

Introduction

Purpose

This manual provides instructions to download software and useful diagnostic data from an Encore® 500/500 S/700 S or Eclipse® unit, and retrieve pump logs using the Laptop Tool software on laptop/PC. These instructions are intended to serve as a quick reference to perform common operations related to the Laptop Tool V03.0.01 or later. However, certain sections may apply to earlier versions as well.

IMPORTANT INFORMATION

It is imperative that you always use the latest Laptop Tool software version.

The Laptop Tool is a program that runs on a Windows® PC. The program is used to download Gilbarco® Software to Encore 500/500 S/700 S series, Eclipse series, and Car Wash Kiosk Automated Attendant (Kiosk) products. The program can also be used to collect pump logs from Encore 500/500 S/700 S and Eclipse units. The Laptop Tool program is obtained from Gilbarco interactive website (using a predefined User ID and Password).

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Required Tools

Following tools are required to install the Laptop Tool software:

- Laptop/PC (refer to [“Laptop/PC Requirements”](#) on [page 2](#))
- Laptop Tool (downloadable from Gilbarco interactive website)
- M00719 Cable (refer to [“Making Cable”](#) on [page 6](#))

Related Documents

Document Number	Title	GOLD® Library
MDE-3804	Encore and Eclipse Start-up/Service Manual	<ul style="list-style-type: none">• Encore and Eclipse• Service Manual
MDE-4018	Automated Attendant Car Wash Entry Payment System Installation, Service and Parts Manual	POS Peripheral Devices

Required Reading

Before installing the equipment, the installer must read, understand, and follow:

- This manual.
- National Fire Protection Association (NFPA) 30A, The Automotive and Marine Service Station Code.
- NFPA 70®, The National Electrical Code (NEC®).
- Applicable federal, state, and local codes and regulations.

Failure to do so may adversely affect the safe use and operation of the equipment.

Note: These procedures must be performed by a Gilbarco Authorized Service Contractor (ASC).

Laptop/PC Requirements

The laptop/PC on which the Laptop Tool is installed must meet the following requirements:

Component	Requirement
Operating System	Any one of the following: <ul style="list-style-type: none">• Windows® XP• Windows 7• Windows 8
Screen	<ul style="list-style-type: none">• Resolution: 800 X 600• Colors: 16 Bit or later
Serial Ports	<ul style="list-style-type: none">• 1 with V12.1.11 or earlier• 1-10 with V12.1.12 or later• Native if an RS-232C Port is available on the PC.~ OR ~• Universal Serial Bus (USB) with Hawking® HUC232S Adapter or equivalent (refer to "USB-to-Serial Adapters" on page 7).
Access	User must be a member of administrator group or have administrator access to change port settings and install device drivers.

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
BIOS	Basic Input Output System
CCN	CRIND Control Node
CRIND®	Card Reader IN Dispenser
D-Box	Distribution Box
GOLD	Gilbarco Online Documentation
LON	Local Operating Network
NEC	National Electrical Code
NFPA	National Fire Protection Association
PCN	Pump Control Node
PDN	Pump Door Node
POS	Point of Sale
TAC	Technical Assistance Center
TRP	Technician Resources Page
USB	Universal Serial Bus
W&M	Weights and Measures

Important Safety Information

Notes: 1) *Save this Important Safety Information section in a readily accessible location.*

2) *Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.*


This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.



Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

**WARNING**



The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gilbarco Authorized Service Contractor or call the Gilbarco Support Center at 1-800-800-7498. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire

Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking

Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

In an Emergency**Inform Emergency Personnel**

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING

Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING

Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

WARNING

Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING

Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Making Cable

A cable can be made using Gilbarco parts to connect an Encore 500/500 S/700 S series or Eclipse unit and the laptop/PC (when using a serial port on the laptop) as shown in [Figure 1](#).

Figure 1: Making Cable Using Gilbarco Parts

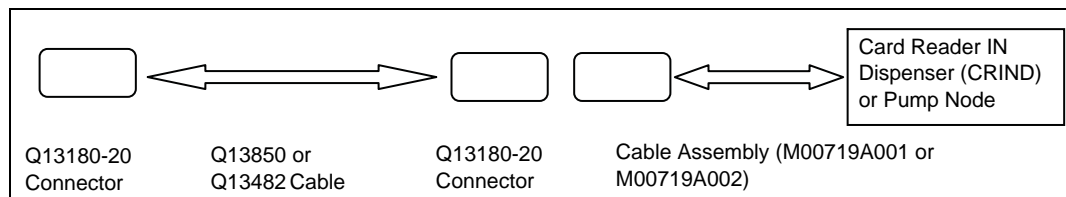


Figure 2: Q13180-20 Connector PIN-out Chart

Label	Q13180-20 "COM"	
Wire Number	MOD Jack 8-pin	DSUB REC 9-pin
1	1	6
2	2	3
3	3	2
4	4	5
5	5	8
6	6	1
7	7	7
8	8	4

- Notes: 1) The M00719 Cable Assembly was included on earlier models of the Encore 500/500 S/700 S series or Eclipse units. For later units, the ASC must supply this cable. The cable may get damaged, so it is recommended that you have a couple of spares handy. Generally, you cannot only visually check if a cable is damaged. Sometimes, a download may start but may not be completed due to a damaged cable.
- 2) The Q13850 Cable is available in several lengths. The Q138850-06 Cable is 6 feet long and is commonly used. The preferred cable length is 6 foot and any cable longer than that MAY cause issues with functionality of the Laptop Tool.

CAUTION

All cable connections to the laptop/PC and the Pump Control Node (PCN) or CRIND Control Node (CCN) must remain tight. Use secure fastenings, as available. Some boards can be permanently damaged or downloads can fail if connections are intermittent.

CAUTION

All desktop computers and most laptops have the earth ground tied to the DC ground of the serial port. It is generally recommended to either use battery power or other ungrounded power sources such as a converter running off the service vehicle battery. Ensure that the vehicle door or other metal surfaces do not come in contact with the dispenser, as this may damage the equipment.

CAUTION

Most Ultra-Hi™ units have a special fuse, which ensures that if the earth ground is connected to the serial port ground, the isolation fuses will blow. Also, if you set the laptop on or inside the dispenser such that the metal casing on the laptop touches the metal chassis, the fuse will blow immediately. In both these situations, a board replacement is required. On Ultra-Hi units using the M06315A001 Ultra-Hi Interface Board, remove J405 before attempting to perform laptop service.

USB-to-Serial Adapters

Newer laptops generally do not have RS-232 ports, they have USB ports. USB-to-RS-232 Converters and the Laptop Tool software can be used to download software to the dispenser. Visit the USB-to-RS-232 Converter manufacturer's website and ensure that the computer has the latest device drivers installed. If you are using Laptop Tool V12.1.11 (or earlier), set the port to COM1. Gilbarco has tested and recommends the Hawking device. However, other equivalent devices work as well.

Hawking HUC232S

The Hawking HUC232S USB-to-Serial device is the unit preferred by Gilbarco. It has been thoroughly tested by Gilbarco. For more information on the Hawking device, visit <http://www.hawkingtech.com>.

Moxa® UPort 1110

The Moxa UPort 1110 USB-to-Serial device is the second unit preferred by Gilbarco and has been thoroughly tested. For more information on the Moxa UPort 1110 device, visit http://www.moxa.com/product/UPort_1110.htm.

Belkin® F5U103

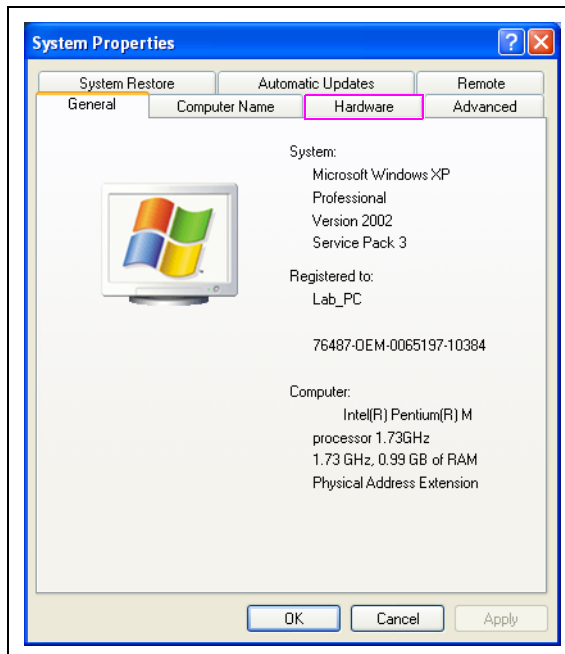
Gilbarco has tested the Belkin F5U103 with success.

Belkin F5U257

If using USB-to-RS-232 Converter in Windows XP, make the following changes:

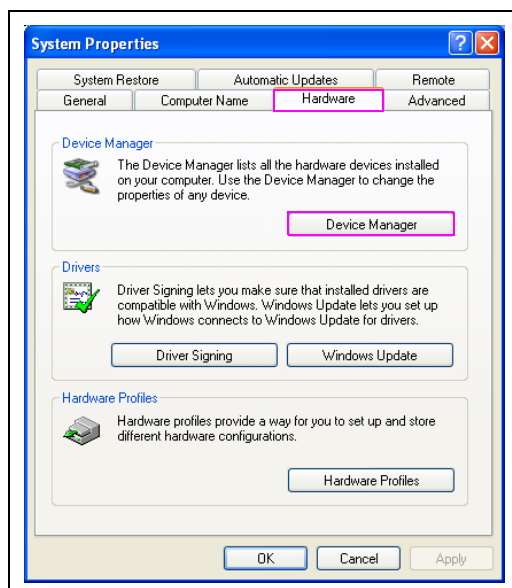
- 1 Go to **Control Panel > System**. The System Properties dialog box appears (see [Figure 3](#)).

Figure 3: System Properties Dialog Box



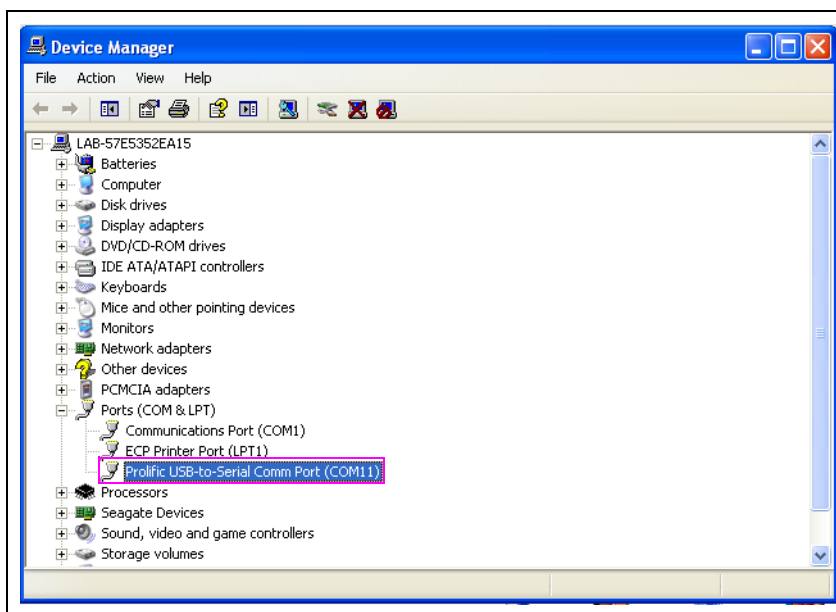
- 2 Select **Hardware > Device Manager**.

Figure 4: System Properties Window



- 3 Select **Ports** to allow the ports devices list to be displayed.

Figure 5: Device Manager Screen

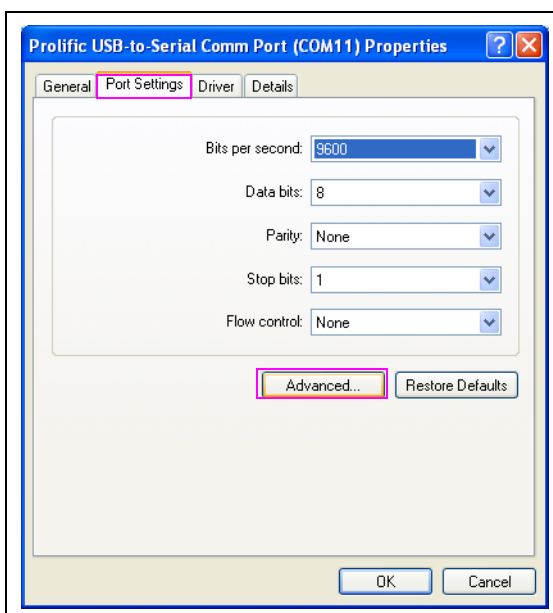


- 4 Select **Properties** or double-click the applicable Serial Port Device (for example, “Hawking” or “Belkin” device).

Note: Hawking USB-to-Serial devices may be named “Prolific” in the port list.

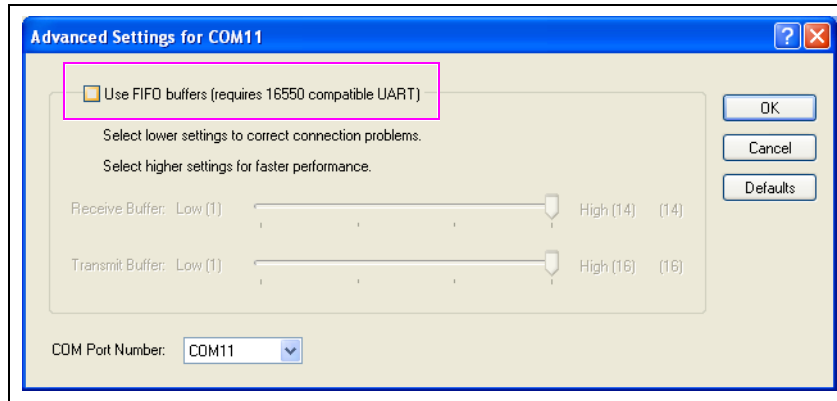
- 5 Select **Port Settings** and then **Advanced**.

Figure 6: Selecting Port Settings



- 6 Unselect the “Use FIFO buffers (requires 16550 compatible UART)” check box and click **OK**.

Figure 7: Advanced Settings for COM11



- 7 Close the system preferences dialog boxes and reboot the laptop/PC. This change may apply to other USB-to-Serial adapters as well.

