SUBARU

QUALITY DRIVEN® SERVICE

PRODUCT CAMPAIGN BULLETIN

APPLICABILITY:	2020MY Legacy and Outback	**NUMBER:** WRH-20R
SUBJECT:	Rear Visibility FMVSS 111 Non-Compliance	**DATE:** 12/11/20
		REVISED: 12/18/20

NHTSA ID: 20V-766

INTRODUCTION:

Subaru of America, Inc. (Subaru) is recalling certain 2020 model year Legacy and Outback vehicles in which a firmware-over-the-air (FOTA) update to the Cockpit Control Module (CCM) software may have timed out during the update.

A timeout failure during the data writing sequence could cause the data to become corrupted, and if corrupted, may result in the Center Information Display (CID) going blank. The failure to display the rearview image in the timing specified and/or periodic loss of rearview image creates a noncompliance with the requirements of FMVSS 111 – Rear Visibility, increasing the risk of a crash.

AFFECTED VEHICLES:

Not all vehicles listed below are included in this recall. Coverage for all affected vehicles must be confirmed by using the Vehicle Coverage Inquiry function on subarunet.com. This information is now available.

The number of U.S. vehicles affected by this recall is 7,741.

Model Year	Carline	Affected Units
2020	Legacy	Refer to Vehicle Coverage Inquiry for WRH-20 Recall Applicability
2020	Outback	

DESCRIPTION OF THE REPAIR:

Subaru dealers will reprogram the CCM software on the affected vehicles for free. If the CID is not properly displaying, the CCM will be replaced with an improved part for free.

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RETAILER RESPONSIBILITY:

Any vehicles listed in any recall/campaign that are in retailer stock must be:

- Immediately identified

- Tagged or otherwise marked to prevent their delivery or use prior to repair

- Repaired in accordance with the repair procedures outlined in the Product Campaign Bulletin

Retailers are to promptly perform the applicable service procedures, to correct all affected vehicles in their inventory (new, used, demo & SSLP). Additionally, whenever a vehicle subject to this safety recall is taken into inventory or in for service, necessary steps should be taken to ensure the repair has been made before selling or releasing the vehicle.

Please be sure to download a copy of your complete inventory report from the Vehicle Inventory Dashboard available on subarunet.com to identify any vehicles with open recalls that may be in your retail, CPO, and SSLP inventory.

OWNER NOTIFICATION:

Owner notification letters will be mailed in January 2021. Retailers will be notified when owner notification begins.

SERVICE PROCEDURE:

REMINDER: Customer satisfaction and retention starts with performing quality repairs.

This Campaign affects certain "Mid" and "High" (w/ Navigation) -level CP1 Head Units with 11.6-inch display ONLY as pictured below. The "Base" model (2- 7.0-inch display screen unit) is NOT affected.

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MATERIALS REQUIRED:

An empty, USB 2.0 or 3.0 storage device (flash drive) will be needed to perform the update procedure. The device should be dedicated to storing and transferring these updating files only. It must be a minimum of <u>16</u>GB or more in size and contain a NTFS file format before downloading the update files onto it. Be sure to locate and re-format any existing USB drives used for updating Denso CP1 audio units to remove any outdated update versions. They must be fully cleared and properly formatted before adding these new update files to them.

IMPORTANT NOTES:

• NEVER change the update file names after downloading them.

• NEVER save any other files on the same flash drive.

There are various types of USB flash drive available from many suppliers. If the head unit does NOT recognize the USB drive during the reprogramming process due to Controller IC type of USB drive or compatibility with the Cockpit Control Module (CCM), confirm the flash drive format is NTFS. The flash drive must be formatted for NTFS. If a recognition problem persists, use a different USB flash drive from another manufacturer.
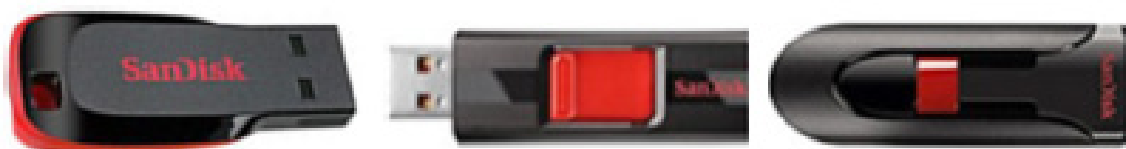
RECOMMENDED USB FLASH DRIVES:

•   **Kingston®:**

DataTraveler G3 Series, DataTraveler 100 G3 DT100G3, DataTraveler SE9 Series, DataTraveler SE9 G2 3.0 DTSE9G2 and Digital Data Traveler 3.0 USB Flash Drive - Violet DTIG4

•   **SanDisk®:**

Ultra Series SDCZ48-064G-J57, Cruzer Blade Series and Cruzer Glide Series CZ60 SDCZ60-064G-B35

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- **Transcend®:**

JetFlash 790 Series TS64GJF790KBE

- **PNY®:**

Retract USB 3.0 Flash Drive, black (P-FD64GTRTC-GE)

- **Silicon Power®:**

(2 Pack) USB 3.0/3.1 Gen1 USB Flash Drive Blaze B02

IMPORTANT NOTE: There are 4 (FOUR) FILES required to complete this update for 2020MY Legacy and Outback. ALL 4 update files MUST BE DOWNLOADED TOGETHER to the USB Flash Drive before starting the update. PERFORMING THIS UPDATE USING A USB FLASH DRIVE WITH ANY OF THE REQUIRED UPDATE FILES MISSING WILL LEAD TO A NON-RECOVERABLE FAILURE OF THE COCKPIT CONTROL MODULE (CCM) REQUIRING CCM REPLACEMENT.

