

ATTENTION:
 GENERAL MANAGER
 PARTS MANAGER
 CLAIMS PERSONNEL
 SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2015-2016MY Legacy and Outback
 2015-2016MY Impreza and XV Crosstrek
 2016MY Forester
 2016MY WRX

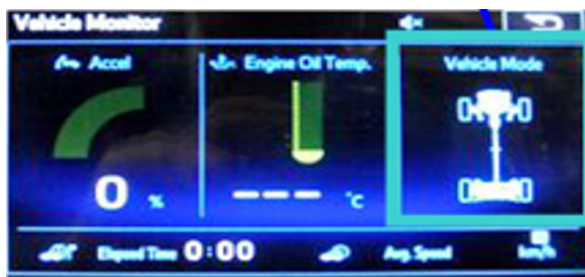
NUMBER: 15-198-16R
DATE: 05/02/16
REVISED: 06/22/16

SUBJECT: Reprogramming File Availability to Address Operational Concerns with “Gen 2” Fujitsu-TEN (F10) Navigation and 7” Display Audio Units

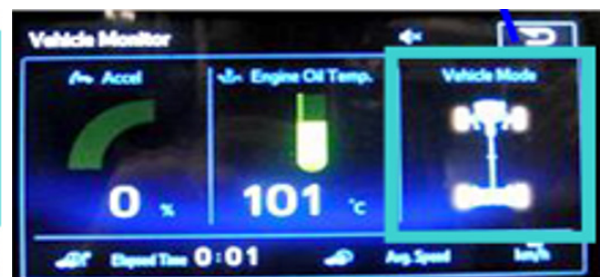
Introduction:

This bulletin announces reprogramming file availability and the software installation procedure to address a group of operational concerns received from the field listed below involving “Gen 2” F10 Navigation and Display Audio units with 7” display. The procedure will involve downloading the applicable software update files from Subarunet then loading them onto a flash drive for audio unit installation. It is important to read through and understand this information **completely** before proceeding.

- Logic change to provide a “_” (underscore) character on the keyboard.
- Logic change to match the engine oil maintenance remaining mileage on the maintenance reminder screen to the odometer meter value on the combination meter when mileage unit is set to read in “KM”.
- Logic change to insure the Vehicle Mode indicator on the Vehicle Monitor screen matches the actual vehicle status. Example: The wheel indicators on the vehicle monitor screen no longer stay illuminated indicating VDC is “active” after VDC activation is complete.



VDC “Inactive”



VDC “Active”

- Logic change to address improper calculation used by the head unit to determine Average Lifetime Fuel Consumption displayed on the ECO monitor.

Continued...

CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

- Logic change to address Voice Recognition error when user says “Radio” or “Music”.
- Logic change to address the radio (audio) not resuming play automatically after a Bluetooth call is ended.
- Logic change to address FM radio station presets resetting to 87.5MHz intermittently when cycling the ignition OFF to ON.
- Logic change to address AM radio station presets resetting to 513KHz intermittently and possible switch from AM to FM if a 513KHz preset is selected.

Production Change Information:

The new logic was incorporated into production during mid-March, 2016 on all the models listed above EXCEPT for WRX when the change took place during late February, 2016. Actual VIN break information was not available at the time of this writing.

VERY IMPORTANT: Each of the “new” files listed in the tables below contain **ALL** the updates referenced in prior TSBs **15-182-15R** and **15-183-15R** in addition to update files for the 8 conditions referenced in the Introduction above.

Update File Applicability / Information:

Model	Model Year	NAVI / DA	Faceplate ID Number	Update Software File Name		Subarunet Link Title
				Update File #1 Name	Update File #2 Name	
Legacy & Outback	2015	NAVI	FB664US	NU9015_USB_1st.zip	NU9015_USB_2nd.zip	2015MY Legacy & Outback w/ F10 NAVIGATION Update File #1
			FB644US			2015MY Legacy & Outback w/ F10 NAVIGATION Update File #2
		DA	FB664UM	OU9014_USB_1st.zip	OU9014_USB_2nd.zip	2015MY Legacy & Outback w/ F10 7" DISPLAY AUDIO Update File #1
			FB644UM	2015MY Legacy & Outback w/ F10 7" DISPLAY AUDIO Update File #2		
	2016	NAVI	FB685US	NU9308_USB_1st.zip	NU9308_USB_2nd.zip	2016MY Legacy & Outback w/ F10 NAVIGATION Update File #1
			FB695US			2016MY Legacy & Outback w/ F10 NAVIGATION Update File #2
		DA	FB685UM	OU9307_USB_1st.zip	OU9014_USB_2nd.zip	2016MY Legacy & Outback w/ F10 7" DISPLAY AUDIO Update File #1
			FB695UM			2016MY Legacy & Outback w/ F10 7" DISPLAY AUDIO Update File #2
Impreza & XV Crosstrek	2015	NAVI	FM634US	NU9110(US)_USB_1st.zip	NU9110(US)_USB_2nd.zip	2015MY Impreza & XV Crosstrek w/ F10 NAVIGATION Update File #1
			FM664UM			OU9109(US)_USB_1st.zip
		DA	FM664UM	OU9109(US)_USB_1st.zip	OU9109(US)_USB_2nd.zip	2015MY Impreza & XV Crosstrek w/ F10 7" DISPLAY AUDIO Update File #2
			FM675UH	NU9406_USB_1st.zip	NU9406_USB_2nd.zip	2016MY Impreza & XV Crosstrek w/ F10 NAVIGATION Update File #1
	FM655UH	2016MY Impreza & XV Crosstrek w/ F10 NAVIGATION Update File #2				
	2016	NAVI	FM705UM	OU9405_USB_1st.zip	OU9405_USB_2nd.zip	2016MY Impreza & XV Crosstrek w/ F10 7" DISPLAY AUDIO Update File #1
			FM685UM			2016MY Impreza & XV Crosstrek w/ F10 7" DISPLAY AUDIO Update File #2
		DA	FM685UM	OU9405_USB_1st.zip	OU9405_USB_2nd.zip	2016MY Impreza & XV Crosstrek w/ F10 7" DISPLAY AUDIO Update File #1
FM685UM			2016MY Impreza & XV Crosstrek w/ F10 7" DISPLAY AUDIO Update File #2			
Forester	2016	NAVI	FF687US	NU9910_USB_1st.zip	NU9910_USB_2nd.zip	2016MY FORESTER w/ F10 NAVIGATION Update File #1
			FF667US			2016MY FORESTER w/ F10 NAVIGATION Update File #2
		DA	FF687UM	OU9909(US)_USB_1st.zip	OU9909(US)_USB_2nd.zip	2016MY FORESTER w/ F10 7" DISPLAY AUDIO Update File #1
			FF667UM	2016MY FORESTER w/ F10 7" DISPLAY AUDIO Update File #2		
WRX	2016	NAVI	fv631US	NU9207_USB_1st.zip	NU9207_USB_2nd.zip	2016MY WRX w/ F10 NAVIGATION Update File #1
			fv651UM			2016MY WRX w/ F10 NAVIGATION Update File #2
		DA	fv631US	OU9207_USB_1st.zip	OU9207_USB_2nd.zip	2016MY WRX w/ F10 7" DISPLAY AUDIO Update File #1
			fv651UM			2016MY WRX w/ F10 7" DISPLAY AUDIO Update File #2

NOTE: Software Version Numbers (as referenced in the Service Procedure below) are included in the Update Software File names. Example: NU9015 and OU9604 are Version Numbers.

