ATTENTION:
GENERAL MANAGER ❑
PARTS MANAGER ❑
CLAIMS PERSONNEL ❑
SERVICE MANAGER ❑

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

SUBARU

QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2023-24MY Legacy & Outback 2.4L

SUBJECT: DTC P2797 / Reprogramming Files

NUMBER: 16-145-23R
DATE: 12/04/23
REVISED: 09/17/24

INTRODUCTION:

This bulletin announces availability of new reprogramming files for the Transmission Control Module (TCM) developed to address cases of DTC P2797 (Electrical/Auxiliary Transmission Fluid Pump "A" Performance/Stuck Off"). A shock or surge can also be felt during engine restart when auto start-stop activates. This condition is caused by engine torque not being transferred correctly by the forward clutch system during engine restart resulting in a false detection of a transmission fluid pump failure. The new files contain enhanced logic optimizing forward clutch engagement. If DTC P2797 found, perform the reprogramming procedure outlined below.

PFC FILE APPLICABILITY:

MY	Model	File Description	Specification	Old Part #	New CID #
2023	Legacy	30919AJ70C.pfc	2.4L Turbo, CVT	30919AJ70B	Z1FEC73100L
	Outback	30919AJ71C.pfc	2.4L Turbo, CVT	30919AJ71B	Z1FEF73100L
	Outback Wilderness	30919AJ72C.pfc	2.4L Turbo, CVT	30919AJ72B	Z18EF73100L

NOTE: There is no need to perform CVT Learning after reprogramming.

Continued...

2023MY SERVICE PROCEDURE / INFORMATION:

Refer to the battery charging information outlined in the **APPENDIX A** section of this bulletin. Reprogram the TCM following the normal SSM5-R procedure. Detailed information regarding the SSM5-R reprograming procedures can be found in TSB **14-28-21R**.

2024MY SERVICE PROCEDURE / INFORMATION:

The information below has been taken from the Service Manual regarding DTC P2797 diagnosis. The additional procedures have been outlined in **RED**.

TRANSMISSION (DIAGNOSTICS) > Diagnostic Procedure with Diagnostic Trouble Code (DTC)

DTC P2797 ELECTRIC/AUXILIARY TRANSMISSION FLUID PUMP "A" PERFORMANCE/STUCK OFF

DTC detecting condition:

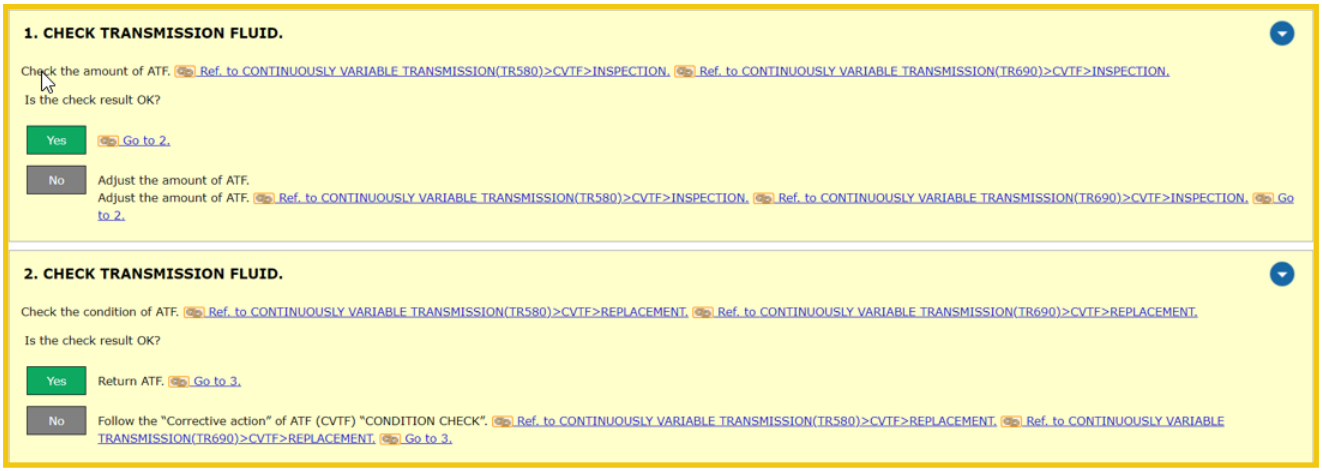
Immediately at fault recognition

Trouble symptom:

- Shocks from clutch engagement occur when Auto Start Stop is restarted.
- Auto Start Stop does not operate.

Before servicing or replacing faulty parts, perform the last step of the basic diagnostic procedure. TRANSMISSION (DIAGNOSTICS)>Basic Diagnostic Procedure

NEW SERVICE MANUAL WORK INSTRUCTIONS



1. CHECK TRANSMISSION FLUID.

Check the amount of ATF. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>CVTF>INSPECTION. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>CVTF>INSPECTION.

Is the check result OK?

Yes — Go to 2.