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STEP 1: Perform a Vehicle Inquiry on Subarunet to confirm **WRH-20** applicability. If there is an OPEN WRH-20 recall, proceed to **STEP 2**, otherwise this bulletin does not apply.

STEP 2: Turn the ignition ON and start the engine. Observe the Center Information Display (CID) screen. If the vehicle presents with a black / non-responsive display or one that appears to be continually rebooting, order a replacement Cockpit Control Module (CCM) following the normal exchange unit procedure (**NOTE:** ONLY the CCM is required. Do NOT order a CID for this repair). **See STEP 2a BEFORE installing the exchange CCM to confirm the replacement part has been updated with the latest (Version 4.0) software.** If CCM replacement is not required, proceed to **STEP 3** below to continue with the reprogramming procedure.

STEP 2a: When receiving the exchange CCM, inspect the back of the module for a GREEN dot as shown here. This **GREEN** dot signifies the module has already been updated with the latest Version 4.0 software. **NOTE:** All related CCMs shipped to retailers after 12/3/2020 have this dot. The **GREEN** dot will be applied to related exchange modules for six months. After that time, the dot will be discontinued but the modules will be OK for use. Proceed with CCM R&R following the procedure in the applicable Service Manual.

VERY IMPORTANT:

• Always record the serial number of the exchange CCM being installed on the Repair Order (RO).

• Confirm and record the software version number installed in the exchange CCM on the RO. See **STEP 3** for instructions.

• After CCM replacement, <u>ALWAYS</u> confirm proper back-up camera operation before releasing the vehicle.

When complete, proceed to the Claim Reimbursement and Entry Procedures section and process a claim for CCM replacement.

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ADDITIONAL REPROGRAMMING FILE CONTENT INFORMATION:

In addition to the update for Firmware Over The Air (FOTA) functionality, the following list of other updates and an enhancement addressed by this reprogramming are outlined below:

- Clarification of the post-FOTA procedure instructions required to complete the update. The screenshot below will appear and explain what must be done to complete the update installation.

> **Software Update Installation Complete**
> To complete the update, your vehicle and STARLINK system must be fully shut down. Please turn off the engine and exit the vehicle. Lock doors, and let the vehicle sit for at least 5 minutes. It is recommended to walk at least 10 feet from the vehicle to prevent key fob interference. After waiting at least 5 minutes, enter the vehicle and turn the engine on. An "Update Successful" message will appear after a few moments. The update will then be complete.
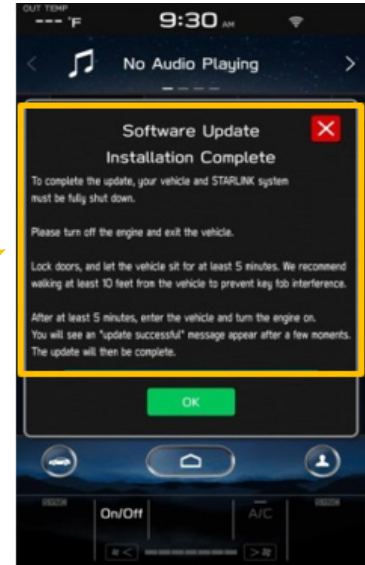
- Currently, the microphone level indication is incorrect. The indicator level has been corrected. More microphone level indication information is included in TSB **15-275-20**.

- A reduced (low) volume (-6db) concern during handsfree conversation when using CarPlay has been addressed to make the volume level consistent.

- Voice recognition (VR) has been enhanced to improve recognition of short words (e.g. YES).

- The program has been corrected to prevent repeated rebooting and system freeze-up immediately after activation of AndroidAuto.

OPERATIONAL ENHANCEMENT INCLUDED:

The Auto Stop-Start On/Off function button has been moved from the bottom to top layer of the system for easier use. A screenshot of how the button will appear is shown below.

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STEP 3: VERY IMPORTANT: Before proceeding with the software updating procedure, the currently installed software version ID MUST be confirmed by following the steps below:

3a) After starting the engine and system boot-up completes, from the HOME screen, touch the Settings button.

3b) Press the General button. Use the down arrow to scroll to System Information then press to display the System Information / Version information.

