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: 2019-23MY Forester
2020-23MY Legacy & Outback
2017-23MY Impreza
2018-23MY Crosstrek

NUMBER: 09-122-24R
DATE: 05/14/24
REVISED: 10/30/26

SUBJECT: DTCs P2404 Reprogramming Files

INTRODUCTION:

This bulletin the announces diagnostic procedures and availability of new Engine Control Module (ECM) reprogramming files to address DTC P2404 (Evap System Leak Detection Pump Sense Circuit Range/Performance) detection. In rare cases, the internal pump for the Evaporative Leak Check Module (ELCM) system can seize temporarily. The new files contain enhanced logic to prevent the ELCM pump from seizing. If P2404 is found in the fault memory, follow the procedures outlined below.

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.

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PAK AND PFC FILE APPLICABILITY:

FORESTER					
MY	**Model**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
19	Forester	22765AL827.pak	22765AL820 22765AL821 22765AL822 22765AL823 22765AL824 22765AL825 22765AL826	A44B186E	XE1FB00A
20	Forester	22765AN466.pak	22765AN460 22765AN461 22765AN462 22765AN463 22765AN464 22765AN465	585CB1E4	XE1M700a00G
21	Forester	22765AR675.pak	22765AR670 22765AR671 22765AR672 22765AR673 22765AR674	67CEEA2A	XE1P800a00G
22	Forester	22765AR604.pak	22765AR600 22765AR601 22765AR602 22765AR603	E1A8EC6C	XE1R600k00G
22	Forester	22765AR554.pak	22765AR550 22765AR551 22765AR552 22765AR553	B4E98F7C	XE1R600a00G
22	Forester	22765AR614.pak	22765AR610 22765AR611 22765AR612 22765AR613	73EC24BE	XE1R600z00G
23	Forester	22765AS923.pak	22765AS920 22765AS921 22765AS922	8BAB05EA	XE1X020k00G
23	Forester	22765AS933.pak	22765AS930 22765AS931 22765AS932	AD4C67EE	XE1X020z00G
23	Forester	22765AV272.pak	22765AV270 22765AV271	3B0220F6	XE1X020p00G
23	Forester	22765AV282.pak	22765AV280 22765AV281	69EF98B7	XE1X020s00G

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LEGACY & OUTBACK 2.5L					
MY	**Model**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
20	Legacy	22765AN20H.pk2	22765AN20A 22765AN20B 22765AN20C 22765AN20D 22765AN20E 22765AN20F 22765AN20G	80F3F042	XE1J600m00G
	Outback	22765AP54H.pk2	22765AP54A 22765AP54B 22765AP54C 22765AP54D 22765AP54E 22765AP54F 22765AP54G	D7DCFE8A	XE1J600n00G
21	Legacy	22765AR18F.pk2	22765AR18A 22765AR18B 22765AR18C 22765AR18D 22765AR18E	2183E3F3	XE1P800m00G
	Outback	22765AR19F.pk2	22765AR19A 22765AR19B 22765AR19C 22765AR19D 22765AR19E	A55FC233	XE1P800n00G
22	Legacy	22765AS22F.pk2	22765AS22A 22765AS22B 22765AS22C 22765AS22D 22765AS22E	BE49F201	XE1Q400m00G
	Outback	22765AS23F.pk2	22765AS23A 22765AS23B 22765AS23C 22765AS23D 22765AS23E	4DB14C7F	XE1Q400n00G
23	Legacy	22765AS49C.pfc	22765AS49A 22765AS49B	NA	XE1W400m00G
	Outback	22765AS50C.pfc	22765AS50A 22765AS50B		XE1W400n00G
24	Legacy	22765AT70B.pfc	22765AT70A		XE1W400L00G
	Outback	22765AT71B.pfc	22765AT71A		XE1W400J00G

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LEGACY & OUTBACK 2.4L					
MY	**Model**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
20	Legacy & Outback	22765AM977.pk2	22765AM970 22765AM971 22765AM972 22765AM973 22765AM974 22765AM975 22765AM976	954775AC	LG7D900B00G
21		22765AR245.pk2	22765AR240 22765AR241 22765AR242 22765AR243 22765AR244	004FF36F	LG7F600F00G
22		22765AR933.pk2	22765AR930 22765AR931 22765AR932	B11BCE83	LG7G500G00G
	Outback Wilderness	22765AR253.pk2	22765AR250 22765AR251 22765AR252	0B2A5DBD	LG7G500H00G
23		22765AS472.pfc	22765AS470 22765AS471	NA	LHBK240H00G