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. Do **NOT** use any USB Drives which contain or require the use of file management, encryption, file backup or other software to function.



Continued...

Service Procedure / Information:

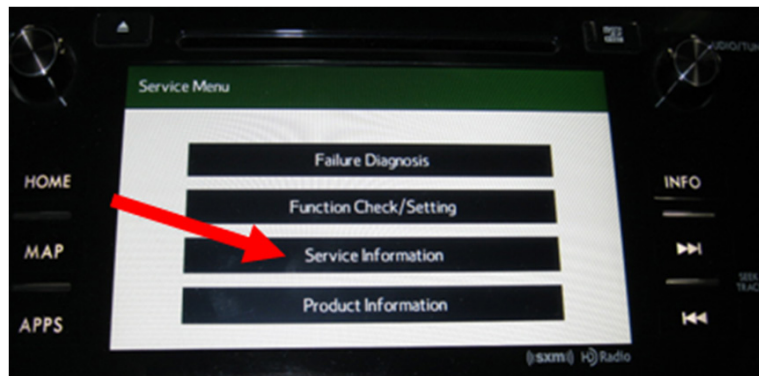
IMPORTANT REMINDER: Read through and understand this procedure **COMPLETELY** before proceeding further.

Step 1: Version Check Procedure

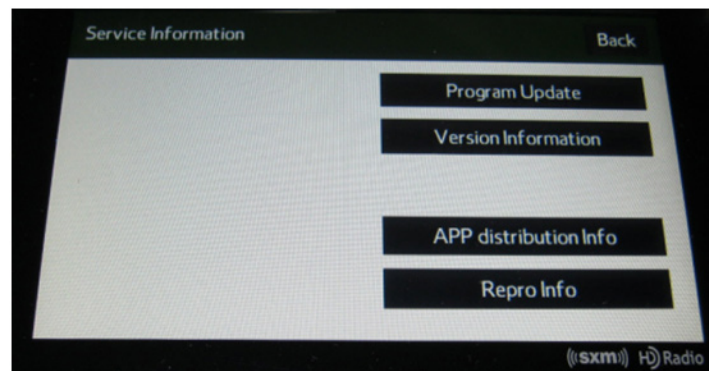
Before proceeding with any updates, the currently installed software version must be determined. If the latest software version (or later) is already installed, no updates are necessary. The Version ID numbers for this procedure are found in the Update File Applicability / Information table shown above. 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.

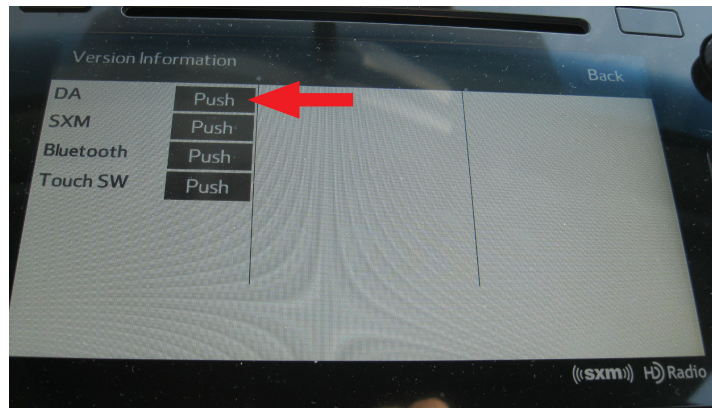


- Press "Service Information"

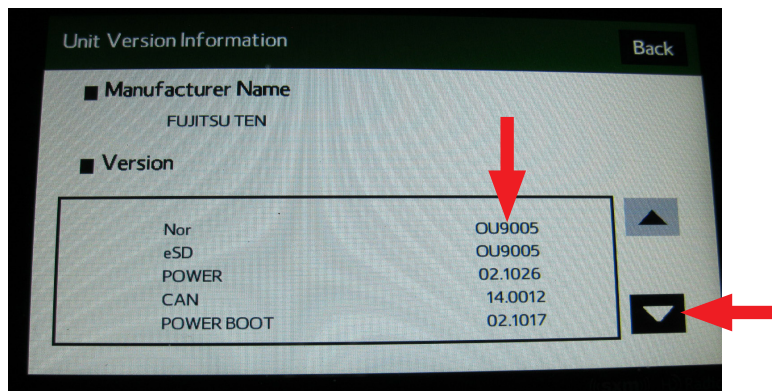


- Press "Version Information"

Continued...



- Press “Push” next to DA (or AVN for Navigation units)



- Verify the current versions according to the Update File Applicability / Information table shown table shown on page 2. Use the down arrow to scroll to the bottom of the list for complete verification.
- If the software version is current, press and HOLD the HOME button to exit the Diagnostic Mode and complete the procedure as no updates are necessary. If no updates are necessary, continue your diagnosis of the customer concern. If the Version ID numbers are prior to (lower than) those shown in the table above, proceed with **Step 2**, preparing the USB memory (Flash Drives) then **Step 3**, the software update procedure.

NOTE: If updates are necessary, the Version Check procedure will need to be performed again after each update installation to confirm the procedure was successful.

After performing the Version Check procedure, if updates are determined to be necessary, the 2 USB flash drives will be needed 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 applicable hyperlink:

Continued...