The examples below identify the head unit model and the last 6 digits signify the software version number. Examples:

• F11G**H**Mxxx-xxx (HIGH model software)

• F11G**M**Mxxx-xxx (MID model software)

If the vehicle is a 2020MY Legacy or Outback and the software version number (xxx-xxx) is **020-501, 020-502, 021-503 or 022-504,** proceed to **STEP 4** below. If the software version is **042-380** or higher, STOP as the module already has the latest software version installed. Proceed to the WARRANTY / CLAIM INFORMATION section of the TSB and process a Version Check Only claim. **NOTE:** The version identified MUST be entered in the Miscellaneous Detail field during claim submission.

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STEP 4: Prepare the USB:

CAUTION: Do not use any USB flash drive which utilizes file organizing software or an operating system.

VERY IMPORTANT: Before attempting to download any data files, confirm the PC and flash drive being used is not infected with any virus. The flash drive MUST be formatted for NTFS.

- Make sure the USB flash drive contains no other files.

- Right click on the corresponding "Removable Disk".

- Select "Format".

- From the File System drop-down menu, select "NTFS"

- Check the "Quick Format" box (if not already done).

- Click on "Start" to format the USB flash drive.
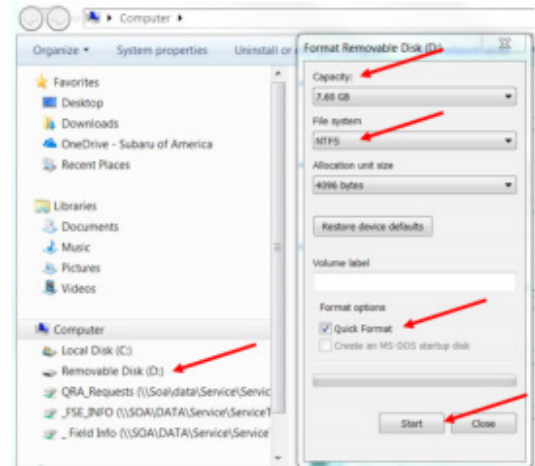
STEP 5: Download the Update Files to the USB.

- The files are available for download on Subarunet (See "**A**" below).

- The applicable reprogramming files have also been sent directly to retailers by Nuspire in the same way a Select Monitor Update would be pushed out. (See "**B**" below).

Follow "**A**" below when using files downloaded from Subarunet. Subarunet Links Page screenshot:

IMPORTANT: Files downloaded from Subarunet will be .zip files and must be unzipped before they can be used. Using the normal audio / navigation system file update download procedure: Go to Subarunet, select Service Operations and Technical>>Forms/Downloads>>Gen 4/Denso for Audio/ Navi then click on the applicable Hyperlink to download the file(s) to your SDS Notebook or PC:

<div align="center">

MID-20-Legacy-Outback-Denso-CP1 AUDIO UPDATE-DECEMBER 2020

HIGH-20-Legacy-Outback-Denso-CP1 AUDIO UPDATE-DECEMBER 2020

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REMINDER: Although BASE models are listed on the Links Page, this **WRH-20** Campaign is applicable to "MID" and "HIGH" (Navigation-equipped) units ONLY.

- Go to Downloads.
- **CAUTION:** After download is complete, NEVER change the file or folder names.
- Open / display the contents of File folder, for example: "Version4(RC2011dash)_F11GHM042-380(High).zip".
- Click on "Extract All Files"
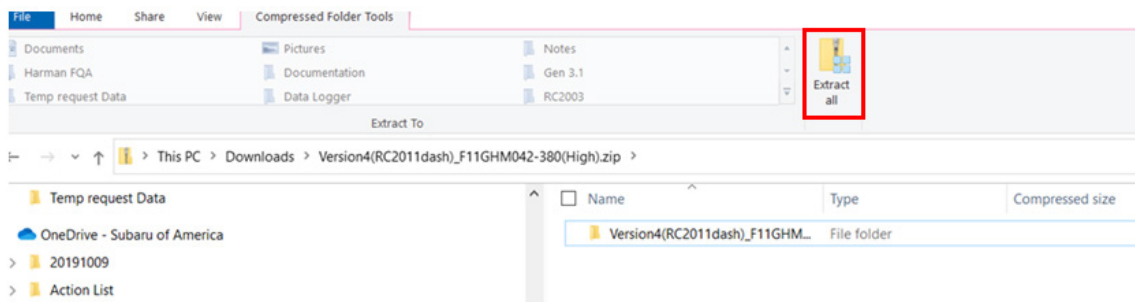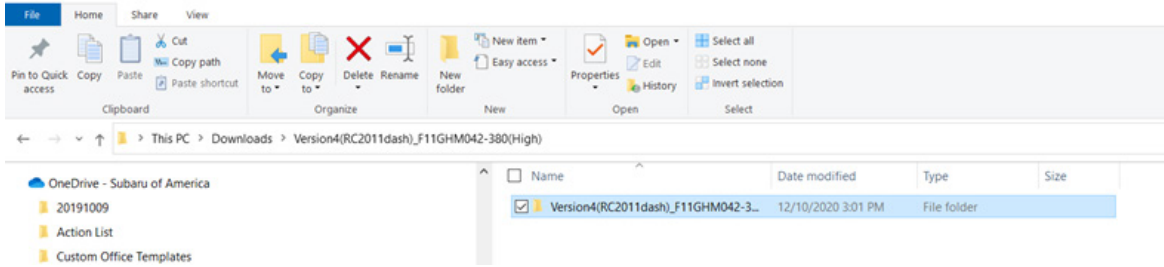