2017-23 IMPREZA						
MY	**Model**	**Specification**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
17	Impreza	2.0L NA CVT AGS	22765AU29B.pak	22765AJ60A 22765AJ60B 22765AJ60C 22765AJ60D 22765AJ60E 22765AJ60F 22765AJ60G 22765AJ60H 22765AJ60J 22765AJ60K 22765AU29A	1B2FA6E0	XH3J2J0D
17-18	Impreza	2.0L NA 5MT AGS	22765AU28B.pak	22765AJ59A 22765AJ59B 22765AJ59C 22765AJ59D 22765AJ59E 22765AJ59F 22765AJ59G 22765AJ59H 22765AJ59J 22765AJ59K 22765AU28A	7343BAEE	XH3J2J0C

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2017-23 IMPREZA						
MY	**Model**	**Specification**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
17-18	Impreza	2.0L NA 5MT	22765AU30B.pak	22765AK61A 22765AK61B 22765AK61C 22765AK61D 22765AK61E 22765AK61F 22765AK61G 22765AK61H 22765AK61J 22765AK61K 22765AU30A	C0580A71	XH3J2J0A
17-18	Impreza	2.0L NA CVT	22765AU31B.pak	22765AL71A 22765AL71B 22765AL71C 22765AL71D 22765AL71E 22765AL71F 22765AL71G 22765AL71H 22765AL71J 22765AL71K 22765AU31	58B3DA32	XH3J2J0B
18	Impreza	2.0L NA CVT AGS	22765AV39A.pak	22765AM28A 22765AM28B 22765AM28C 22765AM28D 22765AM28E 22765AM28F 22765AM28G 22765AM28H 22765AM28J	0D0DDA74	XH3JF00D
20	Impreza	2.0L NA 5MT	22765AP12E.pak	22765AP12A 22765AP12B 22765AP12C 22765AP12D	E469A8DB	XE1M600A00G
20	Impreza	2.0L NA CVT AGS	22765AP13E.pak	22765AP13A 22765AP13B 22765AP13C 22765AP13D	55C01662	XE1M600D00G
20	Impreza	2.0L NA CVT	22765AP14E.pak	22765AP14A 22765AP14B 22765AP14C 22765AP14D	56C0CF73	XE1M600B00G
21	Impreza	2.0L NA 5MT AGS	22765AP84D.pak	22765AP84A 22765AP84B 22765AP84C	56DAE48B	XE1P700C00G
21	Impreza	2.0L NA 5MT	22765AP85D.pak	22765AP85A 22765AP85B 22765AP85C	D74E750C	XE1P700A00G

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2017-23 IMPREZA						
MY	**Model**	**Specification**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
21	Impreza	2.0L NA CVT AGS	22765AP86D.pak	22765AP86A 22765AP86B 22765AP86C	D3D70F22	XE1P700D00G
21	Impreza	2.0L NA CVT	22765AP87D.pak	22765AP87A 22765AP87B 22765AP87C	EC09E228	XE1P700B00G
22	Impreza	2.0L NA 5MT AGS	22765AS27C.pak	22765AS27A 22765AS27B	B93F17AA	XE1R500C00G
22	Impreza	2.0L NA 5MT	22765AS28C.pak	22765AS28A 22765AS28B	ED385E11	XE1R500A00G
22	Impreza	2.0L NA CVT AGS	22765AS29C.pak	22765AS29A 22765AS29B	7009AF79	XE1R500D00G
22	Impreza	2.0L NA CVT	22765AS30C.pak	22765AS30A 22765AS30B	B09D1F18	XE1R500B00G
23	Impreza	2.0L NA 5MT AGS	22765AT09D.pak	22765AT09A 22765AT09B 22765AT09C	D3F3CEC5	XE1W401C00G
23	Impreza	2.0L NA 5MT	22765AT10D.pak	22765AT10A 22765AT10B 22765AT10C	8FF7BD04	XE1W401A00G
23	Impreza	2.0L NA CVT AGS	22765AT11D.pak	22765AT10A 22765AT10B 22765AT10C	8A7F8F69	XE1W401D00G
23	Impreza	2.0L NA CVT	22765AT12D.pak	22765AT12A 22765AT12B 22765AT12C	1A491D04	XE1W401B00G