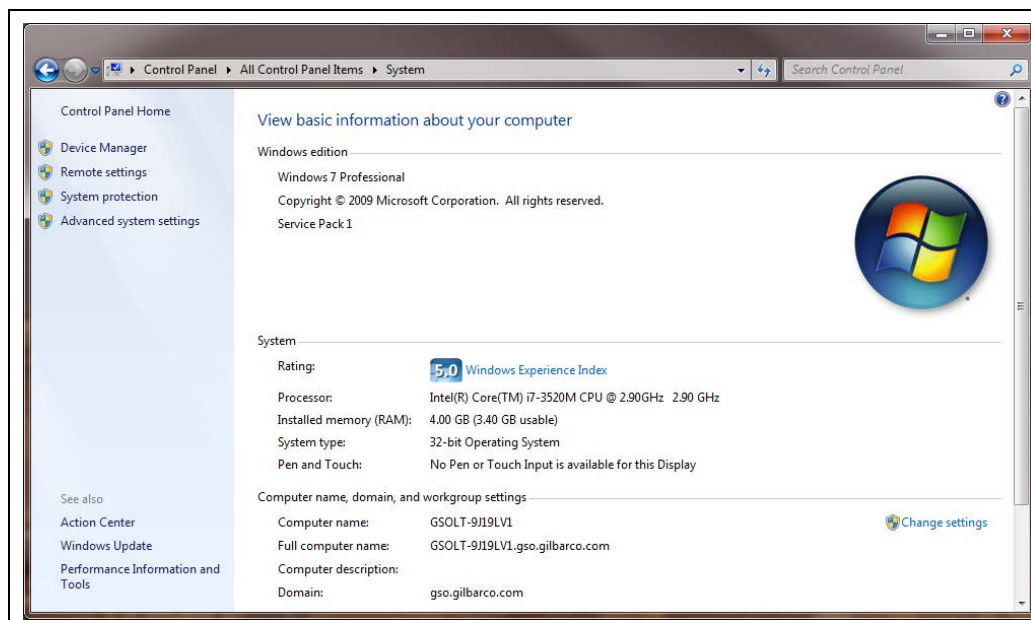
Note: All the other COM Port settings should remain at default.

If using USB-to-RS-232 Converter in Windows 7 or Windows 8, make the following changes:

- 1 Select **Control Panel** from the Start Menu in Windows 7 or by right-clicking **Computer** in Windows Explorer and selecting **Properties** in Windows 7 or Windows 8. Once Control Panel is opened, select **System**.

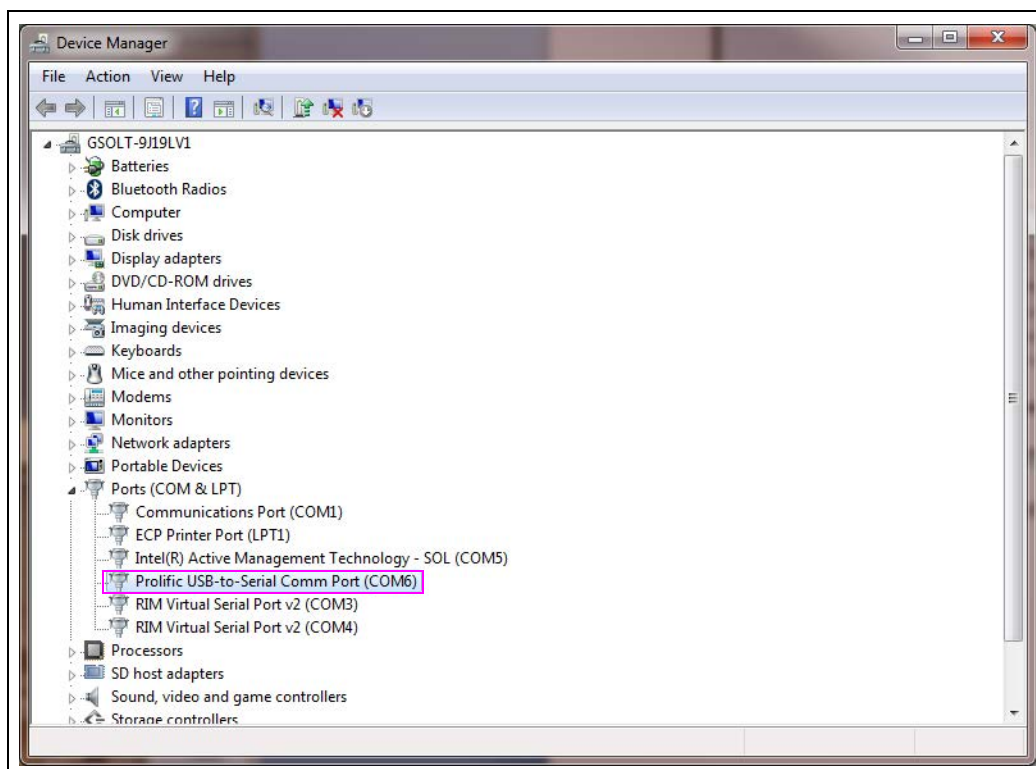
Note: If view by category is selected, then change this to view by Small Icons or Large Icons (otherwise System will be hidden in a category).

Figure 8: Control Panel Window



- 2 Select **Device Manager**.
- 3 Select **Ports** to allow the ports devices list to be displayed.

Figure 9: Selecting Ports

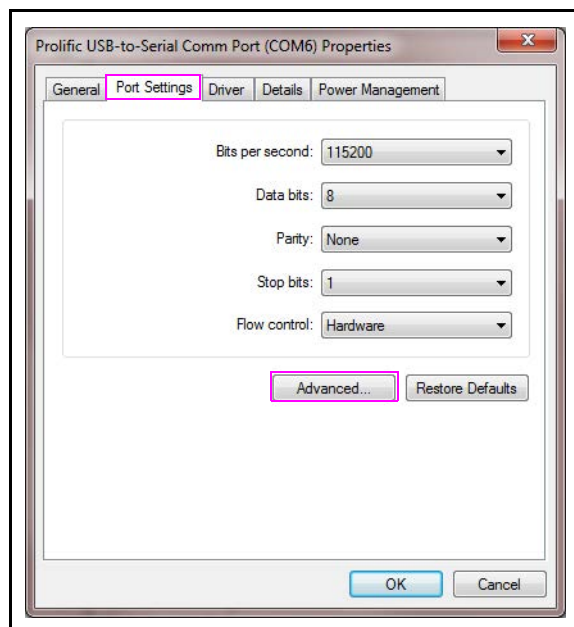


- 4 Select **Properties** or double-click the applicable Serial Port Device (for example, “Hawking” or “Belkin” device).

Note: Hawking USB-to-Serial devices may be named “Prolific” in the port list.

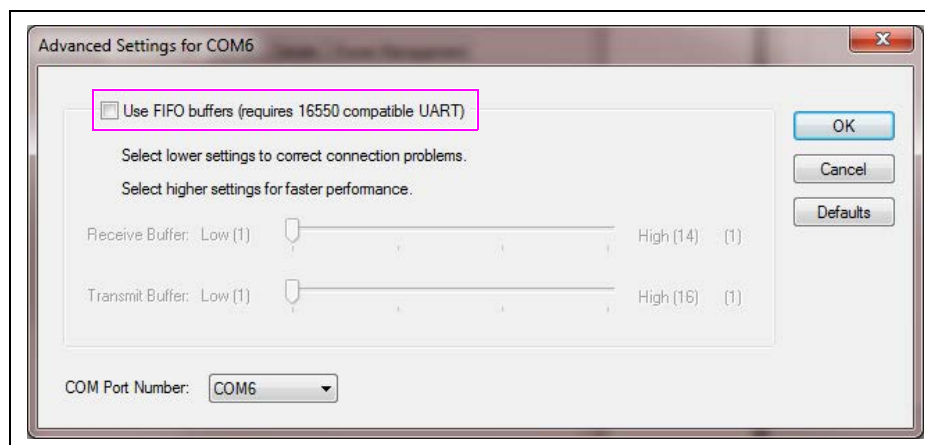
- 5 Select **Port Settings > Advanced**.

Figure 10: Selecting Port Settings



- 6 Unselect the “Use FIFO buffers (requires 16550 compatible UART)” check box and click **OK**.

Figure 11: Advanced Settings for COM6



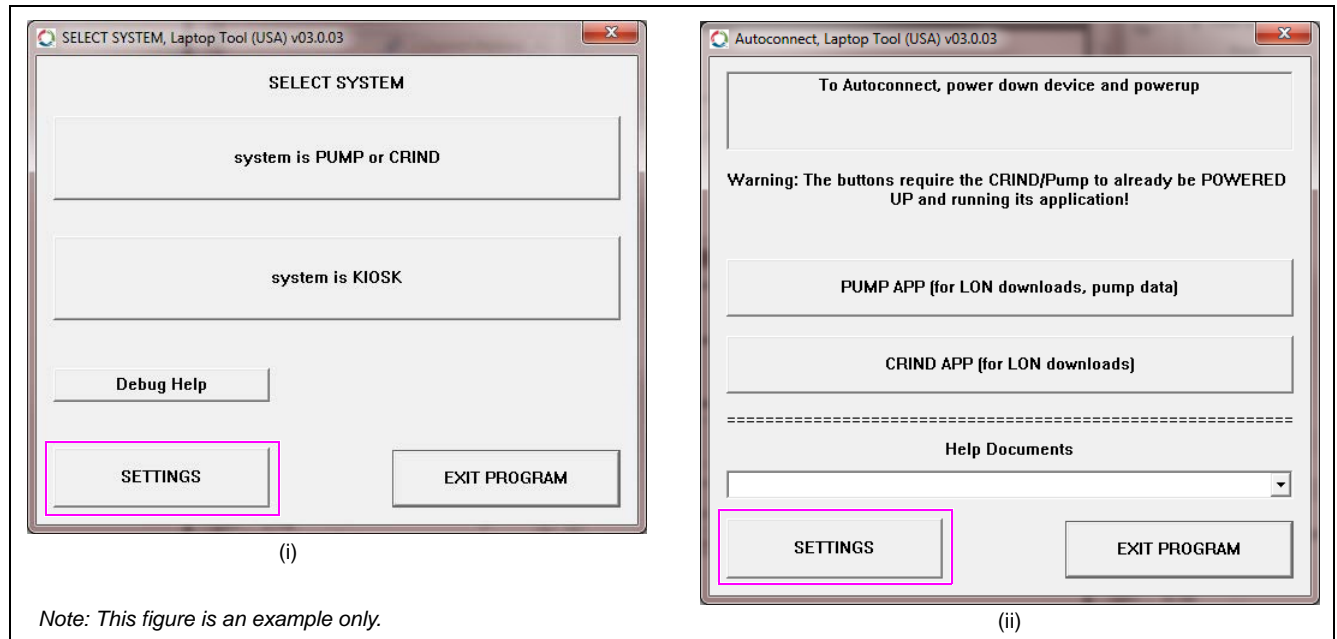
- 7 Close the system preferences dialog boxes and reboot the laptop/PC. This change may apply to other USB-to-Serial adapters as well.

Note: All the other COM Port settings should remain at default.

Laptop Tool Settings

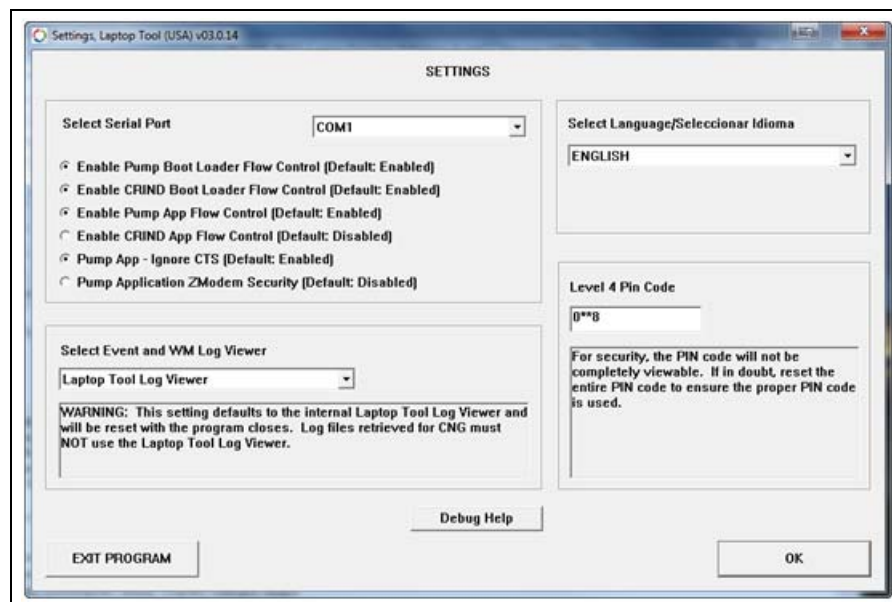
- 1 Click **SETTINGS** to access the Laptop Tool settings on the Select System [see [Figure 12 \(i\)](#)] or Autoconnect screen [see [Figure 12 \(ii\)](#)].

Figure 12: Selecting SETTINGS



- 2 The Settings screen can be used to select the serial port to use special serial port settings and language (**ENGLISH** or **SPANISH**).

Figure 13: Select Serial Port Screen



Downloading Pump/Dispenser and CRIND Software

Note: The technician must always use the latest Laptop Tool version with the latest software downloads available. Refer to “[Downloading Laptop Tool](#)” on [page 44](#).

IMPORTANT INFORMATION

Disconnect the CRIND and pump two-wire from the Point of Sale (POS) system before downloading any software. Do not perform a software upgrade to fix a problem unless you know the latest software is a good fix. Refer to *web bulletins* at the Technician Resources Page (TRP) or advice from Gilbarco Technical Assistance Center (TAC). For memory corruption, a Coldstart is recommended.

CAUTION

If the site uses a third-party POS system, do not disconnect the CRIND and pump two-wire, as this may shut down the entire site.

Note: The order of downloading different types of software is generally not important. However, always read and understand any information regarding the software to be downloaded to verify that no special order is required while updating.

Downloading CRIND Application

To download the CRIND application, proceed as follows:

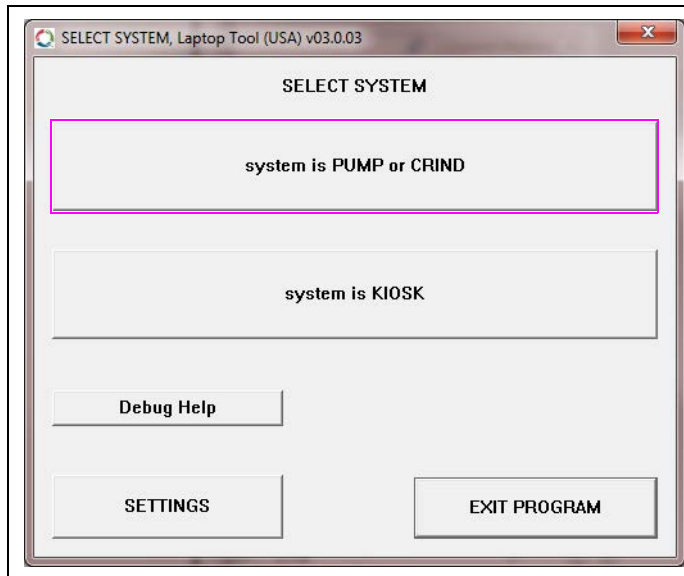
- 1 Ensure that the CCN battery voltage is higher than 3.0 VDC. Replace if needed, before proceeding.
- 2 Disconnect the CRIND two-wire at the Distribution Box (D-Box).
- 3 Remove power from the dispenser.
- 4 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P3111 port on the CCN.

Note: Disconnect any cable that is already plugged into P3111. Ensure that you reconnect any such cable after the download is complete.