- The screen below will appear to set a destination for the extracted file.
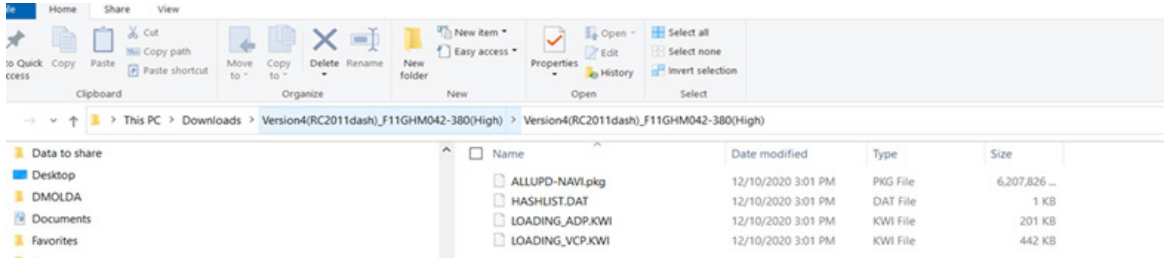

<div align="right">

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</div>
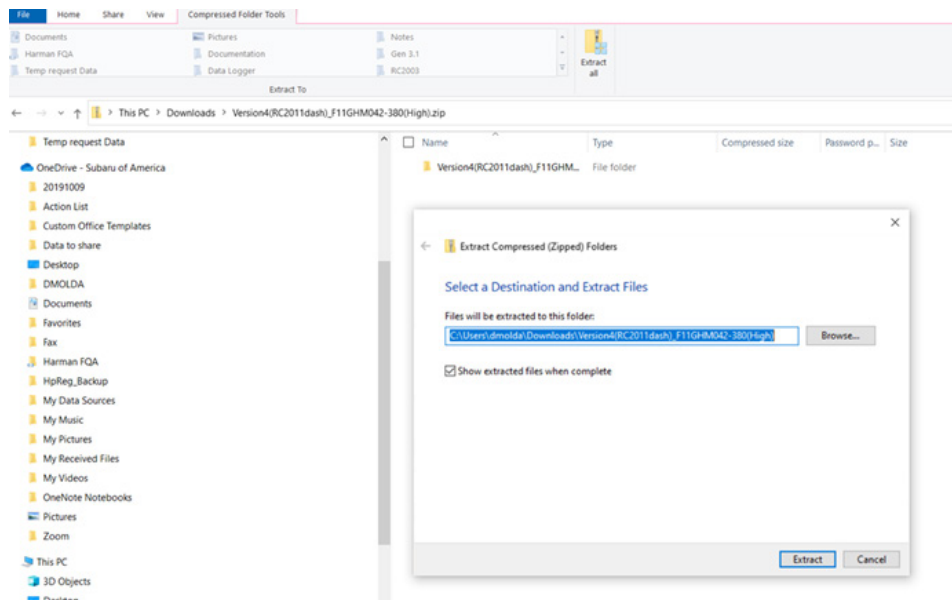
- Double-click on the required folder (for this example, select the file entitled "Version4(RC2011dash)_F11GHM042-380(High)")

- This will display all 4 (four) files inside the folder

- Select and copy all 4 (four) files then paste (or click / drag) them into the "clean" USB flash drive as listed (Removable Disk) in the directory.

IMPORTANT REMINDER: There are 4 (FOUR) FILES required to complete this update for 2020MY Legacy and Outback. ALL 4 update files MUST BE DOWNLOADED TOGETHER to the USB Flash Drive before starting the update. PERFORMING THIS UPDATE USING A USB FLASH DRIVE WITH ANY OF THE REQUIRED UPDATE FILES MISSING WILL LEAD TO A NON-RECOVERABLE FAILURE OF THE COCKPIT CONTROL MODULE (CCM) REQUIRING CCM REPLACEMENT.

- To avoid confusion, use a permanent marker to label the flash drive with the file contents (e.g. MID Denso CP1, HIGH Denso CP1 or HIGH Denso CP1 WRH-20).

- Go to **STEP 6**:

Follow "**B**" below when using the files sent directly to the SDS notebook from Nuspire.

**B:**

- Go to My Documents on the GUI screen click on the folder "Denso CP1 Audio-Navi Update Files" to display the list of available update files shown below. **IMPORTANT:** Always confirm there are two folders as shown below, "**2020**" and "**2021**". If not, the SDS notebook hasn't been updated with the latest release. Please contact Nuspire to request they resend the update.

