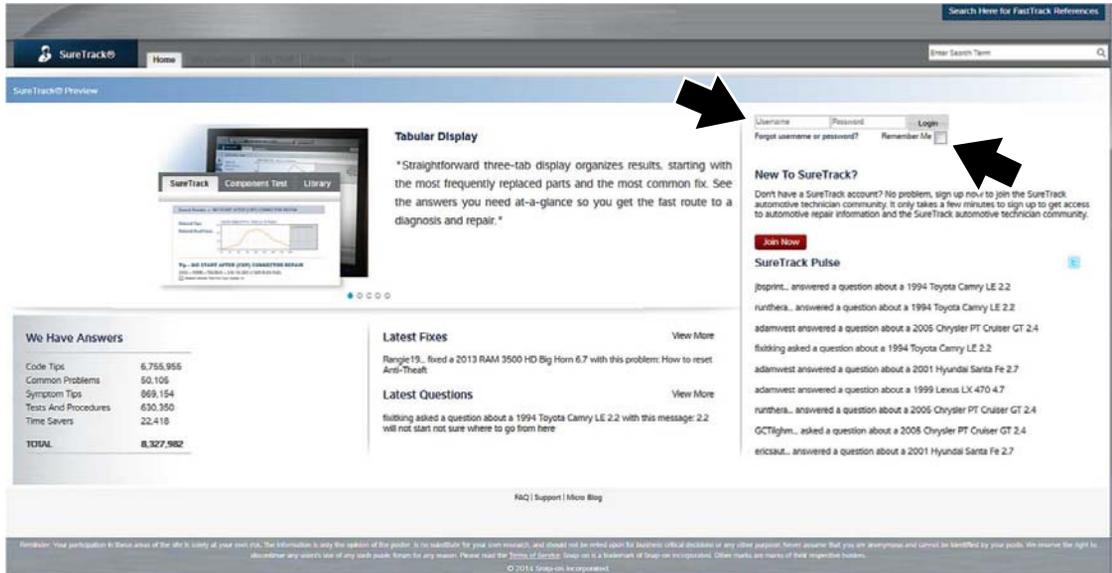
Figure 15-4 *SureTrack Website Login Page (Login fields and Remember Me check box)*

4. Select **Login**. One of two results can be expected.

- Upon successful log in, you will be able to access SureTrack. If you were not able to log in, verify and re-enter your username and password.

- If your SureTrack authorization code has expired, you will be automatically redirected to the SureTrack authorization renewal page (Figure 15-5), proceed to step 5.

For additional SureTrack information, see the following sections: Using SureTrack in Scanner Mode on page 151, Starting SureTrack from the Home Screen on page 154, and Using the SureTrack Website on page 155.

5. If you have purchased a software upgrade, enter your <u>NEW</u> SureTrack authorization code (found on your sales receipt) (Figure 15-5).

   – To use SureTrack you must have the current software upgrade installed on your Diagnostic Tool. When you purchase a software upgrade from your Snap-on Representative, you will receive a SureTrack authorization code.
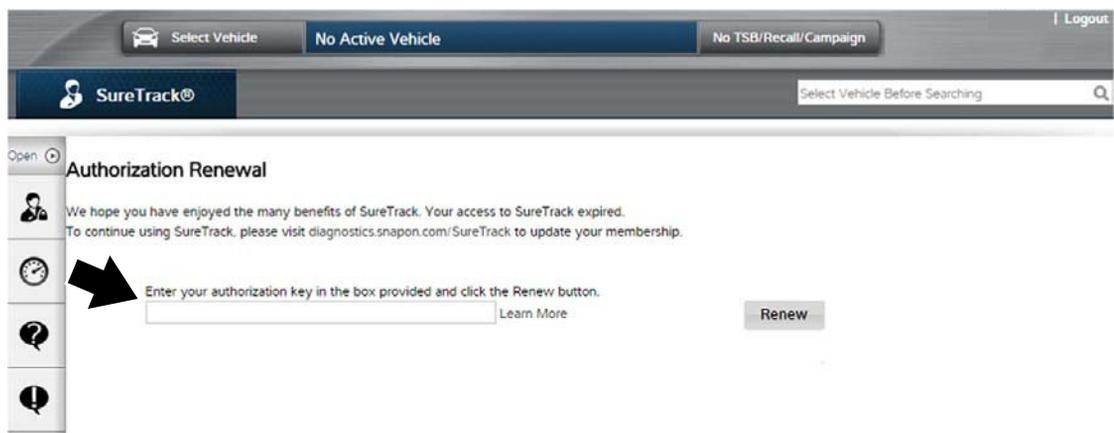
6. Select **Renew**.

Figure 15-5 *SureTrack Authorization Renewal Login Page*

15.3 Using SureTrack in Scanner Mode

SureTrack repair information can be accessed while reviewing DTCs in Scanner Mode, to provide you with diagnostic information specific to the DTC selected. Available DTCs are displayed in a list that includes the DTC, a brief description, and a **Fix It**! icon (Figure 15-6).

Selecting the **Fix It!** icon provides the following SureTrack menu options:

- **Common Replaced Parts Graph**
- **Dashboard Feature Information**

Before using SureTrack, you must be logged in, see SureTrack Log In on page 149. If you are not logged in to SureTrack, a message box will appear on the Display Codes screen (e.g."SureTrack Content May Be Available! Click here for more information."). Selecting the message box will open the SureTrack login page.

15.3.1 Common Replaced Parts Graph

The Common Replaced Parts graph (Figure 15-6) shows the percentage of verified fixes (using the parts listed) derived from the total number of repairs by mileage. The example below indicates that based on 41 repairs (intake airflow sensor replacement) involving vehicles with up to 200k miles, approximately 33% of the repairs occurred at 125k miles. For additional information, see "Common Replaced Parts Graph" on page 151.
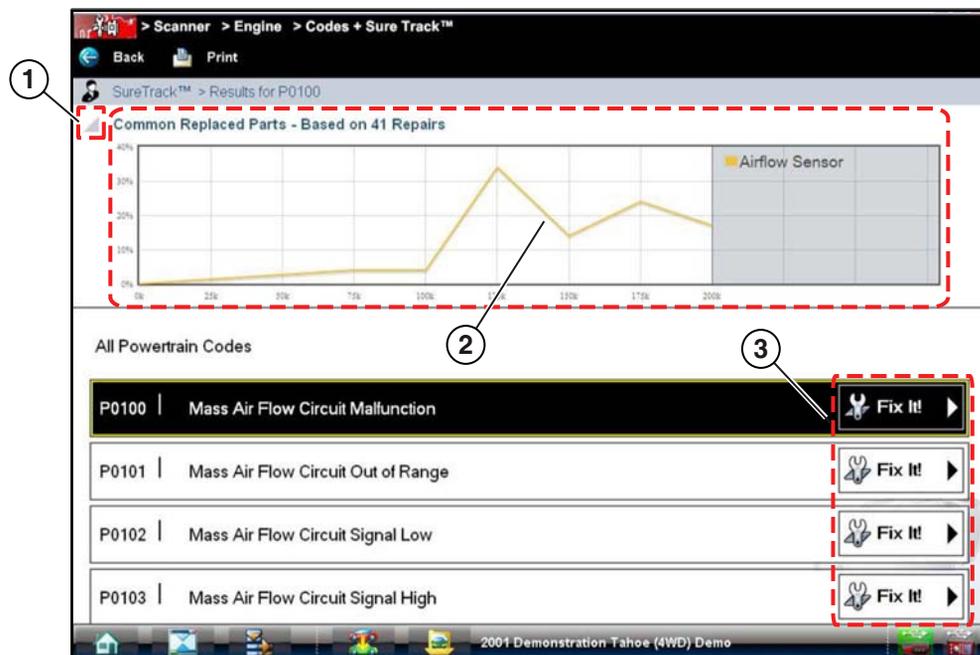

Figure 15-6 *Common Replaced Parts Graph*

1— **Common Replaced Part Graph icon**—toggles Common Replaced Parts graph display on/off**.**
2— **Common Replaced Part Graph**
3— **Fix It! icon**—opens Dashboard Feature Information

15.3.2 Dashboard Feature Information

Dashboard Feature Information includes:

- **Detailed DTC Information**
- **Related Tips, Real Fixes and Repair Information**

SureTrack will display detailed information about the current DTC describing code setting conditions, possible symptoms, system operation and possible solutions (Figure 15-7). In addition, other reference links may be provided such as schematics and illustrations.