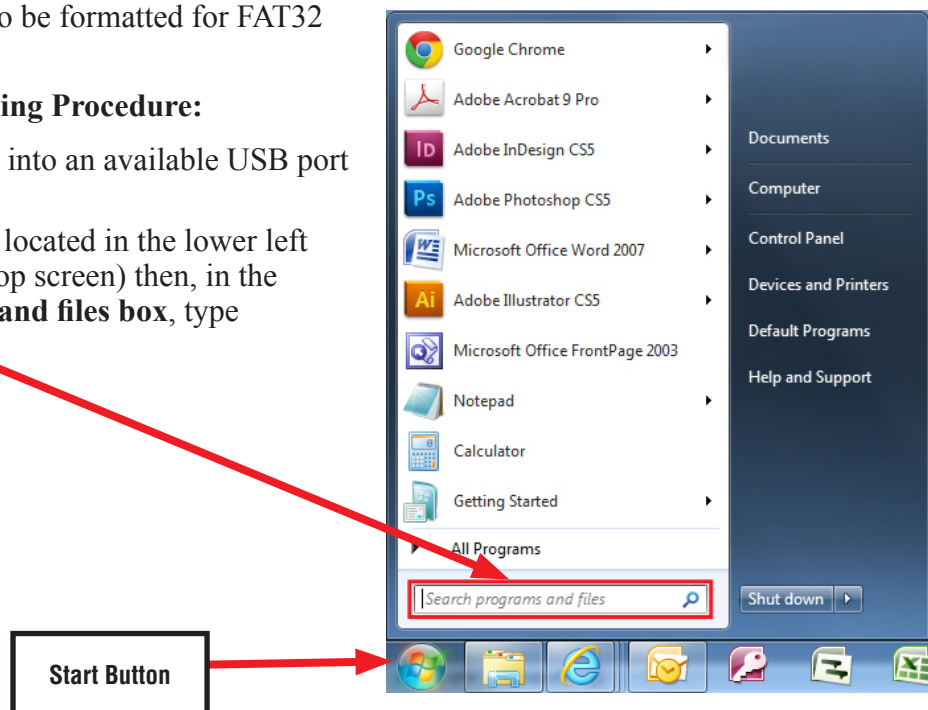
The Subarunet page shown above will display which contains links to the update files 1 & 2 for each model head unit. Do not download any files at this point. The file download procedures are supplied later in this bulletin. The 2 flash drives must be formatted before the Update Files can be downloaded onto them as outlined in Step 2 below.

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:

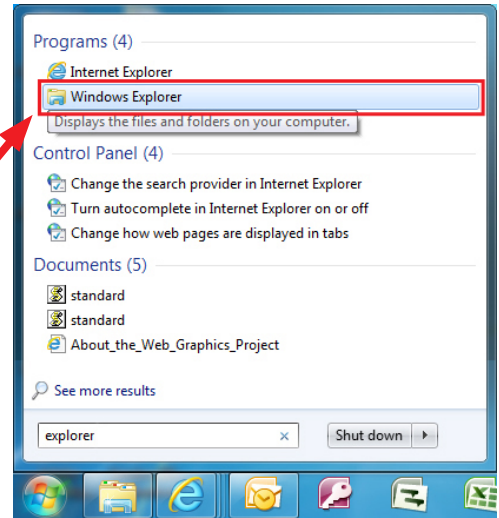
- Install a flash drive into an available USB port on your PC.
- Click **Start** (this is located in the lower left corner of the desktop screen) then, in the **Search programs and files box**, type "explorer".



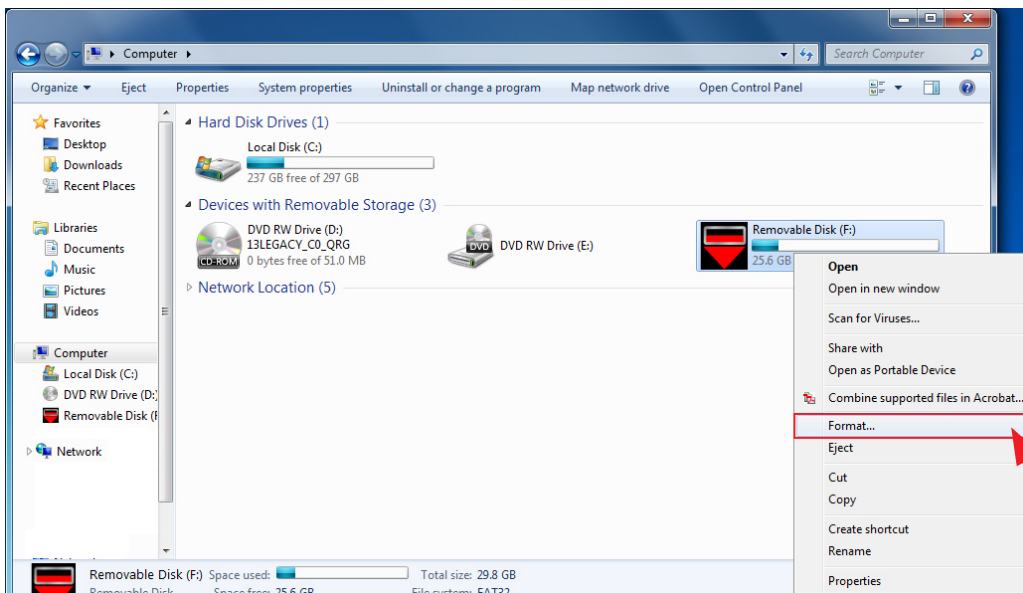
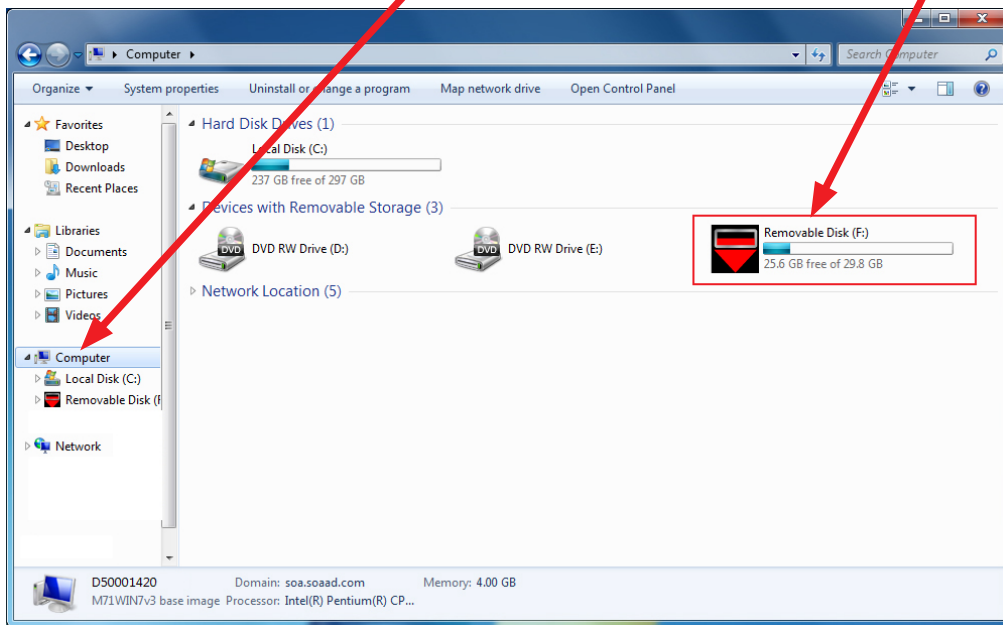
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NOTE: On SDS Notebook you may also press the My Documents button on the GUI Home Screen.

- 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.