Continued...
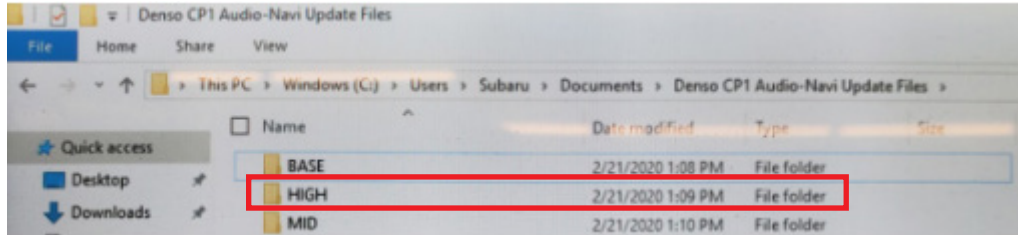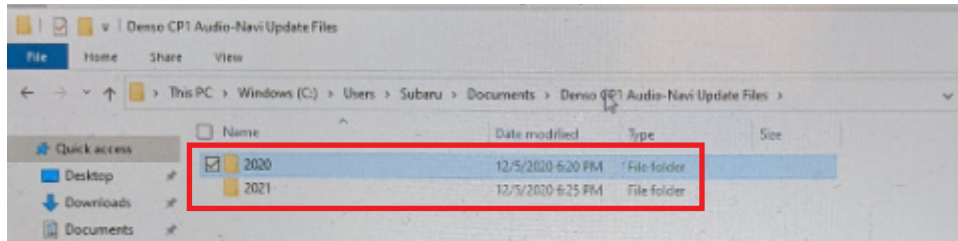
- Double-click on the required folder (for this example, select the file entitled "**HIGH**") and the update file will display as shown below.
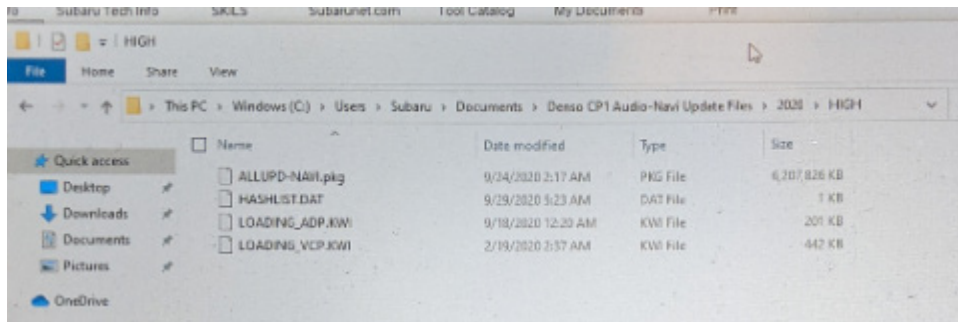
- Select all 4 files and either copy / paste or click / drag them to the USB flash drive.

CAUTION: NEVER change the file names.

- Once all files have been loaded onto the USB flash drive, right click on the drive and select "Eject".
- Remove the USB flash drive after the prompt appears that says, "Safe to Remove Hardware".
- Mark the USB to indicate the head unit it will update (MID Denso CP1 WRH in this example).
- Repeat the above steps to create the MID Denso CP1 WRH or HIGH Denso CP1 WRH USB flash drives as needed using a separate USB drive for each update folder.
- Proceed to STEP 6 below.

STEP 6:

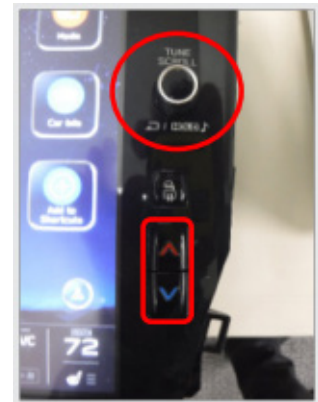Perform the software update.

CAUTIONS:

- **NEVER** attempt to install the software immediately following an exchange module installation. Let the system restart first and operate for 20 minutes.

- **NEVER** attempt to install the software a second time for 30 minutes following a previously unsuccessful software installation.

- **NEVER** attempt to install the software for at least 30 minutes after completing a FOTA update.

6a) Perform the update in a well-ventilated location if updating with the engine running OR with the ignition ON and the DCA battery charger connected in Power Supply mode.

6b) PRESS and HOLD the RIGHT-side temperature control buttons (both up and down), press the Tune / Scroll knob 6 times then release all to display the Dealership Mode Menu.

6c) Select Software Update from the Dealership Mode menu.
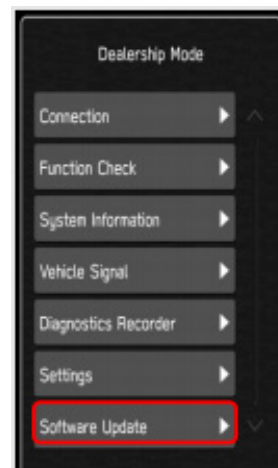
IMPORTANT NOTE: On a RARE occasion, the message "Software update setup is initializing…" may be displayed. Should this occur, proceed to "**Appendix A**" at the end of this bulletin for further instruction. For critical Service Bulletin helpful tips to prevent unnecessary hardware replacement, follow the link to an important Subarunet message: https://www.subarunet.com/home/ home.html#/ Announcement/83194.

