



New Leader ISO Module Firmware

Installation Instructions

Installing New Leader ISO Module Firmware

The purpose of these instructions is to assist the technician with installing new firmware on New Leader modules. If this is your first time installing firmware on New Leader modules, review all the instructions. If you have previously installed firmware, you can skip to Part 2, beginning on page 7.

These instructions are grouped by subject:

- Part 1 – Required Tools & Programs
- Part 2- Download Firmware Files
- Part 3- Connecting to Modules
- Part 4- Installing Firmware



Installing New Leader ISO Module Firmware

Part 1 – Required Tools

- A laptop with the current version of Java installed.
- New Leader ISOBUS Diagnostic to USB kit, PN 315967, ordered directly from New Leader.
- 315967 Kit includes the following:



315965 Harness



315966 SYSTEC CAN to
USB Adapter

CD - not needed



Can Simulator

USB Adapter Cable

Note: If you already have access to the SYSTEC CAN to USB adapter, then you will only need to order harness 315965.

Installing New Leader ISO Module Firmware

Part 1- Required Programs

Introduction

- The Ag Leader Reprogramming Tool is a Java-based PC application that allows reprogramming of New Leader electronic modules. It is used in conjunction with the SYSTEC-electronic CAN-USB adapter (included in kit 315967).
- **Note:** The Reprogramming Tool *will not* reprogram New Leader modules when an Ag Leader display is present. Module firmware is updated through the Ag Leader display via a USB drive containing current module firmware. Contact your local Ag Leader dealer for more details.

Installation

The Reprogramming Tool requires the Java Runtime Environment to be installed on your PC. Unless you have specifically removed the Java Runtime Environment from your computer, Java should already be installed on your PC. To verify and/or install the Java Runtime Environment for your PC, go to www.java.com.



Installing New Leader ISO Module Firmware

Part 1- Required Programs

Installation –Continued

Another component you'll need installed on your PC is the SYSTEC driver. The driver provides an interface to the SYSTEC CAN-USB adapter. The latest driver from SYSTEC-electronic can be downloaded at

<https://www.systec-electronic.com/en/company/support/device-driver/>

Look for “USB-CANmodule Utility Disc” (shown below) and download.

Note: Version V6.04 was the most current version as of Nov. 2018. Periodically visit the above website for the most up to date version.

USB-CANmodul Utility Disk			
P/N SO-387 - V6.04 - Driver for Windows® 10, 8.1, 8, 7 (32/64 bit), LabView			
Please Note! This driver package does not support the obsolete versions			
GW-001, GW-002 and AT91 (3rd generation) based hardware revisions of	ZIP	11 MB	Download
USB-CANmodul2/8/16 (P/N 3204003 Rev.02, 3204004, 3404001). Please			
check our download area for getting driver support for these obsolete			
versions!			



Installing New Leader ISO Module Firmware

Part 1- Required Programs

Installation –Continued

Extract the file. Follow the instructions labeled “readme”.

Open the file labeled [SO-387](#) and follow the prompts to install.

<input type="checkbox"/> Name	Date modified	Type	Size
 readme	11/14/2018 9:40 AM	Rich Text Format	2 KB
 revision	11/14/2018 9:40 AM	Rich Text Format	33 KB
 SO-387	11/14/2018 9:40 AM	Application	10,935 KB

Updating New Leader ISO Module Firmware

Part 1- Required Programs

The Reprogramming Tool and current module firmware are available on the New Leader website listed below.

<https://newleader.com/newleader-support/>

1. Download the zip file labeled downloads and extract the file.
2. Open the new folder labeled downloads. You will be using the files labeled [AgLeaderReprograjmingTool](#). The ISOBUS CAN Logger file is not needed for this procedure.

<input type="checkbox"/> Name	Date modified	Type	Size
 AgLeaderReprogrammingTool	8/28/2018 1:12 PM	Application	11,096 KB
 ISOBUS CAN Logger	8/28/2018 1:12 PM	Application	163 KB

3. Open the [AgLeaderReprogrammingTool](#) and follow the prompts to install. When this program is installed it will automatically create a folder on your hard drive labeled [AgLeader Firmware Files](#). You will need to know the location of this folder in the next step.



Updating New Leader ISO Module Firmware

Part 2- Download Firmware Files

The current module firmware is available on the New Leader website listed below:

<https://newleader.com/newleader-support/>

1. Download the zip file labeled Current firmware. Extract the file.
2. Open the extracted folder labeled Current firmware. Copy all these files and paste into the [AgLeader Firmware Files](#) folder located on your hard drive.