- 5 Start the Laptop Tool.

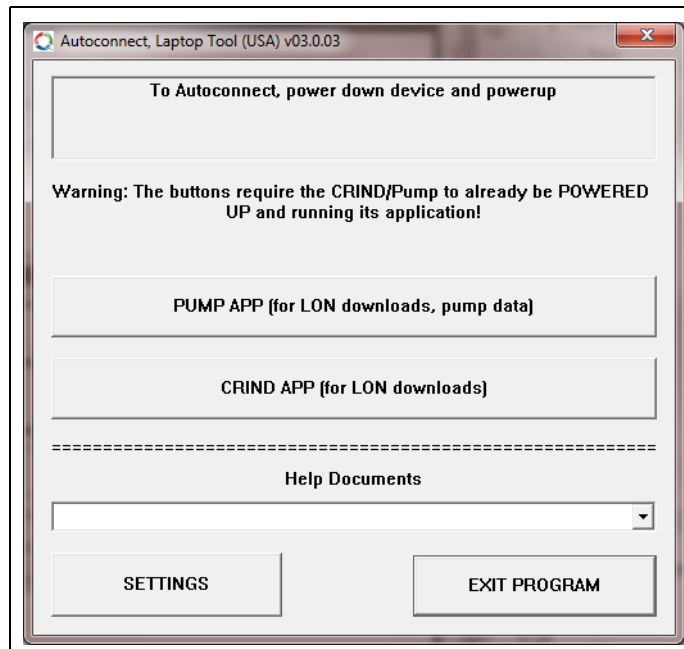
- 6 Click system is PUMP or CRIND.

Figure 14: Select System Screen



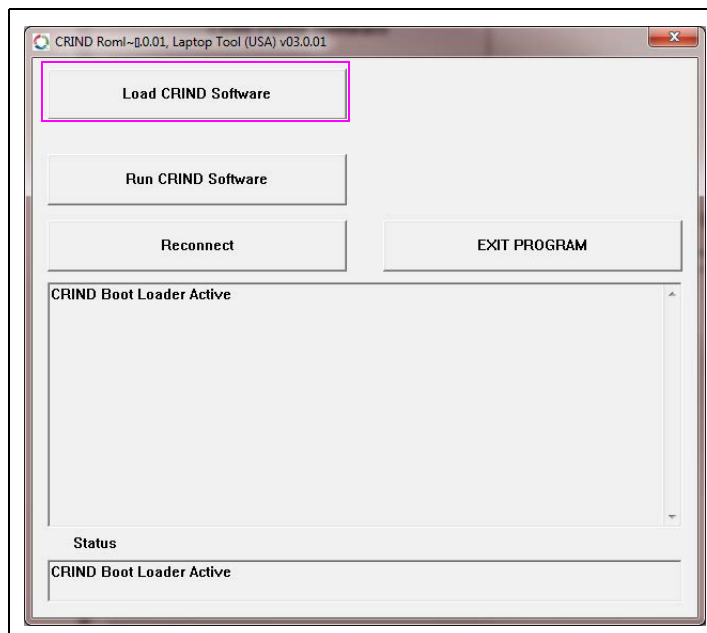
- 7 Apply power to the dispenser. The Laptop Tool will detect a CCN and the appropriate screen appears.

Figure 15: Autoconnect Screen



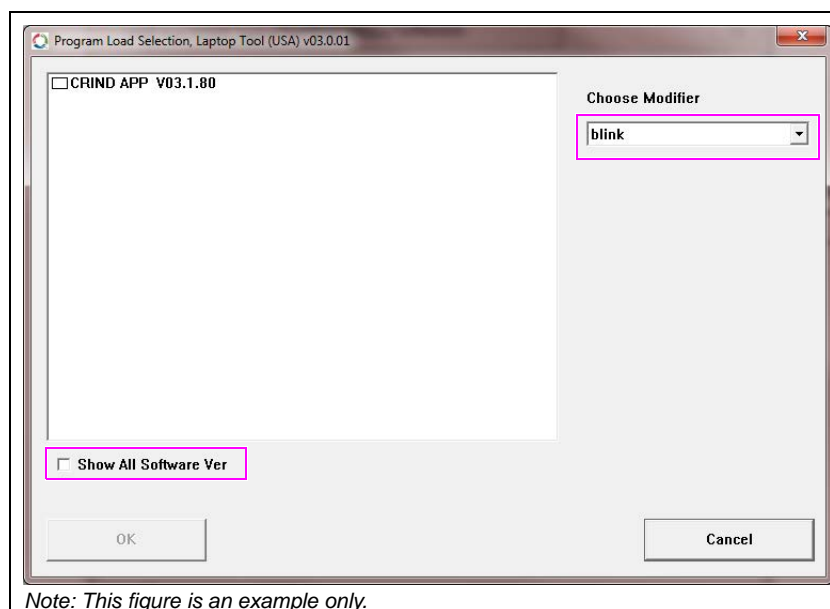
8 Click **Load CRIND Software**.

Figure 16: Load CRIND Software Screen



- 9 In the Choose Modifier box, select the desired modifier. Normally, only the latest software appears and must be used. If required, or if special instructions on the Gilbarco TRP recommend you to use an earlier version, click **Show All Software Ver** to show additional software versions.

Figure 17: Program Load Selection Screen



Note: This figure is an example only.

- 10 Click and highlight the software version to download to the CRIND, and click **OK** to start the download process.

Note: After the software is downloaded, remove the download cable from the CCN and reconnect any cable that was disconnected earlier, before closing the dispenser.

After the desired software is downloaded, the Laptop Tool starts the application.

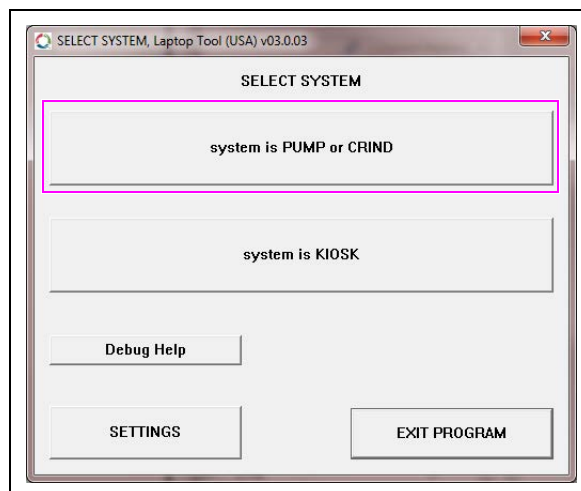
- 11 Power cycle the dispensing unit or kiosk.
- 12 Reconnect the CCN at the two-wire P3105 Connector.

Downloading Pump Application

To download the pump application, proceed as follows:

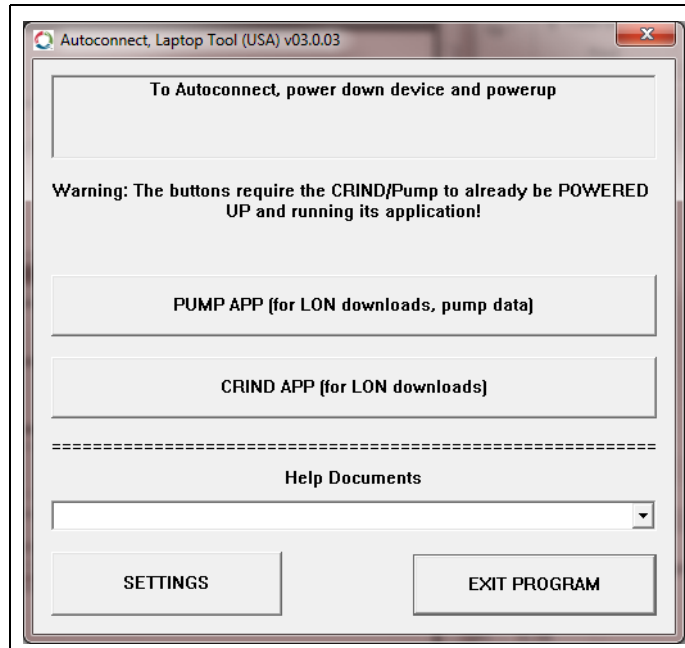
- 1 Ensure that the Pump Node battery voltage is higher than 3.0 VDC. Replace, if needed, before proceeding.
- 2 Disconnect the Pump Node two-wire at the P1109 Connector.
- 3 Remove power from the dispenser.
- 4 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 Port on the CCN.
Note: Disconnect any cable that is already plugged into P1111. Ensure that you reconnect any such cable after the download is complete.
- 5 Flip the Pump Calibration Switch to the right or unsealed position.
- 6 Start the Laptop Tool.
- 7 Click **system is PUMP or CRIND**.

Figure 18: Select System Screen



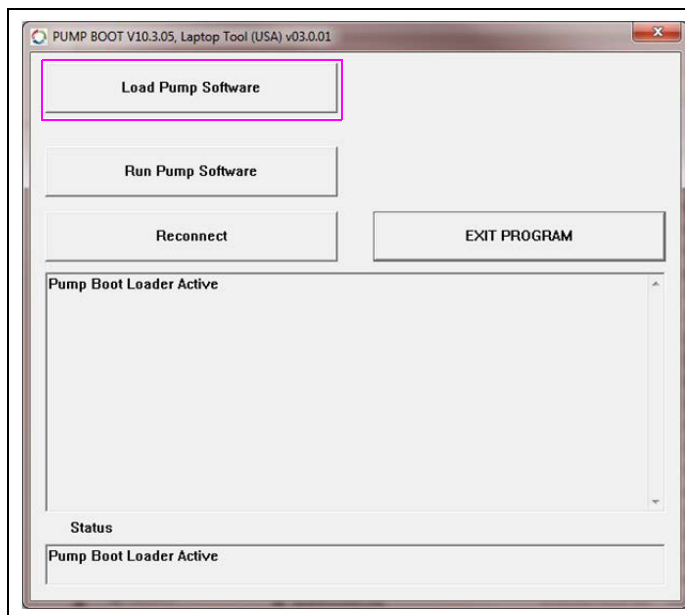
- 8 Apply power to the dispenser. The Laptop Tool will detect a PCN and the appropriate screen appears.

Figure 19: Autoconnect Screen



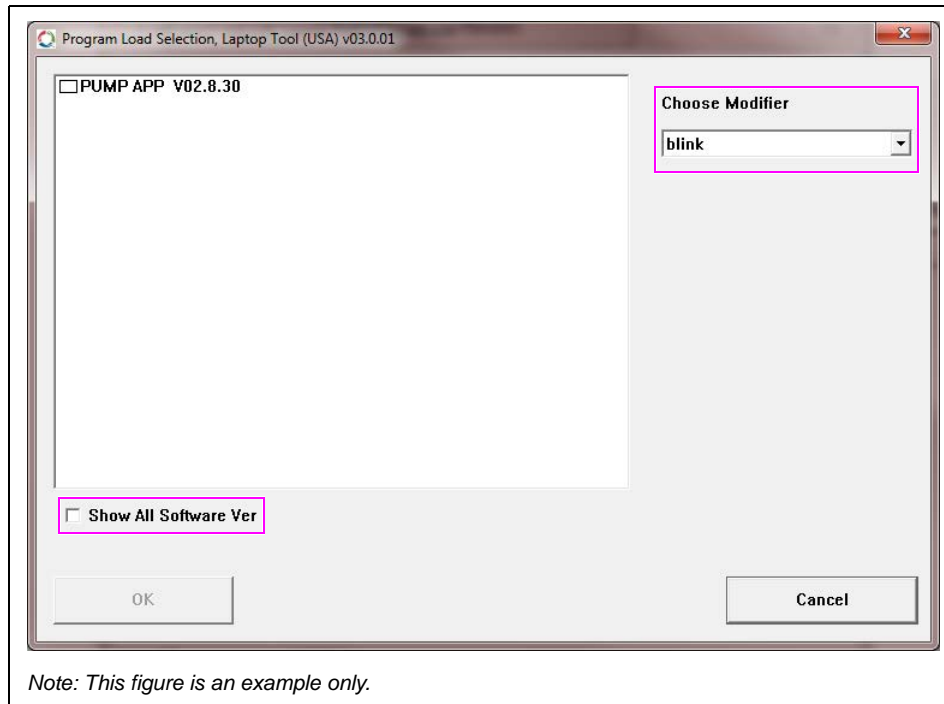
- 9 Click Load Pump Software.

Figure 20: Load Pump Software Screen



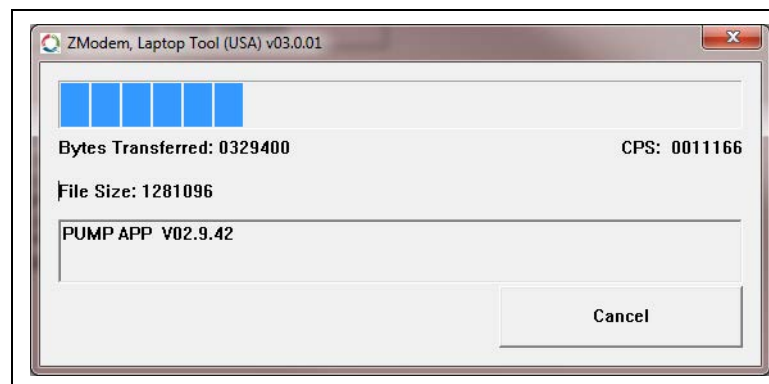
- 10 In the Choose Modifier box, select the desired modifier. Normally, only the latest software appears and must be used. If required, or if special instructions on the Gilbarco TRP page recommend you to use an earlier version, click **Show All Software Ver** to show additional software versions.

Figure 21: Program Load Selection Screen



- 11 Click and highlight the software version to download to the pump, and click **OK** to start the download process.

Figure 22: Download in Progress Screen



Note: After the software has been downloaded, remove the download cable from the PCN and reconnect any cable that was disconnected earlier, before you close the dispenser.

- 12 Flip the Calibration Switch to the left or normal position after the following conditions are

met:

- Download is complete.
- Pump application is started.
- Dispensing unit is warmstarted automatically.

13 Power cycle the dispensing unit.

14 Reconnect the Pump Node at the two-wire P1109 Connector.

Downloading Local Operating Network (LON) Software

CAUTION

Certain LON-based Pump and CRIND peripheral boards have been updated. These different hardware versions require specific minimum versions of software to function properly. Laptop Tool V14, 20, and 03 prevent downloading incorrect software and board revisions. Do not attempt to circumvent this protection as doing so will render the board inoperable.

Software Version Information for Specific LON Pump and CRIND Systems

Allowed old and new hardware versions are as follows:

Hardware	Old Hardware/ Software Versions	New Hardware/ Software Versions
Door Node 2, 3, or 4 (see Note 1 , Note 2)	XX.Y.00 to XX.Y.64	XX.Y.65 to XX.Y.99
Door Node 5 (6 Digit) Door Node 5 (7 Digit) (see Note 2 , Note 3)	-	02.Y.ZZ
Serial Node [For Cash Acceptor and Barcode Scanner (see Note 1 , Note 2)]	XX.Y.00 to XX.Y.57	XX.Y.58 to XX.Y.99
ATC Node (see Note 4)	01.3.ZZ or 10.3.ZZ	01.4.ZZ
Totalizer Node (see Note 4)	01.Y.ZZ or 10.Y.ZZ	03.Y.ZZ
CRIND MIP	No longer downloadable in Laptop Tool	
Pump MIP	No longer downloadable in Laptop Tool	

Notes: 1) XX is 01 or 10.

