ATTENTION: GENERAL MANAGER INFORMAT - All Service Personnel Should Read and Initial in the boxes provided, right. SERVICE MANAGER INFORMATION SERVICE MANA

APPLICABILITY: 2017MY Impreza

SUBJECT: Reprogramming File Availability to Optimize Rear View Camera Operation on Harman Gen 3 Audio and Navigation Head Units

Subaru of America, Inc. (Subaru) is recalling certain 2017 model year Impreza vehicles with Harman navigation/audio head units to update software affecting the operation of the rear view camera image.

DESCRIPTION OF THE SAFETY RISK

The rear view camera image may not display properly. More specifically, due to a software problem within the infotainment unit, the following may occur:

- During initial boot-up, a memory error might result in a blank screen; or
- If multiple processes occur at the same time, the screen might freeze.

If the rear view camera image is not displayed or the image freezes, it does not provide an additional view of the area behind the vehicle to the driver when the vehicle is in reverse. As a result, there is an increased risk of injury or a crash.

DESCRIPTION OF THE REMEDY

The remedy procedure will be to reprogram the infotainment unit with a software update. The procedure will involve either downloading the software update files from Subarunet (or using those sent directly from Nuspire) and transferring them onto a flash drive for head unit installation. It is VERY IMPORTANT to read and understand this information completely before proceeding.

OWNER NOTIFICATION

Notification letters will be sent by first class mail to owners of all potentially affected vehicles. Owner notification will occur during March, 2017. A copy of the letter will be added to the end of this bulletin prior to owner notification.

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.

Continued...

SUBARU OF AMERICA, INC. IS ISO 14001 COMPLIANT

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.



REVISED:

NUMBER: WTN-74R DATE: 02/24/17

NHTSA ID: 17V-132

03/06/17



PRODUCT CAMPAIGN BULLETING

AFFECTED VEHICLES

Your Region/Distributor will provide you with a detailed list of affected new unsold inventory units. If you have any of the affected models in inventory, please ensure your sales and service staff are immediately notified that the unit(s) are un-saleable until the recall campaign is completed and the claim is submitted.

Model Years	Models	Production Start Date	Production End Date	
2017	Impreza 4D & 5D	09/13/2016	02/20/2017	

RETAILER AFFECTED VIN LISTS

Each Subaru retailer will receive an affected VIN list from their Zone Office when owner notification begins. Vehicles will be assigned to retailers in the affected VIN list based on the selling retailer. Retailers are required to limit the use of these lists for the purpose of completion of this safety recall.

SUBARU RETAILER PROGRAM RESPONSIBILITY

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

Any vehicles listed in a recall/campaign that are in the retailer's stock must be:

- Immediately identified.
- Tagged or otherwise marked to prevent their delivery or use prior to inspection and/or repair.
- Repaired in accordance with the repair procedures outlined in this Product Campaign Bulletin.

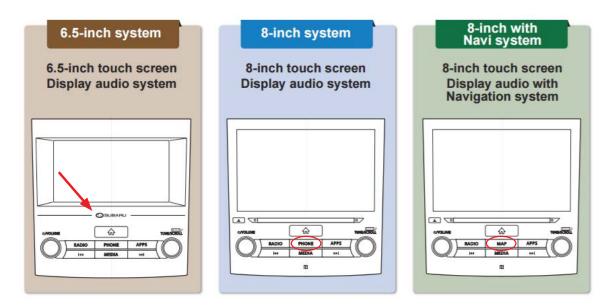
Please be advised that it is a violation of Federal law for a retailer to deliver a new motor vehicle covered by a recall under a sale or lease until the defect is remedied. In addition, any Authorized Subaru Retailer failing to perform the applicable service procedures to correct all affected vehicles in their inventory prior to the vehicle being placed in service will be in breach of the Subaru Dealer Agreement.

INTRODUCTION:

The following information addresses reprogramming file availability and a software update installation procedure to optimize the rear view camera feature of the new Harman Gen 3 audio and Navigation head units utilized in the new 2017MY Impreza. The procedure will involve either downloading the software update files from Subarunet (or using those sent directly from Nuspire) and transferring them onto a flash drive for head unit installation. It is VERY IMPORTANT to read and understand this information completely before proceeding.