6d) The screen shown here will be displayed.

Continued...

6e) Insert the H/U reprogramming USB into the USB port. When the update screen appears, confirm the message on it and if no concerns, press OK.

NOTE: If after plugging in the USB, the screen displays a Software Loading Unsuccessful message, confirm the USB device has been properly formatted and the software on the device matches the H/U being reprogrammed (example: **MID** software is being used to update a **MID** H/U).
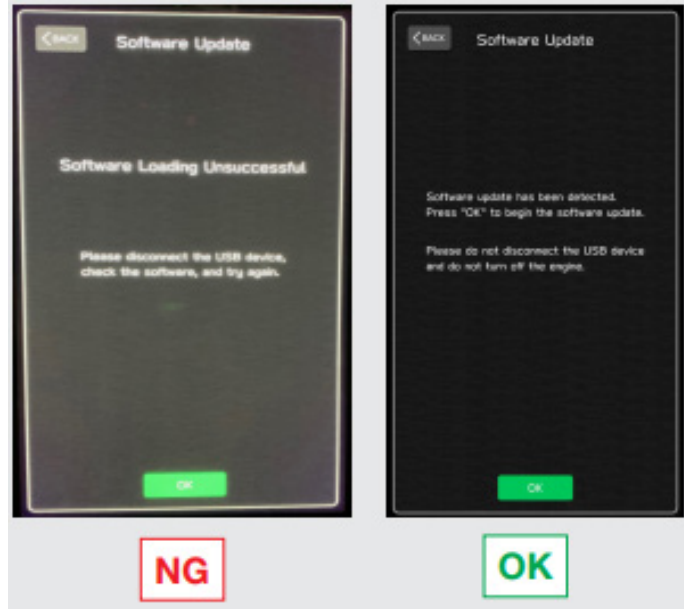
6f) The screen below will be displayed. **NOTE:** The actual software version displayed will be different from the EXAMPLE picture shown below.

See the IMPORTANT: message below.
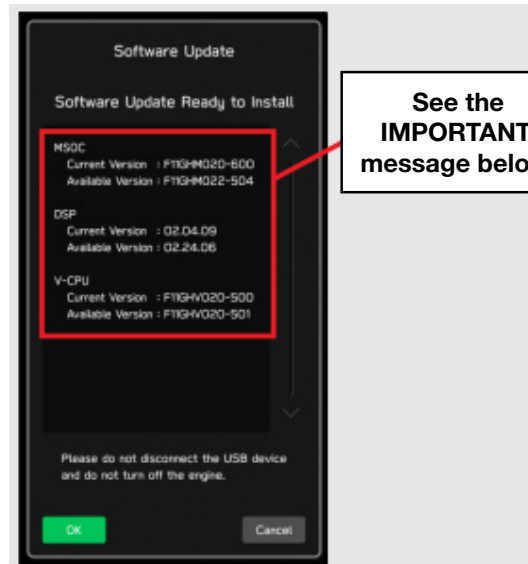
IMPORTANT: The example above identifies the head unit model and the last 6 digits signify the software version number. Examples:

• F11G**H**Mxxx-xxx (HIGH model software)

• F11G**M**Mxxx-xxx (MID model software)

Continued...

Current Version

Model	MSOC Version
High	F11GHM020-501 or F11GHM020-502 or F11GHM021-503 or F11GHM022-504 or F11GHM020-704 and F11GHM021-704
Mid	F11GMM020-501 or F11GMM020-502 or F11GMM021-503 or F11GMM022-504 or F11GMM020-704 and F11GMM021-704

Available Version

Model	MSOC Version
High	F11GHM042-380
Mid	F11GMM042-380

<DSP>
Current Version

Model	DSP Version
High/Mid	02.04.03 or 02.24.06

Available Version

Model	DSP Version
High/Mid	02.24.08

<VCPU>
Current Version

Model	VCPU Version
High/Mid	F11GHV020-500

Available Version

Model	VCPU Version
High/Mid	F11GHV020-501

CRITICAL STEP

Confirm the MSOC Available Version listed here matches with what is shown on the CID.

This is One Possible Example for High Model

MSOC
Current Version : F11GHM020-501
Available Version : F11GHM042-380

If it does not match the Available Version shown on the CID Screen STOP and load the correct file to the USB Drive.

- Press OK to start the software update.

6g) Once the update begins, the screen below will be displayed with a progress bar. It takes about 15 to 20 minutes for the update to complete.

VERY IMPORTANT: NEVER turn the ignition OFF or ON while the software update is in process. To avoid any concerns with battery condition during programming, always perform the update with either the engine running (outside or with exhaust hose attached) or with the DCA charger attached and in power supply mode.

Continued...

6h) When the update is complete, the screen below will be displayed (the actual software version number will be different).