Figure 15-7 *"Fix It!" DTC Information*

Menu options are also provided for the following:

Related Tips—opens a list of tips that may include information that is related to the current DTC (Figure 15-8).

Figure 15-8 *Related Tips Screen*

Draft 4/14/15- Do Not Distribute

Real Fixes—opens a list of tips related to the current DTC that have been gathered from actual shop repair orders and presented in a Complaint, Cause, Correction format (Figure 15-9).
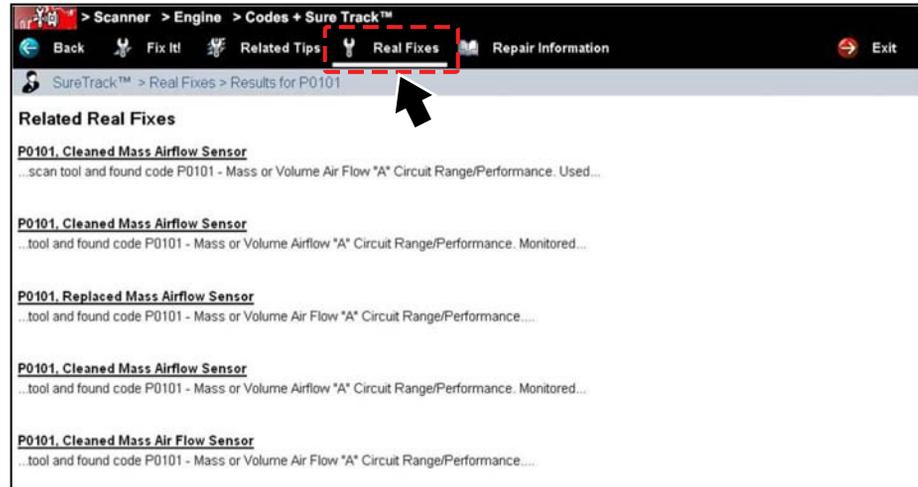

Figure 15-9 *Real Fixes Screen*

Repair Information—opens the ShopKey Pro website, See "Repair Information Operations" on page 113 for additional information (Figure 15-10).
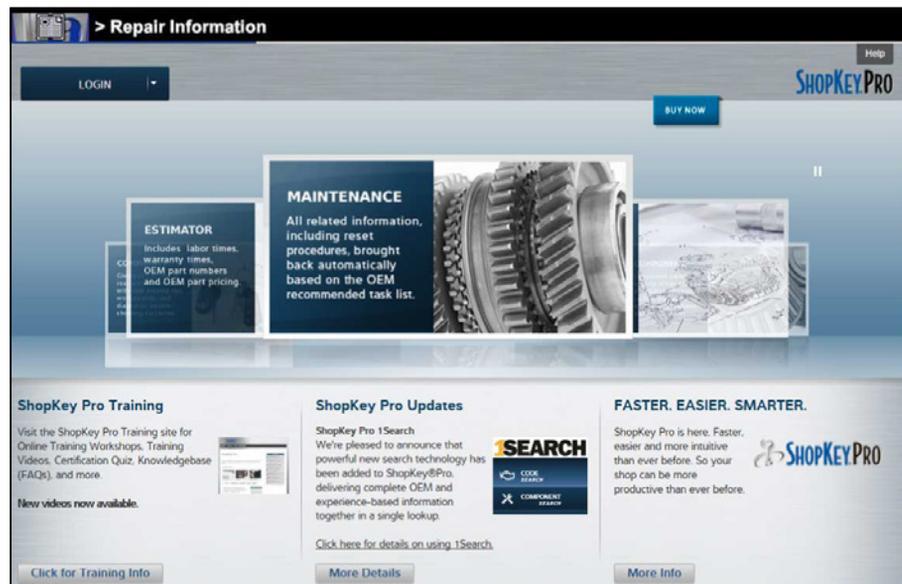

Figure 15-10 *ShopKey Pro Login Screen*

Draft 4/14/15- Do Not Distribute

15.4 Starting SureTrack from the Home Screen

Selecting the **SureTrack** icon from the Home screen, allows you to access SureTrack, without connecting the scanner module to a vehicle. This allows you to quickly access SureTrack diagnostic information at anytime. A vehicle must be identified to access SureTrack.

1. Select the **SureTrack** icon from the Home screen.
2. A vehicle identification sequence begins if there is no active vehicle. Follow the screen prompts to select the year, make, model, submodel, engine, and system of the vehicle (Figure 15-11).

If an active vehicle is detected, a confirmation message will display providing the following options.

  a. Select **OK** to continue with the identified vehicle.
  b. Select **Cancel** to identify a different vehicle.

Figure 15-11 *Active Vehicle Confirmation Message*

After the vehicle identification process is complete, the SureTrack website opens. See Using the SureTrack Website on page 155 for additional information.

Before using SureTrack, you must be logged in, see SureTrack Log In on page 149.

15.5 Using the SureTrack Website

The following section provides basic instructions and information for using the SureTrack website. For additional information, see the FAQ page on the SureTrack website. The FAQ page link is located on the bottom of the SureTrack Login page (Figure 15-12).

SureTrack website address: http://www.askatech.com

While operating the Diagnostic Tool the SureTrack website opens automatically when you are directed to log in to SureTrack or can be opened by:

- Selecting the **SureTrack** icon on the Home screen and identifying a vehicle, see Starting SureTrack from the Home Screen on page 154

    or

- Using the web browser on your Diagnostic Tool or on a device with Internet access

Before using SureTrack, you must log in. For log in instructions, see SureTrack Log In on page 149.

15.5.1 SureTrack Home Page

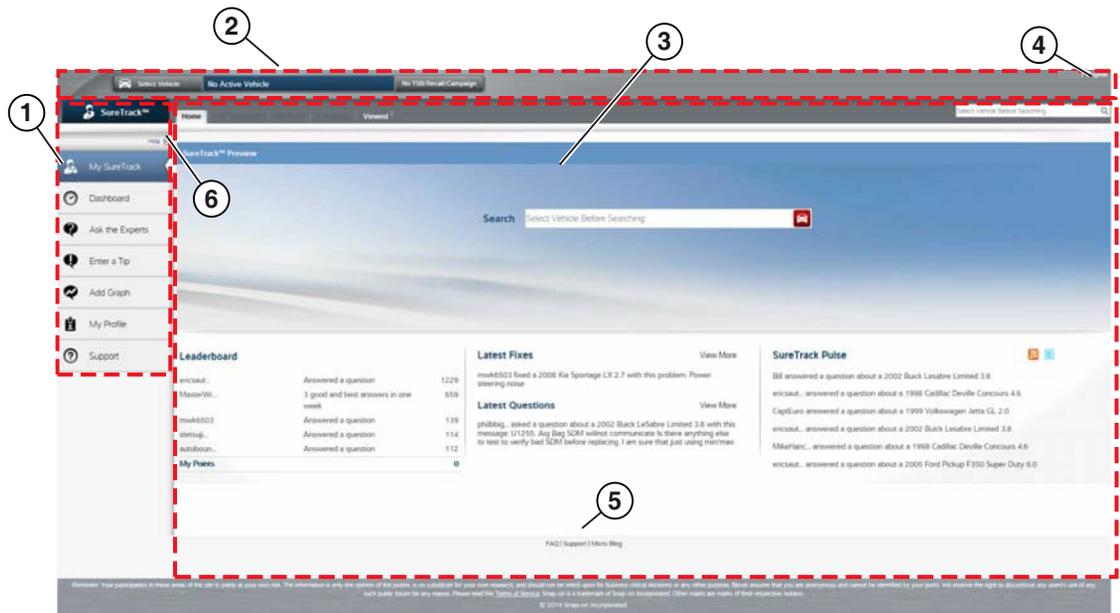After you log in, the SureTrack website opens to the Home page (Figure 15-12):

Figure 15-12 *SureTrack Home Page*

1— **Navigation Bar**—located along the left-hand side of the page is used to access the main functions of SureTrack.

2— **Header Bar**—located across the top of the page used to select vehicles and perform keyword searches.

3— **Main Screen**—the center portion of the page presents content based on the vehicle attributes and keywords selected.