These reprogramming files apply to the following audio / navigation head unit part numbers:

Multimedia System Type	Part Numbers	Descriptive Features
6.5 Inch Display Audio System (Base)	86201FL60A and 61A	No CD slot / Eject Button
8.0 Inch Display Audio System (Mid)	86201FL62A and 63A	Phone Button in Top Row Center
8.0 Inch Audio / Navigation System (High)	86271FL60A	Map Button in Top Row Center



Materials Required:

16GB (MINIMUM) USB 2.0 or 3.0 flash drives which are readily available at most office supply retailers will be needed to perform these updates. There are various types of USB flash drives available from many suppliers. If the head unit does NOT recognize the USB drive during the reprogramming process, it may be that the IC controller type used in the drive is not compatible. In such a case, a different USB drive may be required. For this reason, SanDisk or PNY brand USB drives are not recommended for this procedure. While not all of their products may be compatible, USB flash drives from Verbatim and Kingston are suggested products.

NOTES:

- All SOA Pre-Production Vehicles require a "full version" update be installed BEFORE this update can be applied. Contact your FSE for assistance with any Pre-Production Vehicles.
- The USB flash drive can be USB 2.0 (High Speed USB) or 3.0 (Super Speed USB)
- The USB flash drive <u>MUST</u> be reformatted to NTFS before loading any files to it. NTFS is not the standard format on most USB flash drives.
- The update files are not overly large but, during the reprogramming procedure, the head unit backs up some files to the USB drive. For this reason, sufficient USB drive memory size is required, especially for the High / Navigation units.
- The flash drives should be dedicated to storing these reprogramming files only. Do NOT use any flash drive which contains or requires the use of file management, encryption, file backup or other software to function properly.

Symptoms to be Addressed by These Reprogramming Files:

The main purpose of this campaign is to address display screen freeze-up during rear view camera display (when the shifter is in "R"). In addition, the screen may also freeze when either the Subaru STARLINK or Disclaimer Caution / I Agree is displayed.



IMPORTANT: Although the main purpose for this campaign is to address operational concerns involving the rear view camera feature, software is also included in this update for the following other conditions:

 After switching the vehicle (ACC or IGN) on, the display screen goes black with no audio output and the hard key buttons are illuminated (on solid, or flashing / blinking).



Hard key (button) illuminated, on solid or flashing / blinking



2) Time of day displayed in the MFD (Multi-Function Display) is incorrect and the arrival time displayed in Navigation units is also incorrect.

- 3) The time in the MFD automatically reverts back to a "default" setting, even after setting the time using "Manual" mode.
- 4) Audio volume goes to maximum automatically after one click of the volume up button on the steering wheel. In some cases, this condition may also occur without input from the operator. Maximum volume is also displayed on the screen.



SERVICE PROCEDURE / INFORMATION:

Step 1- Verify the currently installed Software Version ID using the following steps:

• From the HOME screen, touch "Settings".



• From the Settings > General screen, scroll down to and then touch "System Information".



- Confirm the Software Version ID.
 - If the Current Version is **Rel1.17.08.20**, proceed to **Step 6** (**IMPORTANT:** Step 6 contains critical additional checks and procedures required to complete this recall)
 - If the Current Version is prior to **Rel1.17.08.20**, continue to **Step 2**.



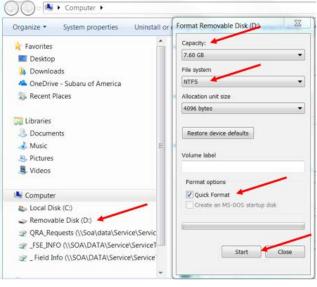
NG- Head Unit Must Be Updated, Proceed To Step 2.



OK- Latest Version Installed, Proceed To Step 6.

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

- 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.

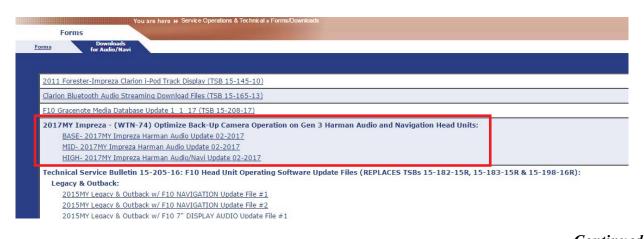


The reprogramming files are available now on Subarunet. Using the normal audio / navigation system file update download procedure: Go to Subarunet, select Service Operations and Technical>>Forms/Downloads>>Downloads for Audio/Navi then click on the applicable Hyperlink to download the file(s) to your SDS Notebook or PC:

