SUBARU.

QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2015MY Legacy, Outback, Impreza & XV Crosstrek 2016MY WRX Models with Fujitsu-Ten (F10) Navigation System	**NUMBER:** 15-182-15R **DATE:** 06/17/15 **REVISED:** 08/11/15

SUBJECT: Procedures for Updating the Head Unit Operating Software

INTRODUCTION:

This bulletin announces a procedure for updating the navigation / audio unit's operating system software. The following list of symptoms and related changes provides a brief description of which customer concerns the updates are intended to address. If the reported customer concern is not identified in the following information, performing the update procedure will not address it. It is important to read through and understand this information completely before proceeding.

SYMPTOMS AND CHANGES:

- **Symptom 1:** Audio output is lost after a few minutes when listening to Sirius/XM satellite radio.
  Change: Logic update to provide proper Sirius/XM satellite radio operation.

- **Symptom 2:** Bluetooth feature becomes inoperative.
  Change: Logic update to provide proper Bluetooth feature operation.

- **Symptom 3:** HD Radio "freezes" after a few minutes of play.
  Change: Logic update to provide proper Sirius/XM satellite radio operation.

- **Symptom 4:** Back-Up Camera "help lines" do not appear.
  Change: Logic change to have the assist lines appear 8 seconds from engine start.

- **Symptom 5:** Map location is inconsistent between Navigation display and iPhone when using the iPhone's Google Maps with the phone connected to the USB port in console.
  Change: Logic update to show correct vehicle location on iPhone.

- **Symptom 6:** Roads or interchanges have the same name displayed multiple times.

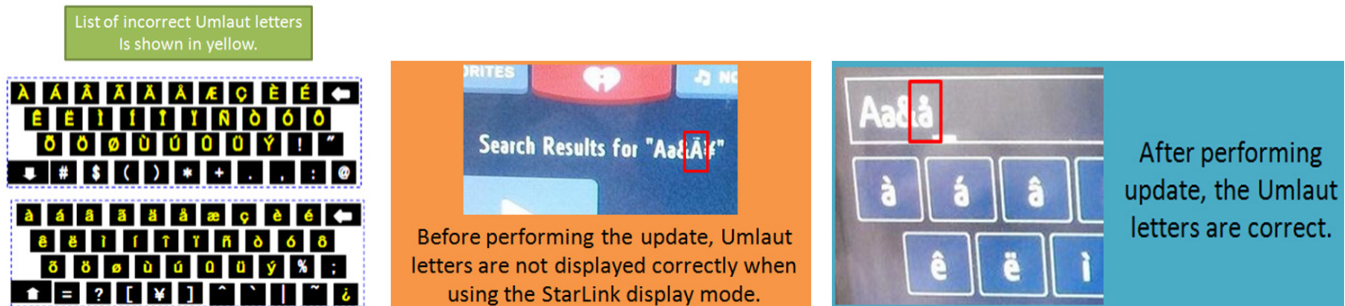**Change:** Logic change to show only one road or interchange name at the same time. *Continued...*

- **Symptom 7:** Navigation function is slow to start when selected.
  Change: Logic change to eliminate Navigation system slow-starting condition.

- **Symptom 8:** No map display with key or ignition in "ACC" (accessory) position.
  Change: Logic change to allow Navigation system operation in accessory ACC mode.

- **Symptom 9:** No voice guidance provided from Navigation system after selecting a route unless the ignition is cycled off and back on again.
  Change: Logic change to stop voice guidance "Mute" function from defaulting to "ON".

- **Symptom 10:** Steering wheel switch controls are inoperative with an iPod (MP3) player connected to the USB.
  Change: Logic change to allow proper steering wheel (satellite) switch functionality.

- **Symptom 11:** Incorrect Umlaut characters are shown on StarLink display.

List of incorrect Umlaut letters Is shown in yellow.

Before performing the update, Umlaut letters are not displayed correctly when using the StarLink display mode.

After performing update, the Umlaut letters are correct.

  Change: Logic change to allow proper display of Umlaut letters.

- **Symptom 12:** No response from the soft touch keys on display.
  Change: Logic change to improve communication between display and internal CPU.

- **Symptom 13:** Back-Up Camera is displayed with shifter in positions other than Reverse.
  Change: Logic change to allow display with shifter in Reverse only.

- **Symptom 14:** "Line Diag" screen is intermittently displayed while driving.

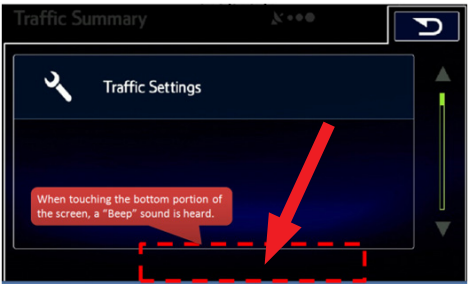 **Change:** Logic change to prevent display of the "Line Diag" screen.

- **Symptom 15:** "LIST" soft touch key is not displayed on Bluetooth Audio screen while using Bluetooth audio feature with an Apple device utilizing iOS8 software version.

  Change: Logic change to enhance compatibility with iOS8 software.

Continued...

- **Symptom 16:** "Beep" sound heard when touching the bottom of the display screen where no function soft touch keys are displayed.
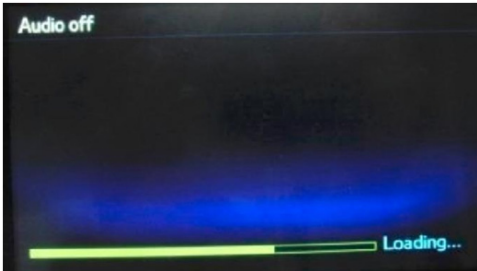

    Change: Logic change to eliminate beeping sound from inactive soft touch key screen areas.

- **Symptom 17:** Sirius/XM caution message screen is displayed in English even when French language operation settings are selected.

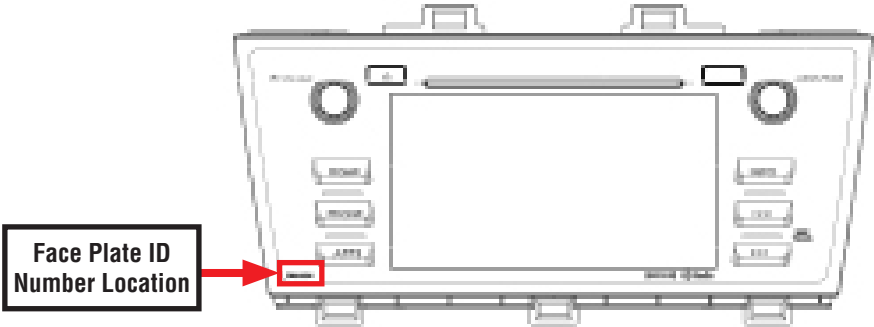   **Change:** Logic change to make all messages display in the selected operating language.

- **Symptoms 18-22:** The following symptoms are all related to the inability of the software to properly load. One or all of these 5 conditions may occur at the same time.. Logic changes have been included in the applicable update to address each of the following conditions:

Loading Screen

- Repeated display of the "Loading" screen at initial unit start-up
- Bluetooth device pairing failure
- Inoperative steering wheel (satellite) switches
- Voice recognition feature inoperative
- Sirius/XM radio feature inoperative.

The following information provides procedures for verifying the current head unit operating software version number and when required, accessing and installation of the applicable update files. The affected F10 Navigation unit part numbers and Faceplate ID numbers are listed below.