<input type="checkbox"/> Name	Type	Compressed size	Password ...	Size
 4003446_NEW_LEADER_G5_RATE_CONTROL_2_1_0_0_fw3	FW3 File	247 KB	No	957 KB
 4003447_NEW_LEADER_BODY_ACCESSORIES_2_1_0_0_fw3	FW3 File	211 KB	No	818 KB
 4003448_NEW_LEADER_G5_SPREADER_SWATH_2_2_0_0_fw3	FW3 File	245 KB	No	958 KB
 4003448_NEW_LEADER_G5_SPREADER_SWATH_2_2_0_0_hx1	HX1 File	206 KB	No	823 KB
 G5 WSM 2.6.0.0_fw3	FW3 File	1,339 KB	No	5,238 KB

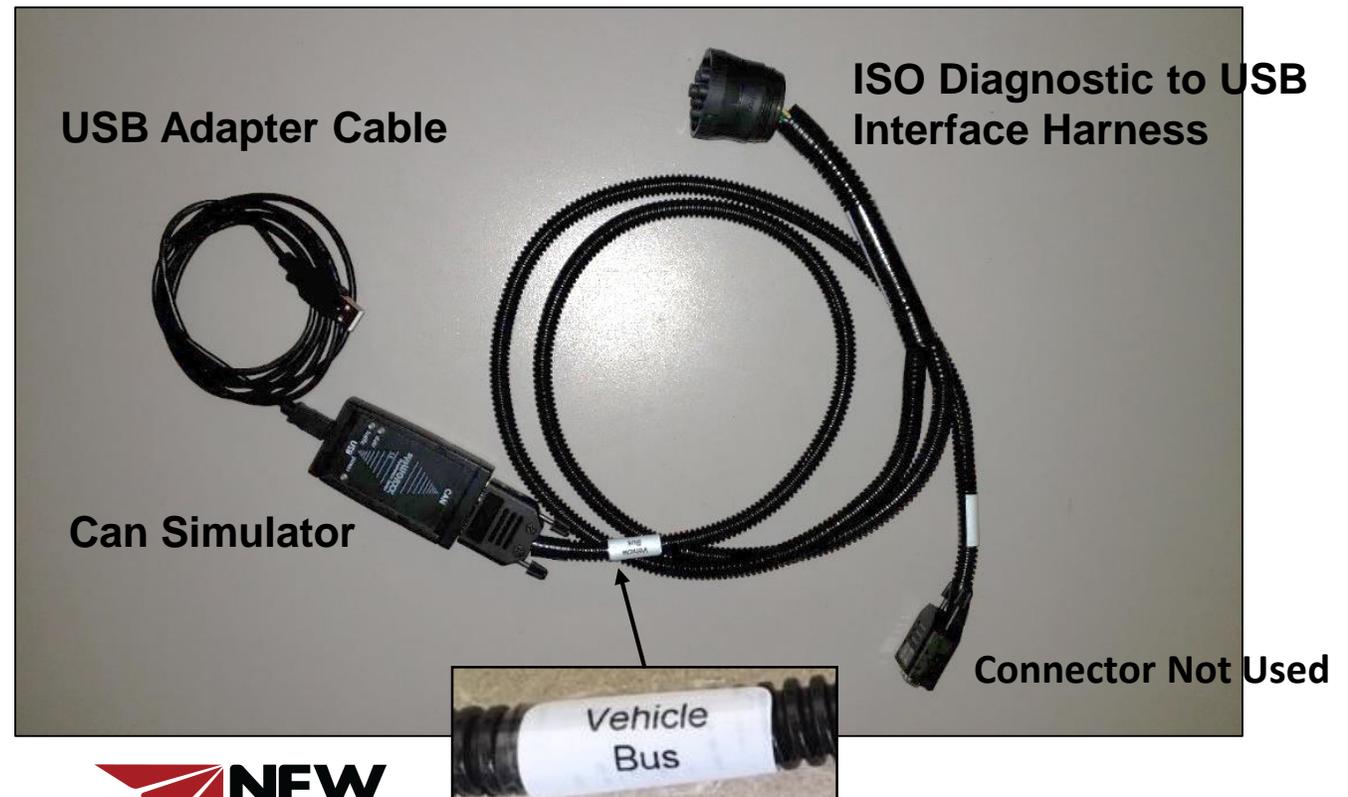


Updating New Leader ISO Module Firmware

Part 3- Connecting to Modules

New Leader USB to Can Simulator Adapter, PN 315966, connections

Connect the USB adapter cable to the CAN simulator, then the CAN simulator to the **Vehicle Bus** connector on the ISO Diagnostic to USB Interface Harness.



Updating New Leader ISO Module Firmware

Part 3- Connecting to Modules



Remove the enclosure cover to gain access to the diagnostic port.