2) Y is 0-9.

3) ZZ is 0-99.

4) ZZ is 01-10.

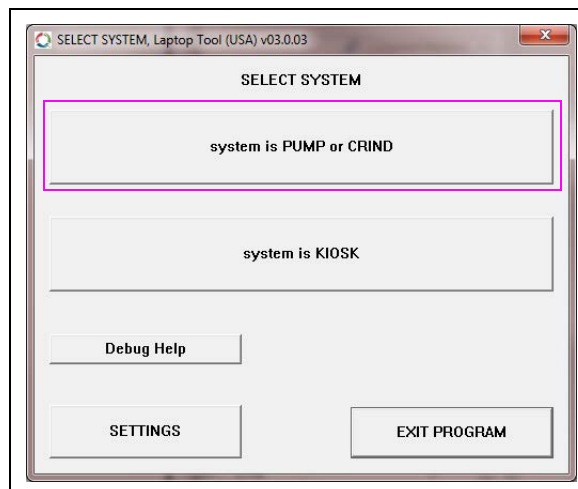
This section provides instructions to download LON application (Door Node, Cash Acceptor Serial Node, Barcode Scanner Serial Node, or ATC Node). LON software can be downloaded either through the PCN or CCN. However, many versions of CRIND do not support LON download. Therefore, the preferred method is to download via the PCN.

To download LON software, proceed as follows:

- 1** Ensure that Pump Node battery voltage is higher than 3.0 VDC. Replace if needed, before proceeding.
- 2** Disconnect the Pump Node two-wire at the P1109 Connector.

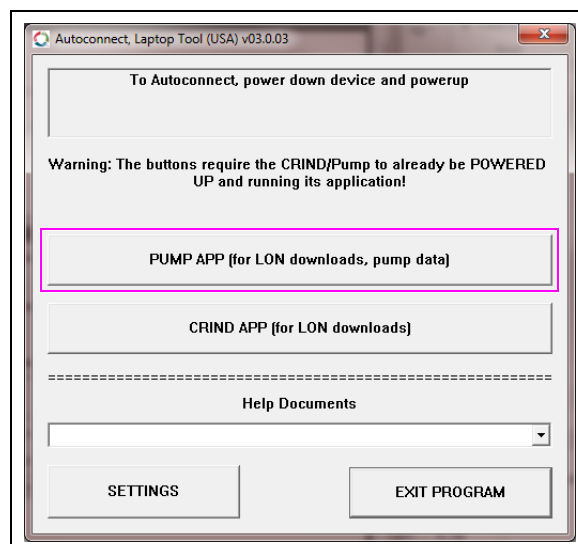
- 3 Remove power from the dispenser.
- 4 Apply power to the pump and wait for the pump application to start.
- 5 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 Port on the PCN.
- 6 Start the Laptop Tool.
- 7 Click **system is PUMP or CRIND**.

Figure 23: Select System Screen



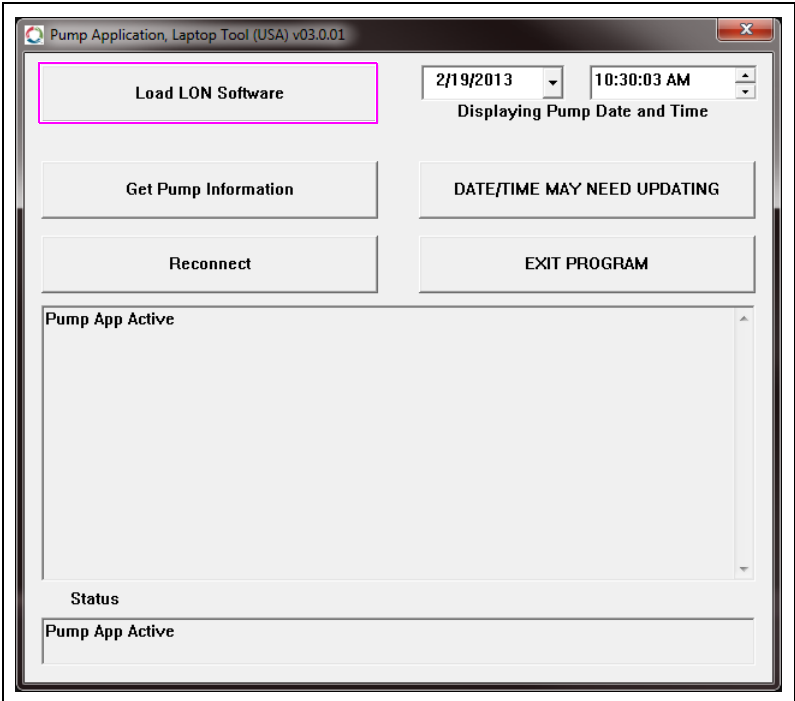
- 8 Click **PUMP APP (for LON downloads, pump data)**.
Note: LON Software must be loaded through a PCN.

Figure 24: Autoconnect Screen



- 9 Click **Load LON Software**.

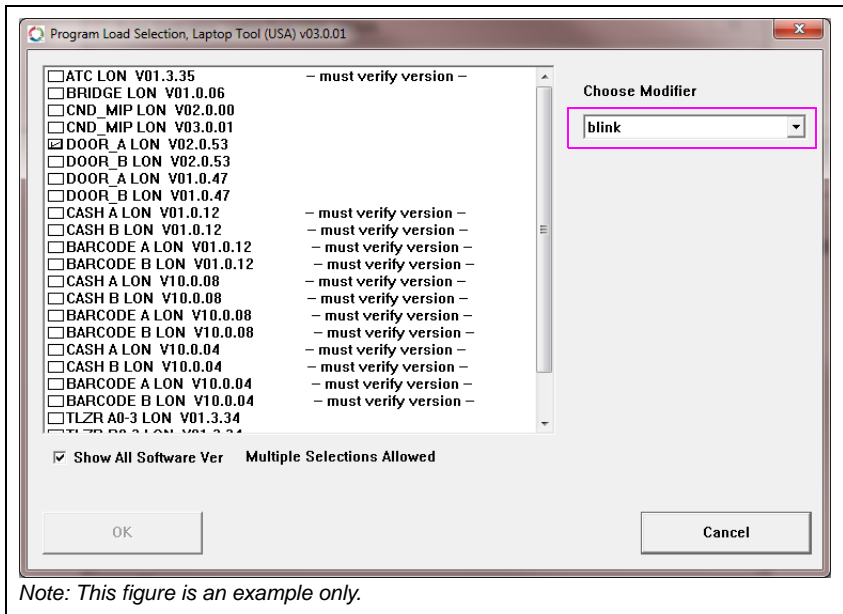
Figure 25: Pump Application Screen



Versions of current software are displayed.

- 10 In the Choose Modifier box, select the desired modifier.

Figure 26: Selecting Modifier



- 11 Click and highlight the LON software version to download and click **OK** to start the download process.

Notes: 1) Multiple versions of LON software can be selected and downloaded in sequence, automatically. However, not all combinations of Laptop Tool and pump software work with multiple selections.

2) The Laptop Tool will show what versions of LON software are already loaded, if this is reported by PCN (or CCN). However, not all versions of LON software are reported to the Laptop Tool. Such versions will not be indicated.

- 12 Repeat steps 9 on page 22 through 11 for each LON software to be loaded (see Note 1).
- 13 Power cycle the dispensing unit. Even though it may look like it is running, all LON software may not be synchronized until after a final power cycle.
- 14 Disconnect the Laptop Tool, power off the dispensing unit, and reconnect the Pump Node two-wire P1109 Connector.

IMPORTANT INFORMATION

Do not load two Pump Door Nodes (PDNs) without rebooting the dispenser. Always upgrade PDN Software one at a time, otherwise pump configuration will be lost.

Pump Data

Updating Pump Time and Date

IMPORTANT INFORMATION

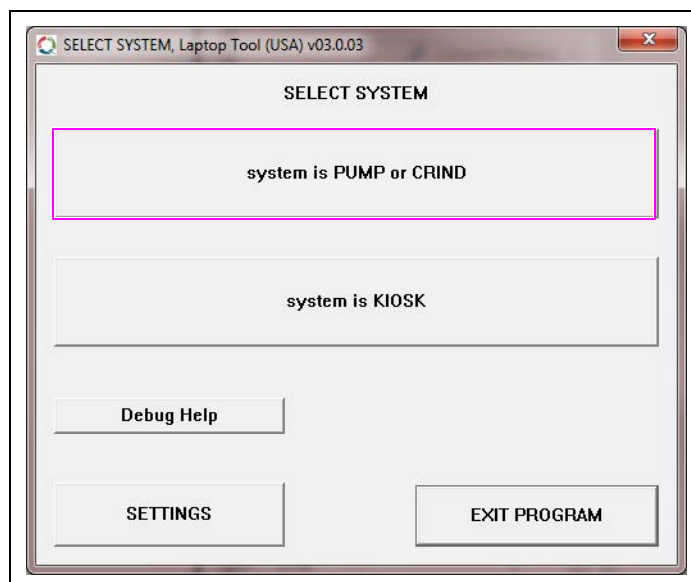
Disconnect the P3105 CRIND Node and Pump Node two-wire P1109 Connector, before changing the date/time.

This section provides instructions to update the pump date/time. It is important that all dispensers/pumps are programmed to display the correct time and date. Otherwise, Event Log entries may not be useful to the service personnel.

To update pump time and date, proceed as follows:

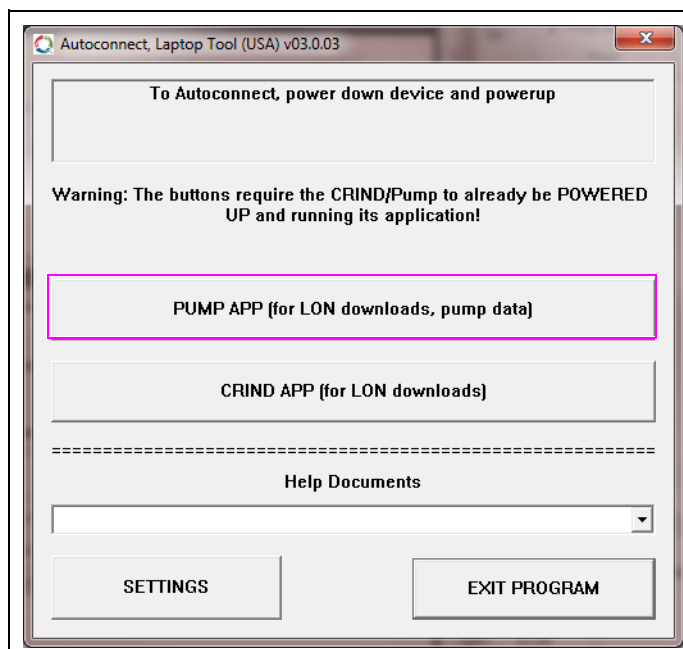
- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 27: Select System Screen



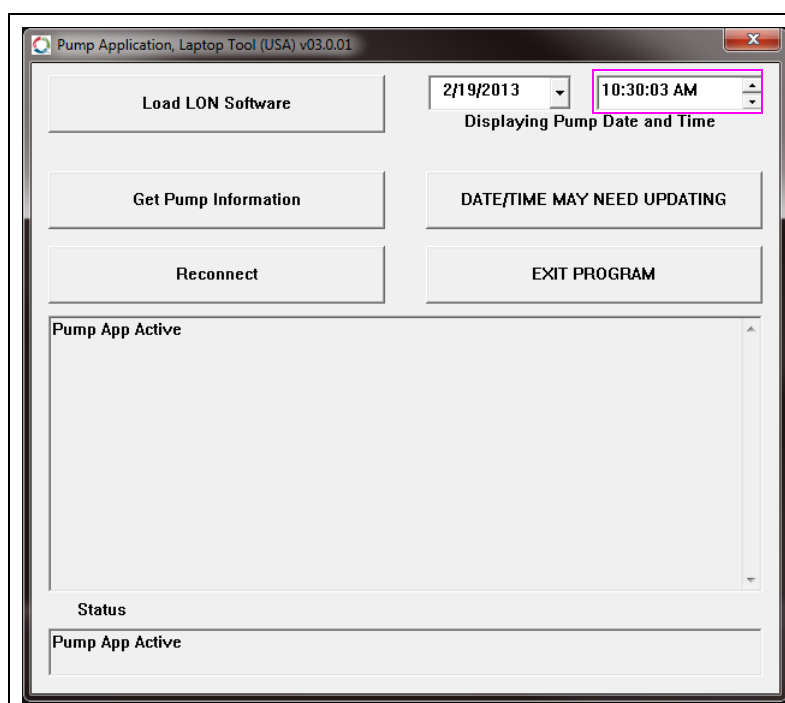
- 5 Click **PUMP APP (for LON downloads, pump data)**.

Figure 28: Autoconnect Screen



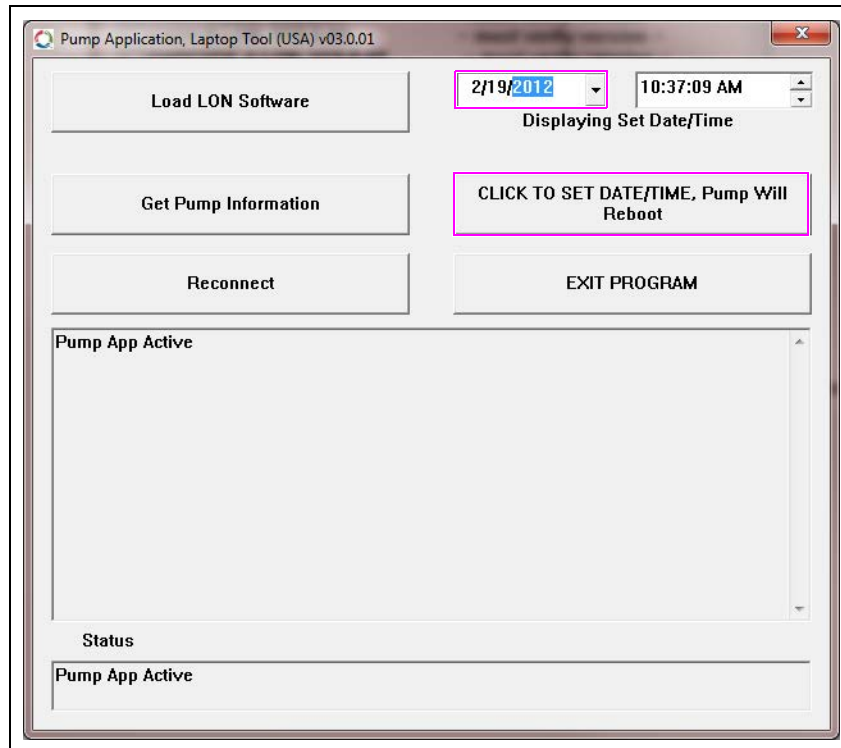
- 6 To change the time, highlight the item to change (such as the hour) and click the up or down arrow.

