

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: 2019-23MY Ascent

NUMBER: 16-144-23

SUBJECT: DTC P0711, P0712, P0713 Diagnostic Procedure

DATE: 11/08/23

INTRODUCTION:

This bulletin announces the availability new service procedure developed for the diagnosis of the following DTCs detected by the Transmission Control Module (TCM):

- P0712 (Transmission Fluid Temperature Sensor “A” Circuit Low)
- P0713 (Transmission Fluid Temperature Sensor “A” Circuit High)

This new procedure will be included in the Service Manual in the future. In addition, new reprogramming files have been developed to address DTC P0711 (Transmission Fluid Temperature Sensor “A” Circuit Range/Performance). If the DTCs listed above are detected by the TCM, follow the service procedures outlined below.

PAK FILE APPLICABILITY:

MY	Specification	File Description	Old Part #	Decryption Keyword	New CID
19	2.4L DIT CVT Without CVTF Cooler	30919AF98G.pak	30919AF98D 30919AF98E 30919AF98F	6CB17BE5	R83EE000
	2.4L DIT, CVT With CVTF Cooler	30919AF99G.pak	30919AF99D 30919AF99E 30919AF99F	1648933C	R83EF000
20-21	2.4L DIT CVT Without CVTF Cooler	30919AH13H.pk2	30919AH13E 30919AH13F 30919AH13G	B3DFD2E3	Q93EE100
	2.4L DIT, CVT With CVTF Cooler	30919AH14H.pk2	30919AH14E 30919AH14F 30919AH14G	B5D0FB3D	Q93EF100
22	2.4L DIT CVT Without CVTF Cooler	30919AJ53C.pk2	30919AJ53A 30919AJ53B	C7FDE264	N2FEE700
	2.4L DIT, CVT With CVTF Cooler	30919AJ54C.pk2	30919AJ54A 30919AJ54B	E64CC4D4	N2FEF700

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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PFC FILE APPLICABILITY:

Model	MY	File Description	Old Part #	New CID #
Ascent	23	30919AJ79B.pfc	30919AJ79A	M3FEE60000L
		30919AJ80B.pfc	30919AH80A	M3FEF60000L

Detailed information regarding the SSM5-R reprogramming procedures can be found in **TSB 14-28-21**.

SERVICE PROCEDURE / INFORMATION:

STEP 1: Perform a DTC check using Subaru Select Monitor (SSM). Is DTC P0711 detected by the TCM?

YES: Proceed to STEP 2.

NO: If DTCs P0712 and or P0713 are stored, proceed to STEP 7. If any DTCs not mentioned in the bulletin are found, continue diagnosis as per the applicable Service Manual.

STEP 2: Perform the reprogramming procedure outlined in STEP 6, when complete, perform the “INSPECTION MODE B” to verify the faults are not detected. Is P0711 detected?

YES: Proceed to STEP 3.

NO: The procedure is complete.

STEP 3: Read the Freeze Frame Data (FFD) of DTC P0711. See the example below.

System ▲	Status ▲	Code ▲	Description & trouble part	Time stamp			IG c...	FFD ▲
				Trip ...	Time C...	Gro...		
Transmission	History	P0711	Transmission Fluid Temperature Sensor "A" Circuit Range/Performance	03144	3199000	Com...		

P0711 The past : Transmission Fluid Temperature Sensor "A" Circuit Range/Performance						
Item	Unit	3 bloc...	2 bloc...	1 bloc...	Detect	
ATF Temp.	°F	66	66	66	66	

Is the ATF temperature less than 68°F?

YES: Proceed to STEP 4.

NO: Proceed to STEP 7.

STEP 4: Check the current ATF temperature data monitor using SSM. See the example below.

Item	Value	Unit
ATF Temp.	88	°F

Continued...

Is the current temperature less than 68°F?

YES: Proceed to STEP 5.

NO: The fault has been inaccurately detected. Clear ALL DTCs and perform a road test to confirm no DTCs return. Follow the “INSPECTION MODE B” road test procedures outlined in STIS: DIAGNOSTICE > TRANSMISSION (DIAGNOSTICS) > Inspection Mode.

STEP 5: Start the engine and allow it to idle for at least five minutes while monitoring the ATF temperature. Does the temperature increase at least 3.6°F from the value observed in STEP 4?

YES: The fault has been inaccurately detected. Clear ALL DTCs and perform a road test to confirm no DTCs return. Follow the “INSPECTION MODE B” road test procedures outlined in STIS: DIAGNOSTICE > TRANSMISSION (DIAGNOSTICS) > Inspection Mode.

NO: Proceed to STEP 7.

STEP 6: Reprogram the TCM following the normal FlashWrite procedure. Once reprogramming is complete, perform a road test to confirm no DTCs return. Follow the “INSPECTION MODE B” road test procedures outlined in STIS: DIAGNOSTICE > TRANSMISSION (DIAGNOSTICS) > Inspection Mode. If no DTCs return, the service procedure is complete.

NOTE: Detailed information regarding battery power supply for reprogramming can be found in the **Appendix A** section of this bulletin.

STEP 7: Further diagnosis of P0712 and/or P0713 is required. Listed below are the service procedures outlined in the Service Manual including the revised corrections. The corrections have been outlined in **RED**. Follow the applicable diagnosis and perform the necessary repair as per the applicable Service Manual.

P0712 DIAGNOSIS:

4. CHECK ATF TEMPERATURE SENSOR.

Measure the resistance between transmission connector terminals.

Connector and terminal

(T19) No. 4 — (T19) No. 16:

Perform the measurements using multiple oil temperatures.

Is resistance as follows?

Fluid temperature 0°C → Approx. 6.2 kΩ

Fluid temperature 20°C → Approx. 2.6 kΩ

Fluid temperature 80°C → Approx. 370 Ω

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Replace the TCM. [CONTINUOUSLY VARIABLE TRANSMISSION\(TR690\)>Transmission Control Module \(TCM\)](#)

Replace the ~~control valve body~~ **Transmission Harness**. [CONTINUOUSLY VARIABLE TRANSMISSION\(TR690\) > Transmission Harness](#)

P0713 DIAGNOSIS:

5. CHECK ATF TEMPERATURE SENSOR.

Measure the resistance between transmission connector terminals.

Connector and terminal

(T19) No. 4 – (T19) No. 16:

Does the resistance value increase gradually while the ATF temperature decreases?

[6](#)

Replace the ~~control valve body~~ **Transmission Harness**. [CONTINUOUSLY VARIABLE TRANSMISSION\(TR690\) > Transmission Harness](#)

WARRANTY / CLAIM INFORMATION:

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

Labor Description	Labor Operation #	Fail Code	Labor Time
TCM Reprogramming	A860-737	MJZ-48	0.5

IMPORTANT: The **NEW** Calibration Identification number (CID) for any newly-installed programming (as confirmed from the actual control module **AFTER** installation) **MUST** be noted on the repair order as this information is required for 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. Technicians 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.

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Appendix A

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 in 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 will take 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 FlashWrite 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.

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.

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