Updating New Leader ISO Module Firmware

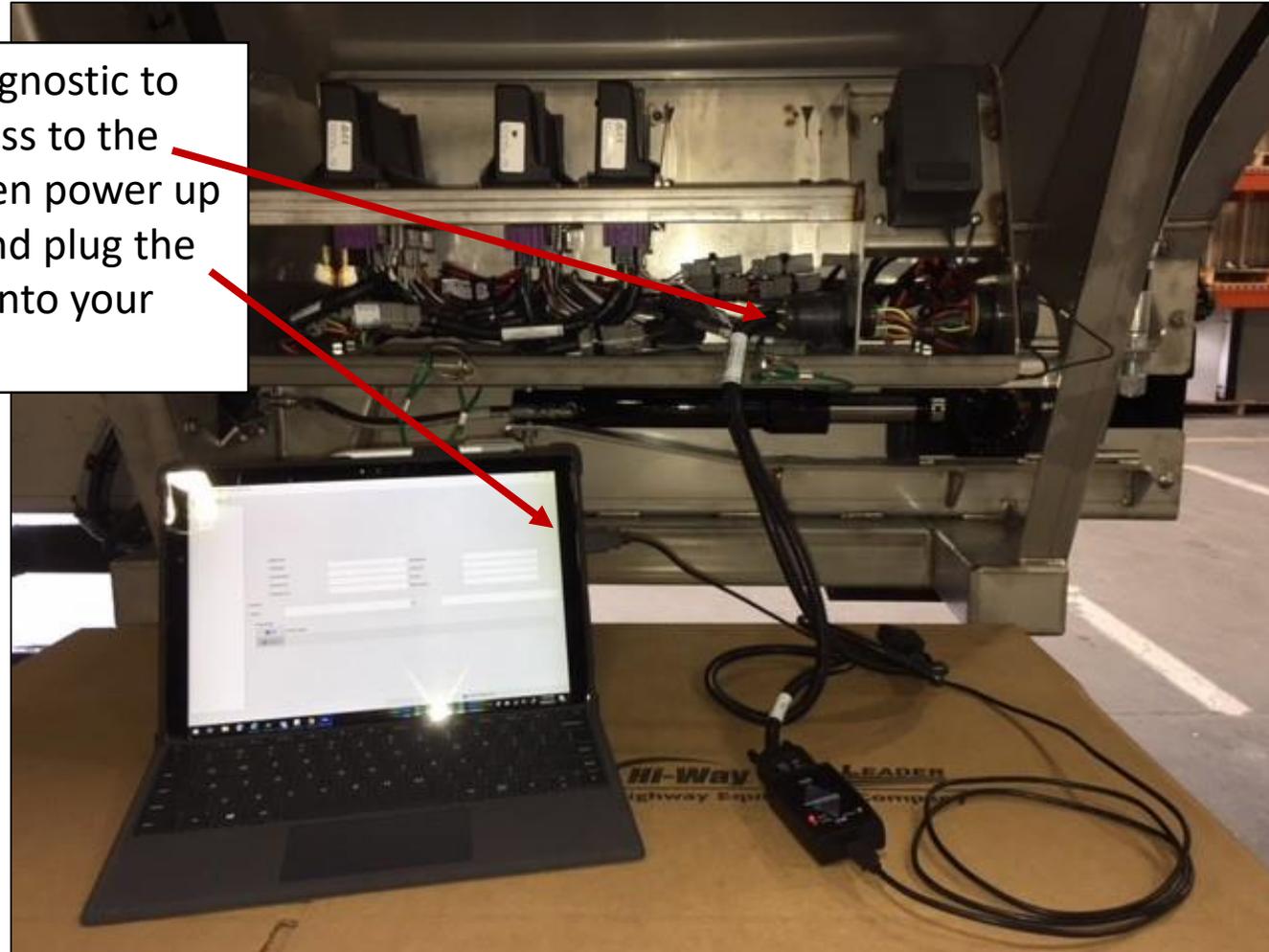
Part 3- Connecting to Modules



Updating New Leader ISO Module Firmware

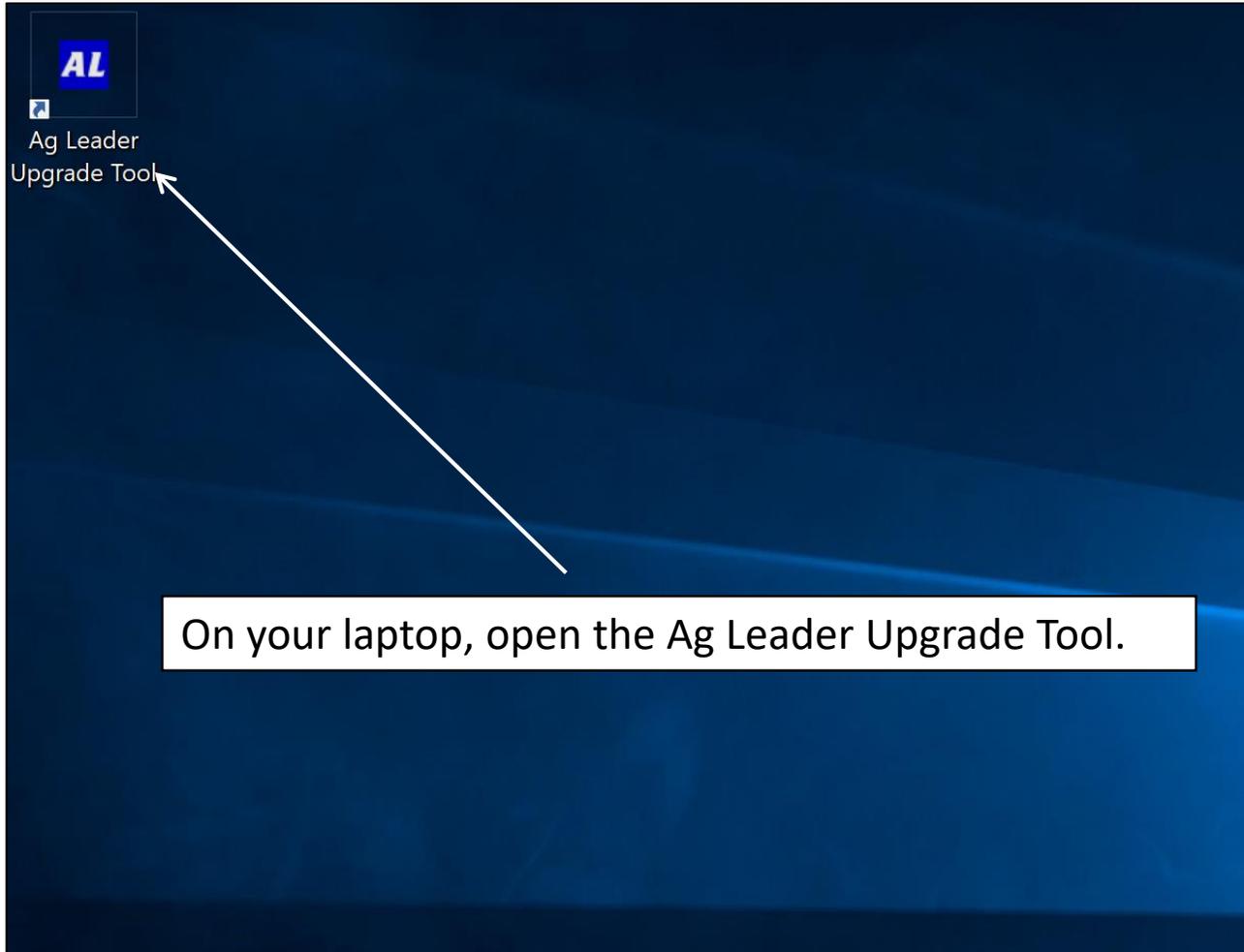
Part 3- Connecting to Modules

Connect the ISO Diagnostic to USB Interface Harness to the Diagnostic Port. Then power up the in-cab display and plug the USB Adapter Cable into your laptop.



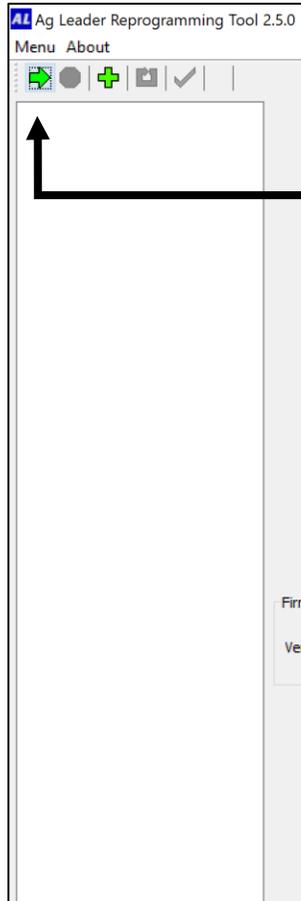
Updating New Leader ISO Module Firmware

Part 4- Installing Firmware



Updating New Leader ISO Module Firmware

Part 4- Installing Firmware



Press the Green Arrow. Note: If the arrow is grey instead of green, then there is a communication problem between the laptop and the module. Close the Ag Leader Upgrade Tool program, power down the in-cab display, and recheck all harness connections. Disconnect, then reconnect the USB cable from the laptop and power up the in-cab display. Wait 20 seconds then open the Ag Leader Upgrade Tool program again.

Module Info

CAN Name:	<input type="text"/>	CAN Address:	<input type="text"/>
Serial Number:	<input type="text"/>	Product ID:	<input type="text"/>
Hardware ID:	<input type="text"/>	Runtime:	<input type="text"/>
Hardware Rev:	<input type="text"/>	Boots Counter:	<input type="text"/>

Firmware

Version: ID:

Programming

No File Loaded

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The screenshot shows the 'Ag Leader Reprogramming Tool 2.5.0' window. At the top left, a list of modules is displayed: 'NL RATE' and 'NL WS MASTER ↑'. An arrow points from the 'NL WS MASTER ↑' entry to a callout box. The callout box contains