No — Adjust the amount of ATF.
Adjust the amount of ATF. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>CVTF>INSPECTION. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>CVTF>INSPECTION. Go to 2.

2. CHECK TRANSMISSION FLUID.

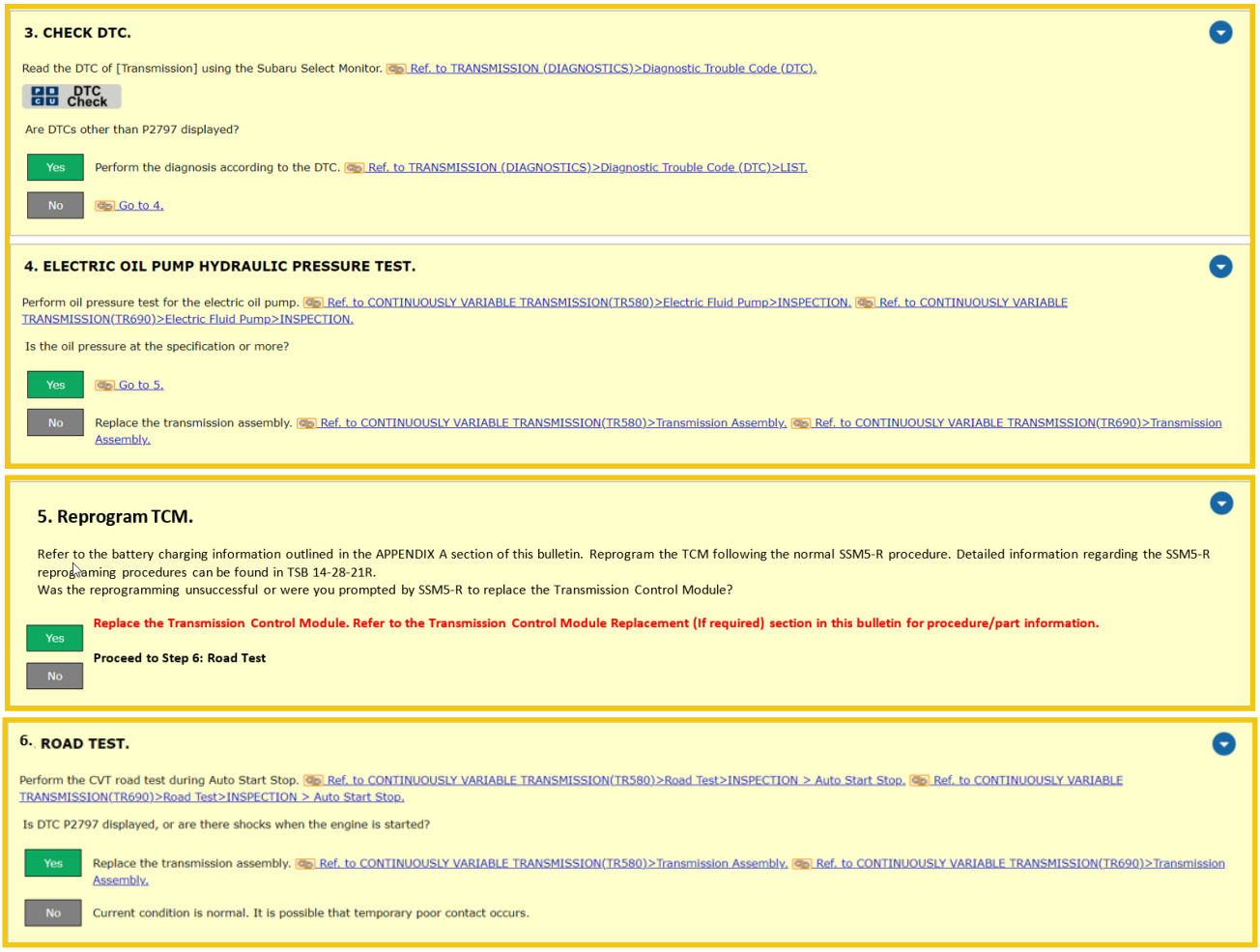
Check the condition of ATF. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>CVTF>REPLACEMENT. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>CVTF>REPLACEMENT.

Is the check result OK?

Yes — Return ATF. Go to 3.

No — Follow the "Corrective action" of ATF (CVTF) "CONDITION CHECK". Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>CVTF>REPLACEMENT. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>CVTF>REPLACEMENT. Go to 3.

Continued...



3. CHECK DTC.

Read the DTC of [Transmission] using the Subaru Select Monitor. Ref. to TRANSMISSION (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

DTC Check

Are DTCs other than P2797 displayed?

Yes — Perform the diagnosis according to the DTC. Ref. to TRANSMISSION (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.

No — Go to 4.

4. ELECTRIC OIL PUMP HYDRAULIC PRESSURE TEST.

Perform oil pressure test for the electric oil pump. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>Electric Fluid Pump>INSPECTION. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>Electric Fluid Pump>INSPECTION.

