

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: 2020-24MY Legacy & Outback 2.4L
 2019-24MY Ascent

NUMBER: 09-117-24

DATE: 04/09/24

SUBJECT: Engine Not Cranking During Low Ambient Temperatures
 DTC P0890 - TCM Power Relay Sense Circuit Low

INTRODUCTION:

This bulletin announces the availability of new reprogramming files developed to address cases of DTC P0890 (TCM Power Relay Sense Circuit Low) detected by the Engine Control Module (ECM). When the engine is shut off after a short distance drive when the ambient temperature is 32°F (0°C) or below, Moisture may develop inside the starter relay and cause the internal contacts to stick or freeze. The new software allows the relay contacts to be cycled periodically to prevent any sticking or freezing of the contact points. If this situation is reported by a customer and/or DTC P0890 is stored in the ECM fault memory, perform the reprogramming procedure outlined below.

2020-2022 LEGACY AND OUTBACK PAK FILE APPLICABILITY:

MY	Model	Specification	File Description	Old Part #	Decryption Keyword	New CID
20	LEGACY & OUTBACK	2.4L Turbo	22765AM978.pk2	22765AM970 22765AM971 22765AM972 22765AM973 22765AM974 22765AM975 22765AM976 22765AM977	68DC9050	LG7D901B00G
21	LEGACY & OUTBACK	2.4L Turbo	22765AR246.pk2	22765AR240 22765AR241 22765AR242 22765AR243 22765AR244 22765AR245	F3C7F721	LG7F601F00G
22	LEGACY & OUTBACK	2.4L Turbo	22765AR994.pk2	22765AR990 22765AR991 22765AR992 22765AR993	8990873C	LG7G501G00G
22	OUTBACK Wilderness	2.4L Turbo	22765AR254.pk2	22765AR250 22765AR251 22765AR252 22765AR253	BF3BAD7C	LG7G501H00G

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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2019-2022 ASCENT PAK FILE AVAILABILITY:

MY	Model	Specification	File Description	Old Part #	Decryption Keyword	New CID
19	ASCENT	2.4L Turbo	22765AV940.pak	22765AL730 22765AL731 22765AL732 22765AL733 22765AL734 22765AL735 22765AL736 22765AL737 22765AL738 22765AL739	7E1B31E9	LT8DB01A
20	ASCENT	2.4L Turbo	22765AN507.pak	22765AN500 22765AN501 22765AN502 22765AN503 22765AN504 22765AN505 22765AN506	27DD3A0F	LT8F601C00G
21	ASCENT	2.4L Turbo	22765AP825.pak	22765AP820 22765AP821 22765AP822 22765AP823 22765AP824	040F5E58	LT8H601D00G
22	ASCENT	2.4L Turbo	22765AS004.pak	22765AS000 22765AS001 22765AS002 22765AS003	5C146151	LT8J501F00G

2023-2024 LEGACY AND OUTBACK PFC FILE AVAILABILITY:

MY	Model	Specification	File Description	Old Part #	New CID
23	LEGACY & OUTBACK	2.4L Turbo	22765AS464.pfc	22765AS460 22765AS461 22765AS462 22765AS463	LHBK301G00G
23	OUTBACK Wilderness	2.4L Turbo	22765AS474.pfc	22765AS470 22765AS471 22765AS472 22765AS473	LHBK301H00G
24	LEGACY & OUTBACK	2.4L Turbo	22765AT832.pfc	22765AT830 22765AT831	LHBKG01G00G
24	OUTBACK Wilderness	2.4L Turbo	22765AT842.pfc	22765AT840 22765AT841	LHBKG01H00G

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2023-2024 ASCENT PFC FILE AVAILABILITY:

MY	Model	Specification	File Description	Old Part #	New CID
23	ASCENT	2.4L Turbo	22765AS633.pfc	22765AS630 22765AS631 22765AS632	LHBK301Y00G
24	ASCENT	2.4L Turbo	22765AU261.pfc	22765AU260	LHBP201A00G

SERVICE PROCEDURE / INFORMATION:

- **2019-22MY:** Reprogram the ECM following the normal FlashWrite procedure.
- **2023-24MY:** Reprogram the VDC Control Module following the normal SSM5-R procedure. Detailed information regarding the SSM5-R reprogramming procedures can be found in TSB **14-28-21R**.

Subaru of America, Inc. (SOA) highly recommends utilizing either the Subaru Midtronics DCA8000 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 (Enhanced Flooded, Flooded, 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.
- 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 DST-010 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 DST-010 to the OBD connector and proceed with initiating the normal SSM5-R reprogramming process.

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- Amperage will fluctuate based upon the vehicle's demand for power. **NOTE:** If the voltage rises beyond 14 Volts 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.
- ALWAYS set the power supply voltage to 13.5 Volts when using Power Supply Mode. NEVER turn the ignition switch on when charging at voltages 15 Volts or higher.

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 Warranty period, 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.

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.