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

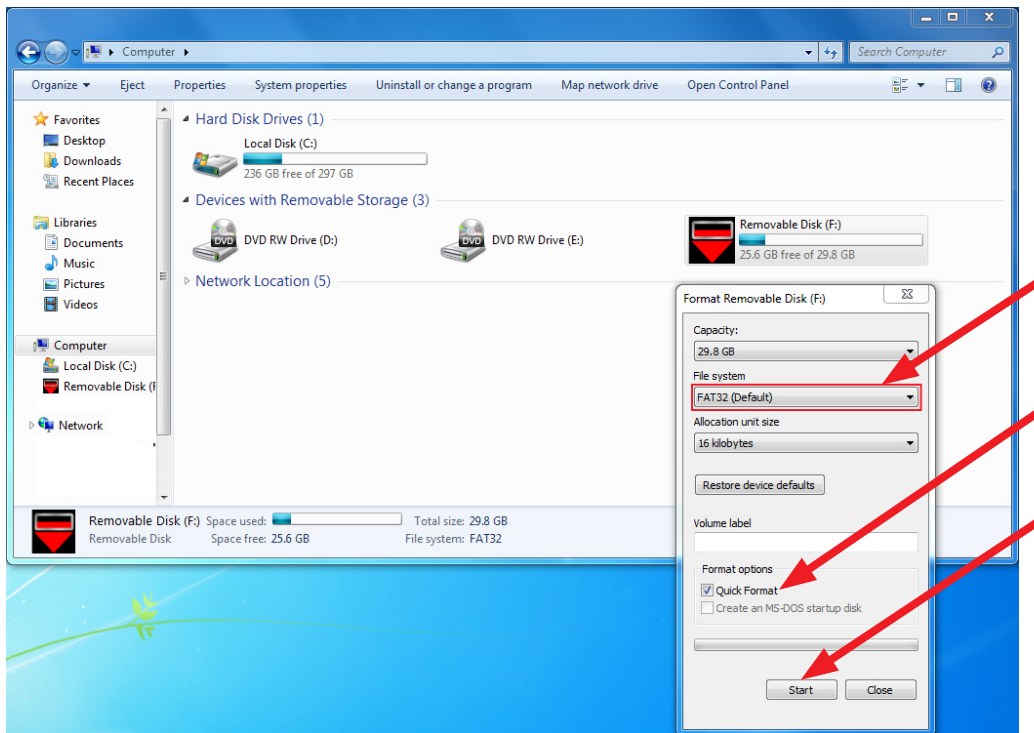


NOTE: Always confirm the device you are formatting is the USB Flash Drive. This drive may have various names assigned to it by the manufacturer of the device and may not reflect the drive name given in this example.

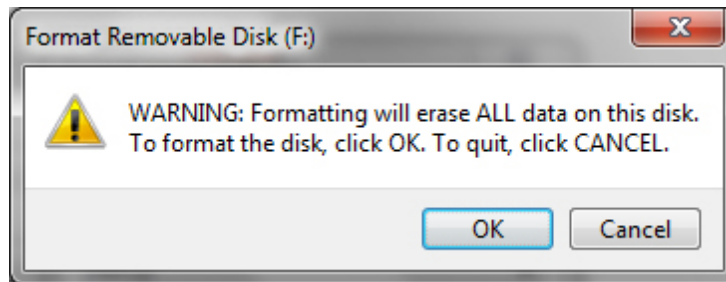
- Right click the picture for “**Removable Disk**” then select “**Format**”.

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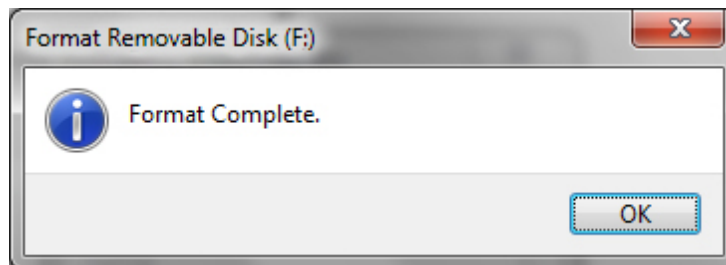
- When the “Format” dialog box appears, make sure that the option labeled “File System” is set to **FAT32** and the **Quick Format** box is checked as well. Then, click the “**Start**” button.