4— **Logout icon**—select to log out of SureTrack

5— **FAQ icon**—select to open the frequently asked questions page

6— **Hide/Show icon**—toggles the Navigation Bar display between icon and text views.

Main Screen

The Main screen is the active field that displays search results, SureTrack Tips, and other data that is available for the vehicle. The display varies depending upon which Navigation Bar function is active.

The Main screen also has tabs that allow you to switch between functions. Which tabs are available depends upon which function is selected on the Navigation Bar.

Header Bar

The Header Bar consists of two rows of options that run across the top of the page. The upper row may include:

- Select Vehicle/Change Vehicle icon
- Active vehicle description
- TSB/Recall/Campaign icon

The lower row may include a series of tabs that allow you to switch between functions, and a search field for entering keywords to locate information. What is available from the tabs changes depending upon which function is selected on the Navigation Bar.

Select Vehicle/Change Vehicle

The Select Vehicle/Change Vehicle icon is used to identify the active vehicle to SureTrack. Vehicle attributes are selected from a sequence of option lists. Make a selection to advance through the lists. Once an active vehicle is identified, search data is filtered so that only information that applies to the identified vehicle is shown.

NOTE:
To ensure a more accurate search, it is recommended that you should make a complete vehicle selection by choosing all of the attributes.

Select the **Change Vehicle** icon at any time to modify the attributes of the active vehicle. Select from the list on the left-side of the screen to change individual attributes of the active vehicle. The **Clear All** icon at the bottom of the list erases all of the vehicle attributes. Select **Use This Vehicle** icon in the upper-right corner of the screen to implement changes once they are made.

TSB/Recall/Campaign

Technical Service Bulletins from the original equipment manufacturer (OEM), recalls ordered by the National Highway Traffic and Safety Administration (NHTSA), and campaigns from the OEM that apply to the active vehicle are accessible from the TSB/Recall/Campaign icon. An icon appears on the icon if any TSB, recall, or campaign information is available for the selected vehicle (Figure 15-13).
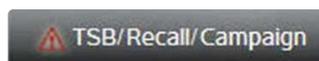

Figure 15-13 *Sample TSB/Recall/Campaign Icon*

Available items are listed in order; recalls first, followed by any campaigns, then service bulletins. The most recent is at the top of the list when multiple documents are available (Figure 15-14). Selecting a listed item opens the complete text of the recall or campaign. TSBs are grouped by year, select the plus sign (+) alongside a year to expand the list.

Figure 15-14 *TSB/Recall/Campaign Window*

Select the **Back** icon on your web browser to close the TSB/Recall/Campaign window.

Navigation Bar

The icons on the Navigation are used to access the main SureTrack functions. Navigation Bar options include:

- **My SureTrack**—shows the latest questions and fixes, along with the SureTrack Pulse and Leaderboard. See My SureTrack on page 158.
- **Dashboard**—shows the current search results for the active vehicle. See Dashboard on page 159.
- **Ask the Experts**—use to post a question to the community. See Ask the Experts on page 161.
- **Enter a Tip**—use to share your personal repair experience with the community. See Enter a Tip on page 163.
- **Add a Waveform or PID Graph**—use to attach supporting images and files to an existing tip. See Add Waveform/PID Graph on page 163.
- **My Profile**—allows you to customize how your profile appears to the community. See My Profile on page 163.
- **Support**—opens a message box for contacting Customer Service by e-mail, a link to the Frequently Asked Questions (FAQ) page, as well as a phone number for contacting the Support Center. See Support on page 163.

15.5.2 My SureTrack

Selecting **My SureTrack** opens your personal SureTrack page, which is also the page that displays when you first login to SureTrack.

A search field is located on the Main screen and can be used to search for codes, symptoms and tips, or other options by keyword.

Multiple options are available from the Header Bar tabs (Figure 15-15):

- **Home**—displays the SureTrack Leaderboard, links to Latest Fixes, Latest Questions, SureTrack Pulse, and a search field.
- **My Questions**—opens a list with links to questions that you have posted to the community.
- **My Stuff**—opens a list of Tips that you have created.
- **Following**—opens a list with links to Tips and discussions you are actively participating in.
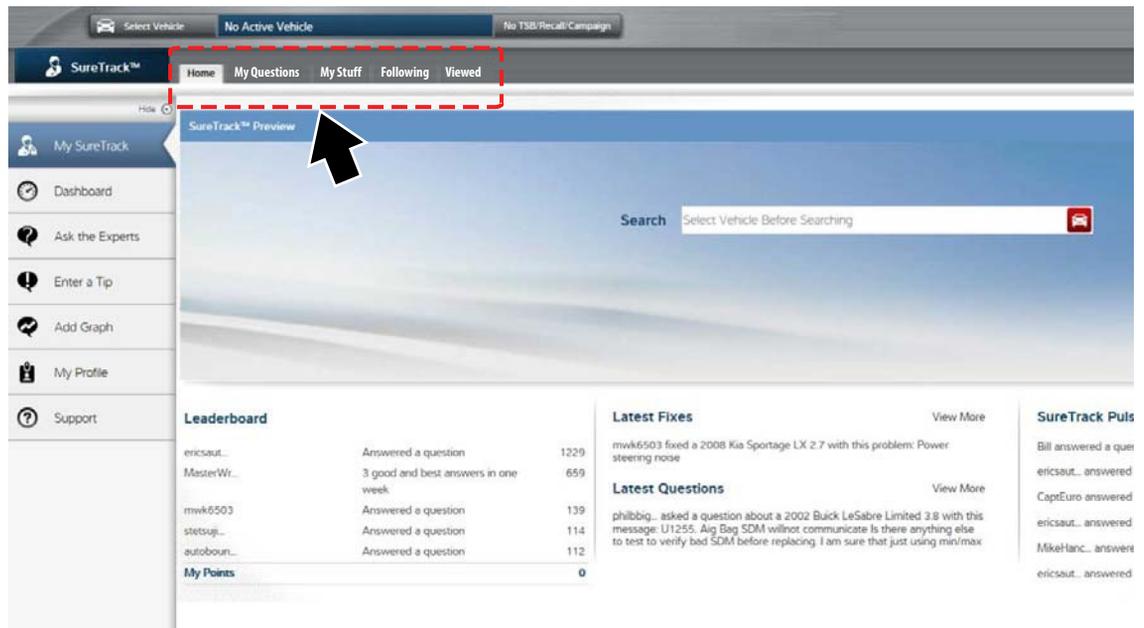- **Viewed**—opens a list with links to Tips that you recently visited.

Figure 15-15 *My SureTrack Page Tab Options*

The following features, are also be available from the My SureTrack Main screen:

- **Leaderboard**, see Leaderboard on page 159.
- **Latest Fixes and Questions**—displays a list of the latest Questions and Fixes posted by active Community members in chronological order
- **SureTrack Pulse**—displays a list of recent Questions and Fixes posted by active Community members

Leaderboard

- The Leaderboard shows the top ranked SureTrack community members. Community members are awarded points for answering questions, and those that gather the most points show on the Leaderboard. For additional information on asking questions, see Ask the Experts on page 161.

Leaderboard points are awarded as follows:

- 1 point is awarded for answering a question.
- 5 points are awarded if your answer is rated as a "Good Answer" by the SureTrack community member who asked the question.
- 10 points are awarded if your answer is rated as the "Best Answer" by the SureTrack community member who asked the question.

Bonus points are awarded for:

- An extra 15 points every time three Best Answers are provided in the week.
- An extra 10 points for a combination of 3 Good Answers and Best Answers per week.

NOTE:
Answers can only be counted once for bonus points.

15.5.3 Dashboard

Selecting **Dashboard** displays search results for the active vehicle. Search results may be listed in several categories (not all categories are available for all vehicles). Tabs across the top allow you to select results by category (e.g. SureTrack, Component Test and Library).

SureTrack Tab

The SureTrack tab displays the following information:

- **Tips**—presents a list of Tips that directly correlate to your search criteria. Select a tip from the list to open and review the complete Tip (Figure 15-16). For addition information, see "About SureTrack Tips" on page 160.