VEHICLE MODEL	HEAD UNIT PART NUMBER	FACE PLATE ID NUMBER
Legacy & Outback	86271AL66A	FB664US
	86271AL64A	FB644US
Impreza & XV Crosstrek	86271FJ630	FM634US
WRX	86271VA630	FV631US

Face Plate ID Number Location

COUNTERMEASURE IN PRODUCTION:

The new logic was incorporated into production according to the table below:

FACE PLATE ID NUMBER	STARTING VIN		DATE
	LEGACY	OUTBACK	
FB664US	F3025503	F3237248	9/29/2014
FB644US	F3027006	F3240780	10/6/2014
	IMPREZA	XV CROSSTREK	
FM634US	F*011328	F*248058	N/A
	WRX		
FV631US	TBD		

MATERIALS REQUIRED:

2 empty 2GB, USB 2.0 storage devices (flash drives) will be needed to perform these updates. The devices should be dedicated to storing and transferring these updating files only. They also need to be no more than 4GB in size and contain a FAT32 file format before downloading update files onto them.
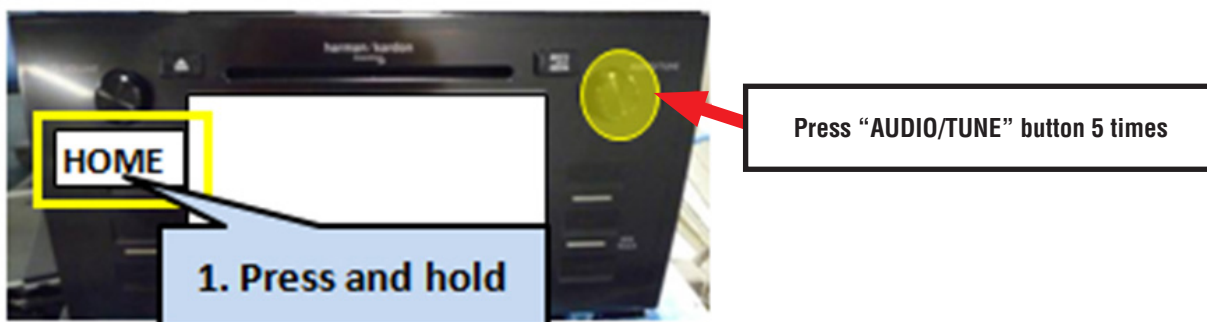
SERVICE PROCEDURE / INFORMATION:

IMPORTANT REMINDER: Read through and understand this procedure **COMPLETELY** before proceeding further.
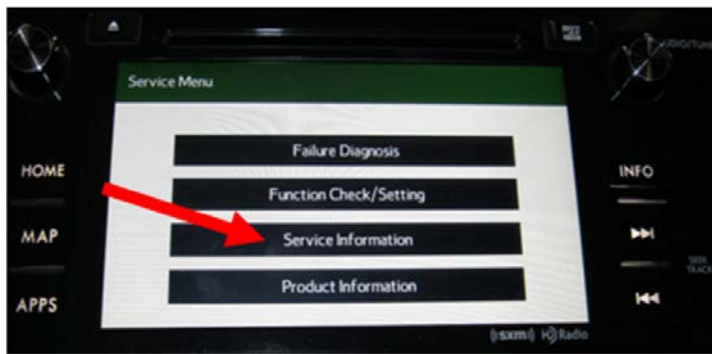
Step 1: Version Check Procedure

Before proceeding with any updates, the currently installed software version must be determined. If the latest software version (or later) is already installed, no updates are necessary. The Version ID numbers for this procedure are found in the Version Check List table shown below. If the Version ID numbers identified during the Version Check procedure are prior to (or lower than) those shown on the table, proceed with the remainder of the software update beginning with **Step 3**.

- Switch the unit into "Diagnosis Mode" by pressing and holding the HOME button while pressing the "AUDIO/TUNE" button 5 (five) times.
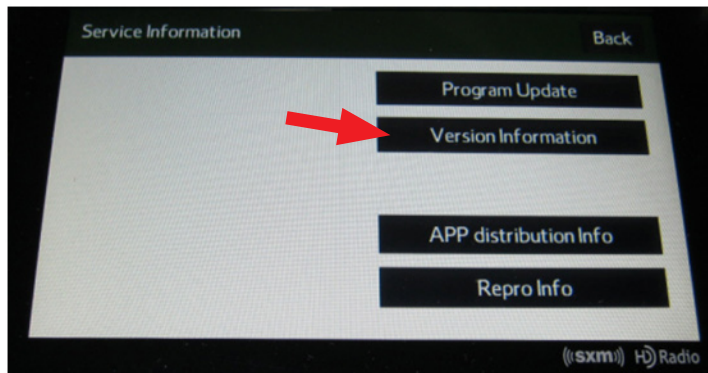

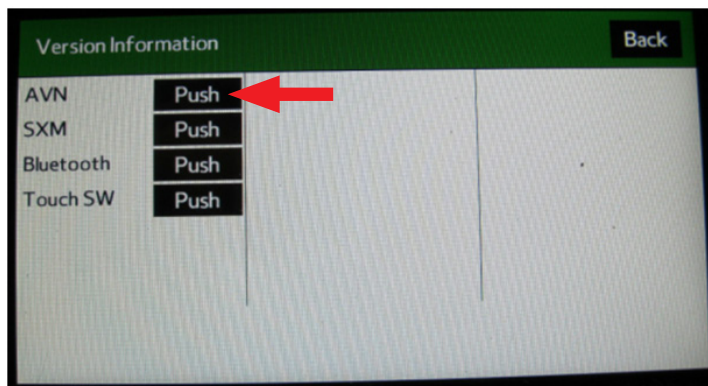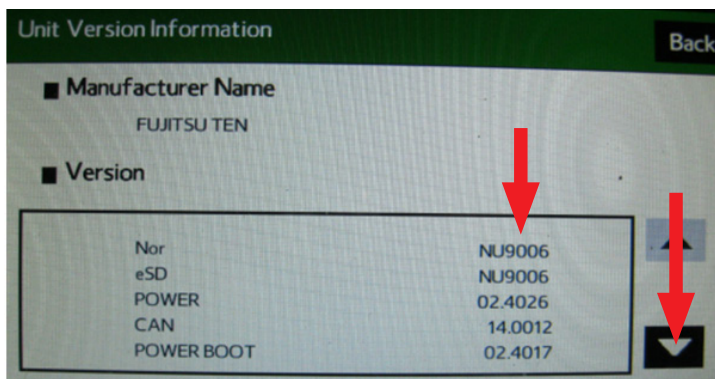Press "AUDIO/TUNE" button 5 times

HOME

1. Press and hold

- Press "Service Information"

- Press "Version Information"

- Press "Push" next to AVN

- Verify the current versions according to the "Version Check List" table shown below on page 6. Use the down arrow to scroll to the bottom of the list for complete verification.

Continued...

- If the software version is current (NU9011 for Legacy/ Outback NU9106 or higher for Impreza/ Crosstrek or NU9203 for WRX), press and **HOLD** the **HOME** button to exit the Diagnostic Mode to complete the procedure as no updates are necessary. If no updates are necessary then continue your diagnosis of the customer concern. If the Version ID numbers are prior to (lower than) those shown on the table below, proceed with **Step 2**, preparing the USB memory (Flash Drives) on page 7 then **Step 3**, the software update procedure on page 10.

NOTE: If you determine the updates are necessary, the Version Check procedure will need to be performed again after the update installation to confirm the procedure was successful (**Step 5**, pg. 17).
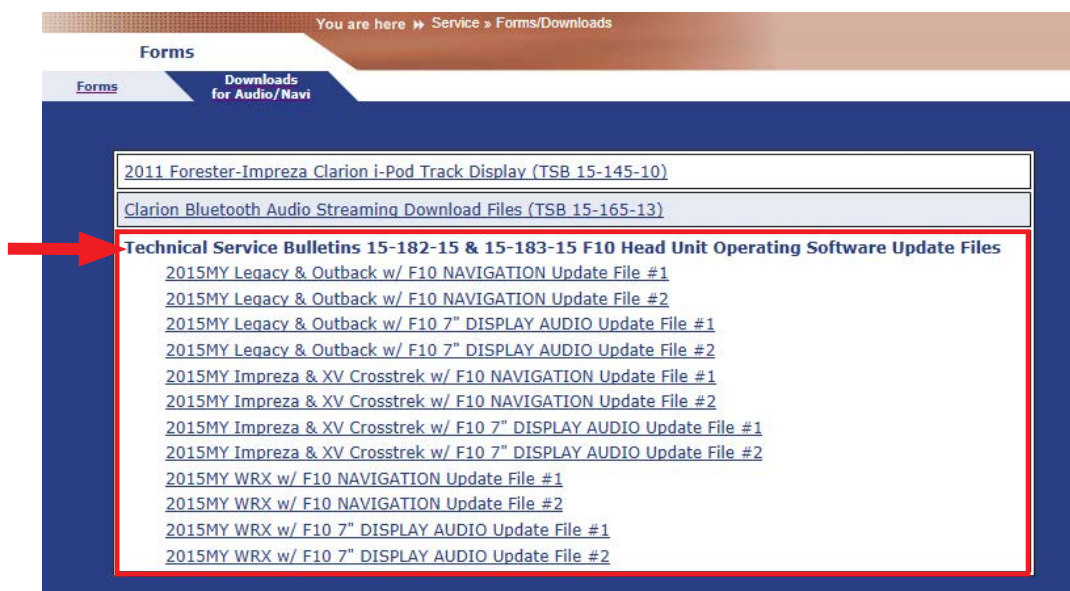
Version Check List