"BASE- 2017MY Impreza Harman Audio Update 02-2017" "MID- 2017MY Impreza Harman Audio Update 02-2017" "HIGH- 2017MY Impreza Harman Audio/Navi Update 02-2017"

In addition, the applicable reprogramming files are being sent directly to retailers by Nuspire in the same way a Select Monitor Update would be pushed out starting on or about the evening of Friday, 2/24/2017. Please make sure all SDS Notebooks are plugged in, turned ON, and within range of the SDS Wi-Fi network to facilitate receiving these important update files.

Once these files are loaded to the SDS Notebook, they can be found in the My Documents folder, in a folder named _2017 Impreza Audio Files (Be sure to include the _ ahead of the file name.). Sorting the My Documents files by name should bring this folder to the top of the folder list.



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

IMPORTANT: Files downloaded from Subarunet will be .zip files and must be unzipped before they can be used.

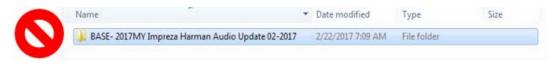
NOTE: When using the files pushed down to the SDS Notebook by Nuspire, the steps are similar but no file extraction is required as the Nuspire files are not zipped. Navigate to My Documents and open the _2017 Impreza Audio Files (**NOTE:** Don't forget to include the underscore "_" with no space before 2017...) folder to locate the BASE, MID, or HIGH folder as needed. Open the selected folder and copy the "update" folder ONLY to the USB flash drive for use.

Step 3- Procedure for loading the Subarunet-based files onto the USB flash drive:

- a. Insert the USB flash drive formatted in Step 2 (16GB MINIMUM) to be used for updating (in this example: a BASE model) head unit into the PC.
- b. Once the file has been downloaded from Subarunet, click on the Downloads folder and then sort by Date Modified to bring the most recent files to the top of the list.
- c. Right click on the required file (for this example, select the folder entitled "BASE- 2017MY Impreza Harman Audio Update 02-2017"), and select Extract All.
- d. From the dialog box, browse to the location (My Documents) then click on "Extract".
- e. Once the file has been extracted, navigate to the folder (in this example BASE-2017MY...) and single-click to access the sub-folder named "Update". Right-click and copy ONLY the "Update" folder then paste it to the USB flash drive as listed (Removable Disk) in the directory.
- f. Once the folder named "Update" is loaded onto the USB flash drive, right click on the drive and select "Eject".
- g. Remove the USB flash drive after the prompt appears that says "Safe to Remove Hardware".
- h. Mark the USB flash drive to indicate the head unit it will be used to update (BASE in this example).
- i. Repeat the above steps to create the MID and HIGH USB flash drives.

IMPORTANT: Install the update folder onto the USB flash drive for the head unit being reprogrammed ONLY. Do not install all three update folders onto the same flash drive at the same time.

NOTE: Do not copy the entire "2017MY Impreza…" File folder. Copy **ONLY** the File folder named "Update" to the flash drive.



Copy **ONLY** the File folder named "Update" to the USB.

	Name	-	Date modified	Туре	Size
O	퉬 update		2/22/2017 7:08 AM	File folder	

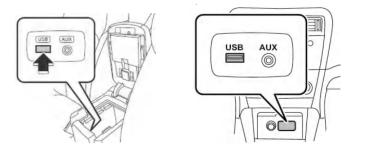
- j. After the download is complete, NEVER change the folder names.
- k. To avoid confusion, label the flash drive with the file contents (e.g. BASE, MID or HIGH).
- 1. Confirm there is a folder named "update" on the flash drive.
- m. After confirmation, move to the car and either start the engine or follow the procedure as outlined in document GR8-1100 on STIS for use of the GR8's Power Supply Mode.
- n. It is recommended to record the radio station presets as they may be lost during the update process. If the presets are lost, the radio display will be incomplete with no current radio station shown and the preset buttons will all read "Initializing" as shown in the photo below.



<u>CAUTION</u>: Confirm one final time the head unit you are about to update matches the USB flash drive you have selected. Attempting to install the incorrect update file will disable the head unit.

Step 4- Update Installation:

• With the engine idling (or GR8 connected), plug the flash drive into the USB Port.