- 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

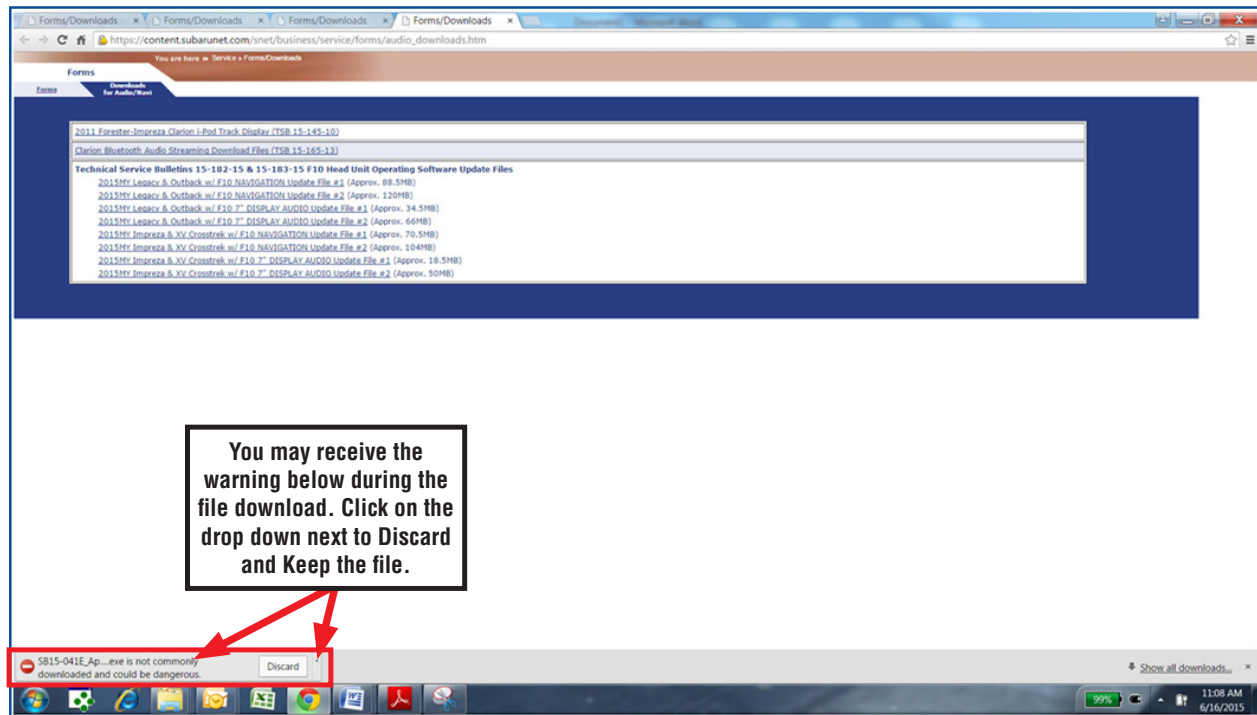
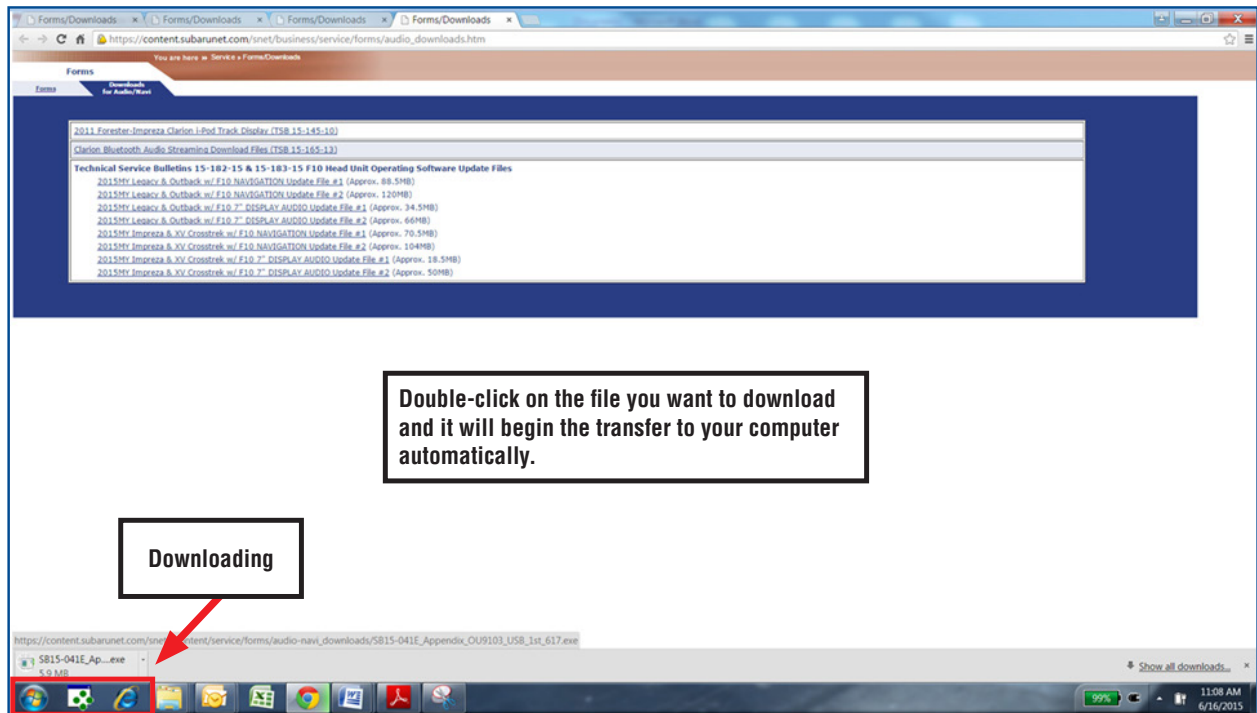
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Step 3: File Download Procedure

After formatting the 2 flash drives is complete, the two Update Files must be downloaded, one to each flash drive. Label them Drive “1” and Drive “2”. 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 the flash drives and ready to use. Update File sizes are quite large and depending on the speed capabilities of the computer, may take some time to complete the download.

PLEASE BE PATIENT!

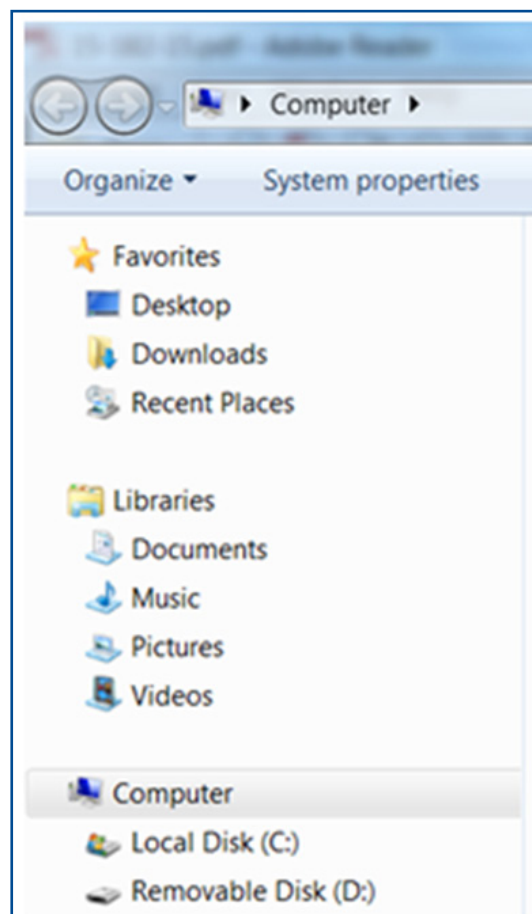
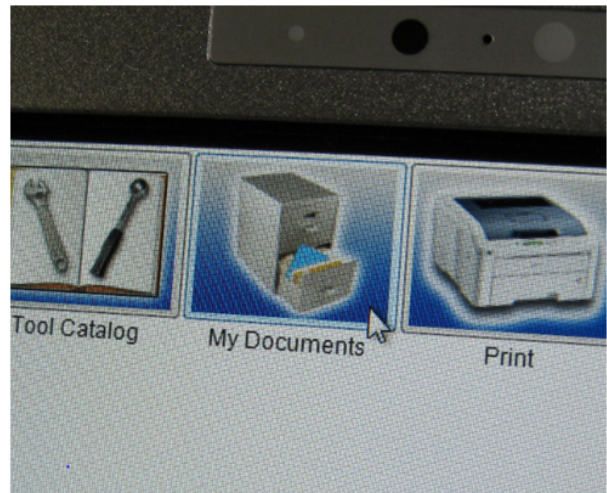
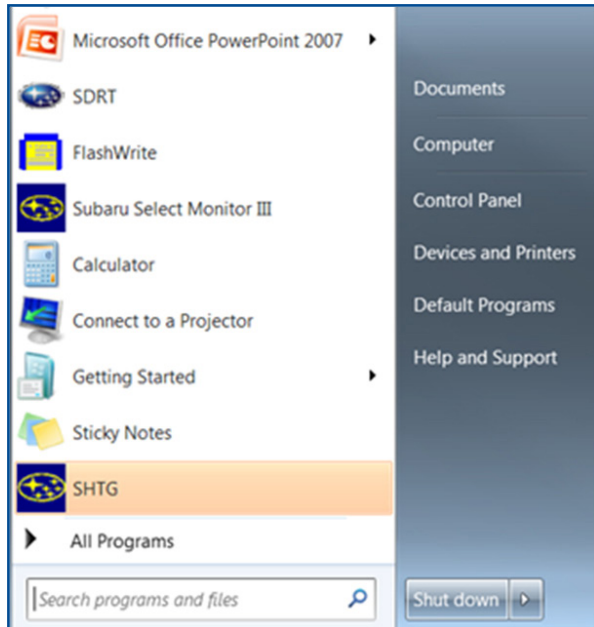


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Once the downloads are complete, you will need to locate the Update File, unzip it and save the unzipped version to your USB flash drive (Update File #1 onto Drive “1”, Update File #2 onto Drive “2”).