PRODUCT NUMBER	LEGACY / OUTBACK 86271AL64A & 86271AL66A	IMPREZA / XV CROSSTREK 86271FJ630	WRX 86271VA630
NOR	NU9011	NU9106	NU9203
eSD	NU9011	NU9106	NU9203
POWER	02.4026	02.4026	02.4026
CAN	14.0012	n/a	n/a
POWER BOOT	02.4017	02.4117	02.4117
POWER VCL	02.0103	63.0105	69.0105
DB	NU9011	NU9106	NU9203

After performing the Version Check procedure, if updates are determined to be necessary, you will need the 2 USB flash drives referenced above to download the Update Files onto.

All the F10 update files are accessible for downloading from Subarunet under: Service>>Forms / Downloads>>Downloads for Audio/Navi page then clicking on the following hyperlink:

Click Here to Access the Downloads for Audio/Navigation Information on Subarunet

The Subarunet page shown above will display and contains links to the update files **1 & 2** for each model head unit.

NOTE: Do not download any files at this point. The file download procedures are supplied later in this bulletin. The flash drives must be formatted before the Update Files can be downloaded onto them. Proceed to **Step 2** below for the flash drive formatting procedure.
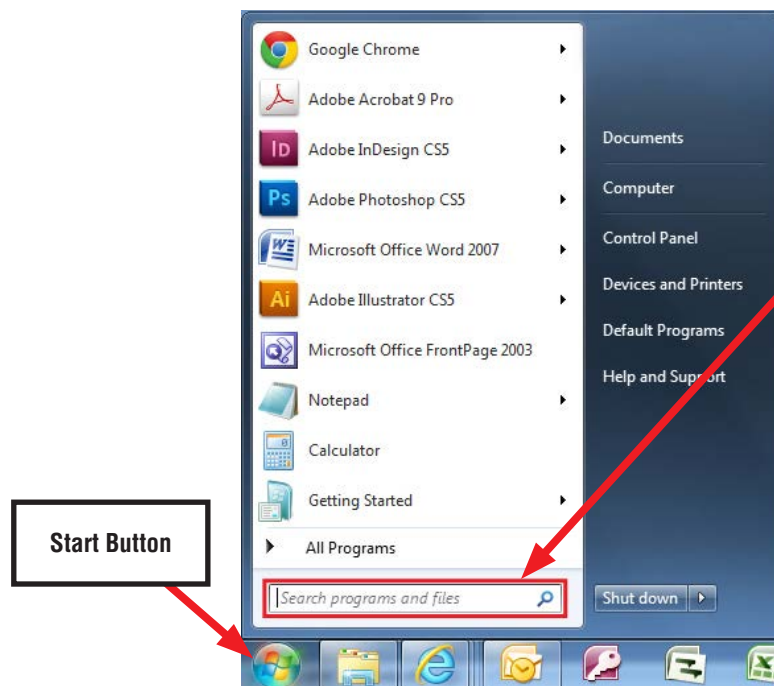
Continued...

Step 2: Prepare the USB Memory (flash drive)

VERY IMPORTANT: Before attempting to download any data files, confirm the PC and flash drives you are using are not infected with any virus. The flash drives will need to be formatted for FAT32 following the steps below.
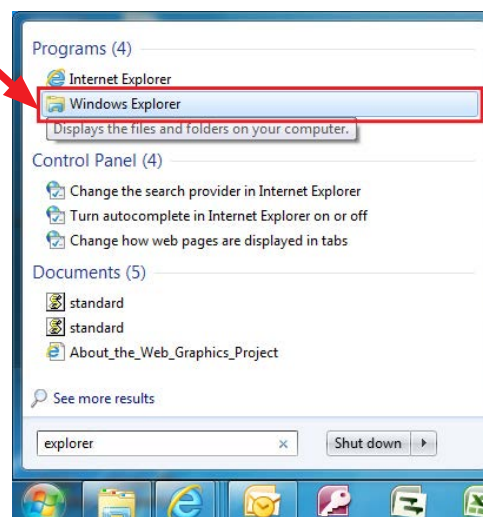
USB Flash Drive Formatting Procedure:

- Install a flash drive into an available USB port on your PC.
- Click **Start** (this is located in the lower left corner of the desktop screen) then, in the **Search programs and files box**, type "explorer".

NOTE: On SDS Notebook you may also press the My Documents button on the GUI Home Screen.

- As you type the word "explorer", search results will start to appear. In the results, click on the **"Windows Explorer"** option under the **Programs** section.
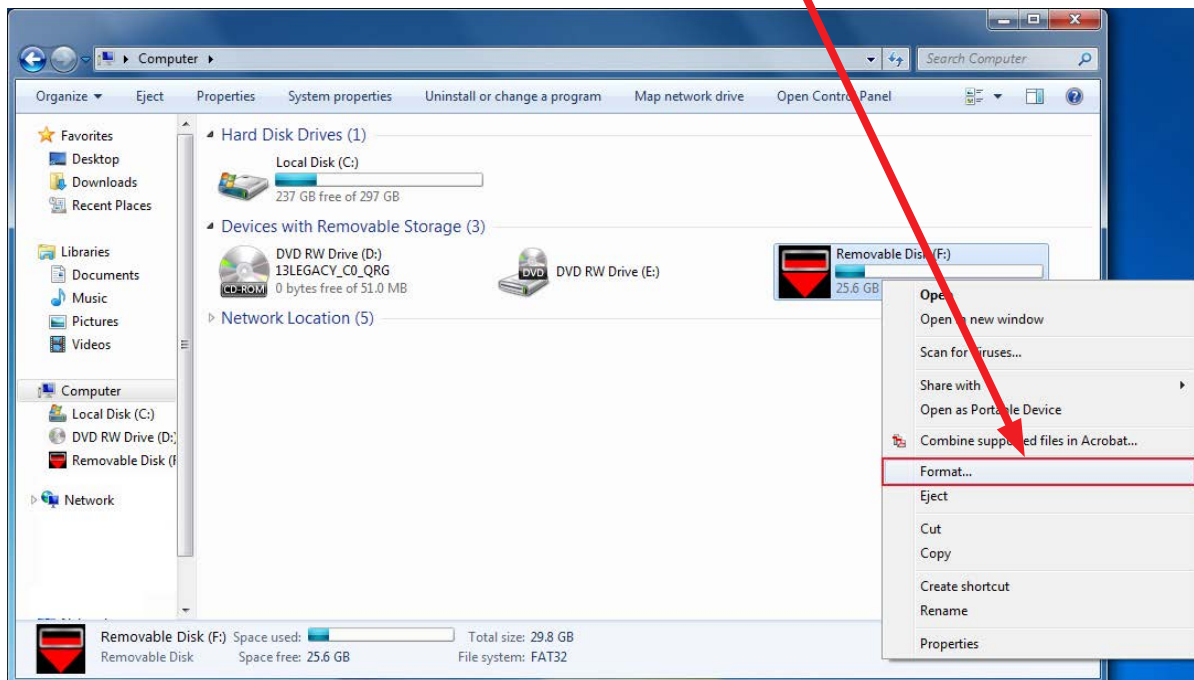

Continued...