the text: 'A list of modules will appear. An Up Arrow to the right of the module name indicates that new firmware is available for that module. If the Up Arrow is not present then the module firmware is current.' To the right of the callout box, a smaller inset window shows a list of modules: 'NL RATE', 'NL WS MASTER ↑', and '80'. An arrow points from the 'NL WS MASTER ↑' entry in this inset to the callout box. Below the module list, there are several input fields for 'CAN Name', 'Serial Number', 'Hardware ID', 'Hardware Rev', 'CAN Address', 'Product ID', 'Runtime', and 'Boots Counter'. Below these fields are 'Firmware' and 'Programming' sections. The 'Firmware' section has 'Version:' and 'ID:' fields. The 'Programming' section has a 'File' button with 'No File Loaded' text and a 'Program' button.

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

You now have two options: auto update or manual update.

- To auto update, select the yellow arrow.
- To manual update, select the individual modules to update.
- With either choice, the current module firmware and new module firmware will automatically populate.

The screenshot displays the 'Ag Leader Reprogramming Tool 2.5.0' interface. The top-left pane shows a list of modules with 'NL WS MASTER' selected. The main area is divided into 'Module Info', 'Firmware', and 'Programming' sections. The 'Module Info' section contains a table of module details. The 'Firmware' section shows the current version and ID. The 'Programming' section includes a 'File' button and a 'Program' button, with a file path displayed next to the 'File' button.