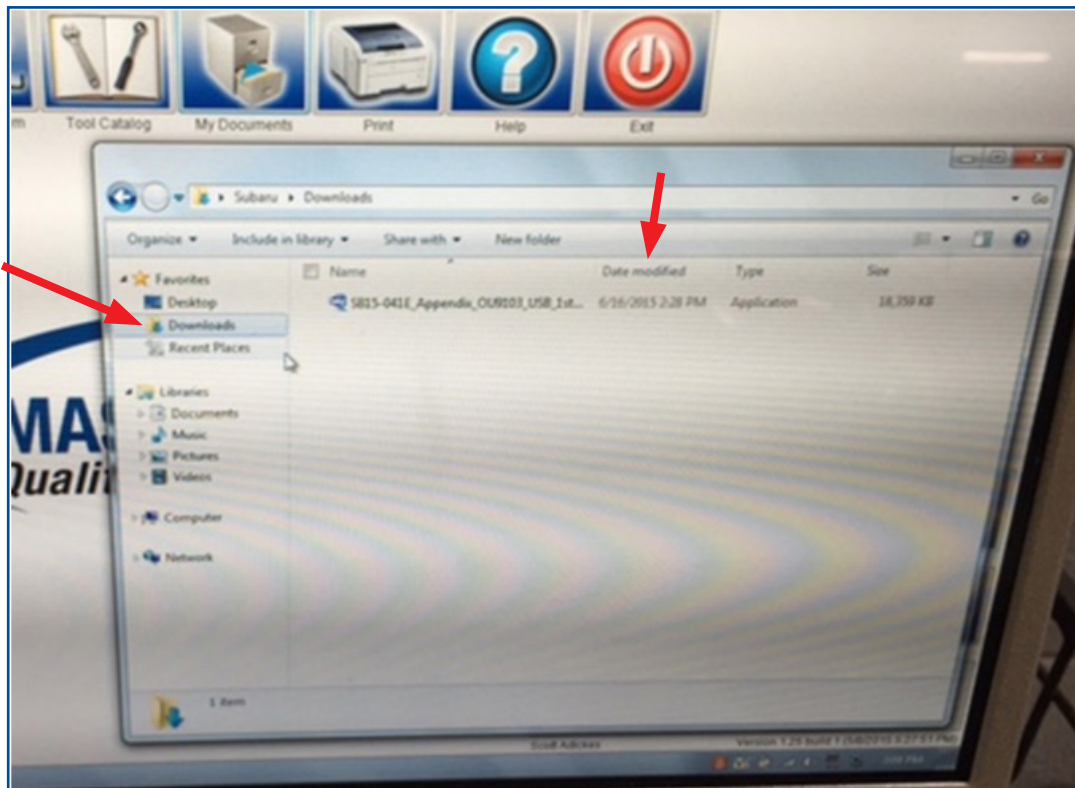
NOTE: If not already done, follow the procedure (**Step 2**) for formatting (removing any existing files) your flash drives. Plug the “clean” flash drive into your computer.

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

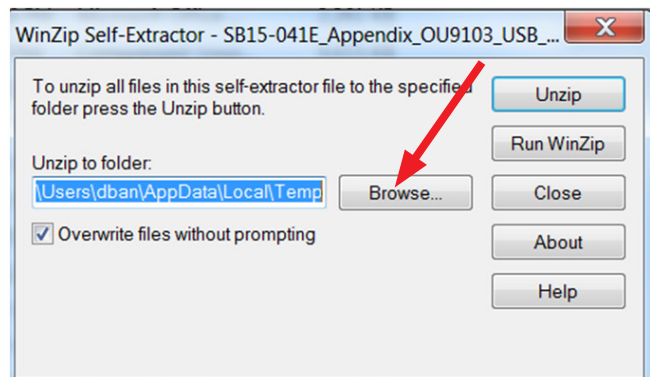
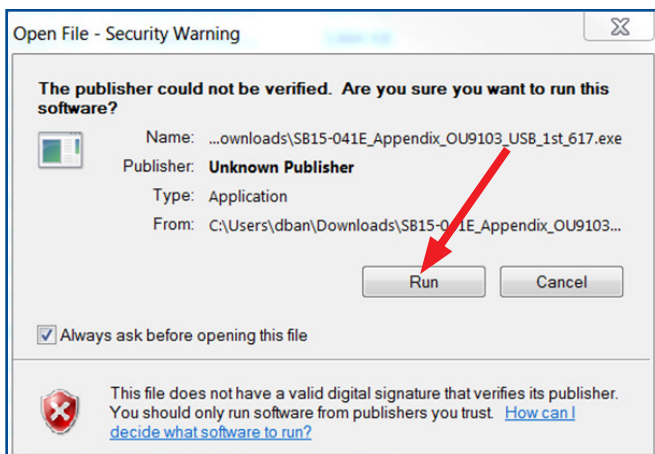


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- Once your list of downloaded files opens, locate and click on the downloaded Update Files (in this example, “OU9103_USB...”) you are looking for. **TIP:** If you click on Date Modified you can sort the downloaded files by the date they were added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

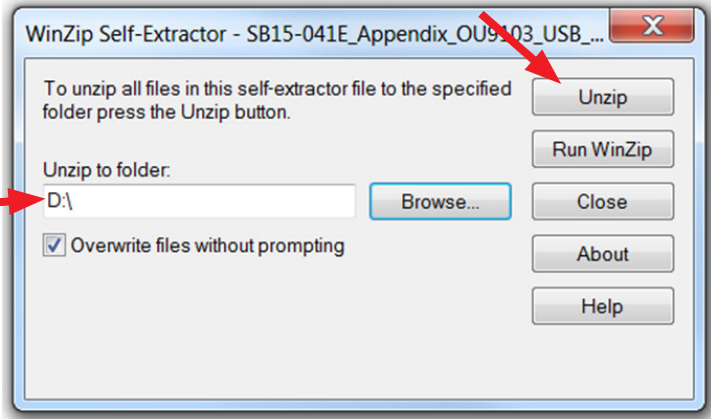
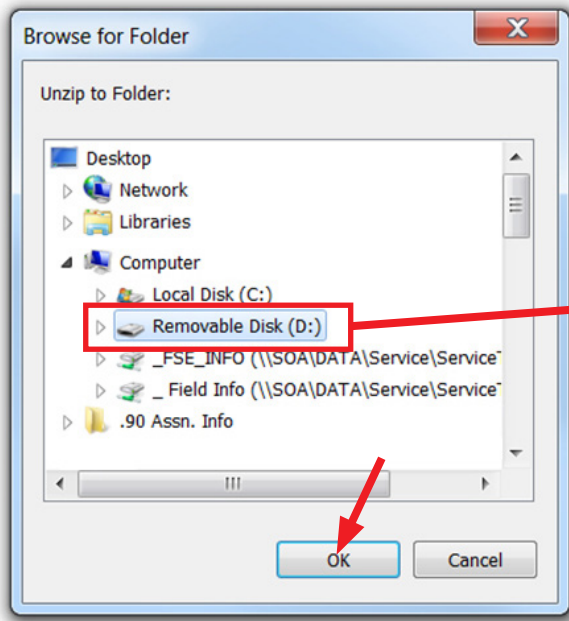