- In the next window, choose the **Computer** section on the left. Locate "**Removable Disk**"

NOTE: Always confirm the device you are formatting is the USB Flash Drive. This drive may have various names assigned to it by the manufacturer of the device and may not reflect the drive name given in this example.
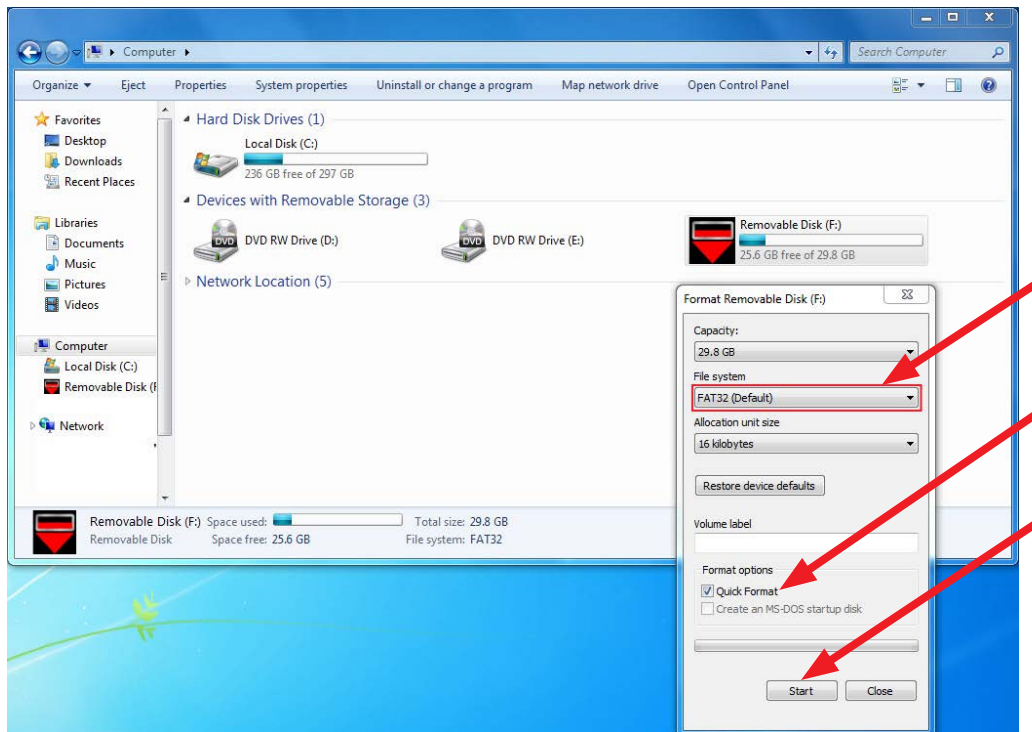
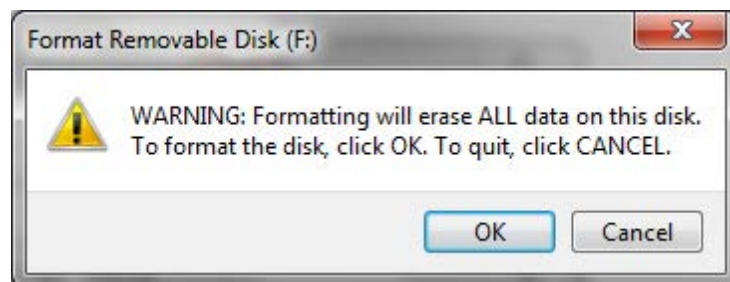- Right click the picture for "**Removable Disk**" then select "**Format**".
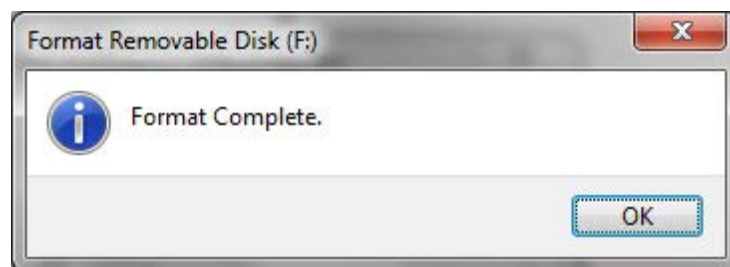

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- When the "Format" dialog box appears, make sure that the option labeled "File System" is set to **FAT32** and the **Quick Format** box is checked as well. Then, click the "**Start**" button.

- Click "**OK**" when the following window appears.

- The drive will start formatting and display this window when it is finished. Click "**OK**" to complete the process.
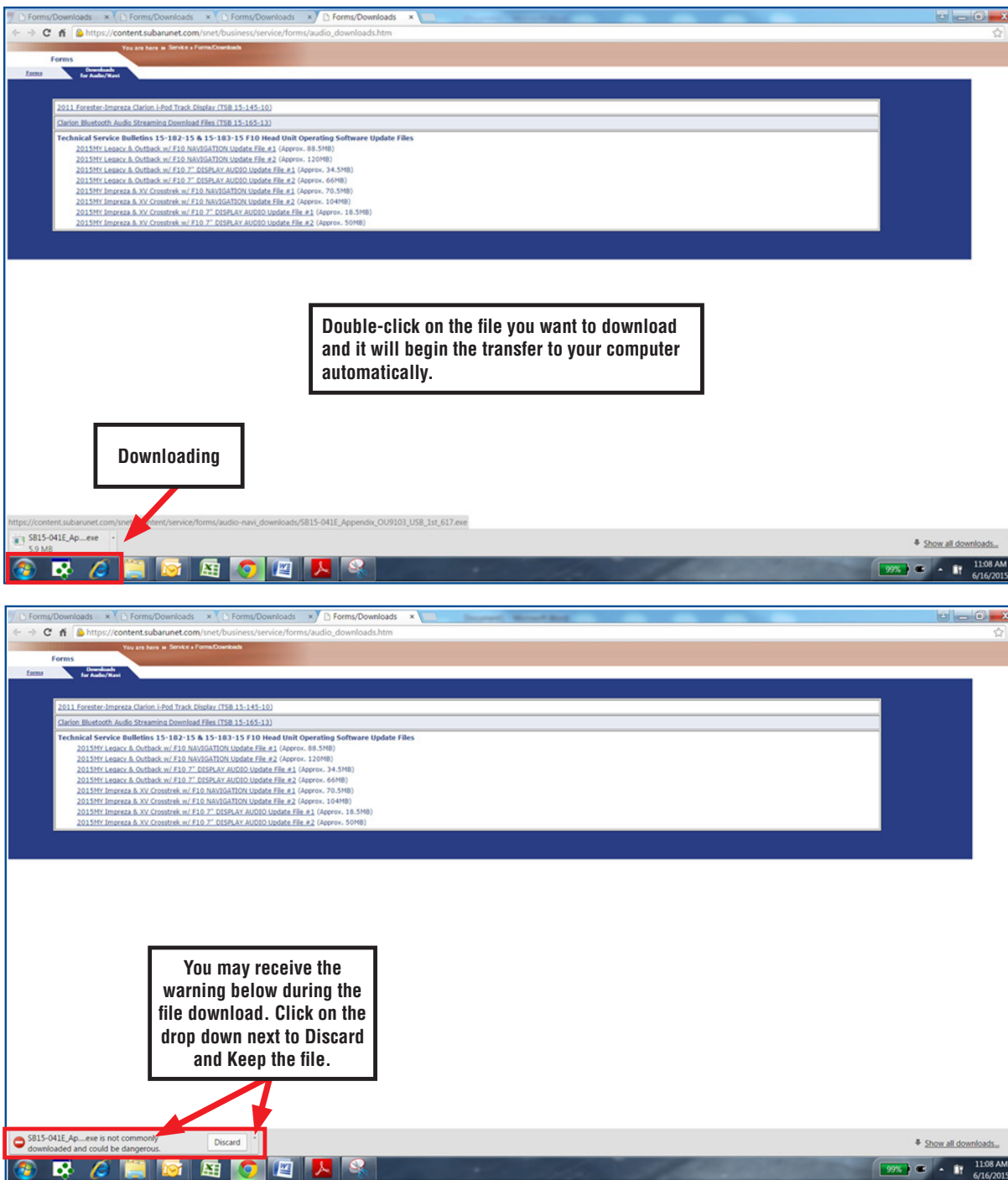

- Repeat the procedure above for the second flash drive.