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2018-23 Crosstrek						
MY	**Model**	**Specification**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
18	Crosstrek	2.0L NA 6MT	22765AJ619.pak	22765AJ610 22765AJ611 22765AJ612 22765AJ613 22765AJ614 22765AJ615 22765AJ616 22765AJ617 22765AJ618	1857E138	XH3J2J0E
18	Crosstrek	2.0L NA CVT	22765AJ629.pak	22765AJ620 22765AJ621 22765AJ622 22765AJ623 22765AJ624 22765AJ625 22765AJ626 22765AJ627 22765AJ628	8DCDF939	XH3J2J0F
19	Crosstrek	2.0L NA CVT	22765AM827.pak	22765AM820 22765AM821 22765AM822 22765AM823 22765AM824 22765AM825 22765AM826	5403239C	337E D1EA
19	Crosstrek	2.0 NA 6MT	22765AM817.pak	22765AM810 22765AM811 22765AM812 22765AM812 22765AM813 22765AM814 22765AM814 22765AM815 22765AM816	AD37330D	XH3NB00E
20	Crosstrek	2.0L NA 6MT	22765AN934.pak	22765AN930 22765AN931 22765AN932 22765AN933	B816B9FF	XE1M600E00G
20	Crosstrek	2.0L NA CVT	22765AN953.pak	22765AN950 22765AN951 22765AN952	ABB8C540	XE1M600F00G
21	Crosstrek	2.5L NA CVT	22765AP814.pak	22765AP810 22765AP811 22765AP812 22765AP813	32282FD2	XE1P700G00G
21	Crosstrek	2.0L NA 6MT	22765AP923.pak	22765AP920 22765AP921 22765AP922	67DDE383	XE1P700E00G

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2018-23 Crosstrek						
MY	**Model**	**Specification**	**File Description**	**Old ECM Part #**	**Decryption Keyword**	**New CID #**
21	Crosstrek	2.0L NA CVT	22765AP933.pak	22765AP930 22765AP931 22765AP932	2CC36181	XE1P700F00G
22	Crosstrek	2.0L NA 6MT	22765AS312.pak	22765AS310 22765AS311	B9C9F065	XE1R500E00G
22	Crosstrek	2.0L NA CVT	22765AS322.pak	22765AS320 22765AS321	090EB7B3	XE1R500F00G
22	Crosstrek	2.5L NA CVT	22765AS344.pak	22765AS340 22765AS341 22765AS342 22765AS343	989D58B6	XE1R500G00G
23	Crosstrek	2.0L NA 6MT	22765AT133.pak	22765AT130 22765AT131 22765AT132	64F97F7B	XE1W401E00G
23	Crosstrek	2.0L NA CVT	22765AT143.pak	22765AT140 22765AT141 22765AT142	5CBF52BB	XE1W401F00G
23	Crosstrek	2.5L NA CVT	22765AT154.pak	22765AT150 22765AT151 22765AT152 22765AT153	575790D2	XE1X020G00G

SERVICE PROCEDURE / INFORMATION:

STEP 1: Perform TSB 09-142-26. Did TSB 09-142-26 provide a repair recommendation?

YES - Repair complete

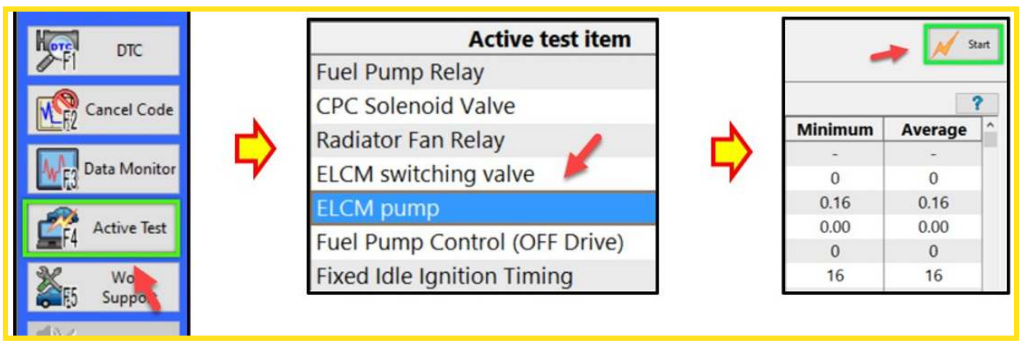
NO - Go to Step 3.

STEP 2: Was the Forced Evap result from 09-142-26 lower than -0.26 psi?

YES - Go to Step 5

NO - Go to Step 3.

