

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: 2015-20MY Legacy and Outback
 2017-20MY Impreza
 2018-20MY Crosstrek
 2019-20MY Crosstrek Hybrid (PHEV)
 2019-20MY Forester

NUMBER: 11-200-20R

DATE: 02/13/20

REVISED: 02/03/21

SUBJECT: Reprogramming File Availability for Hard Starting in Sub-Freezing Temperatures, DTC P0400 and Surging in High Altitudes

INTRODUCTION:

This bulletin announces the availability of reprogramming files to optimize the Engine Control Module (ECM). The new logic will address customer concerns of:

- Hard starting in sub-freezing (below 32 degrees Fahrenheit) conditions: Main Relay contacts may freeze in an “open” condition when turning the engine off after a short trip then attempting to restart.
- Check Engine light illumination with a DTC P0400 stored in memory: ECM may test the EGR system in error when ambient / intake air temperatures are below freezing.
- Surging / vibration condition when using the cruise control in high-altitude areas (FORESTER ONLY): Incorrect amount of throttle compensation when EGR is switched on or off.

Operation of the self-shut relay has been changed to minimize the temperature difference inside the relay to prevent condensation / moisture (which may freeze) from occurring. The EGR system parameters have been changed to prevent testing when ambient temperatures do not meet specified criteria. Throttle control software has been optimized to prevent the surging condition.

PRODUCTION CHANGE INFORMATION:

The new logic was incorporated into production starting with the VINS as listed in the table below:

Model	Starting VIN
Legacy	L3016625
Outback	L3163560
Impreza 4-Door	L3609516
Impreza 5-Door	L1720389
Crosstrek	LH230394
Forester	LH506789

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.

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.

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PACK FILE APPLICABILITY:

NOTE: All the files below are included in the April 2020 SSM software update.

Model Year, FORESTER	PAK File Name	New ECM Part Number	Old ECM Part Numbers	Decryption Keyword	New ECM CID Number
2019MY, CAL, CVT	22765AL822.pak	22765AL822	22765AL820 & 21	8A985699	XE1F500A
2020MY, CAL, CVT	22765AN461.pak	22765AN461	22765AN460	09E86955	XE1M300a00G

Model Year, LEGACY & OUTBACK	PAK File Name	New ECM Part Number	Old ECM Part Numbers	Decryption Keyword	New ECM CID Number
2015MY, 2.5L FED	22765AF35H.pak	22765AF35H	22765AF35A, B, C, D, E, F & G	097FFF9A	EB4GE00B
2015MY, 2.5L CAL	22765AF36H.pak *	22765AF36H	22765AF36A, B, C, D, E, F & G	8584EAEC	EB4GE00C
	22765AK16F.pak *	22765AK16F	22765AK16A, B, C, D & E	799C889E	EB4GE00c
2015MY, 3.6L FED	22765AF45E.pak	22765AF45E	22765AF45A, B, C & D	164B9740	DB4GE00D
2016MY, 2.5 CAL	22765AJ14E.pak	22765AJ14E	22765AJ14A, B, C & D	E913C492	EB4I330C
2016MY, 2.5L FED	22765AJ15E.pak	22765AJ15E	22765AJ15A, B, C & D	2FDB6F85	EB4I330B
2016MY, 3.6L FED	22765AJ17C.pak	22765AJ17C	22765AJ17A & B	54B98D9B	DB4I330D
2017MY, 2.5 CAL	22765AK48F.pak	22765AK48F	22765AK48A, B, C, D & E	DB5280A2	EB4I530C
2017MY, 3.6L FED	22765AK31D.pak	22765AK31D	22765AK31A, B & C	15AFB8C6	DB4I530D
2018MY, 2.5L CAL	22765AK85C.pak *	22765AK85C	22765AK85A & B	E47AACC1	EB4T400C
2018MY, 3.6L FED / CAL	22765AK89B.pak*	22765AK89B	22765AK89A	57420773	DB4T400D
2019MY, 2.5L CAL	22765AN06B.pak *	22765AN06B	22765AN06A & B	84268BD7	EB4V600C
2019MY, 3.6L FED / CAL	22765AN11B.pak*	22765AN11B	22765AN11A	5DABC6A7	DB4V600D
2020MY, 2.5L, CAL	22765AN20B.pak*	22765AN20B	22765AN20A	785362C3	XE1J300m00G
	22765AP54B.pak*	22765AP54B	22765AP54A	D550925D	XE1J300n00G
* Denotes a mid-production running change. For these applications, always choose the applicable reprogramming file based on the ECM's current CID number.					