Continued...

Step 3: File Download Procedure:

Now that the 2 flash drives have been formatted, the two Update Files must be downloaded, one to each flash drive as shown in the table below. Label the flash drives L/O1 and L/O2 for Legacy / Outback, I/X1 and I/X2 for Impreza / XV Crosstrek and W/1 and W/2 for WRX. Download the Update Files to your PC from the Subarunet links. The updates must be installed in order, drive "**1**" first followed by drive "**2**". **NOTE:** Each downloaded Update File may contain 1 to 3 individual files.

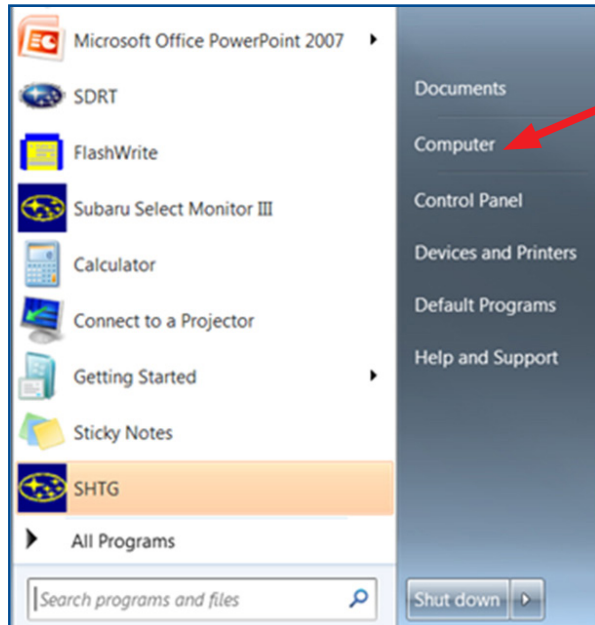The screenshots below will take you through the steps required to get the selected Update Files onto your flash drives and ready to use. Update File sizes are quite large and depending on the speed capabilities of the computer you are using, may take some time to complete the download. **PLEASE BE PATIENT!**
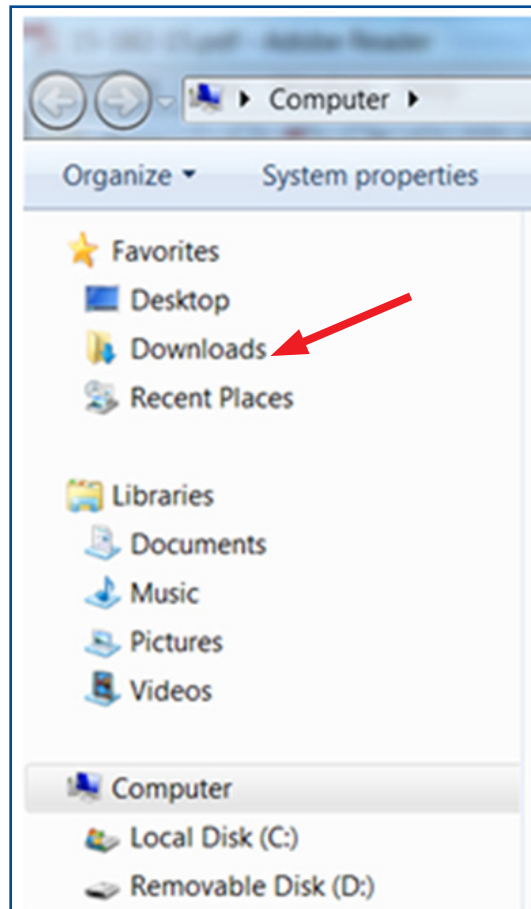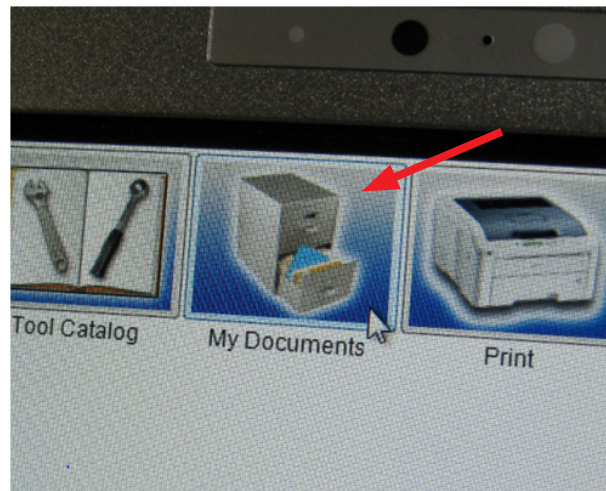
Once the download is complete, you will need to locate the Update File, unzip it then save the unzipped version to your USB flash drive (Update File #1 onto drive "1", Update File #2 onto drive "2"). **NOTE:** If you have not already done so, follow the procedure (**Step 2** starting on page 7) for re-formatting (removing any existing files) your flash drive. Plug the "clean" flash drive into your computer.

- Go to your Windows Start screen, select "Computer" (or click on My Documents if you are using the SDS Toughbook) then click on "Downloads".
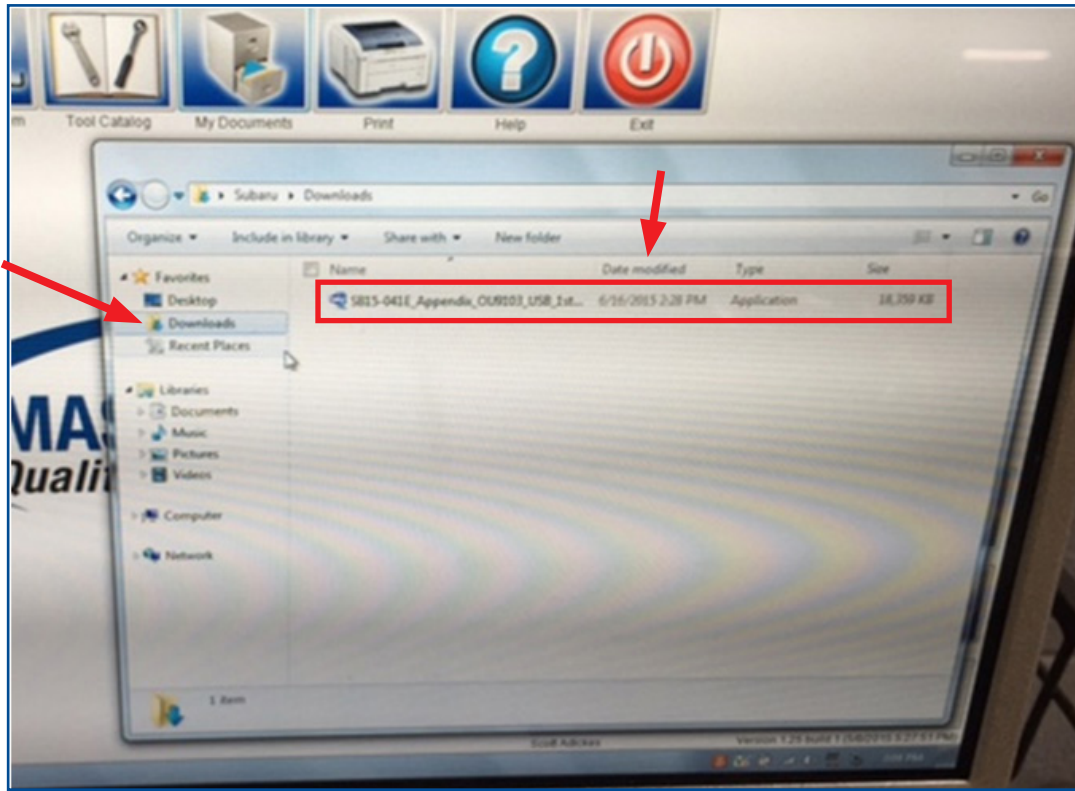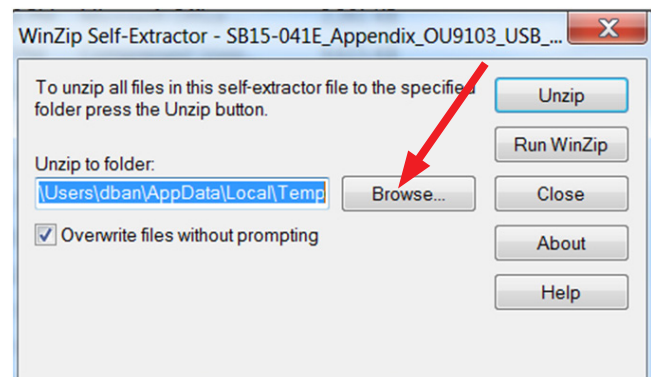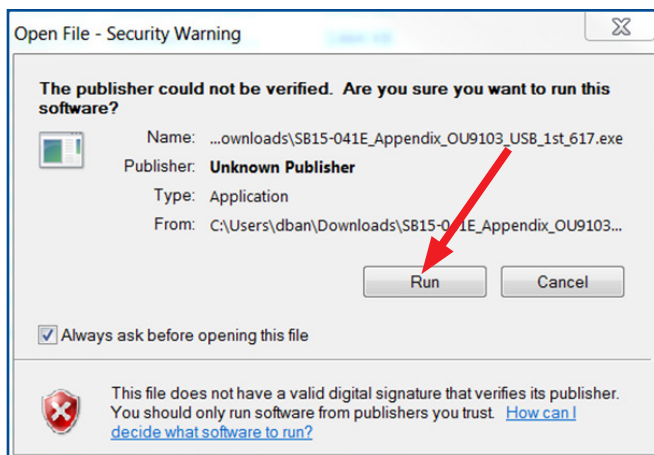