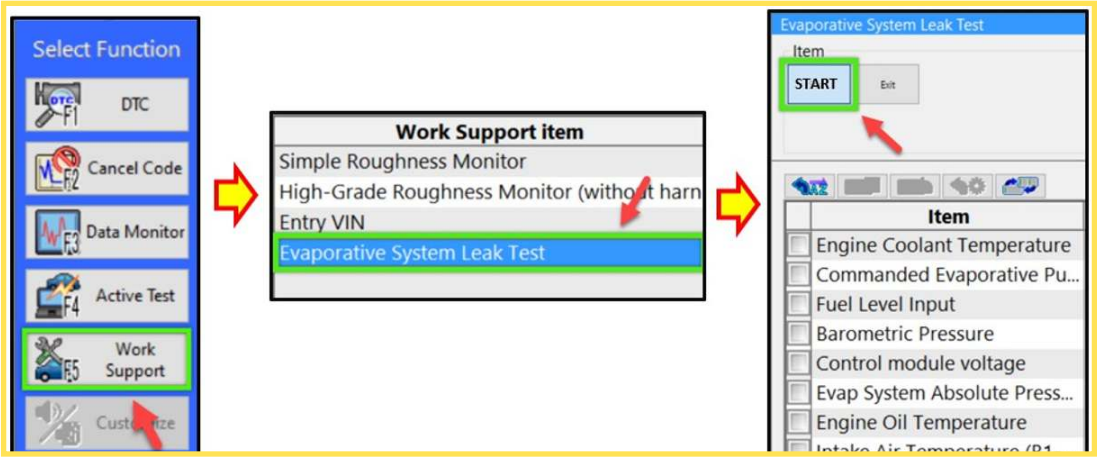
STEP 3: Using SSM, perform the ELCM Pump Active Test for a period of 35 minutes or more. See **APPENDIX A** for additional information regarding power supply.



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Step 4: Connect the vehicle to a recommended power supply. See APPENDIX A for additional information regarding power supply. Using SSM, perform the Evaporative System Leak Test. Collect and save all data.

Note: Ensure the power supply is connected and battery voltage remains between 12-13.5V.



Was the Forced Evap leak test result lower than -0.26 psi?

YES - Go to Step 5.

NO - Replace the Evaporate Leak Check Module and go to Step 5.

STEP 5: Reprogram the ECM following the normal SSM5-R procedure then proceed to Step 6. See **APPENDIX A** for addition information regarding power supply.

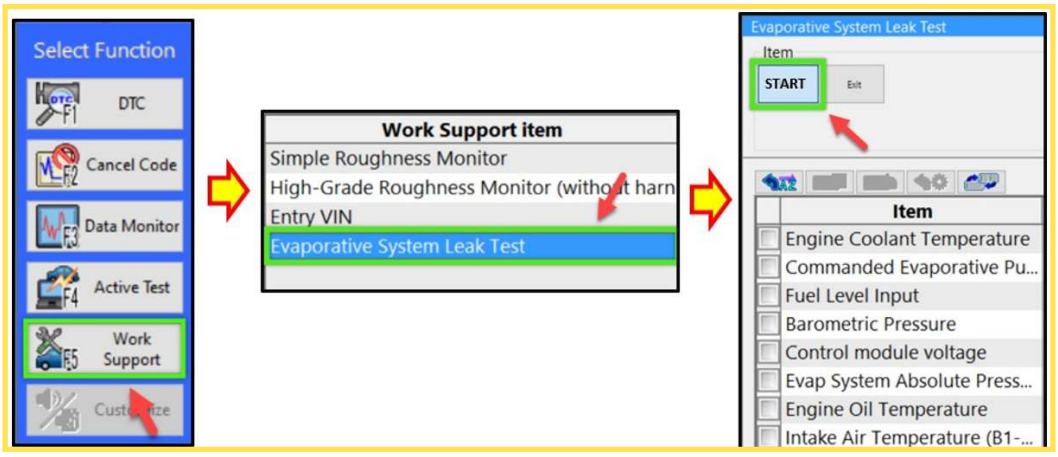
STEP 6: Connect the vehicle to a recommended power supply. See APPENDIX A for additional information regarding power supply. Using SSM, perform the Evaporative System Leak Test. Collect and save all data.

Note: Ensure the power supply is connected and battery voltage remains between 12-13.5V.

Did any DTCs return?

YES - Diagnose the condition according to the applicable Service Manual.

NO - Repair is complete.



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STEP 7: If the VIN precedes those listed in the Production Change section, reprogram the ECM using the standard FlashWrite or SSM5-R procedure. Refer to **APPENDIX A** for additional information regarding power supply.

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 #	Labor Time	Fail Code
*ECM REPROGRAMMING & DRAIN TUBE CLEAN / EVAP TESTING	A455-223	1.8H	UPG-48
*LEAK CHECK MODULE R&R AND ECM REPROGRAMMING	A455-244	3.4H	

* This includes the work performed from TSB 09-142-26

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 claim specific data 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.

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APPENDIX A

Subaru of America, Inc. (SOA) highly recommends connecting 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.

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.

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.