- Double clicking the Update File will bring up a dialogue box with a security warning, click on “Run” to continue.
- Click on “Browse”

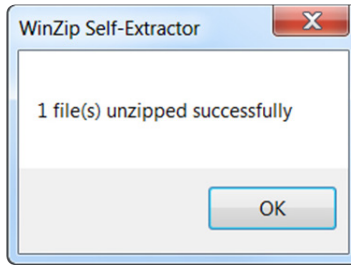


- As shown below, click on “Removable Disk” which is your USB flash drive where you want the unzipped file(s) to be saved. Click “OK” then click on “Unzip”.

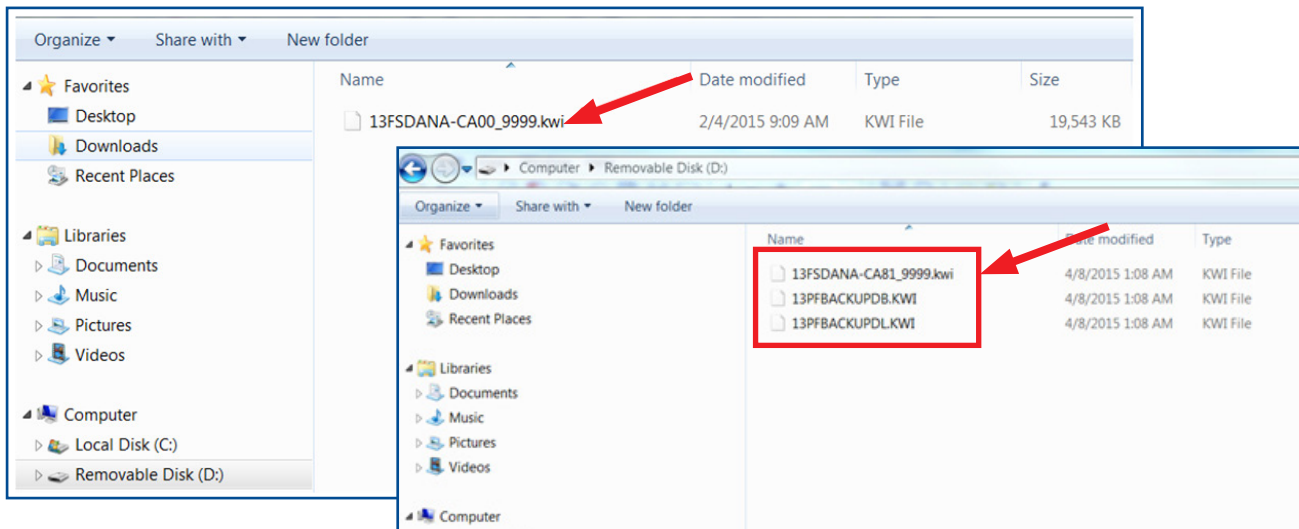
Continued...



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: 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.

Step 4: Update Software Installation

NOTE: Because of the time it takes to perform these updates, Subaru of America, Inc. (SOA) highly recommends connecting the Subaru Midtronics GR8 Diagnostic Battery Charger to the vehicle and utilizing the Power Supply Mode feature anytime a vehicle control module is being reprogrammed. Follow the procedure as outlined in document GR8-1100 on STIS for use of the GR8's Power Supply Mode:

- Confirm all electrical loads such as lights, audio, HVAC, seat heaters, and rear defroster are all switched **OFF** before setting up for Power Supply Mode.
- Select the correct battery type (Flooded, AGM or AGM Spiral).
- Select the CCA which matches the vehicle's battery (**NOTE:** OE and replacement batteries have different CCA ratings. Always confirm the battery rating before proceeding.)
- If the "Charge Battery" **WARNING** appears, the battery **MUST** be charged before attempting reprogramming.
- **DO NOT** connect the DSTi or SDI until the GR8 Power Supply mode has completed its battery test mode and the Charging Voltage has dropped to a steady 13.5 Volts on the display.
- If the GR8 "beeps" or the Status Light flashes, a diagnostic charge should be performed on the battery before proceeding further.
- Once Power Supply Mode reaches a steady 13.5 volts, connect the DSTi or SDI to the OBD connector and initiate the reprogramming process.
- Amperage will fluctuate based upon the vehicle's demand for power. **NOTE:** If the voltage rises beyond 14V while programming is in process, the procedure will abort. This can indicate a need to test or charge the vehicle battery before any further attempt at programming.

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 SOA.

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 Power Supply Mode, and have the battery voltage stabilized and ready for reprogramming.

REMINDER: If the GR8 indicates the vehicle's battery must be charged, charge the battery using the GR8 before proceeding to reprogram the vehicle.

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Version Update Procedure



- Turn the ignition / key (ACC) “ON”.

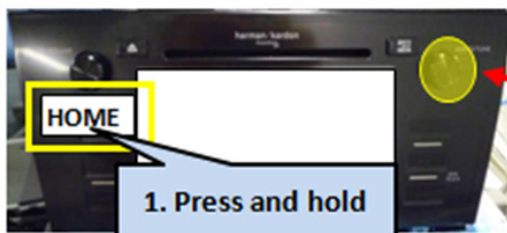


- Press the “AUDIO/TUNE” button.
The Select Audio Source screen will appear.

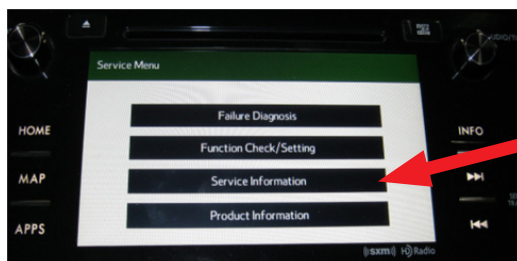


Install Drive “1” (or Drive “2” after successful installation of Drive “1” update is confirmed) into the vehicle’s USB port. After the flash drive is recognized, the USB icon will illuminate.

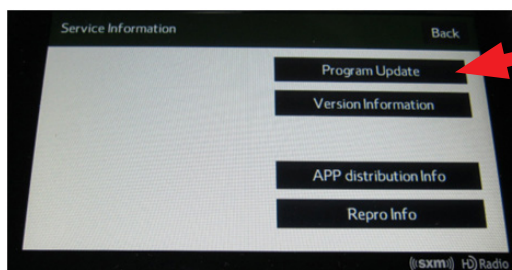
- Once the USB icon is illuminated, switch the unit into “Diagnosis Mode” by pressing and holding the HOME button while pressing the “AUDIO/TUNE” button 5 (five) times.