Figure 29: Clicking Load LON Software



- 7 To change the date, click the down arrow next to the date.
- 8 To send the date/time changes to the pump, click **CLICK TO SET DATE/TIME, Pump Will Reboot**.

Figure 30: Sending Date/Time Changes to Pump



The button title will change to DATE/TIME WAS SET when the process is completed.

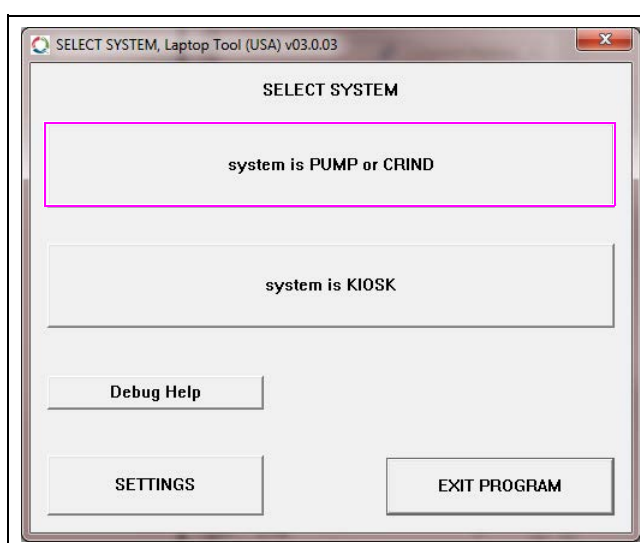
Note: Currently, there is no provision to set Daylight Savings Time.

Getting Pump Versions

To get pump versions, proceed as follows:

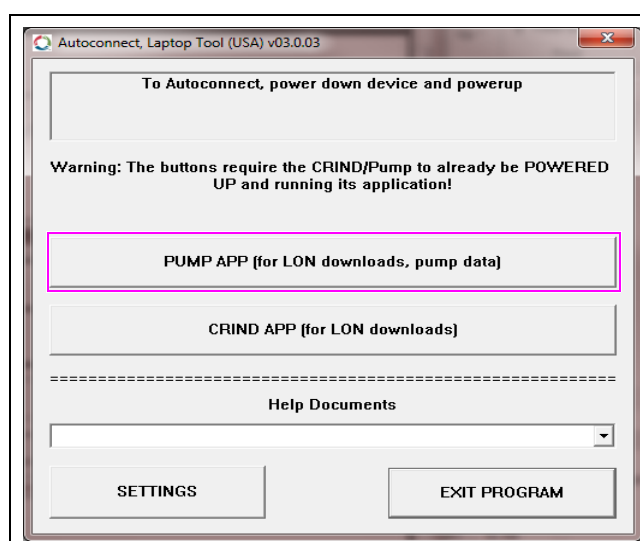
- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 31: Select System Screen



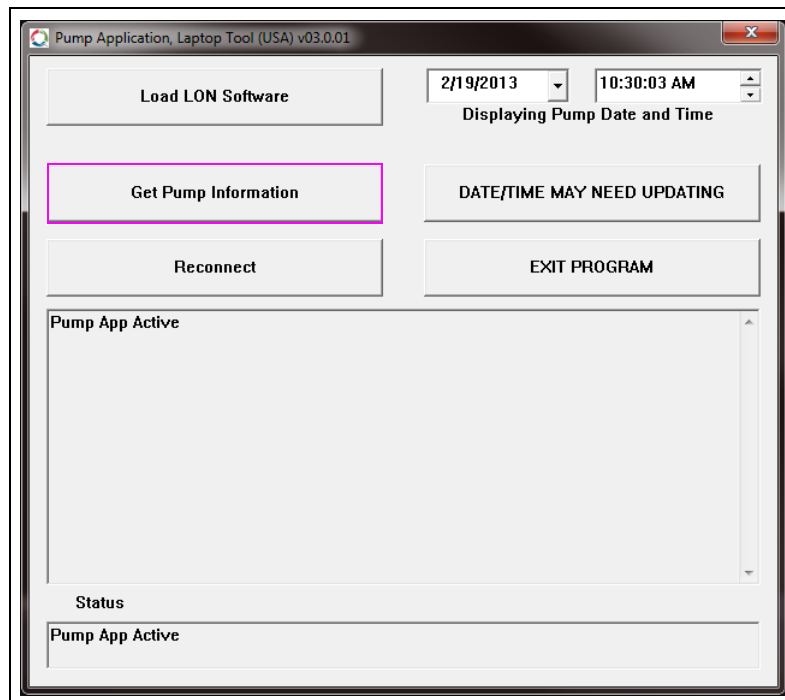
- 5 Click **PUMP APP (for LON downloads, pump data)**.

Figure 32: Autoconnect Screen



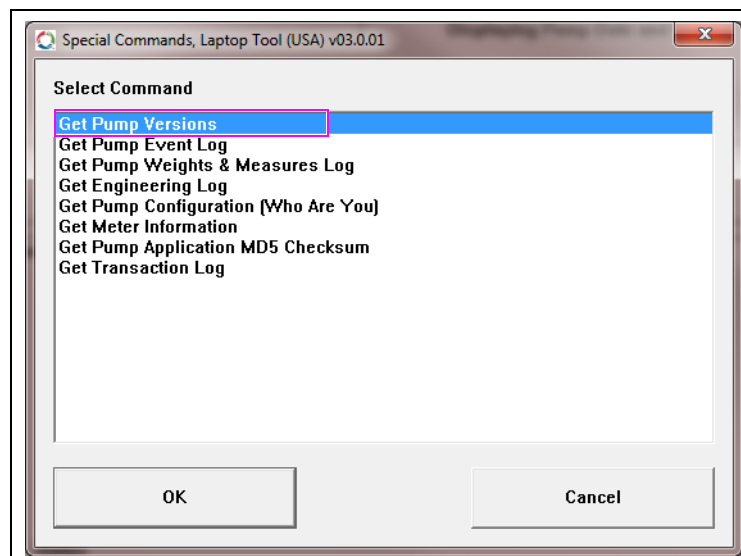
- 6 Click **Get Pump Information**.

Figure 33: Clicking Get Pump Information



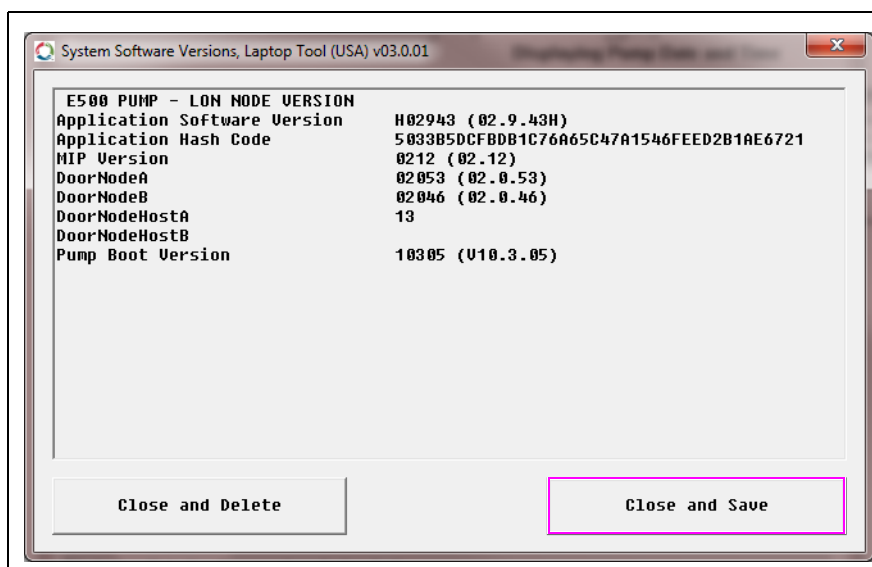
- 7 Highlight the **Get Pump Versions** item.

Figure 34: Selecting Command



- 8 Click **OK**.
- 9 Click **Close and Save** to save the data or click **Close and Delete** to exit without saving.

Figure 35: Closing and Saving Data



- 10 If you clicked **Close and Save**, then choose a directory and file name for the data.
- 11 When you finish collecting all required data, disconnect the laptop from the P1111 port on the PCN. Reconnect any previously attached cable (sites with SMART Connect™).

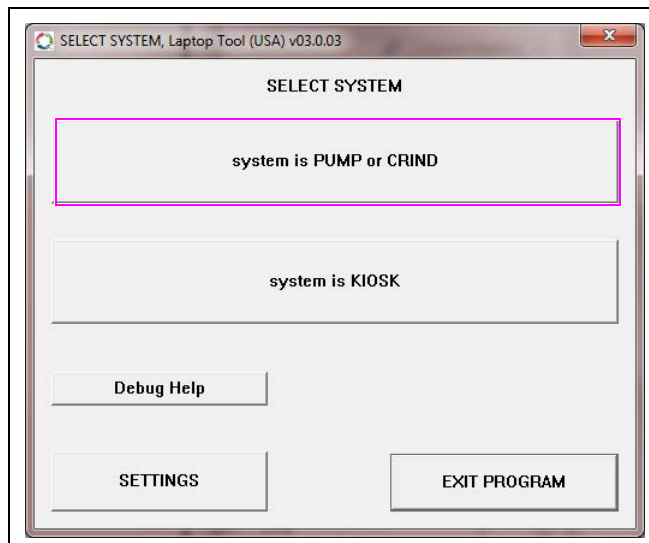
Getting Pump Event Log or Weights and Measures (W&M) Log

To get Pump Event or W&M Log, proceed as follows:

- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.

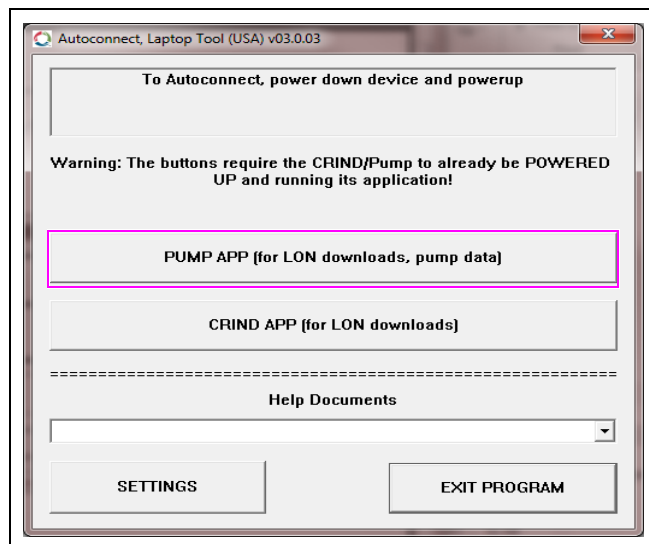
- 4 Click system is **PUMP** or **CRIND**.

Figure 36: Select System Screen



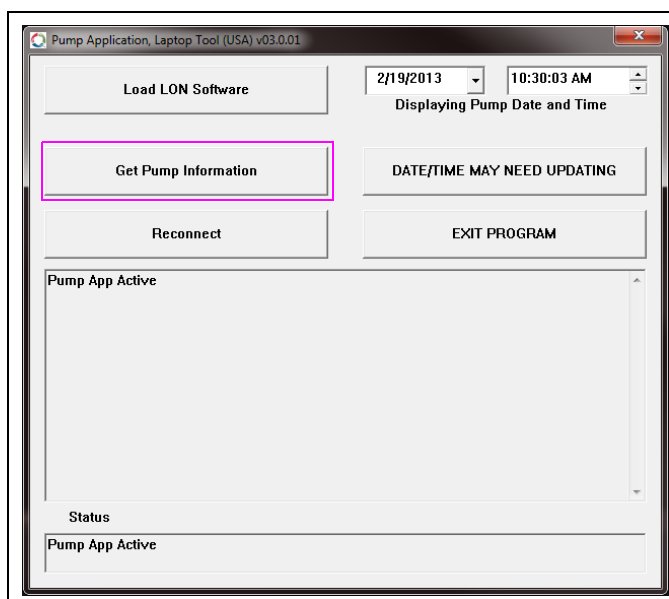
- 5 Click **PUMP APP** (for LON downloads, pump data).

Figure 37: Autoconnect Screen



6 Click **Get Pump Information**.

Figure 38: Pump Application Screen



7 Highlight the **Get Pump Event Log or Pump W&M Log**.

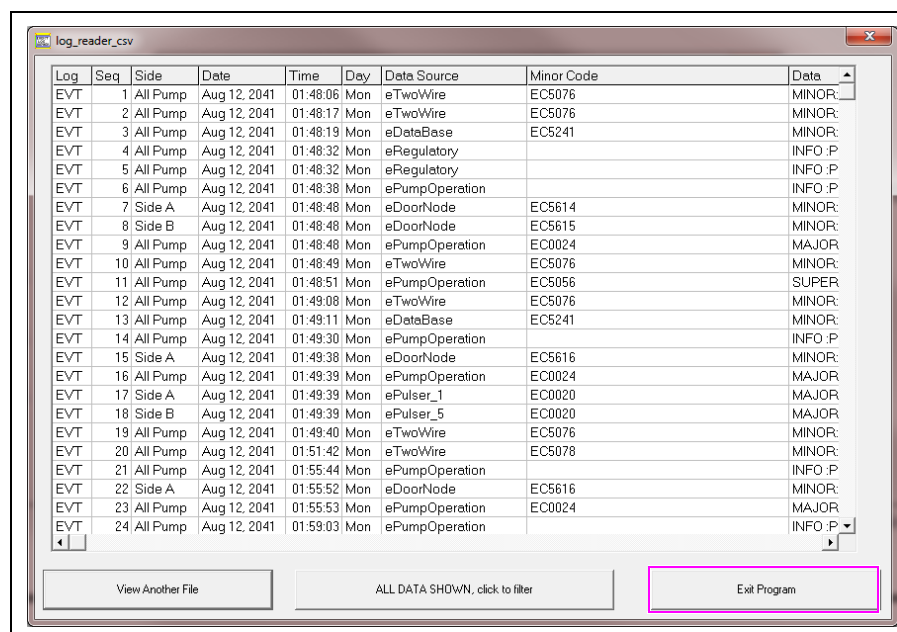
Note: W&M Log is sometimes termed as the Audit Log or Norms Log.

8 Click **OK**.

Note: Large log files can take up to 5 minutes to download.

9 After the data is collected, a viewer program is started to view the data. When you are finished, click **Exit Program**.

Figure 39: Exit Program Screen



- 10 Choose a directory and file name to save the data (or click **Cancel** to not save). Choose a file name ending in the .csv file so that you can view the data later using Microsoft® Office Excel or the viewer program.