Module Info	
CAN Name:	AD28200C00840AA0
Serial Number:	2120010413
Hardware ID:	4003358
Hardware Rev:	3.1.0.1
CAN Address:	C9
Product ID:	4003451
Runtime:	42:19:44
Boots Counter:	306

Current module firmware.

Version: 2.3.0.0 ID: 4003444

File: 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0_fw3

New module firmware. Make note of the firmware ID.

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

Press the Program button to start the update. A warning will appear, press OK.

Module Info

CAN Name:	1B29200C00840AA0	CAN Address:	C9
Serial Number:	2120010523	Product ID:	4003451
Hardware ID:	4003358	Time:	0:17:03
Hardware Rev:	3.1.0.1	Counter:	15

Firmware

Version: 2.3.0.0

Programming

4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0_fw3

Program

Ag Leader Reprogramming Tool

Do not disrupt or disconnect module power during programming!

Failure to do so could result in a module becoming unusable.

OK

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The status bar will begin filling and also display percentage complete. Be patient. Several seconds will pass before the status bar begins filling. The program is erasing current firmware in preparation for installing new firmware.

Module Info

CAN Name:	1B29200C00840AA0	CAN Address:	C9
Serial Number:	2120010523	Product ID:	4003451
Hardware ID:	4003358	Runtime:	0:17:03
Hardware Rev:	3.1.0.1	Boots Counter:	15

Firmware

Version: 255.255.255.255 ID:

Programming

File 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0.fw3

Cancel

20%

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

You may receive a message of “Programming Timeout”. This indicates the module firmware has not successfully updated.

- Close the Update Tool Program, unplug the USB cable, and wait 20 seconds.
- Reconnect the USB cable, open the Update Tool Program, and proceed with updating the module firmware as before.

Caution: The module is unusable in this state. Completing the module firmware upgrade is required for continued use.

Ag Leader Reprogramming Tool 2.5.0

Menu About

NL RATE
80
NL WS MASTER

Module Info

CAN Name:	1B29200C00840AA0	CAN Address:	C9
Serial Number:	2120010523	Product ID:	4003451
Hardware ID:	4003358	Runtime:	0:17:03
Hardware Rev:	3.1.0.1	Counter:	15