Press "OK"
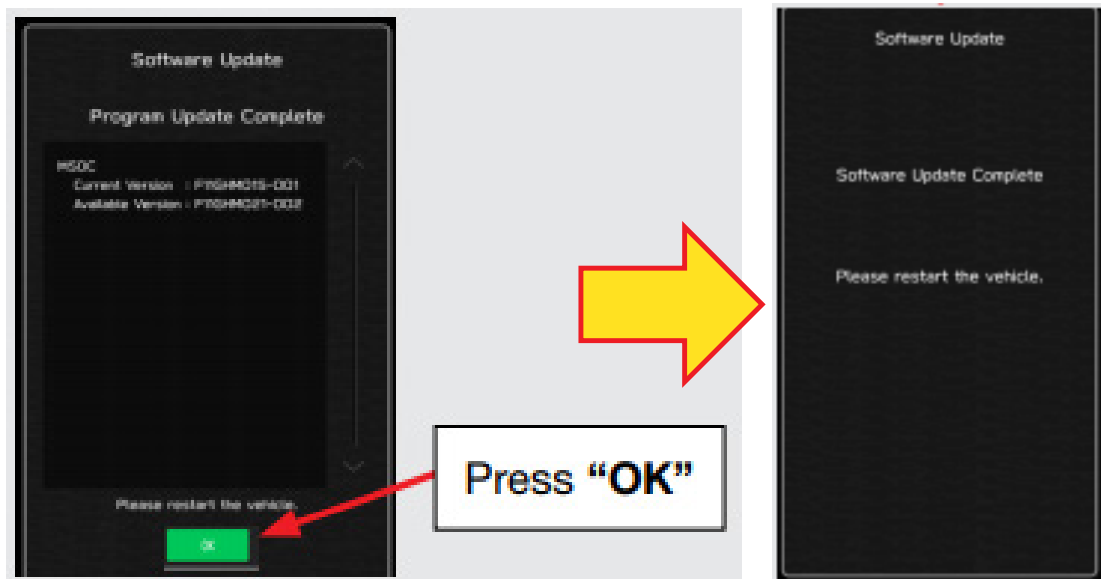
IMPORTANT NOTE: On rare occasions a "Software Update Incomplete" message may appear in this step which occurs due to a bug in the software update procedure. DO NOT attempt to install the update again, proceed to **6i)** below to confirm the software version has been updated to the latest version.

6i) Select OK in the screen above then remove the H/U reprogramming USB from the USB port.

6j) Turn the ignition OFF, open the driver's door then close the driver's door.

6k) Wait for at least 3 minutes, then turn the ignition ON.

6l) Access Dealership Mode following steps provided in **6b** above and confirm the software update completed successfully using the table below:

Continued...

Model	MSOC Version
High	F11GHM042-380
Mid	F11GMM042-380
Model	DSP Version
High/Mid	02.24.08
Model	VCPU Version
High/Mid	F11GHV020-501

- Confirm and record the software version number installed on the RO.

6m) Turn the ignition OFF, open the driver's door then close the driver's door to complete the update procedure.

VERY IMPORTANT: After the CCM reprogramming procedure is complete, **ALWAYS** confirm proper back-up camera operation before releasing the vehicle.

SERVICE PROGRAM IDENTIFICATION LABEL:

Type or print the necessary information on a Campaign Identification Label. The completed label should be attached to the vehicle's upper radiator support. Additional labels are available through normal parts ordering channels. The part number is **MSA6P1302**, which comes as one sheet of 20 labels.

Part Number	Applicability	Description	Order Quantity
MSA6P1302	All Models	Campaign Completion Labels (contains one sheet of 20 labels)	1

SUBARU

Campaign Code

WRH-20

COMPLETED

DIST./DEALER NO.

SERIAL NO.

DO NOT REMOVE
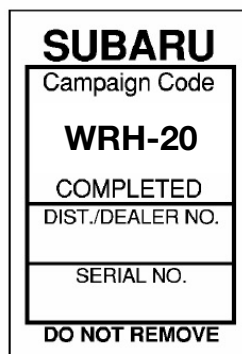
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CLAIM REIMBURSEMENT AND ENTRY PROCEDURES:

Credit to perform this recall will be based on properly completed repair order information. Retailers may submit claims through Subarunet.com.

Labor Description	Labor Operation #	Labor Time	Fail Code
WRH-20- SOFTWARE VERSION CHECK ONLY	A131-128	0.2	
WRH-20- CCM REPLACEMENT (An additional 0.2 allowance has been set up in system for Retailers when satellite (SXM) reactivation is required.)	A131-631	0.6	WRH-20
WRH-20- SOFTWARE UPDATE / REPROGRAMMING	A131-108	0.6	

A **ONE-TIME** charge of **$30.00** can be claimed in sublet to cover the cost of the USB flash drives.

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.

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"APPENDIX A"

Follow this procedure in the RARE case of "**Software update setup is initializing…**" message is displayed:

- If the screen shown below appears, **WAIT** for approximately 15 minutes or as long as necessary to allow the Software update setup initialization process to complete.