SDS Toughbook screen shot

Continued...

- Once your list of downloaded files opens, locate and click on the downloaded <mark>Update File</mark> (in this example, "OU9103_USB…") you are looking for. **TIP:** If you click on Date Modified you can sort the downloaded files by the date they were added which will bring the newest file to the top.
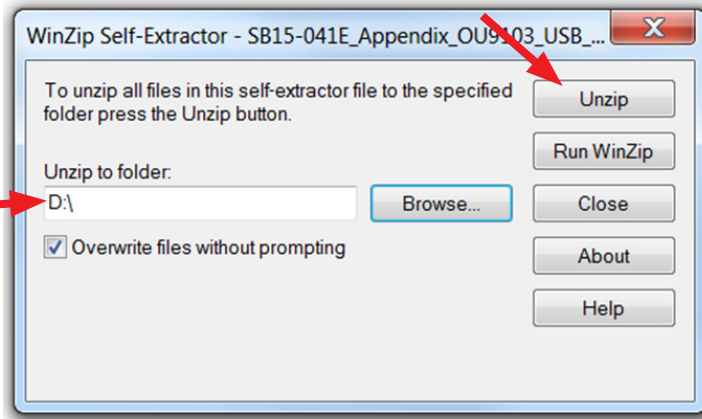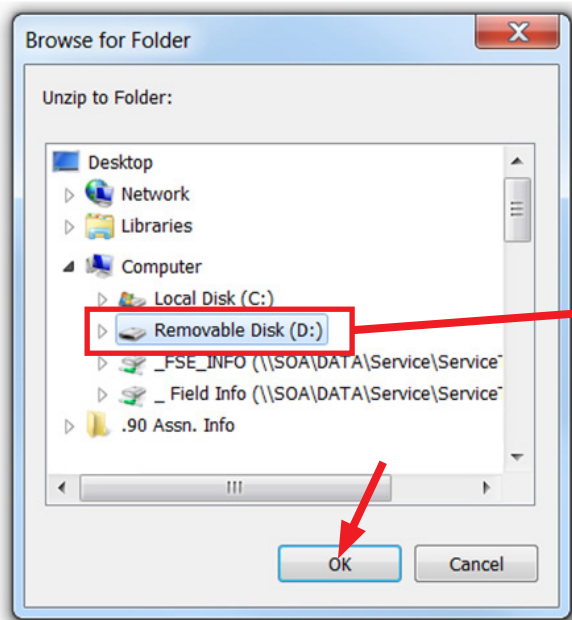

- Double clicking the <mark>Update File</mark> will bring up a dialogue box with a security warning. Click on "Run" to continue.

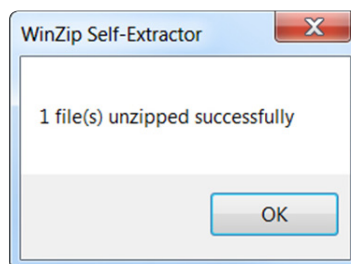- Click on "Browse"

- As shown below, click on "Removable Disk" which is your USB flash drive where you want the unzipped <mark>file(s)</mark> to be saved. Click "OK" then click on "Unzip".
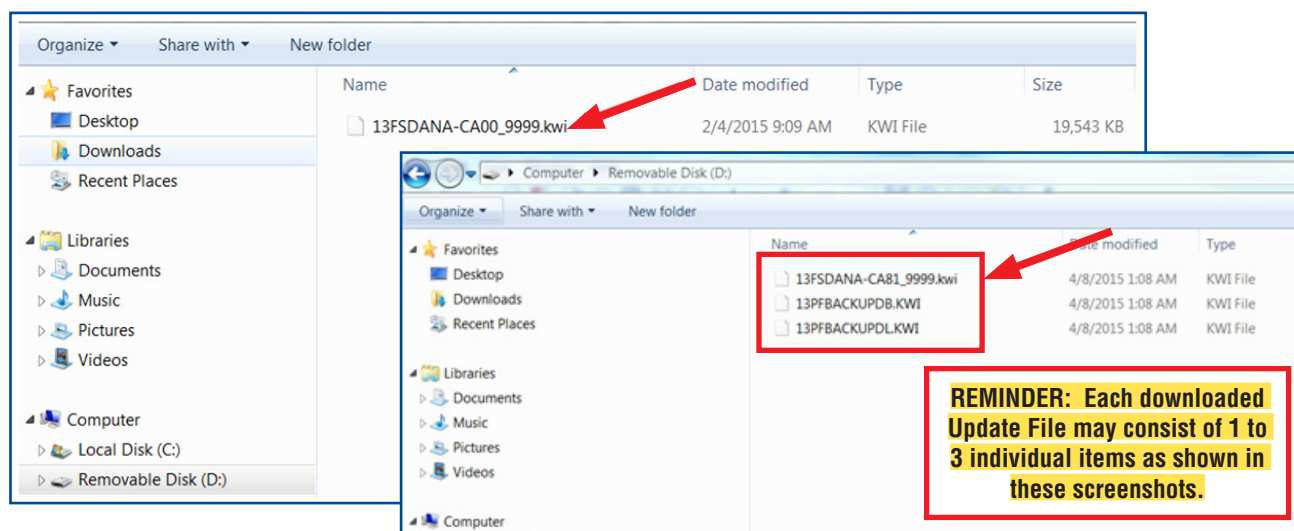
Continued...

The Update File will unzip and be saved to your flash drive.

- Confirm the Update File (and flash drive) is ready to use by going back to Start > Computer (or My Documents on the SDS Toughbook) and double clicking on "Removable Disk" to display the drive's contents as shown in the examples below. Some Update Files will consist of just 1 item but others may list 3. All of the files will have a ".kwi" extension at the end of their file name. If OK, proceed with **Step 4: Update Software Installation** below.

REMINDER: Each downloaded Update File may consist of 1 to 3 individual items as shown in these screenshots.

REMINDER: There can only be **ONE** Update File stored on each flash drive or the update procedure will not work. If you see more than one Update File stored, start over by re-formatting the flash drive again and reloading the Update File you are trying to install.

Continued...

IMPORTANT NOTES:

- Do not change the Update File names after downloading them.
- Do not save any other version Update Files onto the flash drives.

MODEL	FACE PLATE ID NUMBER	1ST UPDATE SOFTWARE FILE NAME	2ND UPDATE SOFTWARE FILE NAME
Legacy / Outback	FB664US	NU9011_USB_1st.exe	NU9011_USB_2nd.exe
	FB644US		
Impreza / XV Crosstrek	FM634US	NU9106_USB_1st.exe	NU9106_USB_2nd.exe
WRX	FV631US	NU9203_USB_1st.exe	NU9203_USB_2nd.exe

Step 4: Update Software Installation

NOTE: Because of the time it takes to perform these updates, SOA recommends connecting the Midtronics GR8 Diagnostic Battery Charger to the vehicle and utilizing the Power Supply Mode feature when performing these updates. Once the GR8 is connected to the vehicle, as long as the battery is fully charged, it takes less than 3 minutes to boot-up the charger, select the Power Supply Mode, and have the vehicle's battery voltage stabilized and ready for updating.

VERY IMPORTANT: This information is applicable to the Midtronics GR8 Diagnostic Battery Charger ONLY. It does not apply to any other brand / type of "generic" battery charger whatsoever. ONLY the GR8 and its Power Supply Mode feature has been tested and approved by Subaru of America, Inc. (SOA). If the GR8 indicates the vehicle's battery must be charged, charge the battery using the GR8 before proceeding to update the audio unit while using the Power Supply Mode.

Once the GR8 has been connected and Power Supply Mode initiated, insert the Drive "**1**" into the USB port and follow the steps below to install the Update File **#1**.

NOTE: Where applicable, record any radio station presets as they will be lost along with any mobile device pairing during this procedure.

Version Update Procedure
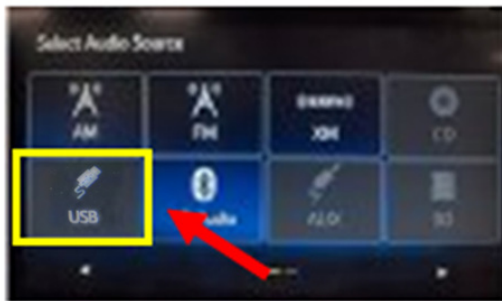
- Turn the ignition / key (ACC) "ON".

- Press the "AUDIO/TUNE" button.

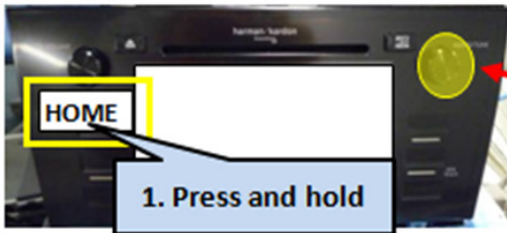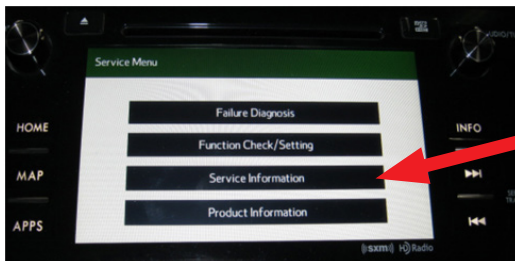The Select Audio Source screen will appear.

Continued...

Install the flash drive into the vehicle's USB port. After the flash drive is recognized, the USB icon will illuminate.
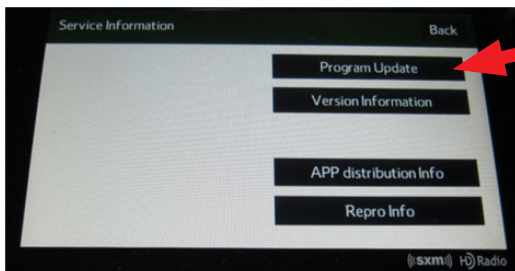
- Once the USB icon is illuminated, switch the unit into "Diagnosis Mode" by pressing and holding the HOME button while pressing the "AUDIO/TUNE" button 5 (five) times.
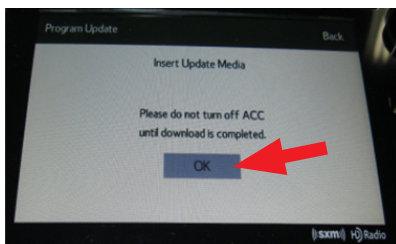
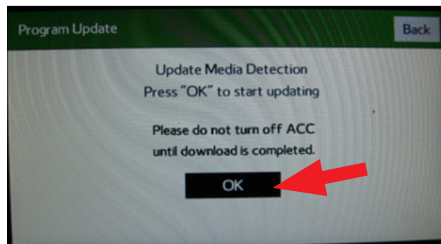

2. Press "AUDIO/TUNE" button 5 times

1. Press and hold

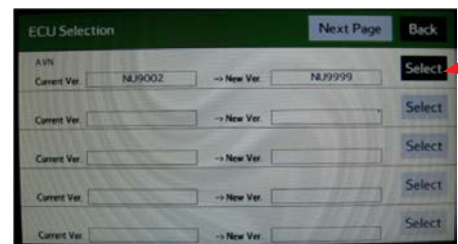
- Press "Service Information"

- Press "Program Update" then follow the sequence shown in the screen shots below

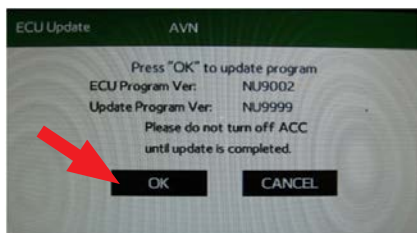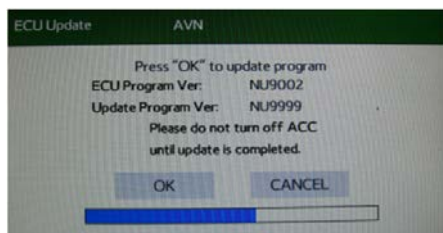**Wait for "OK" to activate (turn black)**

Press "OK"

Press "SELECT"

NOTE: The "**OK**" button will not activate (turn black) if the wrong Update File(s) are on the flash drive. Re-format the flash drive and reload the proper Update Fi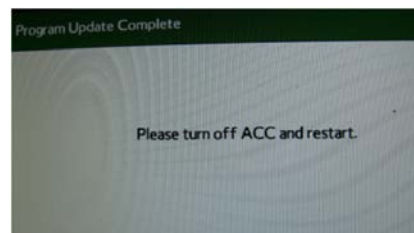les starting from the beginning of **Step 2**.   *Continued...*
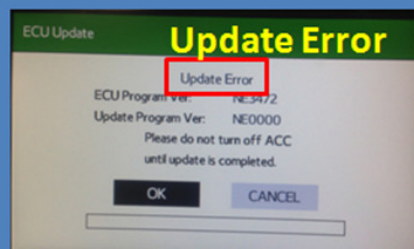
Press "OK"

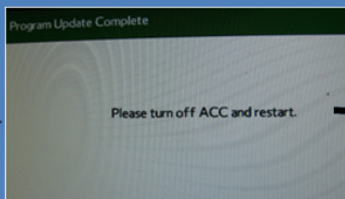**Once the updating starts, the status bar may need to complete more than once and could take up to about 15 minutes.**

Turn off ACC

If "Update Error" screen is displayed as shown below:
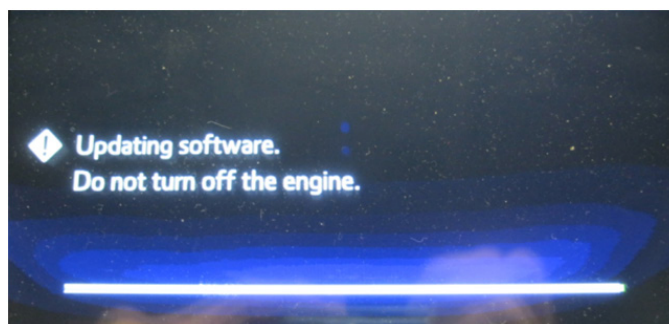

Select "OK".

ACC OFF then back ON again

Perform the Version Update again from Step 3.

If the progress bar stops, please wait 15 minutes. If the progress bar does not change even if after 15 minutes, turn ACC OFF and back ON again then, restart the update procedure from **Step 4.**

IMPORTANT: Do not turn the ACC (ignition / key) off or disconnect the flash drive from the USB port during updating.

- Once the update completes successfully, turn the ACC off, **WAIT 30 SECONDS** then turn it back on again.

- After the unit boots back up, the "Updating software" screen and its status bar will be displayed. This update may take up to 5 minutes to complete.

When the Software Update completes, the unit will restart automatically. Once the STARLINK opening screen is displayed, remove the flash drive from the USB port and turn the ACC off.

Before proceeding further perform **Step 1** (Version Check Procedure) again to confirm the updated software installation "from Drive 1" was successful. When the update is successful, the software version (NOR) **NU9011** for Legacy and Outback, **NU9016** for Impreza and XV Crosstrek and **NU9203 f**or WRX and the CAN version **14.0012** (Legacy and Outback only) will be displayed. If OK, proceed with installation of the Drive "2" update (repeat **Step 4**, Update Software Installation). If the updated versions are not displayed, **Step 4** using Drive "1" must be repeated.

NOTE: If the CAN version displayed after the Drive "1" update is **B2.0105**, turn the ignition OFF, wait **at least 1 minute**, turn the ignition back ON and perform **Step 1** (Version Check Procedure) again to confirm **14.002** is displayed.

Once the software and CAN version updates are confirmed, insert Drive "2" to install Update File **#2** and repeat **Step 4.**
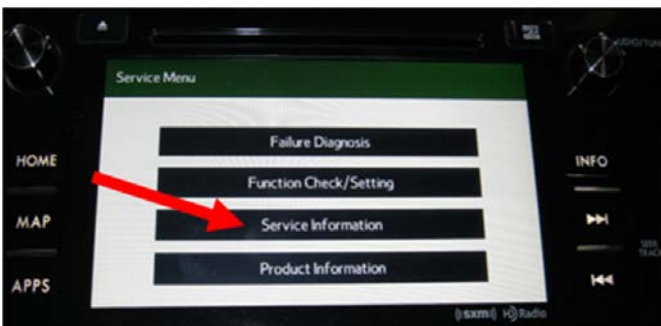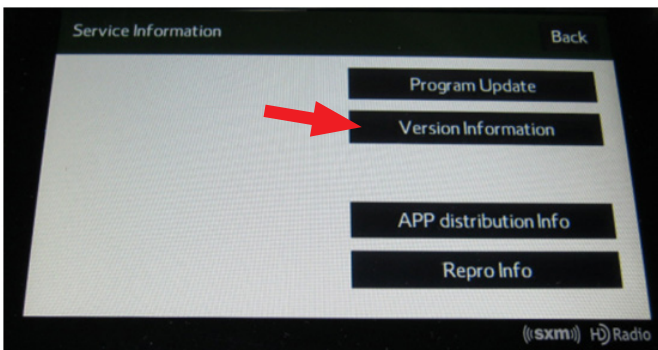
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Step 5: Version Check Procedure

As mentioned earlier on page 6, once both update software installations are complete, the Version Check procedure must be performed again to confirm all of the updates have been installed successfully.
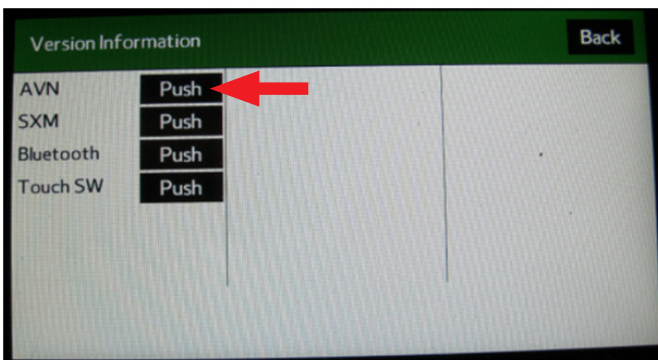
- Switch the unit into "Diagnosis Mode" by pressing and holding the HOME button while pressing the "AUDIO/TUNE" button 5 (five) times.

Press "AUDIO/TUNE" button 5 times

HOME

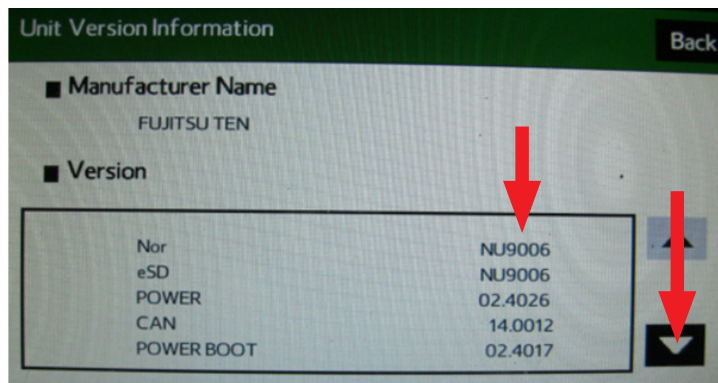**1. Press and hold**

- Press "Service Information"

- Press "Version Information"

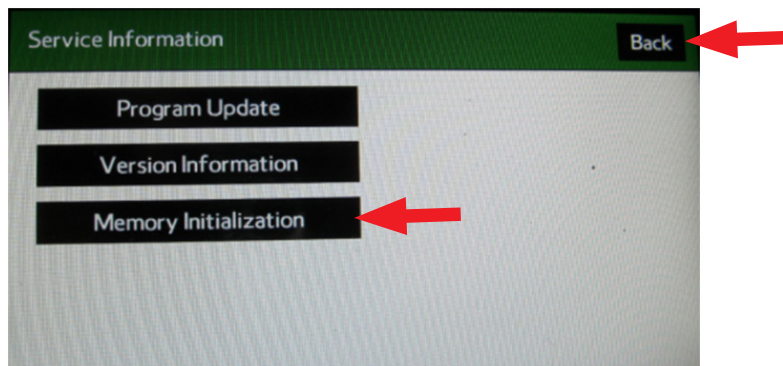- Press "Push" next to AVN

Continued...

- Verify the current versions according to the "Version Check List" table shown on page 6. Use the down arrow to scroll to the bottom of the list for complete verification.

Step 6: Memory Clear Procedure

After confirming both software updates have been installed successfully, the Memory Clear procedure must be performed to complete the update procedure. After pressing "Back", the following screen will be displayed:

NOTE: All presets will likely be lost and will need to reset after performing this procedure.
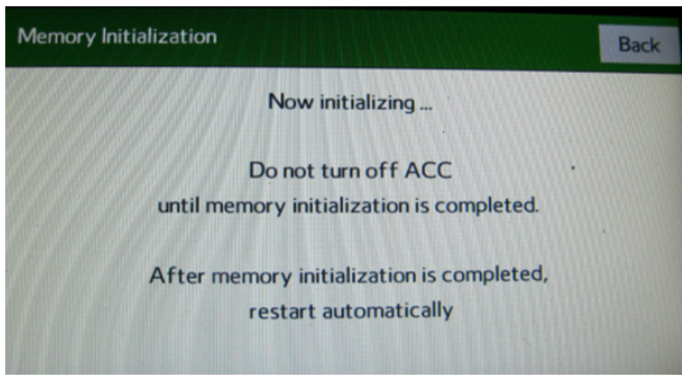

- Press "Memory Initialization"

- Press and **HOLD** the "OK" button until the screen shown below is displayed (5 to 10 seconds).

Continued...

This screen will be displayed for about 1 minute while the unit restarts. After restart, the Loading screen and its status bar will be displayed. After the status bar completes, the Main Menu screen will be displayed. To complete the updating procedure, you must go through the series of Initial Setup screens, reset the radio station presets and re-pair any mobile devices (where applicable).

NOTE: After confirming the updates are complete, remove the labels and re-format both flash drives to clear any remaining files so they are ready for use the next time. This reduces the chances of inadvertently combining files the next time the drives are used. It also ensures that every repair receives the very latest software as these files will be updated from time to time whenever a newer version is released.

WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited Warranty period or with an active Added Security Gold Service Agreement, this repair may be claimed using the following information:

LABOR DESCRIPTION	LABOR OPERATION #	FAIL CODE	LABOR TIME
F10 AUDIO/NAVIGATION HEAD UNIT UPDATE	A031-128	ZQL-48	0.6

NOTE: Up to $12.00 may be claimed **ONE TIME** in sublet to cover the cost for the 2 USB Flash Drives ($6.00 each).

REMINDER: SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.

Always refer to STIS for the latest service information before performing any repairs.