Firmware

Version: 255.255.255.255

Programming

File: 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0_fw3

Program: 23%

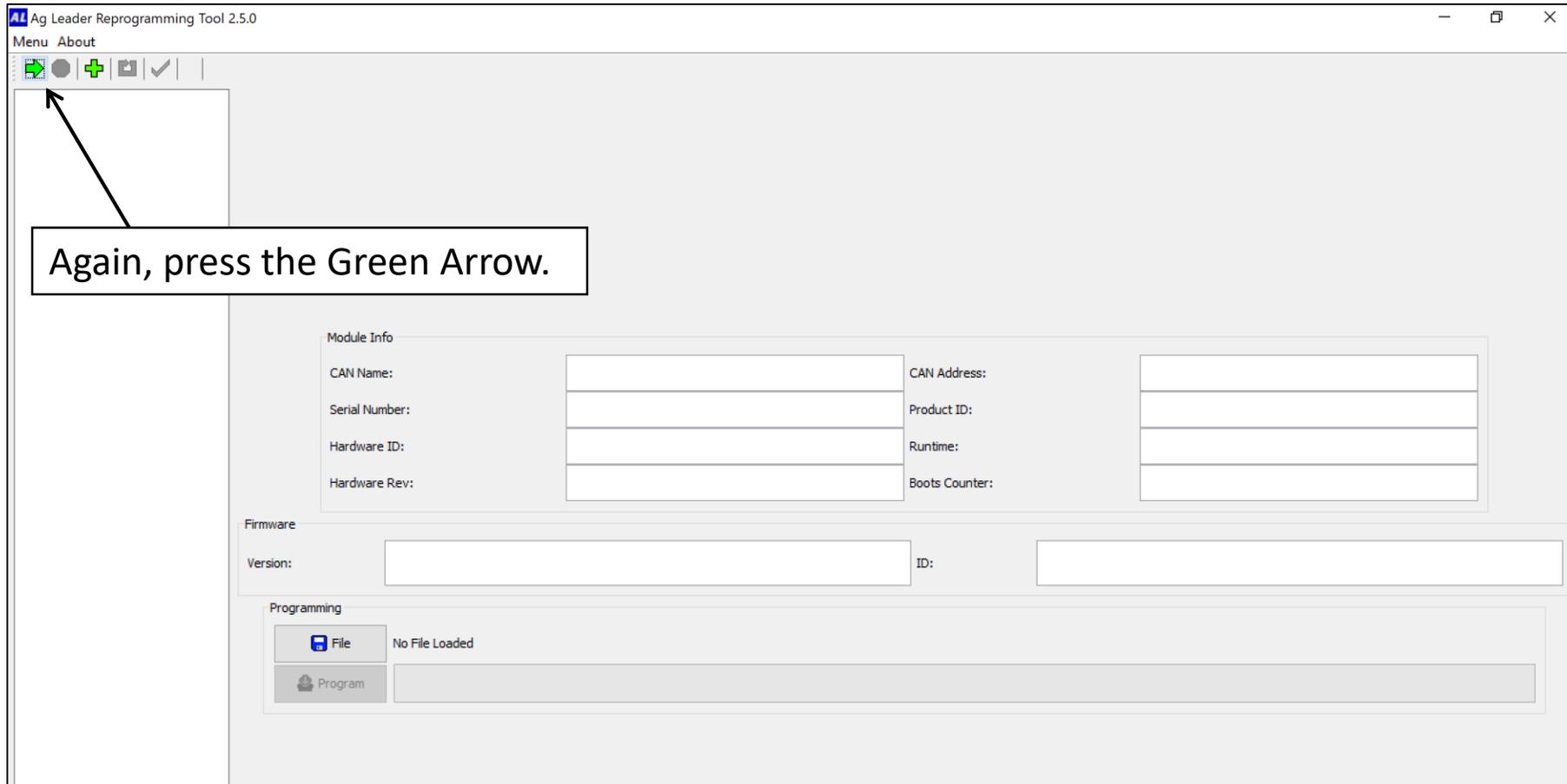
Ag Leader Reprogramming Tool

Programming Timeout

OK

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware



Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The screenshot displays the 'Ag Leader Reprogramming Tool 2.5.0' window. On the left, a list of modules includes 'NL RATE' and 'NL WS MASTER', with 'NL WS MASTER' selected. A text box with an arrow points to this selection, containing the following text:

Choose the module that was previously chosen. The Arrow that was previously next to the module name will no longer be displayed. The new firmware will no longer automatically populate and must be manually chosen from the File tab.

Below the module list, the 'Module Info' section contains the following data:

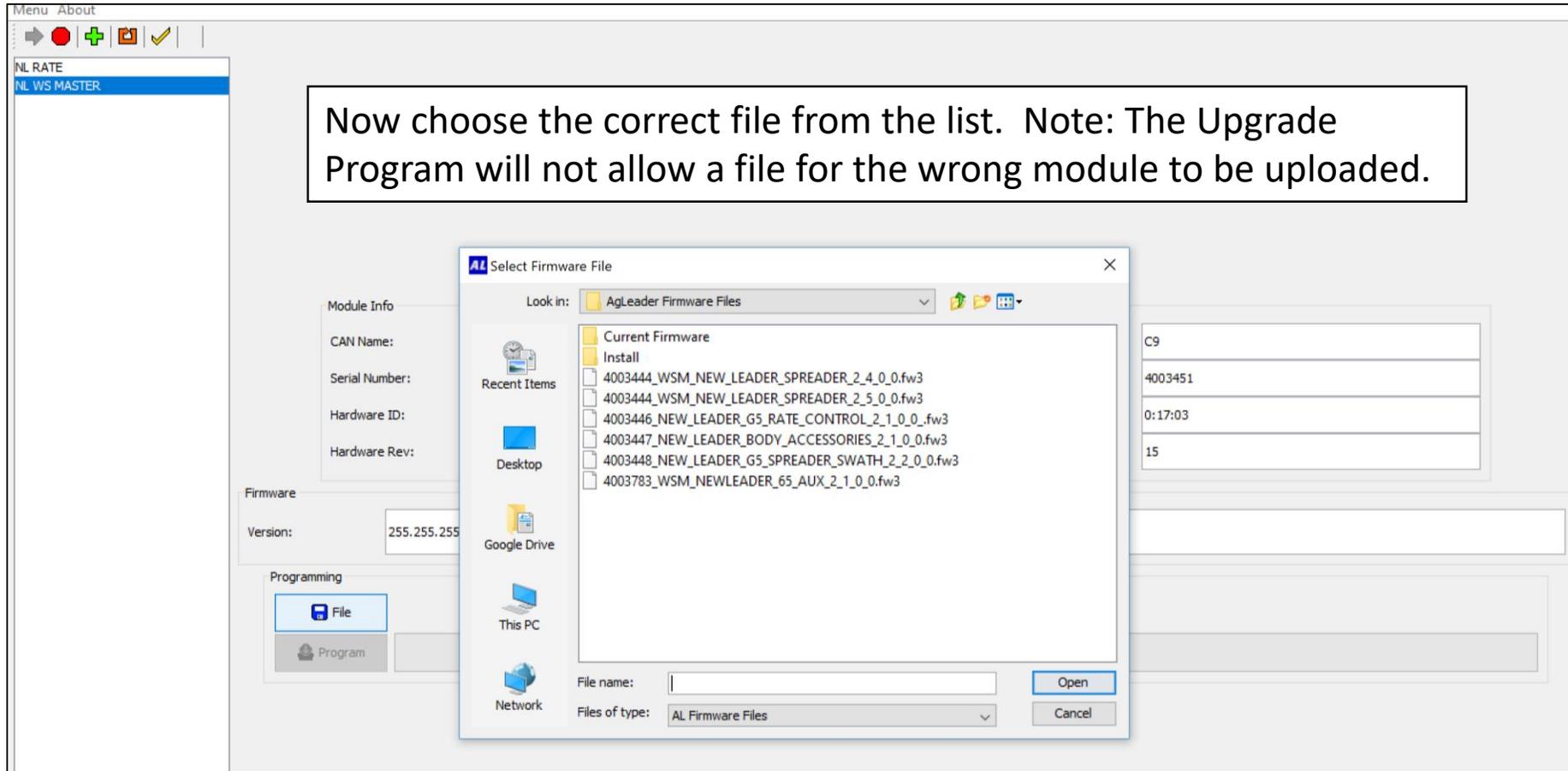
CAN Name:	1B29200C00840AA0	CAN Address:	C9
Serial Number:	2120010523	Product ID:	4003451
Hardware ID:	4003358	Runtime:	0:17:03
Hardware Rev:	3.1.0.1	Boots Counter:	15