Is the oil pressure at the specification or more?

Yes — Go to 5.

No — Replace the transmission assembly. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>Transmission Assembly. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>Transmission Assembly.

5. Reprogram TCM.

Refer to the battery charging information outlined in the APPENDIX A section of this bulletin. Reprogram the TCM following the normal SSM5-R procedure. Detailed information regarding the SSM5-R reprogramming procedures can be found in TSB 14-28-21R.
Was the reprogramming unsuccessful or were you prompted by SSM5-R to replace the Transmission Control Module?

Yes — **Replace the Transmission Control Module. Refer to the Transmission Control Module Replacement (If required) section in this bulletin for procedure/part information.**

No — **Proceed to Step 6: Road Test**

6. ROAD TEST.

Perform the CVT road test during Auto Start Stop. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>Road Test>INSPECTION > Auto Start Stop. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>Road Test>INSPECTION > Auto Start Stop.

Is DTC P2797 displayed, or are there shocks when the engine is started?

Yes — Replace the transmission assembly. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR580)>Transmission Assembly. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>Transmission Assembly.

No — Current condition is normal. It is possible that temporary poor contact occurs.

ROAD TESTING WITH AUTO START STOP:

1. Connect the vehicle to Subaru Select Monitor.
2. Turn the ignition switch to “ON.” (Engine OFF)
3. Display the “ATF Temp” and the “Emphasized idle stop request” data monitors.
4. Start the engine.
5. Allow the ATF Temperature to reach 140°F (60°C).

   NOTE: 140°F -194° (60°c-90°) is the preferred road testing range.

6. Confirm the “Emphasized idle stop request” data monitor reads “Permit.”

   NOTE: If the “Emphasized idle stop request” data monitor reads “Prohibit,” follow the procedures below.

   - Confirm there are no DTCs.
   - Confirm the ATF Oil Temp & AWD warnings are not indicated.
   - Using SSM, confirm the Electric oil pump relay is “ON,” the status is “Normal,” and Electric oil pump command duty is 5-15%.

Continued...

7. Turn off all system causing an electrical load, such as headlamps, A/C seat heater, defrost, etc.

8. Shift the gear selector to the "D" range.

9. Check for any "Excessive Shock" when the engine is restarted from the Auto Start Stop system.

   a) Allow the Auto Start Stop system to turn off the engine for five seconds.

   b) Release the brake pedal and allow the vehicle to move forward for two seconds or more. Confirm there is no "Excessive Shock" felt.

   c) Stop the vehicle and repeat the a-b process four more times.

   d) If an "Excessive Shock" is felt, repeat the a-b process twenty more times to confirm if the condition continues.

TRANSMISSION CONTROL MODULE REPLACEMENT (IF REQUIRED):

The proceedures below are ONLY to be followed if an unscuccessfull reprograming attempt has been previously performed or prompted to by SSM-R.

The service procedures for transmission control module replacement remain unchanged. Always refer to the applicable Service Manual and review the full requirements of the repair being performed. The Service Manual procedures contain information critical to performing an effective repair the first time, every time. This includes but is not limited to important SAFETY precautions, proper inspection criteria, necessary special tools, required processes and related one-time-use parts needed for a complete and lasting repair. Refer to STIS: Transmission/Transaxle > Transmission Control Module (TCM)

IMPORTANT NOTES:

- Whenever reconnecting the ground cable terminal to the battery sensor, torque to 7.5Nm (5.5ft.-lbs. or 66inch-lbs.) while supporting the sensor with the other hand as outlined in the applicable Service Manual under: STARTING/CHARGING SYSTSEMS > Battery Sensor.
- When the TCM is replaced, the new module will require registration and "AT clearing/ learning" procedure performed.
- When the TCM is replaced on vehicle equipped with the Auto Start Stop function, the "Start count reading ECU to SSM" procedure will require performing.

PART INFORMATION:

REMINDER: Always order the most up-to-date replacement parts based on the specific VIN being repaired.

Part Description	MY	Model	Part Number
UNIT-AT CONTROL	2024	Legacy	30919AK09D
	2024	Outback	30919AK10D
	2024	Outback Wilderness	30919AK11D

Continued...

WARRANTY / CLAIM INFORMATION:

There have been no changes made to the Labor Time Guide regarding these procedures.

IMPORTANT: Always note the original Calibration Identification number (CID) / ROMID the vehicle came in with on the repair order **before** reprogramming and, make sure to list the **NEW** CID / ROMID for any newly installed programming (as confirmed from the actual control module **AFTER** installation). The **NEW** CID / ROMID MUST also be noted on the repair order as this information is required for entry in the Miscellaneous Detail field during claim submission. These numbers can be read using SSM5-R.

NOTE: The pfc 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. Technicians can confirm if a later version is available by entering the CID listed in this bulletin into SSM5-R. If a newer CID is shown as available in SSM5-R, 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.

Continued...

APPENDIX A

BATTERY CHARGING INFORMATION:

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.
- 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.