High/Mid	Base
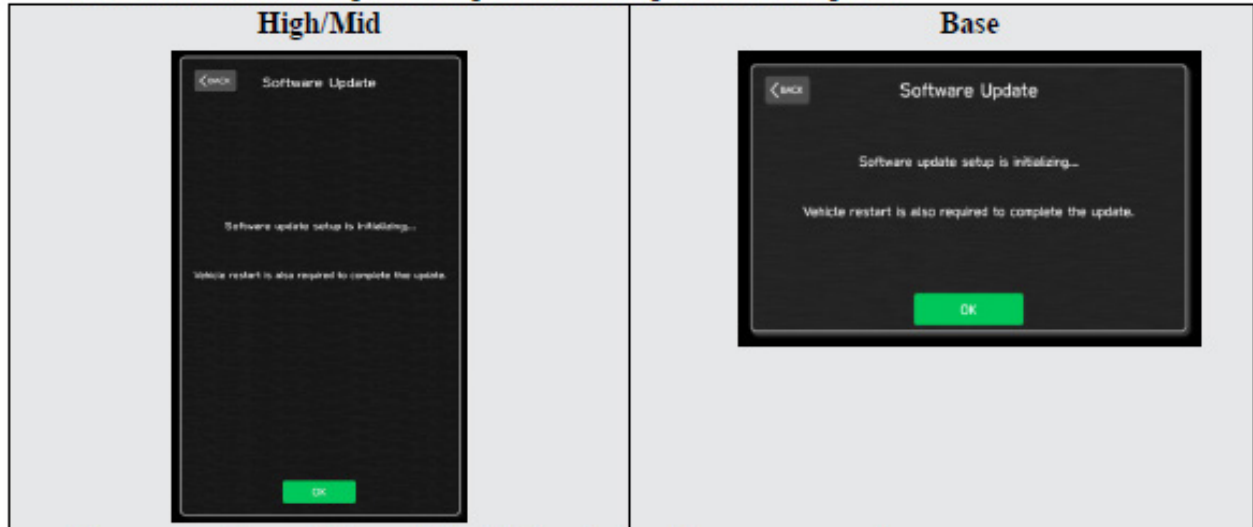
- The screens shown below will be displayed when the process completes.

High/Mid	Base
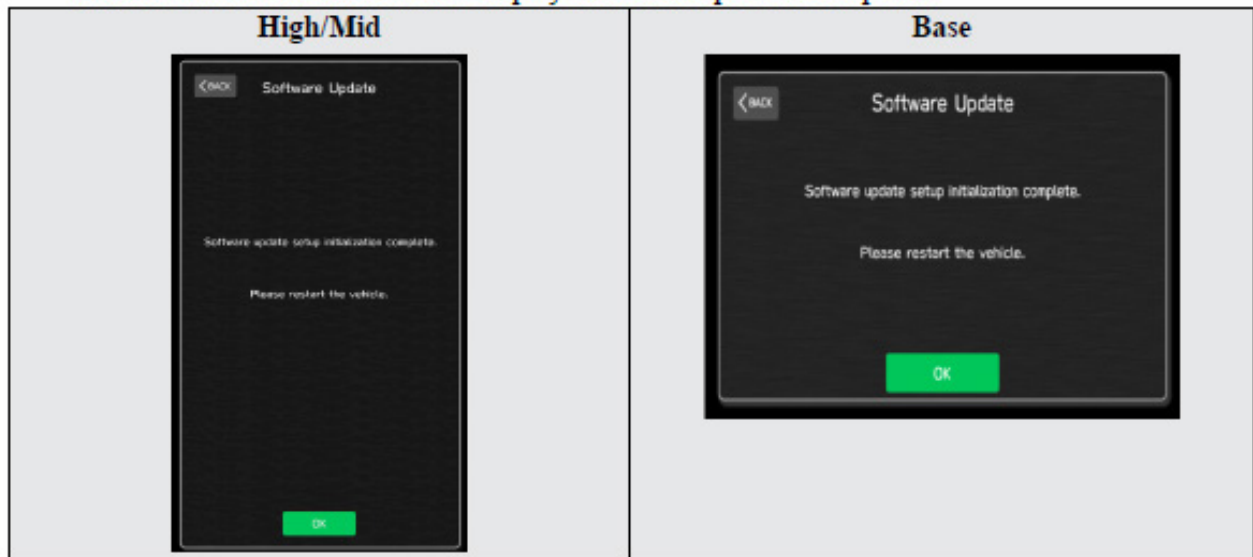
1. Turn the ignition OFF, open the driver's door, close the driver's door and **WAIT** for 3 or more minutes before proceeding further.

2. Open the driver's door again and either turn the ignition ON (if a charger is connected) or start the engine.

3. Go to Dealership Mode menu again (PRESS and HOLD the RIGHT-side temperature control buttons (both up and down) and press the Tune / Scroll knob 6 times then release all to display the Dealership Mode) and select Software Update as in **STEP 3** beginning on pg. 8.

IMPORTANT NOTE: If this procedure is required, contact Techline as additional action may be necessary.