The 'Firmware' section shows 'Version: 255.255.255.255' and an empty 'ID:' field. The 'Programming' section at the bottom features a 'File' button with a folder icon and a 'Program' button with a play icon. An arrow points from the text box to the 'File' button.

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

Now choose the correct file from the list. Note: The Upgrade Program will not allow a file for the wrong module to be uploaded.



The screenshot displays the New Leader software interface. On the left, a sidebar menu includes 'NL RATE' and 'NL WS MASTER'. The main window is divided into sections: 'Module Info' (CAN Name, Serial Number, Hardware ID, Hardware Rev), 'Firmware' (Version: 255.255.255), and 'Programming' (File, Program). A 'Select Firmware File' dialog box is open, showing a list of files in the 'AgLeader Firmware Files' folder. The files are:

- Current Firmware
- Install
- 4003444_WSM_NEW_LEADER_SPREADER_2_4_0_0.fw3
- 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0.fw3
- 4003446_NEW_LEADER_G5_RATE_CONTROL_2_1_0_0.fw3
- 4003447_NEW_LEADER_BODY_ACCESSORIES_2_1_0_0.fw3
- 4003448_NEW_LEADER_G5_SPREADER_SWATH_2_2_0_0.fw3
- 4003783_WSM_NEWLEADER_65_AUX_2_1_0_0.fw3

The dialog also shows a 'File name' field, a 'Files of type' dropdown set to 'AL Firmware Files', and 'Open' and 'Cancel' buttons.

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The screenshot displays the Ag Leader Reprogramming Tool 2.5.0 interface. On the left, a sidebar lists 'NL RATE' and 'NL WS MASTER'. The main area is divided into sections: 'Module Info' with fields for CAN Name (1B29200C00840AA0), Serial Number (2120010523), Hardware ID (4003358), and Hardware Rev (3.1.0.1); 'CAN Address' (C9), 'Product ID' (4003451), 'Runtime' (0:17:03), and 'Counter' (15); 'Firmware' with 'Version' (255.255.255.255); and 'Programming' with a 'File' button (marked with a red X) and a 'Program' button. An error dialog box is open, stating 'Can't copy firmware file! Already in firmware directory.' with an 'OK' button. A text box with a black border contains the text: 'You will receive the above error message. Press OK then press Program.' Two arrows point from this text box to the 'File' button and the 'OK' button in the error dialog.

Ag Leader Reprogramming Tool 2.5.0

Menu About

NL RATE
NL WS MASTER

You will receive the above error message.
Press OK then press Program.

Module Info

CAN Name: 1B29200C00840AA0 CAN Address: C9

Serial Number: 2120010523 Product ID: 4003451

Hardware ID: 4003358 Runtime: 0:17:03

Hardware Rev: 3.1.0.1 Counter: 15

Firmware

Version: 255.255.255.255

Programming

File 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0.fw3

Program

Ag Leader Reprogramming Tool

Can't copy firmware file!
Already in firmware directory.

OK

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The screenshot displays the 'Ag Leader Reprogramming Tool 2.5.0' window. On the left, a console window shows 'NL RATE 80' and 'NL WS MASTER'. The main interface is divided into several sections: 'Module Info' with fields for CAN Name (1B29200C00840AA0), Serial Number (2120010523), Hardware ID (4003358), Hardware Rev (3.1.0.1), CAN Address (C9), Product ID (4003451), Runtime (0:17:03), and Boots Counter (15); 'Firmware' with Version (255.255.255.255) and ID fields; and 'Programming' with a file selection button (File) and a progress bar. The progress bar is partially filled with blue and shows '20%'. A 'Cancel' button is visible on the left of the progress bar. A text box with a black border contains the text: 'The update will begin as before and the status bar will fill and display percentage complete.' An arrow points from this text box to the progress bar.

The update will begin as before and the status bar will fill and display percentage complete.