  Common Replaced Parts Graph—when a tip is selected the Common Replaced Parts graph appears at the top the Dashboard page. The graph shows the frequency with which parts, commonly related to the Tip, are replaced and at what vehicle mileage. The data in the Common Replaced Parts graph is actual data extracted from millions of recorded repair orders from shops all around the country. For additional information, see "Common Replaced Parts Graph" on page 151.
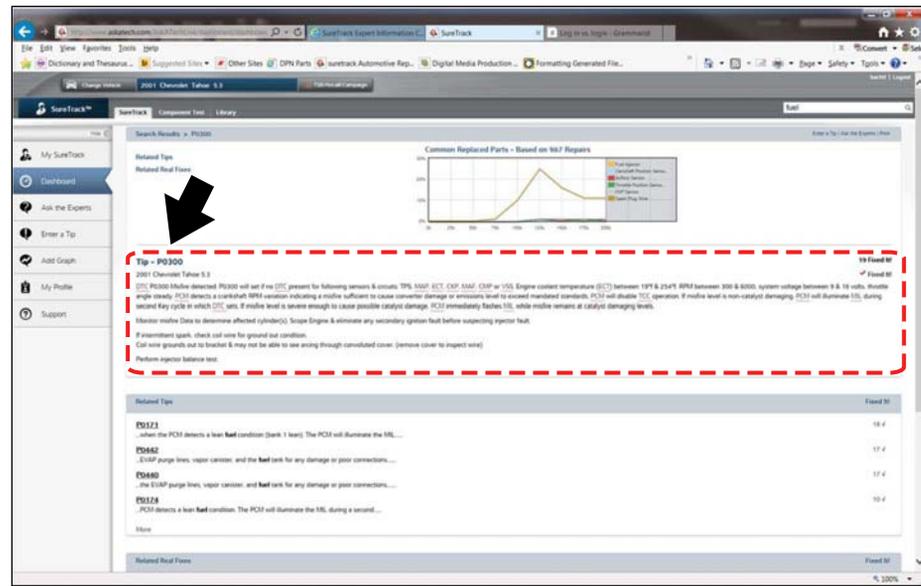
Figure 15-16 *SureTrack Tip*

- **Related Tips**—presents a list of Tips that may include information that pertains to your search, even though they are not an exact match to your search criteria.
- **Related Real Fixes**—presents a list of successful repairs for problems similar to the one in your search.
- **Community**—presents a list of Tips that have been gathered from actual shop repair orders and are presented in an easy to understand Complaint, Cause, Correction format.

About SureTrack Tips

SureTrack Tips are concise and complete descriptions of a real fix for a particular vehicle repair issue. A SureTrack Tip is a combination of proven fixes and vehicle specific data we have collected and analyzed into an all-in-one information source to help you fix vehicle problems quickly and easily (Figure 15-16).

On SureTrack you can search for Tips or enter your own Tip to help other community members resolve vehicle issues. There are 3 types of SureTrack Tips:

- **Snap-on Certified Tips**—these proven tips have gone through rigorous review by experts.
- **Real Fix Tips**—these tips are gathered from actual shop repair orders and are presented in an easy to understand Complaint, Cause, Correction format.
- **SureTrack Community Tips**—these are Tips that have been created by members of the SureTrack community.

If you have a new fix to a specific problem, you can create a Tip to share this information with other technicians. .

Component Test Tab

The Component Test tab on the Dashboard page, provides specific component operational information on how to locate the component on the vehicle, how to set up a meter to test the component, the best place on the vehicle to connect the meter, component connector pin assignments, and what readings you should expect to see.

Library Tab

The Library tab on the Dashboard page, provides data graphs and/or waveforms associated with the selected Tip and vehicle. This is a comprehensive collection of test results gathered through actual on-vehicle tests, so you know exactly what to look for when performing your own tests. Data graphs and lab scope waveforms provide a point of reference to help you verify faulty parts.

15.5.4 Ask the Experts

Selecting **Ask the Experts** opens a series of text entry forms that allow you to ask a question to the SureTrack community.

Questions and Answers

Asking Questions

SureTrack provides answers, but you must first ask a question in order to receive an answer. Begin using SureTrack by asking a question of the Community. Select See Examples in the upper-right portion of the screen to view samples of well written questions (Figure 15-17).
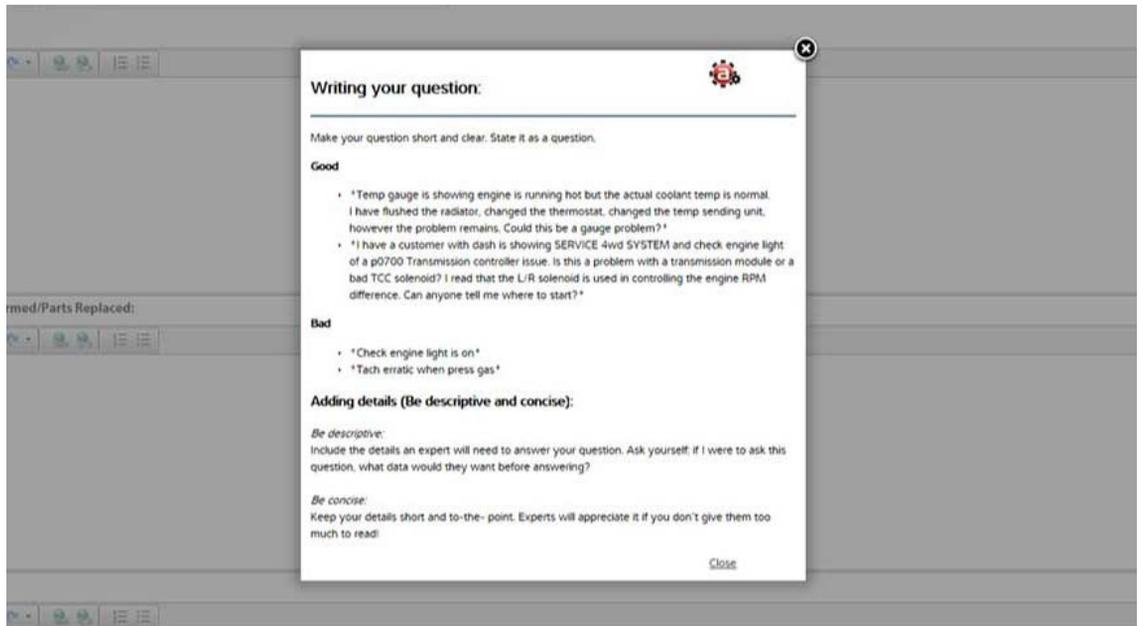

Figure 15-17 *Example Question*

▶ **To ask a Question:**

1. If not already done, select either **Select Vehicle** or **Change Vehicle** on the Header Bar and enter the identifying attributes of the vehicle you would like to ask a question about.

2. Select **Ask the Experts** on the Navigation Bar along the left-side of the screen to open the page.

3. Enter a **Subject** for the question (4 to 10 words).

4. Complete the form:

   – **Symptoms**—this is where you describe how the vehicle is behaving.

   – **Diagnostics Steps Performed/Parts Replaced**—include any previous diagnostic tests that you performed, including the results of those tests. Also list any parts that were replaced during previous diagnostic work.

   – **Your Question**—compose a clear and concise question to ask the community. Be sure to be descriptive and concise when asking your question. Select **See Examples** in the upper-right corner of the page to review examples of how to construct a good question.

   The **Attach Files** icon at the left-side bottom of the page allows you to include images or other supporting data with your question. Select **Attach Files** and a selection window opens for locating items on your computer and attaching them.

   Use the **Preview** icon at the right-side bottom of the page to see how your question will be presented to the community before you actually post it.

   Use the **Cancel** icon at the right-side bottom of the page to delete your question.

   Use the **Submit** icon at the right-side bottom of the page to ask your question.

   Check the **Follow** box if you want to get e-mail notifications when other members edit or comment on your question.

Closing a Question

Questions that you post to the community need to be closed once the vehicle repair issue has been resolved. You are encouraged to document the fix, and an important part in doing so is to provide information on what actually fixed the vehicle. This makes it possible for other SureTrack community members to use the information as well. To close a question select the **Close Question** icon on the right side of your question. Your question is now converted to a SureTrack Community Tip. Unless you have already done so, you will be asked to award Best Answer and Good Answer ratings to reward those community members that helped you as part of closing the question. This awards Leaderboard points to those community members that assisted you.