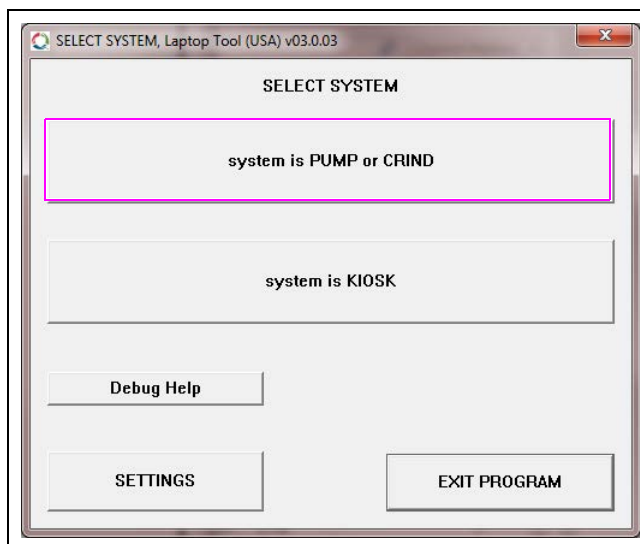
Getting Engineering Logs

To get Engineering Logs, proceed as follows:

Note: Normally, the service technician will only obtain these logs based on special request from Gilbarco as the data will not be relevant to the technician.

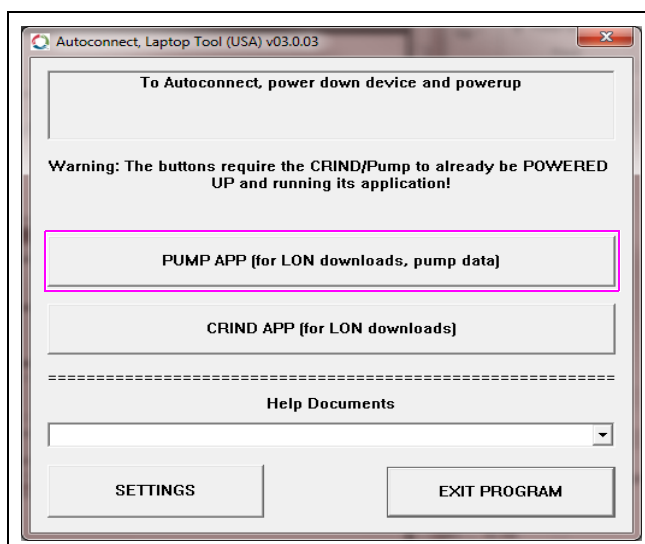
- 1 Apply power to the pump and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 40: Select System Screen



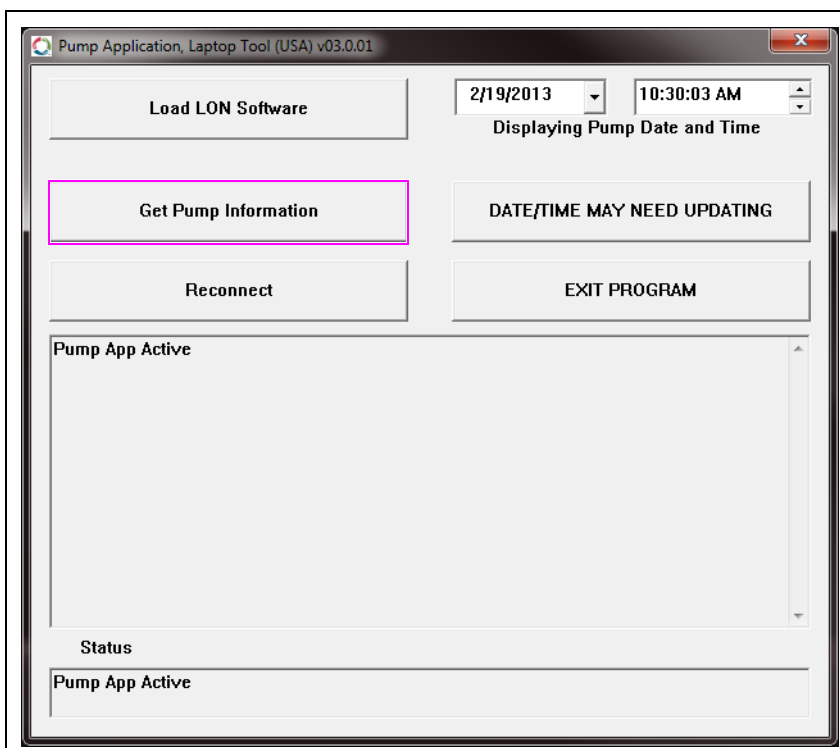
- 5 Click **PUMP APP** (for LON downloads, pump data).

Figure 41: Autoconnect Screen



- 6 Click **Get Pump Information**.

Figure 42: Pump Application Screen



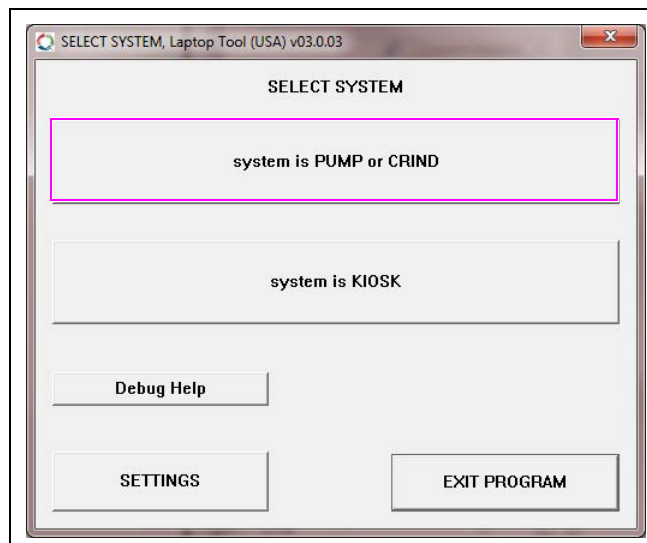
- 7 Highlight the **Get Engineering Logs** item.
- 8 Click **OK**.
- 9 Choose a directory and file name to save the data (or click **Cancel** to not save). This data is meaningful only to engineering, so no viewer program is started.

Getting Pump Configuration (Who Are You) Information

To get pump configuration (Who Are You) information, proceed as follows:

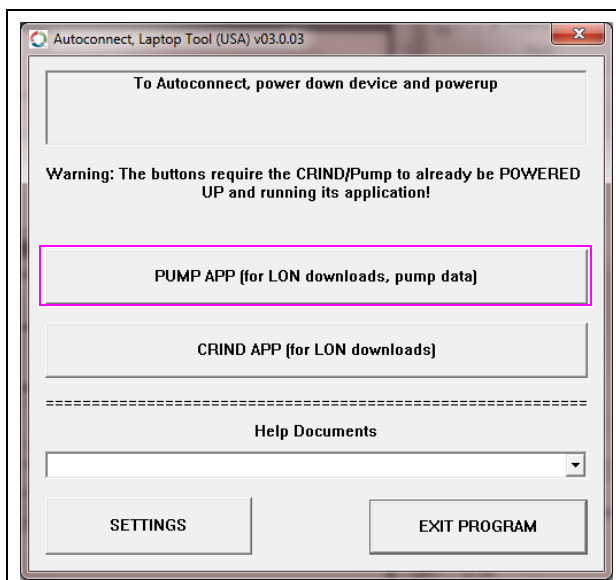
- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 43: Select System Screen



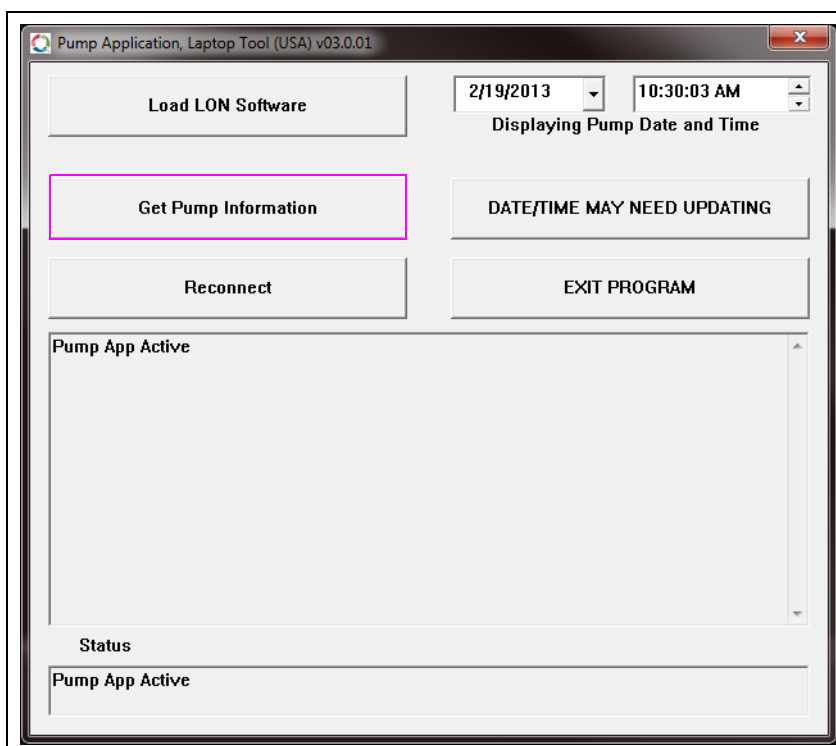
- 5 Click **PUMP APP** (for LON downloads, pump data).

Figure 44: Autoconnect Screen



- 6 Click **Get Pump Information**.

Figure 45: Pump Application Screen



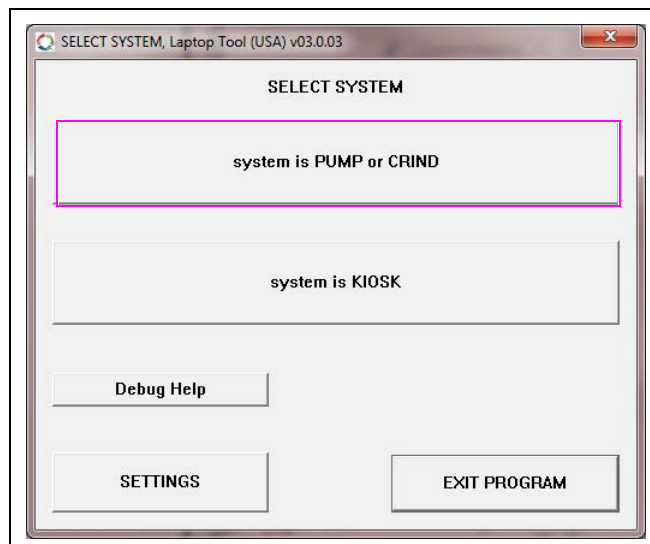
- 7 Highlight the **Get Who Are You** item.
- 8 Click **OK**.
- 9 After the data is collected, the information is brought up in a Notepad file. Exit Notepad after viewing the data.
- 10 Choose a directory and file name to save the data (or click **Cancel** to not save).

Getting Meter Information

To get meter information, proceed as follows:

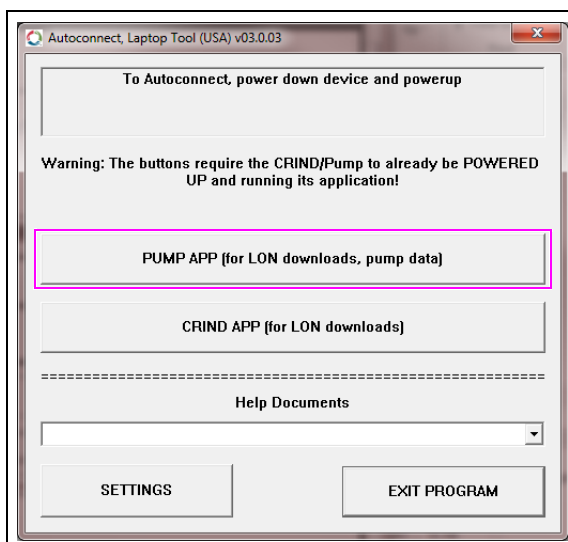
- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 46: Select System Screen



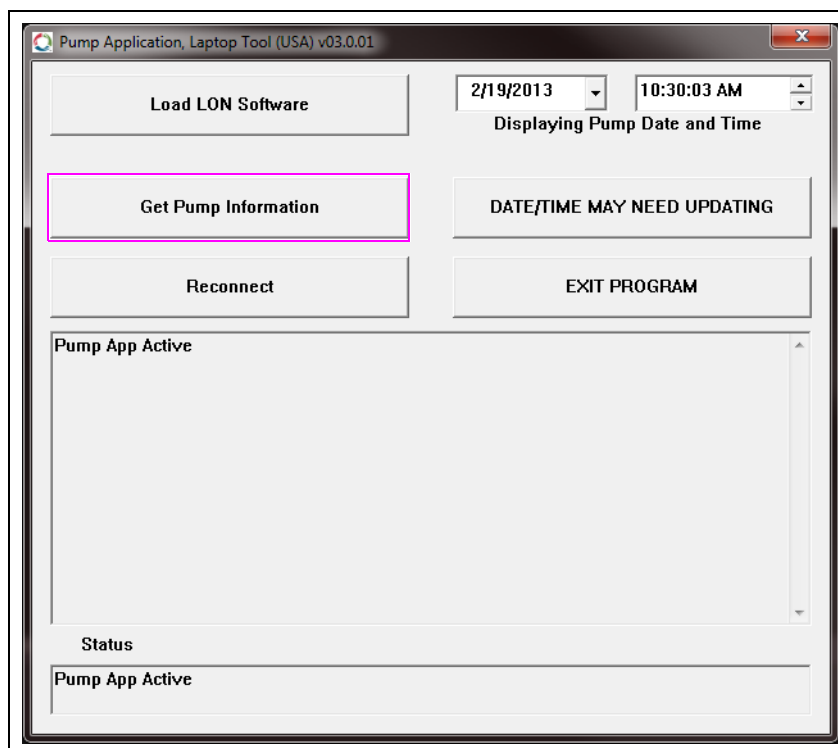
- 5 Click **PUMP APP** (for LON downloads, pump data).

Figure 47: Autoconnect Screen



- 6 Click **Get Pump Information**.

Figure 48: Pump Application Screen



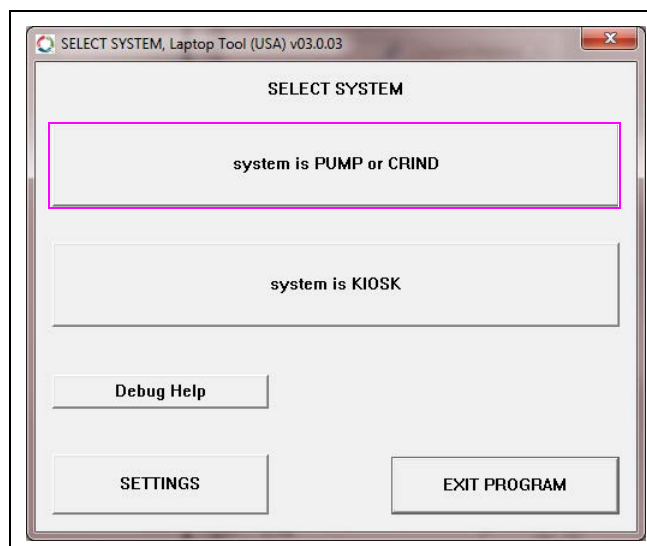
- 7 Highlight the **Get Meter Info** item.
- 8 Click **OK**.
- 9 After the data is collected, the information is brought up in a Notepad file. Exit Notepad after viewing the data.
- 10 Choose a directory and file name to save the data (or click **Cancel** to not save).