2. Press "AUDIO/TUNE" button 5 times

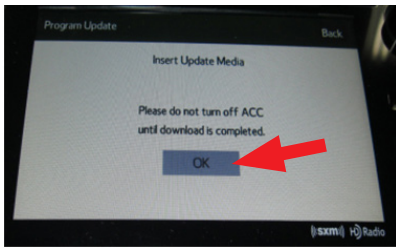


- Press “Service Information”

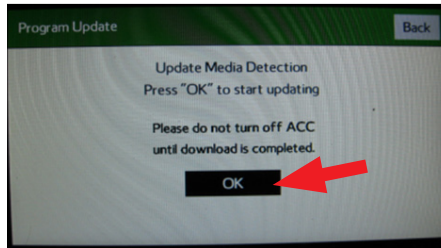


- Press “Program Update” then follow the sequence shown in the screen shots on the next page

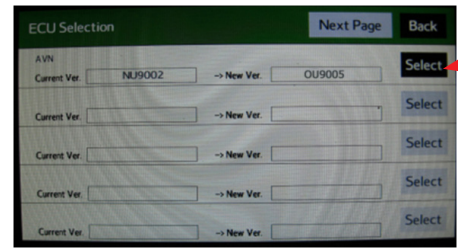
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Wait for "OK" to activate (turn black)

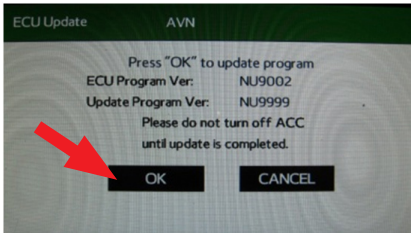


Press "OK"

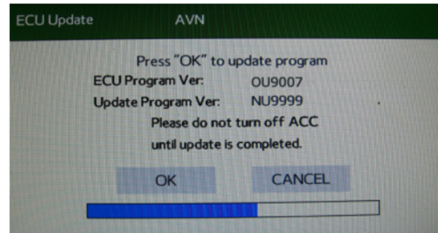


Press "SELECT"

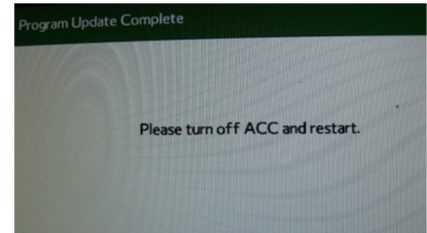
NOTE: The "OK" button will not activate (turn black) if the wrong Update File(s) are on the flash drive. Re-format the flash drive and reload the proper Update Files starting from the beginning of Step 2.



Press "OK"

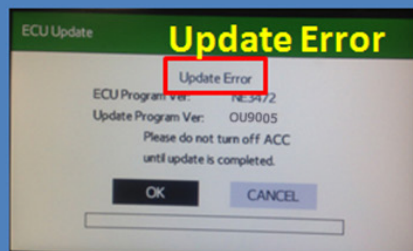


Once the updating starts, the status bar may need to complete more than once and could take up to about 15 minutes.

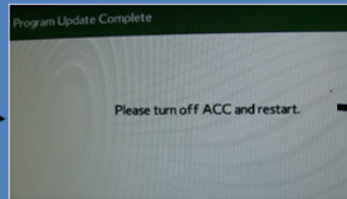


Turn off ACC

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



Select "OK".



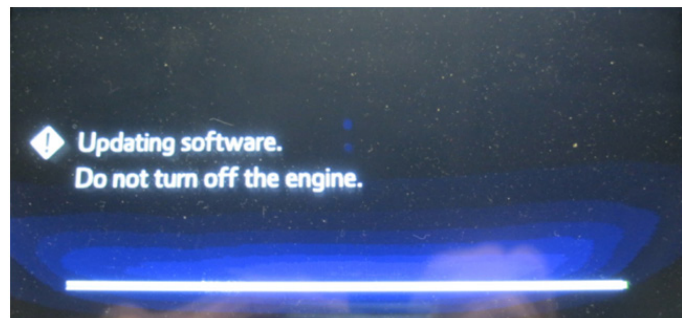
ACC OFF then back ON again

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.



Continued...

When the Software Updates complete, the unit will restart automatically. Once the STARLINK opening screen is displayed, remove the flash drive from the USB port and turn the ignition 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 new software version number 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. Once the software and CAN version updates are confirmed, insert Drive “2” and repeat **Step 4**.

Step 5: Version Check Procedure

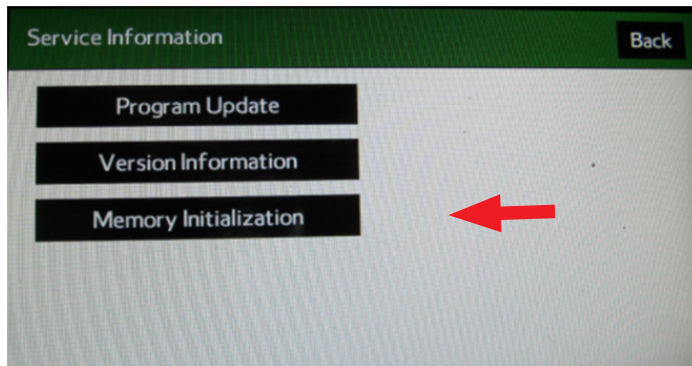
As mentioned earlier, once both update software installations are complete, the Version Check procedure (**Step 1**) must be performed again to confirm all of the updates have been installed successfully.

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.

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

After pressing “Back”, the following screen will be displayed:



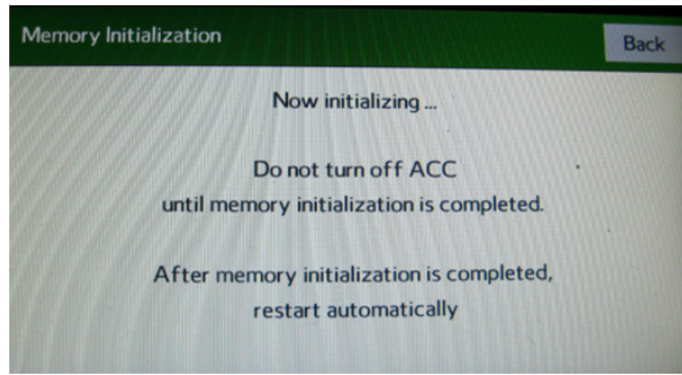
- Press “Memory Initialization”



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

Press and Hold

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 covered by a Subaru Added Security Gold plan, this repair may be submitted using the following claim 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).

IMPORTANT REMINDERS:

- 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 check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.