Rating Answers

Rating answers is one way to give back to the SureTrack community. The member that originally asked the question gets to select a Good Answer and a Best Answer from all the responses. The community member that provided the Good Answer or Best Answer to a question is recognized for their contribution.

About Good Answers and Best Answers:

• Only one answer can be rated Best Answer.

• More than one answer can be rated Good Answer.

• Only the SureTrack community member that asked the question can rate the answers.

15.5.5 Enter a Tip

Selecting **Enter a Tip** opens a text entry form where you can enter you personal repair experience to share with the community.

▶ **To create a new Tip:**

1. Select either **Select Vehicle** or **Change Vehicle** from the Header Bar and enter all of the identifying attributes of the vehicle you are writing the Tip about.

2. Select **Enter a Tip** from the Navigation Bar.

3. Enter your Tip Title in the Title field.

4. Compose your tip in the Content field. Include as much information as possible, while keeping the information concise and to the point. A tip should provide accurate information that is easy to read, understand, and follow.

5. Select **Submit** once you are satisfied with your Tip.

For additional information, .

15.5.6 Add Waveform/PID Graph

Selecting **Add a Waveform/PIDGraph** opens a data entry form that allows you to attach a file sample of a graph or similar image. To submit the image you must complete all the required entries including Title, File (attach) and the five drop-down list items in the Tags menu box. When you are finished, select the **Submit** icon.

15.5.7 My Profile

Selecting **My Profile** opens your personal identification page. The Header Bar tabs allow you to create your SureTrack identity, and to establish filters for the type of information that will be sent to you:

• **User Profile**—information that you include here determines how you are presented to the community.

• **Vehicle Selection**—use to set up a list of preferred vehicles. The preferred list limits the choices that display on the "Select Vehicle" list to specific years, makes, and systems.

• **Expert Subscriptions**—allows you to share your knowledge by alerting you when there is a question related to an indicated area of your expertise.

• **Communication**—use to configure what type of information from the community will be e-mailed to you.

15.5.8 Support

Selecting **Support** opens a message box to report problems with the website and to make general suggestions. The SureTrack customer support phone number is also listed.

Chapter 16
ShopStream Update Tool (SST)

The ShopStream Update Tool (SST) is a maintenance program that automatically keeps your diagnostic software up-to-date.

The following terms are used in this section and throughout this manual as described below:

- **Software Upgrade** - a new diagnostic software version. Software upgrades include new and enhanced coverage and features for subscribed Snap-on diagnostic tools.
- **Software Update** - a service release "update" for a existing diagnostic software version

For clarity, throughout this document the term "software update(s)" will be used to collectively describe "software updates, upgrades and SST program updates" using the SST, except where noted.

The ShopStream Update Tool program downloads and installs:

- Diagnostic software upgrades (subscribed tools only)
- Diagnostic software updates
- SST program updates

When connected to the Internet, the SST automatically checks for new software updates. This automatic check also occurs every time the diagnostic tool is turned on. If a software update is available, the SST will download it.

The SST is a low priority program that only downloads software updates when unused bandwidth is available. If other programs are running that communicate over the Wi-Fi network, such as a browser or instant messaging, the download may be temporarily suspended. This allows you to continue normal diagnostic tool operation, without interruptions or loss of performance.

16.1 Basic Operation

The SST program is normally running in the Windows background and available from the Windows taskbar notification area. The program can be accessed as follows:

- **SST icon in the notification area** - opens the SST program menu
- **SST program selection from the Windows "All Programs" or "Startup" menus** - starts the SST program and adds the SST icon to the notification area

NOTE:
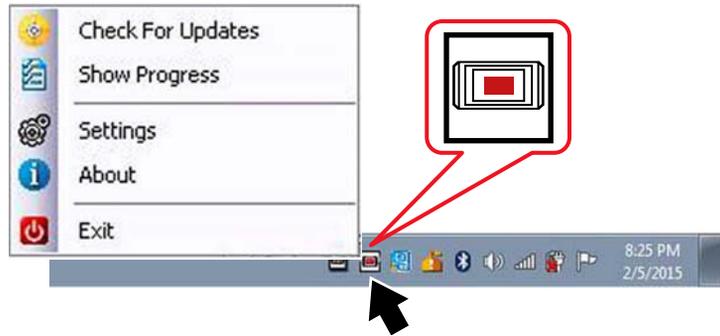If necessary, select the **expand** arrow to see the SST icon in the notification area.

Figure 16-1 *SST Icon in notification area*

Selecting the SST icon from the notification area provides the following menu choices:

- **Check for Updates** - Allows you to manually check for software updates anytime. See Manual Download on page 166.
- **Show Progress** - allows you to check the status of an active download
- **Settings** - provides SST program options:
  - Turn on/off automatic software installation. *Applies only for SST program updates.* The default setting is "on" (box checked).
  - Set the hourly interval for the SST to check for software updates (choose number 2 to 168). *Applies to SST program updates, and diagnostic tool software upgrades/updates.* The default interval is 4 hours.
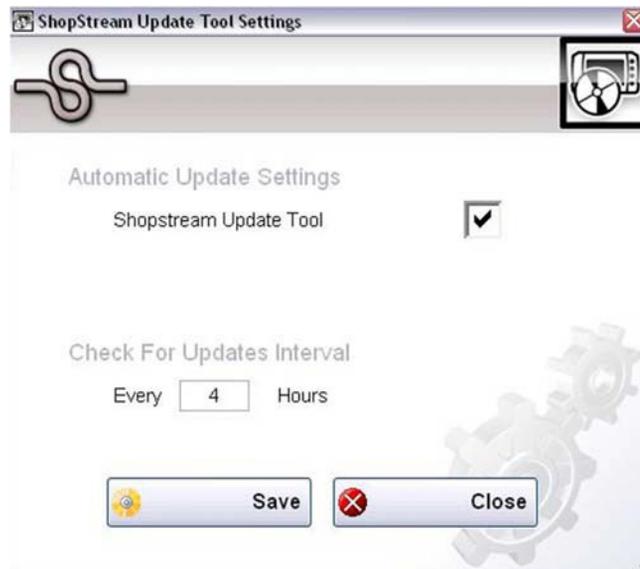

Figure 16-2

- **About** - displays the SST program software version number
- **Exit** - closes the SST program

16.2 Manual Download

This section describes the basic procedures for manually downloading software updates and upgrades.

Normally, the SST will automatically detect and download software. If necessary, use the following procedure to manually check for and download software.

NOTE:
Software Subscription Customers Only - It is recommend that you download software upgrades when not actively using the diagnostic tool. Download times will vary as they are dependent on the file size of the upgrade (some upgrades may exceed 3Gb) and your connection speed. It is suggested that you start the download at the end of your day and let it run overnight. For software upgrade installation instructions, see Installing Software Upgrades on page 169.

▶ **To manually download software:**

1. Select the SST icon in the Windows taskbar notification area to open the menu (Figure 16-3).
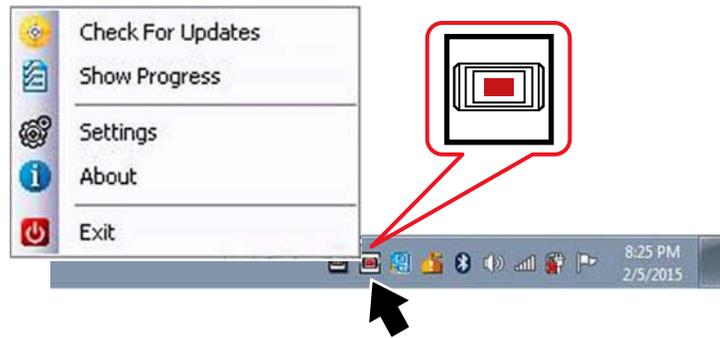

Figure 16-3 *ShopStream Update Tool icon and menu*

2. Select **Check for Updates** from the menu.

    A series of message boxes will display as the SST searches for updates (Figure 16-4).