IMPORTANT NOTE: If the head unit does not recognize the USB flash drive during the reprogramming process, this may be due to an incompatible Controller IC in the USB flash drive or it is otherwise incompatible with the head unit. If this occurs, delete all files from the flash drive and re-format it to "<u>FAT32</u>", instead of "NTFS" and reload the appropriate "update" folder to the USB flash drive. If the USB flash drive is still not recognized, please discontinue the use of that drive and instead use a USB flash drive from a different manufacturer.

• After the unit "authenticates" the USB flash drive, press "Next" and after the second screen is displayed, press "Next" again.



• The current and available software version information will be displayed. The **available** Version I.D should be "**Rel.17.08.20**". This version number is the same for all three levels of head unit.



- After confirming the Available Version, press "Install Now" to start the reprogramming process. **NOTE:** The screen will go blank (black) for a brief period after installation begins.
- All the updates (Base, Mid and High) should take less than 10 minutes to install.

IMPORTANT NOTES:

REMINDER: To avoid possible head unit damage, always confirm the update file on the USB flash drive being used matches the head unit being updated (e.g. a BASE update file is being installed into a BASE head unit). Although the new "after update" version numbers are the same for all 3 head units, the update files are NOT interchangeable between them.

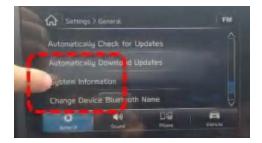
- Remain in the vehicle with all doors close throughout the updating procedure.
- Do not touch any of the buttons on the head unit while the updating process is taking place.
- If during the updating an error screen is displayed asking "Do you want to Retry", press "Retry" to restart the update.
- Once the updating process is complete, the head unit will perform a "soft" reboot. (**NOTE:** several "hard" reboots are required to fully install the update. This procedure is covered in **Step 6** below.)
- **CRITICAL STEP:** After the reboot process completes, press the HOME button to return to the HOME screen. (**NOTE:** If the "install message" is displayed asking if you want to start the update process again, press "Cancel", press the HOME button again and return to the HOME screen.)
- Turn the ignition OFF and remove the flash drive from the USB port.
- Open the Driver's door, close the Driver's door and WAIT for AT LEAST 3 minutes.

Step 5- Verify the newly-installed Software Version ID using the following steps:

- Turn the ignition ON. Confirm the "SUBARU Starlink" screen is displayed. If "SUBARU Starlink" screen is NOT displayed on the first screen, system did not fully enter "sleep mode" and reboot properly. If reboot was incomplete, turn the ignition OFF, open the Driver's door (confirm the screen goes dark), close the Driver's door and wait AT LEAST 3 MINUTES before repeating this step.
- From the HOME screen, touch "Settings".



• From the Settings > General screen, scroll down to and then touch "System Information".



• Confirm Software Version is now "Rel1.17.08.20".



• Press $\mathbf{\hat{u}}$ (HOME) to return to the HOME screen and shut the engine OFF.

Step 6- Operation Check Procedure:

NOTE: These are also known as "Hard" Reboot Procedures- These are **<u>REQUIRED</u>** steps.

- 1) Turn the ignition back ON (ACC) and confirm normal system operation.
- 2) Confirm the HOME screen is displayed.

IMPORTANT: If during this procedure, the screen goes blank (black) and the STARLINK screen does not appear, the head unit must be replaced. THIS SHOULD BE A VERY RARE OCCURRENCE.

- **3)** Turn the ignition OFF. Open the Driver's door, close the Driver's door and WAIT for AT LEAST 3 minutes. This is the "hard" reboot.
- 4) Perform 1), 2) and 3) above another **four** times (5 cycles total). If normal operation is confirmed, press **(**) to return to the HOME screen and shut the ignition OFF to complete the procedure.

CLAIM REIMBURSEMENT AND ENTRY PROCEDURES:

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

Labor Description	Labor Operation #	Labor Time	Fail Code	Claim Type
HARMAN AUDIO / NAVI UNIT REPROGRAMMING (INC. VERSION ID & OPERATION CHECKS)	A103-118	0.6	WTN-74	RC
HARMAN AUDIO / NAVI UNIT, VERSION ID & OPERATION CHECKS ONLY	A103-110	0.4		

NOTE: A **ONE-TIME** charge of \$50.00 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.