Getting Transaction Log

To get pump Transaction Log, proceed as follows:

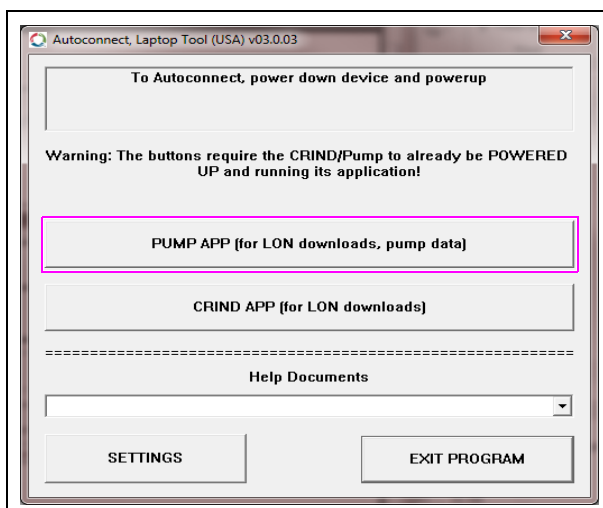
- 1 Apply power to the dispenser and wait for the pump application to start.
- 2 Use the Q13850 (or Q13482) Cable to connect the laptop/PC to RS-232 or USB adapter serial port to the P1111 port on the PCN.
- 3 Start the Laptop Tool.
- 4 Click **system is PUMP or CRIND**.

Figure 49: Select System Screen



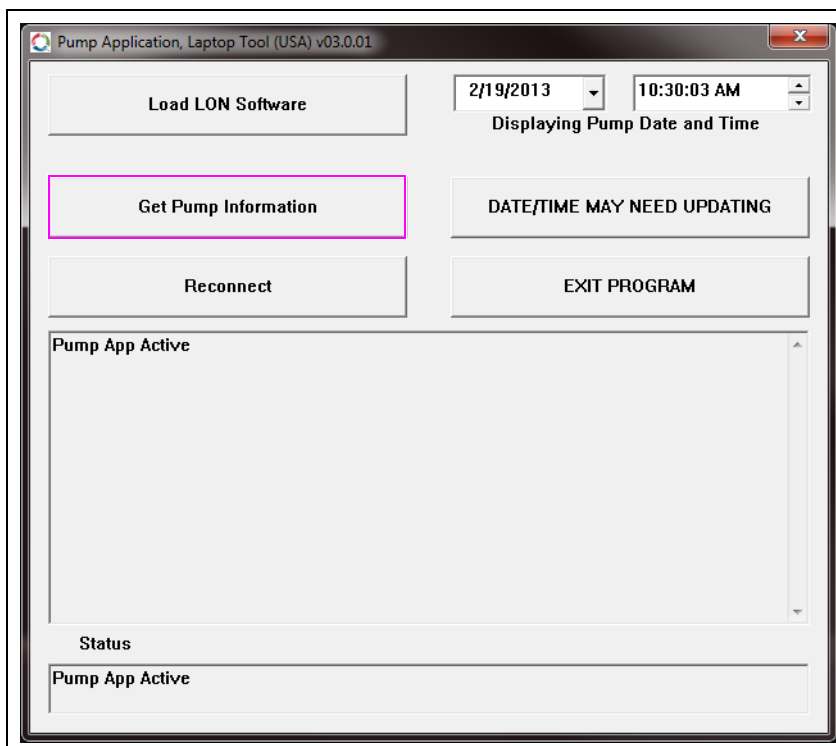
- 5 Click **PUMP APP** (for LON downloads, pump data).

Figure 50: Autoconnect Screen



- 6 Click **Get Pump Information**.

Figure 51: Pump Application Screen



- 7 Highlight the **Get Transaction Log** item.
- 8 Click **OK**.
- 9 After the data is collected, the information is brought up in a Notepad file. Exit Notepad after viewing the data.
- 10 Chose a directory and file name to save the data (or click **Cancel** to not save).
Note: Not all pumps or dispensers support Transaction Log capabilities.

Laptop Tool Default Settings

The configuration data refers to data in the file **c:\gilbarco\ngd\bin\NGDLaptop2.cfg**.
Default settings are provided as follows:

```
config file version 3
english
port = com1
user name=

language=
english
site data=

end site data=
network software enabled=
NO
flow control pump boot=
YES
flow control pump app=
NO
flow control crind boot=
YES
flow control crind app=
NO
crind network software=
\\Gsosvedata01\engdata\CCN_Software\BIOS-Releases\
pump network software=
\\Gsosvedata01\engdata\PCN_Software
crind file match=
CRIND-*.initrd
pump file match=
???.??
end config file
```

Note: This information is useful when troubleshooting Laptop Tool issues.

Laptop Tool Settings

This section provides important laptop settings required for setup and is useful when troubleshooting Laptop Tool issues.

Laptop Settings

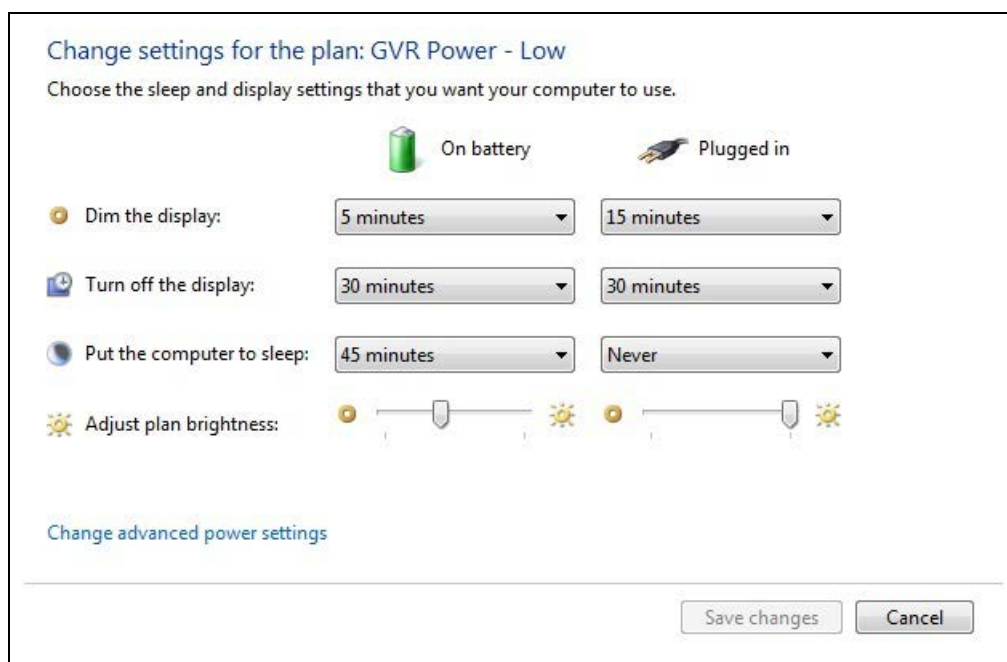
Administrative Rights

Log in as an administrator before loading or updating the Laptop Tool program on the computer. If you do not have administrative rights when you load or update the programming, the program will load. However, it will not operate correctly. If someone else (like an administrator) has setup your computer, you most likely do not have full administrative rights.

Laptop Power Option Settings

When you use battery power, the laptop will shut down if the system is not in use for a period of time. Some systems may shut down the laptop in the middle of a download. This may either damage the board or you may have to download again. From the start menu, access **Control Panel > Power Options**. Set the System standby time to at least After 15 minutes, and click **OK**.

Figure 52: Power Options Properties Screen



Laptop Tool Special Operations

Manually Adding File for Loading

Sometimes, you are given a file for loading without downloading it from the web (for example, via e-mail). However, the Laptop Tool does not display the file though it is in the correct folder. Therefore, the file has to be associated with a modifier. Follow the instructions to create a manual modifier to add these files. The same instructions could be applied to any modifier. However, you would lose the changes the next time you update that modifier from the web.

- 1 Copy file **c:\gilbarco\ngd\system\Upload_List_blink.xml** to **c:\gilbarco\ngd\system\Upload_List_manual.txt**. Name it with the extension .txt temporarily, for convenience. You can rename it later.
Note: Skip this step if the file already exists and if you do not want to lose previous edits.
- 2 Use Notepad to edit the file Upload_List_manual.txt created in step 1.
- 3 Find a section that matches the type of file for which you want to create a new entry.
<Name>PUMP APP</Name> for pump application.
<Name>CRIND APP</Name> for CRIND application.
<Name>DOOR_A LON</Name> for door node Side A and so on.
- 4 Copy and paste all the lines from <PROGRAM> through </PROGRAM>. For example:
<PROGRAM>
 <Name>CRIND APP</Name>
 <Version>02.3.40</Version>
 <Group>0</Group>
 <Enabled>Yes</Enabled>
 <File>c:\gilbarco\NGD\SOFTWARE\crind\12502340.ind</File>
</PROGRAM>
- 5 Change the version to match the recent version. Change the file name to match the recent version.
Note: The version is typically the last five digits of the file's name.

An example for adding V02.7.80 (the changes are shown in bold) is shown as follows:

```
<PROGRAM>
  <Name>CRIND APP</Name>
  <Version>02.7.80</Version>
  <Group>0</Group>
  <Enabled>Yes</Enabled>
  <File>c:\gilbarco\NGD\SOFTWARE\crind\12502780.ind</File>
</PROGRAM>
```

Note: If you are performing this operation on a LON Node, normally Side A and B are required. The file name (<File> section) will have a slightly different name. However, the file itself will be two copies of the same file.

- 6 Exit Notepad after ensuring that you have saved the file changes.
- 7 Rename the file **Upload_List_manual.txt** to **Upload_List_manual.xml**.
- 8 When you use the Laptop Tool, select the modifier manual to view the new files.

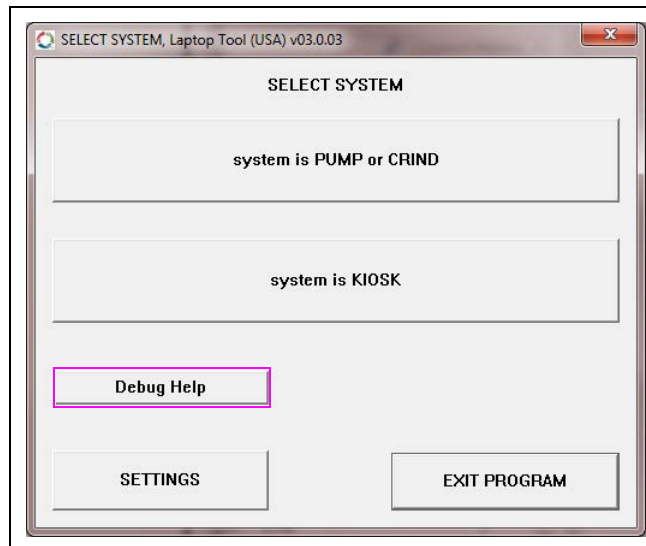
Collecting Debug Information

There are several places in the Laptop Tool program where debug information can be turned on for collection. Turn on the debug information when instructed by the Gilbarco engineering. This information will be used to help diagnose Laptop Tool problems.

To collect debug information, proceed as follows:

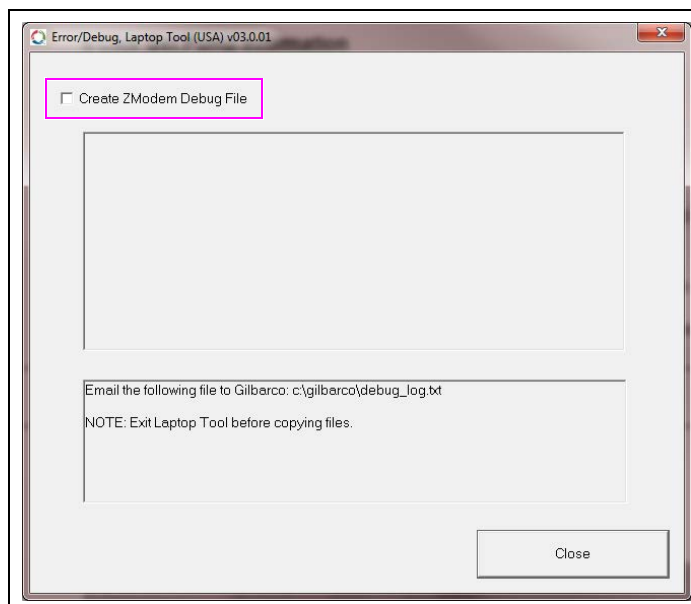
- 1 Start the Laptop Tool. The Select System screen appears (see [Figure 53](#)).

Figure 53: Select System Screen



- 2 Click **Debug Help**. The Debug Help screen appears (see [Figure 54](#)).

Figure 54: Debug Help Screen



- 3 Select the Create ZModem Debug File option (see [Figure 54](#) on [page 43](#)). The program creates a debug_log.txt file. This is stored on the laptop hard drive under **C:/gilbarco/debug_log.txt**.
- 4 Use Notepad to open and review the file.
Note: Pull the debug logs only when they are requested by Gilbarco engineering.

Downloading Laptop Tool

The single-click program interacts with your computer and the Gilbarco server to manage file downloads and monitor the installation of the Laptop Tool program. Because of the interactive features, the Laptop Tool program will not work if it is downloaded on one computer and then transferred to other computers.

Microsoft's Windows XP Operating Systems require full computer administrative rights to download, install, or use the single-click and Laptop Tool programs.

IMPORTANT INFORMATION	
The single-click program has not been tested with Microsoft Windows Vista™ operating system.	

Note: Disable your antivirus and/or spyware protection if you have problems downloading.

Ensure that your Internet connection is not interrupted during the download and installation processes. Disable all screensaver and power management features before proceeding. Some of the step-by-step instructions have multiple choices. The choices shown were selected because they provide the most consistent download performance.

To download the Laptop Tool program, proceed as follows:

- 1 Go to <http://www.gilbarco.com/interactive/login.cfm>. Enter the User ID and Password provided by your employer's gatekeeper. If you do not know your company's gatekeeper, check with your service manager or dispatcher. Click **Accept and Login**.