Figure 16-4 *Typical - Checking for Updates message*

Once the search is complete, one of two results are expected:

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- – If no updates are found, the message box closes and a "No updates available" message displays. Select the message to close it.
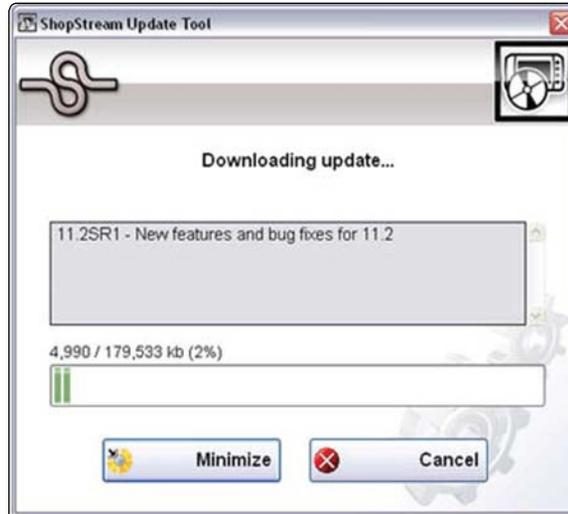- – If updates are found, they will automatically begin to download (Figure 16-5).

Figure 16-5 *Typical - Downloading update window*

> **NOTE:**
> The percentage status bar may not always be displayed while downloading (Figure 16-5).

3. During an active download, two options are available:
   - – **Minimize**—closes the message box. The download continues as a background task and the diagnostic tool can be used normally. Select **Show Progress** from the SST icon menu at any time to reopen the message box and check the status of the download.
   - – **Cancel**—stops and cancels the download and closes the message box. If you select Cancel, and choose to re-start the download again, the download will start from the beginning.
4. Once the download completes, it must be installed. See the applicable instructions for Installing Software Updates on page 168 or Installing Software Upgrades on page 169.

   For SST program updates (only) - if you have the Automatic Update setting "on", the update will be installed automatically. See Automatic Update setting in Basic Operation on page 164 for additional information.

   If you have the Automatic Update setting "off", the SST program must be manually installed. See Installing Software Updates on page 168.

> **NOTE:**
> If the Internet connection is interrupted during a download, the download is suspended and a "network unavailable" message displays. The message disappears and the download resumes automatically once the Internet connection is restored.

16.3 Installing Software Updates

When a software update is ready for installation, an installation update message will appear (Figure 16-6). You can select the message or the SST icon from the Windows taskbar notification area at anytime to start the software update installation process.
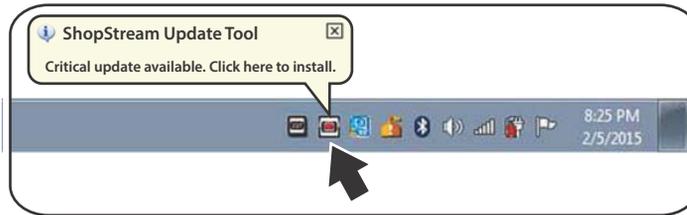

Figure 16-6 *Typical update installation message*

NOTE:
Before installing a software update, have your Scan Module and USB cable available. The software update may include Scan Module firmware updates that need to be installed.

To install a software update:

1. Select the software update available message (Figure 16-6), or the SST icon from the notification area.

    A software update installation window will display (Figure 16-7).

Figure 16-7 *Typical update installation window*

2. Select an installation option to continue:
    – **Install Now**—starts the software update installation. Proceed to step 3.
    – **Install Later**—closes the message. The message will reappear at a later time as a reminder.

> **NOTE:**
> If **Install Later** is chosen, you can select the SST icon from the notification area to restart the installation at anytime.

3. Close the **ShopStream Diagnostic Suite** application. The ShopStream Diagnostic Suite should remain closed until the software installation has completed.

4. Follow the on-screen instructions to complete the installation.

5. After the installation is complete, open the **ShopStream Diagnostic Suite** application.

6. Select **Scanner** from the Home Screen. If a Scan Module firmware update has been received, a "Scan Module firmware update" message will display. Proceed to Updating Scan Module Firmware on page 62.

    – If the Scanner opens normally and no update message is displayed, proceed to step 7.

7. Turn the diagnostic tool off, then turn it on (re-boot).

8. From the toolbar, select **Menu > HELP > Version Info** to confirm the new version number is installed.

16.4 Installing Software Upgrades

This section is ONLY applicable if you are currently in the software subscription program.

> **NOTE:**
> It is recommended that you perform software upgrade installations Monday – Friday, during business hours to ensure customer care representatives are available for support. The installation will take approximately 30 minutes. If the installation is interrupted, Contact Snap-on Diagnostics Customer Care for assistance. See the Snap-on contact information at the front of this manual.

> **NOTE:**
> Before installing a software upgrade, have your Scan Module and USB cable available. The software upgrade may include firmware updates that need to be installed to the Scan Module.

▶ **To install a software upgrade:**

1. Select the software upgrade available message (Figure 16-8), or the SST icon from the Windows taskbar notification area.
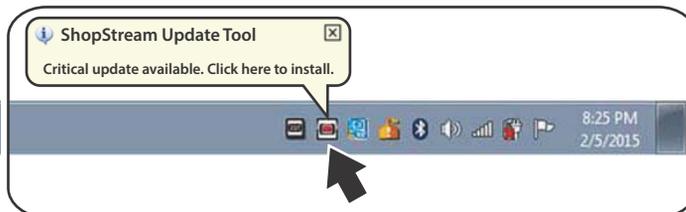

Figure 16-8 *Typical upgrade installation message*

An upgrade installation window will display (Figure 16-9).
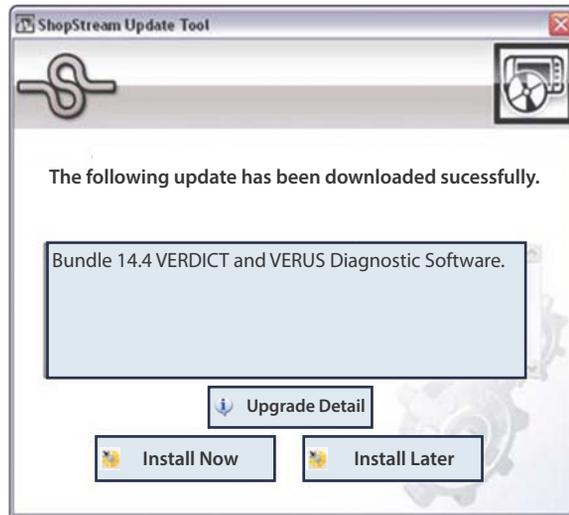

Figure 16-9 *Typical upgrade installation window*

2.　Select an installation option to continue:

　–　**Upgrade Detail**—opens a PDF file describing the details of the software upgrade, including any accessories that may be required.

　–　**Install Now**—starts the software upgrade installation. Proceed to step 3.

　–　**Install Later**—closes the upgrade message. The upgrade available message reappears at a later time as a reminder.

NOTE:
If **Install Later** is chosen, you can select the SST icon from the notification area to restart the installation at anytime.

3.　Close the **ShopStream Diagnostic Suite** application. The ShopStream Diagnostic Suite should remain closed until the software installation has completed.

4.　Follow the on-screen instructions to complete the installation.

5.　After the installation is complete, open the **ShopStream Diagnostic Suite** application.

6.　Select **Scanner** from the Home Screen, if a Scan Module firmware update has been received, a "Scan Module firmware update" message will display, proceed to Updating Scan Module Firmware on page 62.

　–　If the Scanner opens normally and no update message is displayed, proceed to step 7.

7.　Turn the diagnostic tool off, then turn it on (re-boot).

8.　From the toolbar, select **Menu > HELP > Version Info** to confirm the new version number is installed.

9.　To activate your SureTrack access that comes with your new software upgrade, see SureTrack on page 147.

Chapter 17 | # Maintenance

This section describes typical maintenance and care procedures for your Diagnostic Tool and components.

17.1 Diagnostic Tool

17.1.1 Cleaning

Periodically perform the following tasks to keep your Diagnostic Tool in proper working order:

- Check the housing, cables and connectors for dirt and damage before and after each use.
- At the end of each work day, wipe the Diagnostic Tool housing, cables and connectors clean with a damp cloth.

IMPORTANT:
Do not use any abrasive cleansers or automotive chemicals on the Diagnostic Tool.

17.1.2 Cleaning the Touch Screen

The touch screen can be cleaned with a soft cloth and a mild window cleaner.

IMPORTANT:
Do not use any abrasive cleansers or automotive chemicals on the touch screen.

17.1.3 Battery Service

Follow all safety guidelines when handling the battery pack.