Model Year, CROSSTREK	PAK File Name	New ECM Part Number	Old ECM Part Numbers	Decryption Keyword	New ECM CID Number
2018MY, CAL, 6MT	22765AJ616.pak	22765AJ616	22765AJ610, 11, 12, 13, 14 & 15	57D5FEEB	XH3J2C0E
2018MY, CAL, CVT	22765AJ626.pak	22765AJ626	22765AJ620, 21, 22, 23, 24 & 25	E68C3D77	XH3J2C0F
2019MY, CAL, 6MT W/ AGS	22765AM814.pak	22765AM814	22765AM810, 11, 12 & 13	FE2394C0	XH3N600E
2019MY, CAL, CVT WO/ AGS	22765AM824.pak	22765AM824	22765AM820, 21, 22 & 23	13FBFBAA	XH3N600F
2020MY, CAL, 6MT	22765AN931.pak	22765AN931	22765AN930	EA61C8CA	XE1M300E00G
2020MY, CAL, CVT	22765AN951.pak	22765AN951	22765AN950	DA064B0C	XE1M300F00G

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Model Year, <i>IMPREZA</i>	PAK File Name	New ECM Part Number	Old ECM Part Numbers	Decryption Keyword	New ECM CID Number
2017-18MY, CAL, MT W/ AGS	22765AJ59J.pak	22765AJ59J	22765AJ59A, B, C, D, E, F, G & H	375EE3E7	XH3J2C0C
2017MY, CAL, CVT W/ AGS	22765AJ60J.pak	22765AJ60J	22765AJ60A, B, C, D, E, F, G & H	AEBD0665	XH3J2C0D
2017-18MY, CAL, MT WO/ AGS	22765AK61J.pak	22765AK61J	22765AK61A, B, C, D, E, F, G & H	245D7FAE	XH3J2C0A
2017-18 MY, CAL, CVT WO/ AGS	22765AL71J.pak	22765AL71J	22765AL71A, B, C, D, E, F, G & H	250AEE3A	XH3J2C0B
2018MY, CAL, CVT W/ AGS	22765AM28G.pak	22765AM28G	22765AM28A, B, C, D, E & F	2EDFFDF3	XH3JA00D
2019MY, CAL, MT W/ AGS	22765AM64E.pak	22765AM64E	22765AM64A, B, C & D	560937AD	XH3N600C
2019MY, CAL, MT WO/ AGS	22765AM65E.pak	22765AM65E	22765AM65A, B, C & D	E0DCCA72	XH3N600A
2019MY, CAL, CVT W/ AGS	22765AM66E.pak	22765AM66E	22765AM66A, B, C & D	19763752	XH3N600D
2019MY, CAL, CVT WO/ AGS	22765AM67E.pak	22765AM67E	22765AM67A, B, C & D	5817CB83	XH3N600B
2020MY, CAL, MT W/ AGS	22765AP11B.pak	22765AP11B	22765AP11A	66EA658B	XE1M300C00G
2020MY, CAL, MT WO/ AGS	22765AP12B.pak	22765AP12B	22765AP12A	BA4FC8AA	XE1M300A00G
2020MY, CAL, CVT W/ AGS	22765AP13B.pak	22765AP13B	22765AP13A	65AC4429	XE1M300D00G
2020MY, CAL, CVT WO/ AGS	22765AP14B.pak	22765AP14B	22765AP14A	21F87B2D	XE1M300B00G

SERVICE PROCEDURE:

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

- Reprogram the ECM following the normal FlashWrite procedure.

SERVICE PROCEDURE / INFORMATION:

Subaru of America, Inc. (SOA) highly recommends connecting either the Subaru Midtronics DCA-8000 Dynamic Diagnostic Charging System or the Subaru Midtronics GR8-1100 Diagnostic Battery Charger to the vehicle and utilizing the Power Supply Mode feature anytime a vehicle control module is being reprogrammed.

Once the Midtronics charger is connected to the vehicle, **if the battery is fully charged**, it takes less than three (3) minutes to boot-up the charger, select the Power Supply Mode, and have the battery voltage stabilized and ready for reprogramming.

NOTES:

- For instructions on using the power supply mode, reference the applicable User Manual for the Midtronics DCA-8000 Dynamic Diagnostic Charging System and the Midtronics GR8-1100 Diagnostic Battery Charger on STIS.
- Confirm all electrical loads such as lights, audio, HVAC, seat heaters, and rear defroster are all switched **OFF** before setting up the charger for Power Supply Mode.
- Select the correct battery type (Flooded, EFB, Gel, AGM or AGM Spiral).
- Input the CCA which matches the vehicle's battery. **NOTE:** OE and replacement batteries have different CCA ratings. Always confirm the battery's CCA rating before proceeding.

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- If using a DCA-8000 Dynamic Diagnostic Charging System, set the power supply voltage to 13.5 volts.
- **DO NOT** connect the DST-i or SDI until the Power Supply mode function has completed its battery test mode and the Charging Voltage has dropped to and shows a steady 13.5 Volts on the display.
- Once Power Supply Mode reaches a steady 13.5 volts, connect the DST-i or SDI to the OBD connector and proceed with initiating the normal FlashWrite 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 is made.

VERY IMPORTANT:

This information is applicable to the Subaru Midtronics DCA-8000 Dynamic Diagnostic Charging System and the Subaru Midtronics GR8-1100 Diagnostic Battery Charger **ONLY**. It does not apply to any other brand / type of "generic" battery charger whatsoever. **ONLY** the DCA-8000 and the GR8-1100 and their Power Supply Mode feature have been tested and approved by SOA.

REMINDER: If the DCA-8000 or GR8-1100 indicates the vehicle's battery must be charged, charge the battery fully before proceeding to reprogram the vehicle while using the Power Supply Mode.

NOTE: Control module failures resulting from 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.

WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited, an applicable Emission 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
MFI OBDII ECM Reprogramming	A455-288	UPG-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 pak 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.

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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.