Module Info	
CAN Name:	1B29200C00840AA0
Serial Number:	2120010523
Hardware ID:	4003358
Hardware Rev:	3.1.0.1
CAN Address:	C9
Product ID:	4003451
Runtime:	0:17:03
Boots Counter:	15

Firmware
Version: 255.255.255.255 ID:

Programming
File 4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0.fw3
Cancel [Progress Bar] 20%

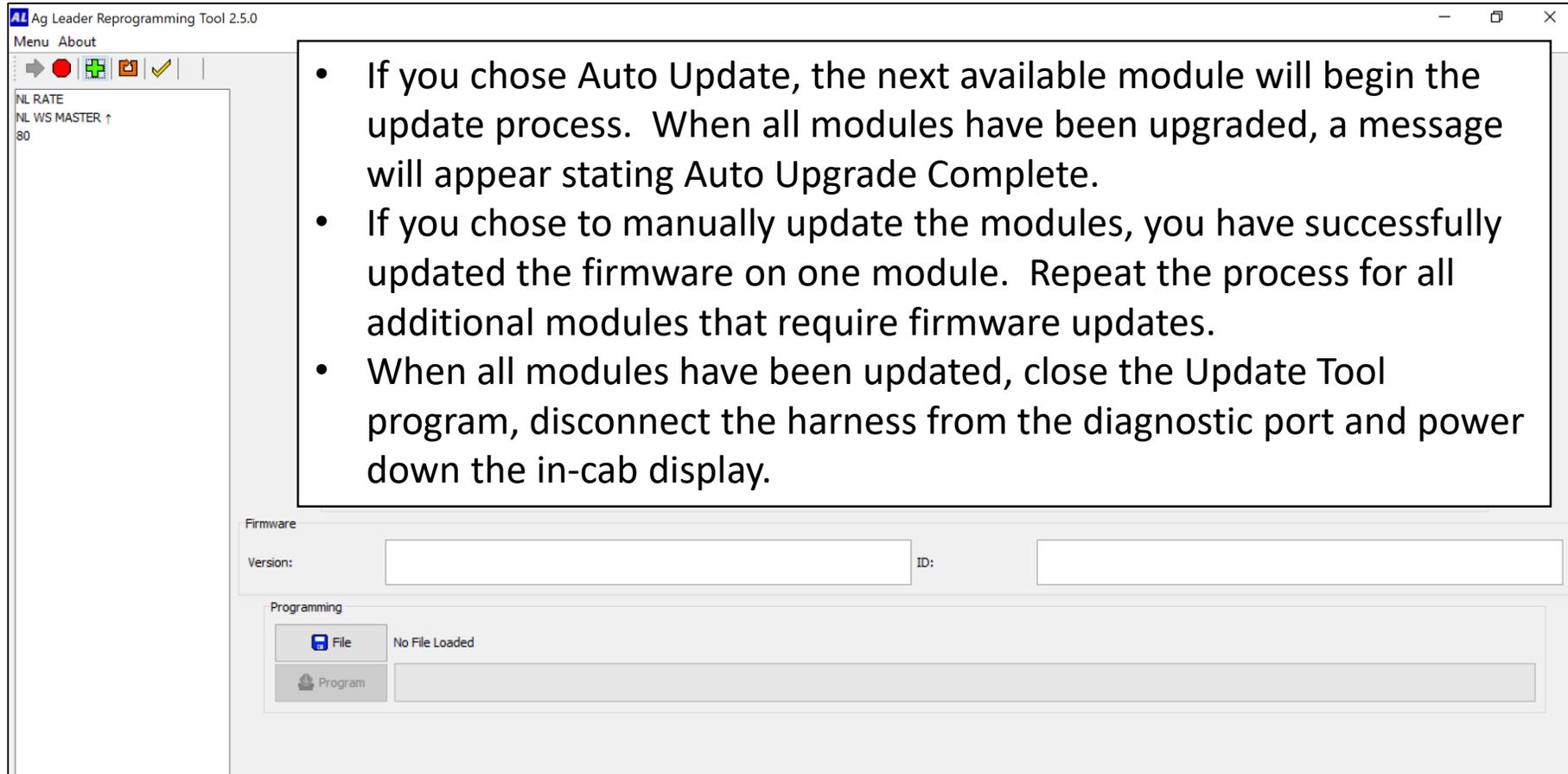
Updating New Leader ISO Module Firmware

Part 4- Installing Firmware

The screenshot displays the 'Ag Leader Reprogramming Tool 2.5.0' interface. A text box at the top center contains the instruction: "When the update is complete, choose OK." An arrow points from this box to a small dialog box titled "Ag Leader Reprogramming Tool" with the message "Programming Complete" and an "OK" button. The main interface shows a "Module Info" section with fields for CAN Name (1B29200C00840AA0), Serial Number (2120010523), Hardware ID (4003358), and Hardware Rev (3.1.0.1). To the right, there are fields for CAN Address (C9), Product ID (4003451), Runtime (0:17:03), and Counter (15). Below this is a "Firmware" section with a "Version" field containing "255.255.255.255". At the bottom, the "Programming" section shows a file named "4003444_WSM_NEW_LEADER_SPREADER_2_5_0_0_fw3" and a progress bar that is fully filled to "100%".

Updating New Leader ISO Module Firmware

Part 4- Installing Firmware



- If you chose Auto Update, the next available module will begin the update process. When all modules have been upgraded, a message will appear stating Auto Upgrade Complete.
- If you chose to manually update the modules, you have successfully updated the firmware on one module. Repeat the process for all additional modules that require firmware updates.
- When all modules have been updated, close the Update Tool program, disconnect the harness from the diagnostic port and power down the in-cab display.