⚠ **WARNING**

Risk of electric shock.
- **Prior to recycling the battery pack, protect exposed terminals with heavy insulating tape to prevent shorting.**
- **Disconnect all test leads and turn Diagnostic Tools off before removing the battery pack.**
- **Do not attempt to disassemble the battery or remove any component projecting from or protecting the battery terminals.**
- **Do not expose the Diagnostic Tool or battery pack to rain, snow, or wet conditions.**
- **Do not short circuit the battery terminals.**

Electric shock can cause injury.

⚠ **WARNING**

Risk of explosion.
- **The Lithium battery is factory replaceable only, incorrect replacement or tampering with the battery pack may cause an explosion.**

Explosion can cause death or serious injury.

Battery Safety Guidelines

IMPORTANT:
The battery pack contains no user serviceable components. Tampering with the battery pack terminals or housing will void the product warranty.

Keep the following in mind when using and handling the battery pack:

- Do not short circuit battery pack terminals.
- Do not immerse the Diagnostic Tool or battery pack in water, or allow water to enter the Diagnostic Tool or battery pack.
- Do not crush, disassemble, or tamper with the battery pack.
- Do not heat the battery pack to over 100°C (212°F), or dispose of it in a fire.
- Do not expose the battery pack to excessive physical shock or vibration.
- Keep the battery pack out of reach of children.
- Do not use a battery pack that appears to have suffered abuse or damage.
- Charge the battery pack in the appropriate charger only.
- Do not use a battery charger that has been modified or damaged.
- Use the battery pack for the specified product only.
- Store the battery pack in a cool, dry, well ventilated area.

NOTE:
The battery pack should be used within a short period of time (about 30 days) after charging to prevent loss of capacity due to self-discharging.

If long-term storage of the battery pack is necessary, it should be stored in a in a cool, dry, well ventilated place with a 30 to 75 percent state of charge to prevent loss of characteristics.

To prolong the life of your battery, turn off the Diagnostic Tool when not in use. The Diagnostic Tool has a built in charger that recharges the battery on demand whenever it is connected to a power source.

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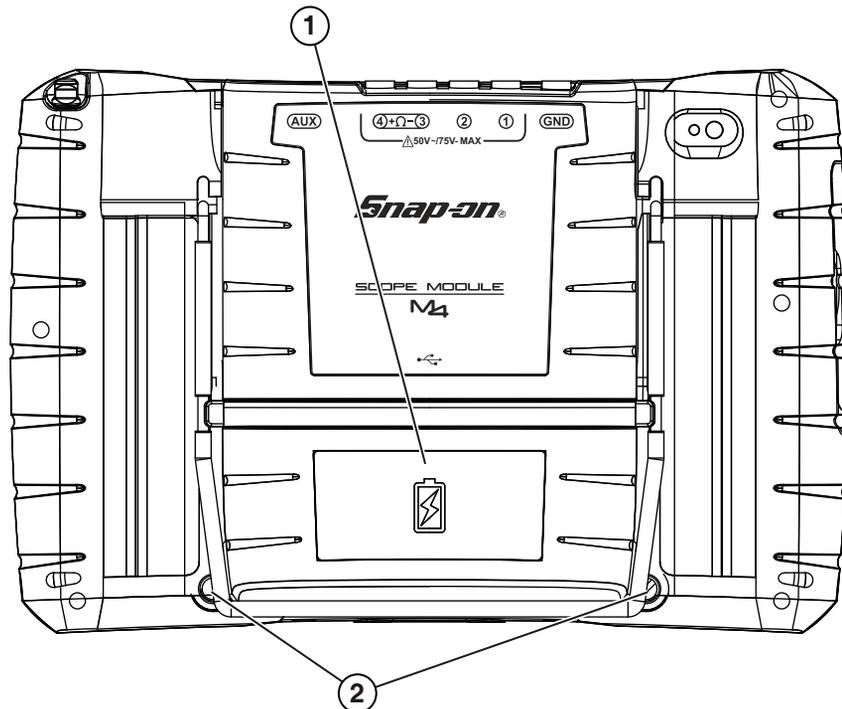
Replacing the Battery Pack

If the battery pack no longer holds a charge, contact your sales representative to order a new one.

IMPORTANT:
Replace the battery pack with original Snap-on replacement parts only.

▶ **To replace the battery pack:**
1. Loosen the two battery pack screws.
2. Carefully raise the battery pack up and remove.

1— Battery Pack
2— Battery Pack Screws (2)
Figure 17-1 *Battery pack location*

3. Align the new battery pack into position, making sure it is fully seated.

NOTE:
Do not overtighten the battery pack screws.

4. Tighten the two battery pack screws.

Disposing of the Battery Pack

Always dispose of a lithium-ion battery pack according to local regulations, which vary for different countries and regions. The battery pack, while non-hazardous waste, does contain recyclable materials. If shipping is required, ship the battery pack to a recyling facility in accordance with local, national, and international regulations. For additional information contact:

- **North America**—Rechargeable Battery Recycling Corporation (RBRC) at http://www.rbrc.org or http://www.call2recycle.org, or call 1(800) 822-8837 (USA)

Products bearing the WEEE logo (Figure 17-2) are subject to European Union regulations.

Figure 17-2 *sample WEEE logo*

NOTE:
Always dispose of materials according to local regulations.

Contact your sales representative for details.

17.1.4 Calibrating the Touch Screen

The touch screen can be calibrated for accuracy using the Windows Tablet PC Settings.

To calibrate the touch screen:

1. From the Windows menu select **Start > Control Panel > Hardware and Sound > Tablet PC Settings**.

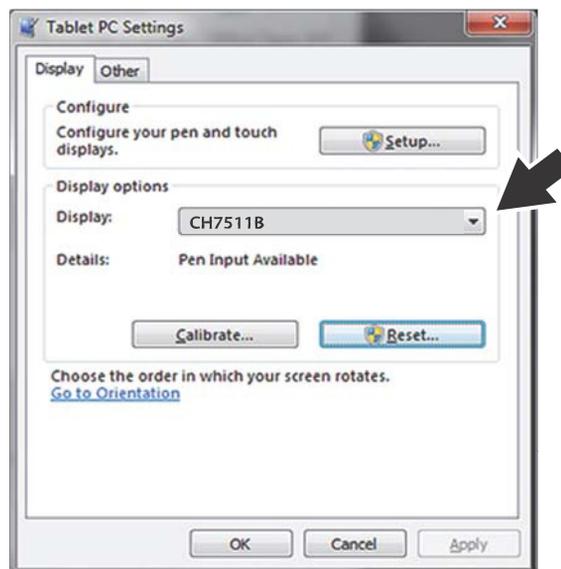The Tablet PC Setting window is displayed (Figure 17-3).

Figure 17-3 *Tablet PC Settings window*

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Maintenance   Diagnostic Tool

2. Select the display to be calibrated from the dropdown list. The default diagnostic tool display is "**CH7511B**" (Figure 17-3).

NOTE:
If you are using an optional touch screen (e.g. using an external touch screen with a Tech Cart and docking station), there will be an additional touch screen choice displayed.

3. Select **Calibrate**.

The Calibration screen is displayed (Figure 17-4).

4. Using the stylus, follow the screen prompts and tap on the center of the cross-hairs as they appear at each corner on the screen (Figure 17-4).

NOTE:
To achieve the best results, it is recommended to use the capacitive stylus when performing the touch screen calibration.
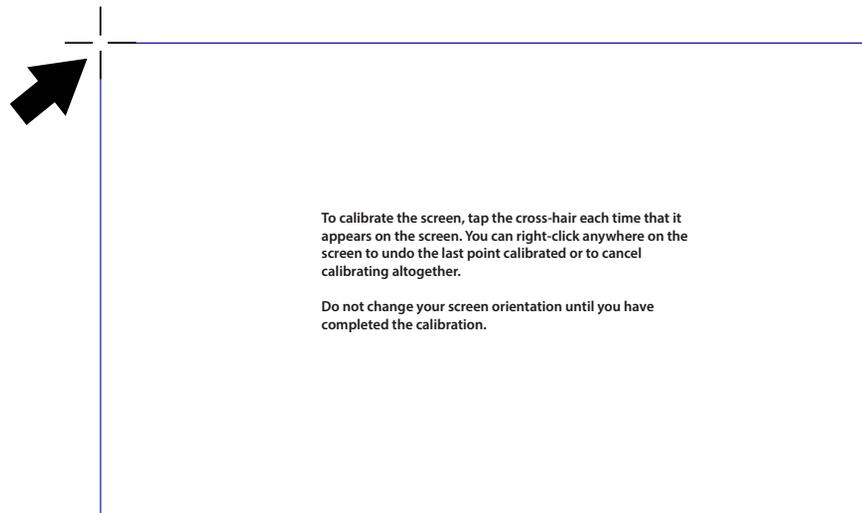
Figure 17-4 *Calibrating the Touch Screen*

5. Select **OK** to close the dialog boxes once the calibration is complete.

17.1.5 Screen Protector Installation

Touch screen protectors are available as optional equipment (contact your sales representative to order). The following procedure describes typical installation procedures.

