

## DTC P0A7E: REPROGRAMMING FILE AVAILABILITY

**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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**SUBARU**

QUALITY DRIVEN® SERVICE

## SERVICE BULLETIN

**APPLICABILITY:** 2014-16MY Crosstrek Hybrid (HEV)

**NUMBER:** 11-185-18

**SUBJECT:** DTC P0A7E: Reprogramming File Availability

**DATE:** 11/27/18

### INTRODUCTION:

This bulletin announces availability of reprogramming files to optimize the Battery Energy Control Unit (BECU) which is a component part of the HEV battery pack. The new files address the BECU logic used for detection of the HEV battery pack temperature. After the engine is shut off, the battery pack generates a certain amount of self-discharge heat by design. Existing BECU logic uses a threshold for the amount of this heat which is too low. As a result, the Hybrid Motor Assist Regeneration (HEV battery recharge) system and Auto Start Stop features stop operating. In addition to these reprogramming files to address this condition, a design change was made to the replacement battery pack in support of this software update.

**IMPORTANT NOTE:** To clarify, **the HEV battery pack does NOT require replacement** when installing these reprogramming files.

### PACK FILE APPLICABILITY:

Model	PAK File Name	Decryption Keyword	New CID Number
2014MY CROSSTREK HEV	82002FJ001.pak	852F08F8	01D2008100
2014-2016MY CROSSTREK HEV	82002FJ011.pak	00787F1C	02D2008000

These update files were included in the October, 2018 SSM Update.

**CAUTION:** If the High Voltage Battery pack has previously been replaced with either a p.n. 82009FJ001 or 82009FJ002 on a 2014MY vehicle, PAK file 82002FJ001.pak cannot be used. In this case, use the 2014-16MY PAK file 82002FJ011.pak as listed in the table above.

**NOTE:** FlashWrite currently displays the Battery Energy Control Unit as BECU when searching for available updates using Vehicle Spec as shown in the screen shot to the right.

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**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.

## PART INFORMATION:

The part number for the new HEV battery pack which already contains the new software is **82009FJ003**. The BECU does not need to be reprogrammed when installing this new battery pack part number.

**REMINDER:** Unless the HEV battery pack requires replacement for a different reason, there is no need to replace it when installing these reprogramming files.

## SERVICE PROCEDURE:

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

- Reprogram the BECU following the normal FlashWrite procedure.

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.

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

**NOTE:** Control module failures as a result of battery discharge during reprogramming are not a matter for warranty. Should any DTCs reset after the reprogramming update is performed, diagnose per the procedure outlined in the applicable Service Manual.

**Additional Information: Post-Reprogramming DTC P0A7E Diagnostics**

Installing this new logic enables detection of **DTC P0A7E: HIGH VOLTAGE BATTERY OVER TEMPERATURE**. The procedure for troubleshooting when this DTC is detected is as follows:

**DTC DETECTING CONDITION:**

- Over Temperature of the High Voltage Battery is detected.
- If the temperature of the High Voltage Battery is higher than the standard value, it is judged as NG.
- This anomaly is detected at the same time when any anomaly occurs.

**TROUBLE SYMPTOMS:**

- The Idling Stop function does not work during the motor driving.
- The Motor Assist Regeneration function does not work.

**CAUTION:**

After servicing or replacing faulty parts, perform Clear Memory Mode <Ref. to EN (H4DO HEV) (diag), OPERATION, Clear Memory Mode.>, and Inspection Mode <Ref. to EN (H4DO HEV) (diag), PROCEDURE, Inspection Mode.>.

Step	Check	Yes	No
<b>1. Check the DTC.</b> 1) Start the engine. 2) Using the SSM, check the DTC for the Body integrated unit.	Are other DTCs for the Body integrated unit detected?	Perform the diagnosis according to the DTC.	Go to step 2.
<b>2. Check the DTC.</b> Using the SSM, check DTCs for the Drive Motor Control Module, HPCU and TCM.	Are other DTCs detected? P0CA7, P0604, P0605, P0A94, P0A1B, P062F, P0601, U1290, U1591, U0110, U0287, U0588, U0411, P0A83 or P0A82	Perform the diagnosis according to the DTC	Go to step 3.
<b>3. Check the periphery of battery pack.</b> Check for a heat source or the like around the periphery of the battery pack.	Is there a heater or other heat source at the bottom of the battery pack or at the inlet of the air intake duct?	Remove the heat source.	Go to step 4.
<b>4. Check the high voltage battery cooling fan.</b> Using the Subaru Select Monitor, perform "High Voltage Battery Cooling Fan" of the System Operation Check Mode for the drive motor control system.	Does the High Voltage Battery Cooling Fan operate?	Go to step 5.	Check the harness between the Drive Motor Control Module and the High Voltage Battery Cooling Fan, cooling fan power supply relay, and the High Voltage Battery Cooling Fan as a single part.
<b>5. Check the ducts.</b> Check the High Voltage Battery Cooling Fan ducts.	Are the ducts in good condition? (Check for clogging, dislodging, etc.)	Replace the battery pack.	Repair the ducts.

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## WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited Warranty period or covered by an active Subaru Added Security Classic or Gold plan, this repair may be submitted using the following claim information:

Labor Description	Labor Operation #	Fail Code	Labor Time
BECU REPROGRAMMING	A804-208	FCS-48	0.4

**IMPORTANT:** Always note the original Calibration Identification number (CID) the vehicle came in with on the repair order **before** reprogramming and, make sure to list the **NEW** CID for any newly-installed programming (as confirmed from the actual control module **AFTER** installation). The **NEW** CID **MUST** also be noted on the repair order as this information is required for entry in the Miscellaneous Detail field during claim submission.

**NOTE:** The pack file listings provided in this bulletin are the latest available at the time of publishing. Updates are often released thereafter without revision to the original bulletin. For this reason, it is critical to always have the latest version of Select Monitor software installed on your system. You can confirm if a later version is available by entering the CID listed in this bulletin into FlashWrite. If a newer CID is shown as available in FlashWrite, reprogram using that file.

## 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.