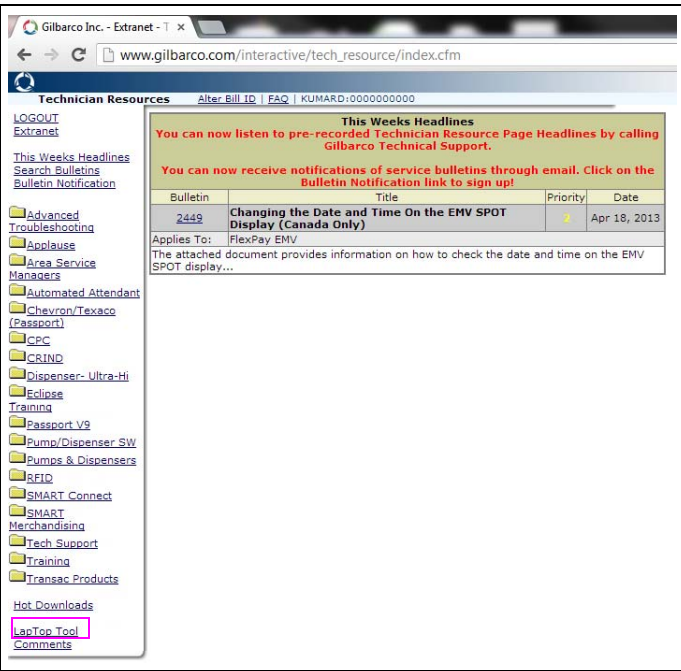
Figure 55: Gilbarco Login Screen

- 2 Click **Technician Resources** to proceed to the next page.

Figure 56: Technician Resources Link

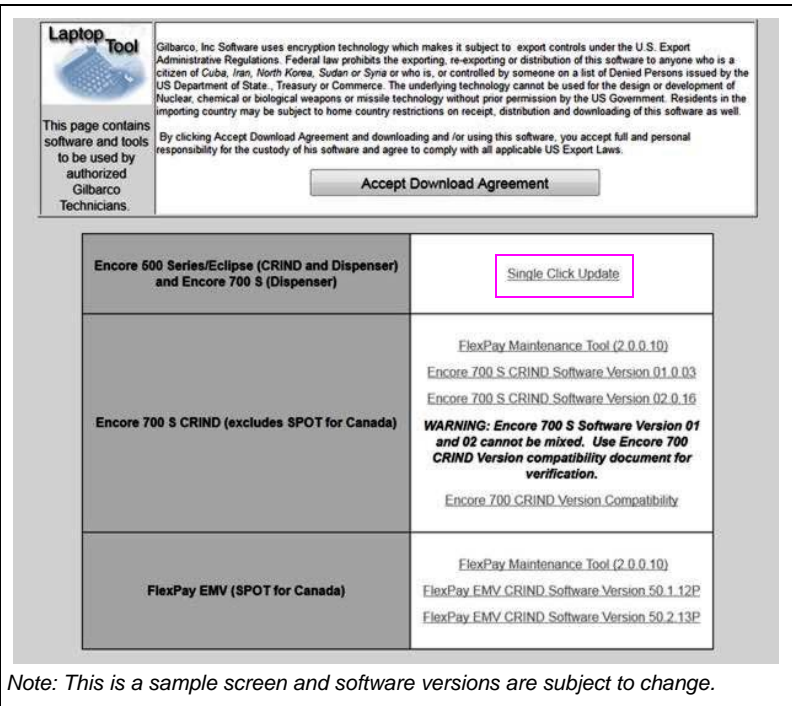
- 3 Click **Laptop Tool** to proceed to the Laptop Tool page.

Figure 57: Laptop Tool Link



- 4 Understand the download agreement and once it is has been properly reviewed, click **Accept Download Agreement** before any of the links are active.
- 5 Click **Single Click Update**.

Figure 58: Single Click Update Link - Sample Screen



6 Click **Save**.

Note: File download management is more accurate and efficient when the single-click program runs from your computer than over an Internet connection.

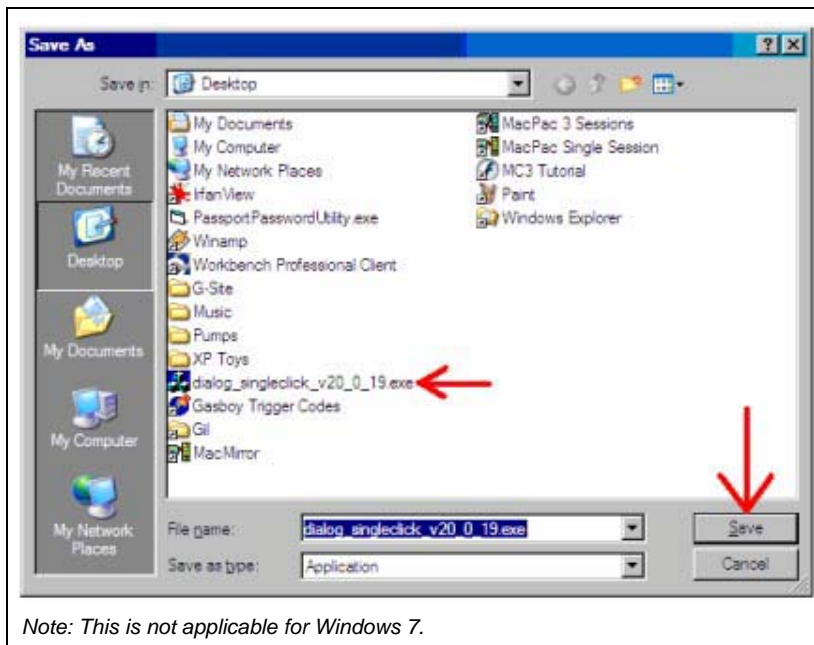
Figure 59: File Download Screen



Note: This is not applicable for Windows 7.

7 Select the **dialog_singleclick_vXX.X_XX.exe** file and click **Save** to save it to your computer's desktop. This will help you find the program easily.

Figure 60: Save As Dialog Box



Note: This is not applicable for Windows 7.

8 Minimize all open pages.

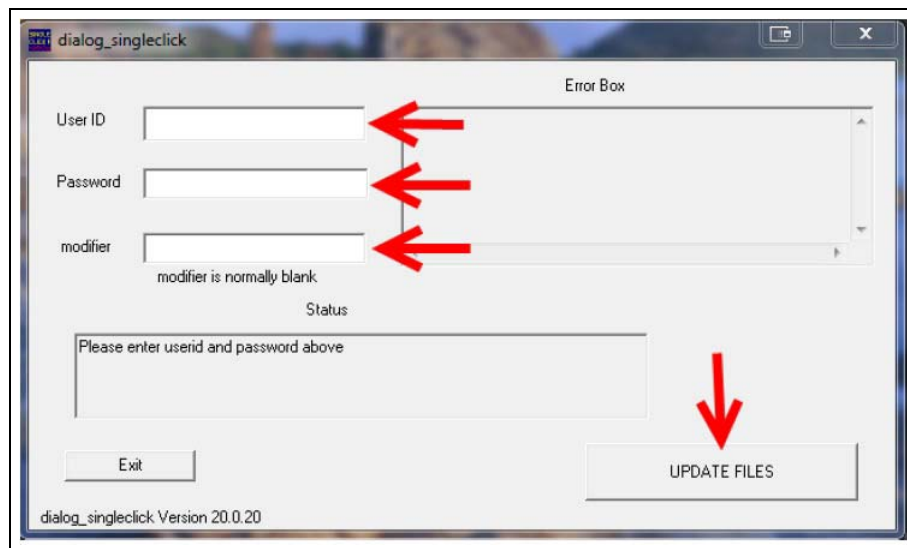
- 9 Find the single-click icon on your desktop. The icon is blue, has yellow letters, and a red construction barrier across the bottom. Double-click the single-click icon to start the program.
Note: Your computer still needs to be connected to the Internet for the single-click program to work. Open your browser to test your internet connection before proceeding.

Figure 61: Desktop Showing Single-click Icon



- 10 Enter the **User ID**, **Password**, and **modifier** provided during hands-on training.
Note: The modifier required for a specific version of software is provided in the Service Bulletin for that version at the time of release, which may be located by searching the TRP.

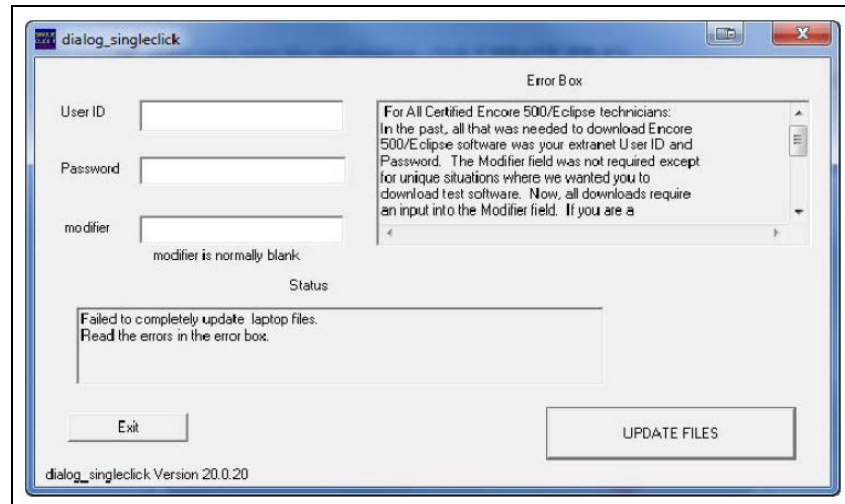
Figure 62: Single-click Program Login Screen



- 11 After you enter the information, click **UPDATE FILES**.

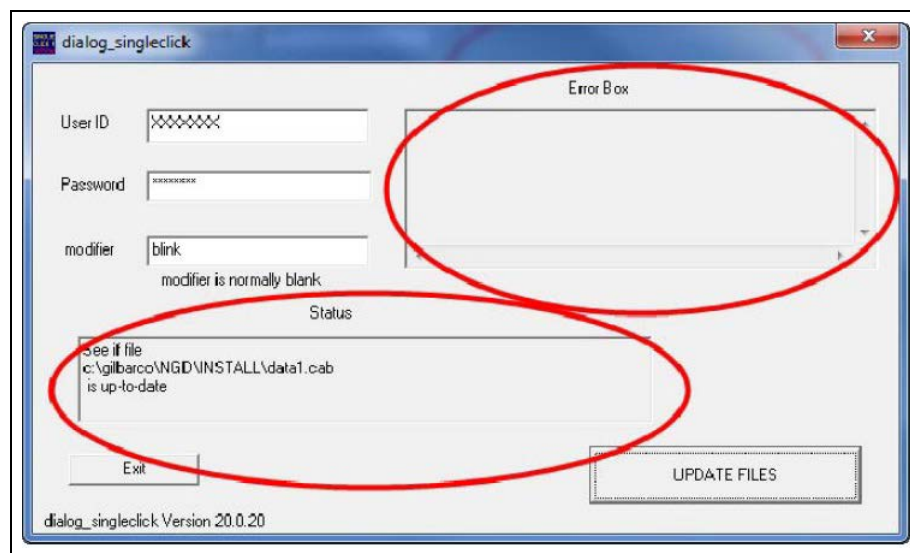
Note: If you do not provide a modifier, you will see a screen similar to the one shown in Figure 63.

Figure 63: Single-click Program Login Screen (Program Modifier not Provided)



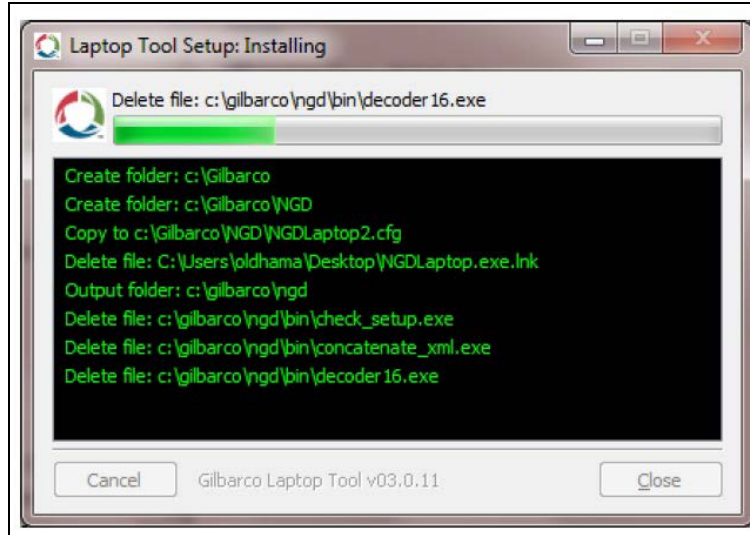
- 12 The Status box details the file download process. Error Box alerts you if any problems occur during the file download process. If the Error Box displays any errors, exit the single-click program, correct the issue (normally the issue will be an interrupted Internet connection), and run single-click again.

Figure 64: Status Box Displayed During File Download



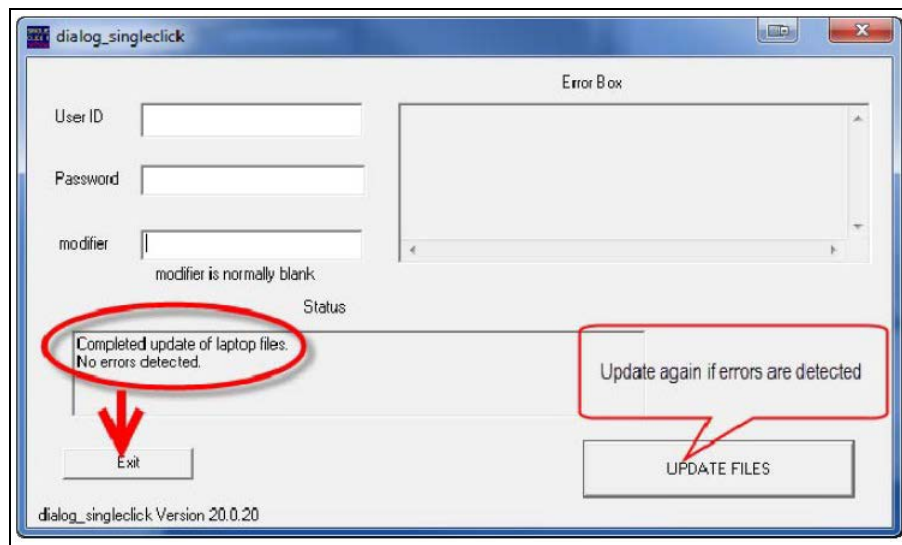
- 13 After all downloads are complete, an InstallShield® Wizard prompts for your input to begin the installation of the Laptop Tool program on your computer. Click **Next**.
Note: The installation runs automatically and does not require user intervention. The installation window will close once the installation is complete.

Figure 65: Installing Laptop Tool



- 14 Verify if the single-click Status box displays the message, “Completed update of laptop files. No errors detected.”. If so, click **Exit** or click **UPDATE FILES** (see [Figure 66](#)).

Figure 66: Single-click Status Box



- 15 Return to your desktop.

The ngdlaptop.exe icon will always be the most current Laptop Tool version. This is the icon you will normally use to start the Laptop Tool program.

Figure 67: Current Laptop Tool Icon



Downloading the Laptop Tool is now complete.

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7300 West Friendly Avenue · Post Office Box 22087
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Phone (336) 547-5000 · <http://www.gilbarco.com> · Printed in the U.S.A.
MDE-3921E Laptop Tool User Reference Guide · October 2013