Items recommended for installation:

- Microfiber type cloth (lint-free)
- Flexible straight edged tool (e.g. small squeegee, plastic card)
- Cellophane tape

▶ **To install a screen protector:**

Installation Tip(s):
Cleanliness is the most important factor during the installation of the screen protector. The following tips are provided to assist in the installation:

- ○ Clean your hands thoroughly
- ○ Clean the touch screen thoroughly using a microfiber type cloth, removing all dirt, dust, grease, fingerprints etc. See Cleaning the Touch Screen on page 171 for additional information.
- ○ Work in a well lit area
- ○ Minimize dust; work in an area with minimal air movement, turn off fans or air conditioning etc.

1. Thoroughly clean and dry the touch screen. See Cleaning on page 171 for additional information.
2. Peel the rear mask (Tab 1) approximately 1 in. (2.54 cm) away from one edge of the protector. Do not remove the front mask (Tab 2) at this time.
3. Carefully align the exposed edge of the protector with the edge of the screen and lightly hold the edge down to keep it in position (Figure 17-5). While holding the edge, slowly pull off the rear mask and allow the protector to cling to the screen. Make any alignment adjustments as needed during installation.

Figure 17-5 *Removing rear mask (Tab 1) to apply protector*

4. Once the protector is in place, use the microfiber cloth to work out any air bubbles. As an alternative, a flexible straight edged tool can be used.

Installation Tip(s):
To remove air bubbles, slowly work from the inside towards the edges. If large air bubbles are trapped, it may be easier to carefully peel back the protector and re-apply. If air bubbles are persistent, it is an indication that the screen and/or protector are not clean.

If visible dust is noticed trapped under the protector, peel back the protector and use the adhesive side of a small piece of cellophane tape to remove the dust.

To peel back the protector once it is in place, use a small piece of cellophane tape stuck to a corner of the front mask to lift the edge.

5. Once the protector is in place and air bubbles are removed, slowly remove the front mask (Tab 2) (Figure 17-6). Lightly hold the protector in place (under Tab 2), when you start to remove the front mask.
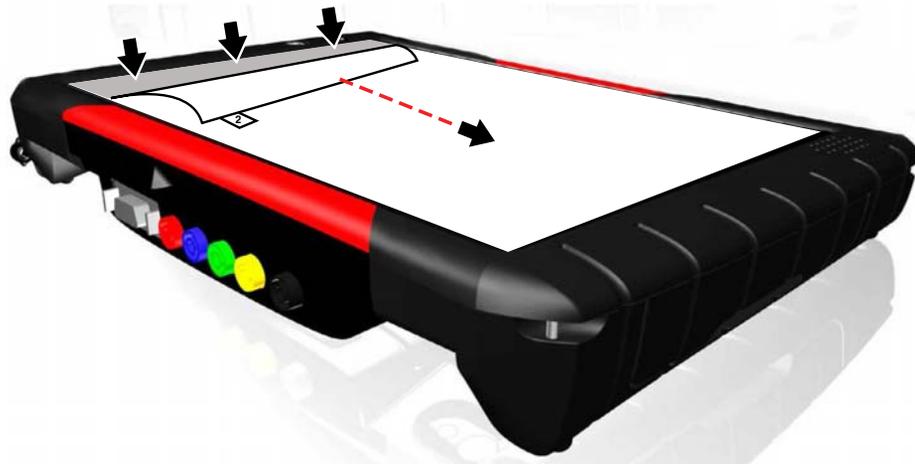
Figure 17-6 *Removing front mask (Tab 2)*

6. To complete the application, wipe the protector (using microfiber cloth) evenly while applying light pressure.

IMPORTANT:
If air bubbles appear at the edges, use the microfiber cloth or your finger to remove. Avoid using any type of tool (e.g. small squeegee, plastic card, etc.) directly on the protector surface.

17.1.6 Stylus Tip Replacement

Periodically the capacitive stylus tip may need to be replaced. To remove the stylus tip, unthread the tip counterclockwise. To install the new stylus tip, thread clockwise until seated.

Stylus tips are available as optional equipment (contact your sales representative to order).
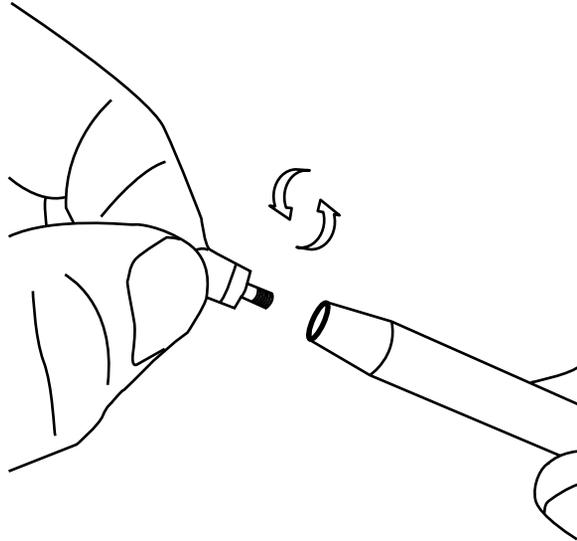
IMPORTANT:
Do not overtighten the stylus tip.

Figure 17-7 *Replacing stylus tip*

17.1.7 Operating System Restore

Snap-on System Restore is a hard disk drive recovery program that allows you recover the hard disk drive files in the event of a failure. Running the program replaces all of the C drive data with the original factory data. Be aware, all new or modified files on the C drive will be lost.

To restore the operating system
1. Turn on the Diagnostic Tool.
2. Wait for the "Press the "S" button to run Snap-on System Restore." message to display, then Press the **Shortcut (S)** button.

   A progress indicator displays while the program loads.
3. Select **OK** from the confirmation message.

   A progress indicator displays while the files are being restored.
4. Select **OK** from the confirmation message.

   The Diagnostic Tool shuts down, then reboots and the system recovery portion of the operation begins. Follow any on-screen prompts.

   The Diagnostic Tool shuts down and reboots a second time. When the Home screen displays, the procedure is complete and the Diagnostic Tool is ready for use.

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17.2 Scan Module

This section covers how to care for your Scan Module.

17.2.1 Cleaning and Inspecting the Scan Module

When using the Scan Module, make sure to do the following:

•   Check the housing, wiring, and connectors for dirt and damage before and after each use.
•   At the end of each work day, wipe the housing, wiring, and connectors clean with a slightly damp cloth.

IMPORTANT:
Do not use any abrasive cleansers or automotive chemicals on the Scan Module.

17.2.2 Replacing the Protective Handgrip

The soft protective handgrip that covers the outer edges of the Scan Module is easily replaced should it become worn or damaged. Contact your sales representative for replacement parts.

▶ **To replace the protective handgrip:**
1. Disconnect the data cable, and any other cables, if attached to the Scan Module.
2. From the bottom of the Scan Module, gently lift up and out on one side of the handgrip to free it from Scanner housing.
3. Repeat step 2 to loosen the other side of the handgrip.
4. Lift the handgrip off of the Scan Module housing.

NOTE:
The handgrip tapers toward the front of the Scan Module housing. Make sure the replacement handgrip is correctly oriented before attempting to install it.

5. Fit the new handgrip over the top, data cable end, of the Scan Module housing.
6. With your fingers, work the new handgrip onto the Scan Module housing from top to bottom. Make sure the tabs on the handgrip fit into the grooves on the housing.

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna. -Increase the separation between the equipment and receiver. -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device was tested for typical lap held operations with the device contacted directly to the human body to the **back side** of the Display Unit. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting.