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: 2017-18MY Forester

SUBJECT: DTC P2404 / Reprogramming Files

NUMBER: 09-113-23R
DATE: 01/11/24
REVISED: 10/30/26

INTRODUCTION:

This bulletin 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.

PAK FILE APPLICABILITY:

These reprogramming files have been included in the October 2023 SSM software update.

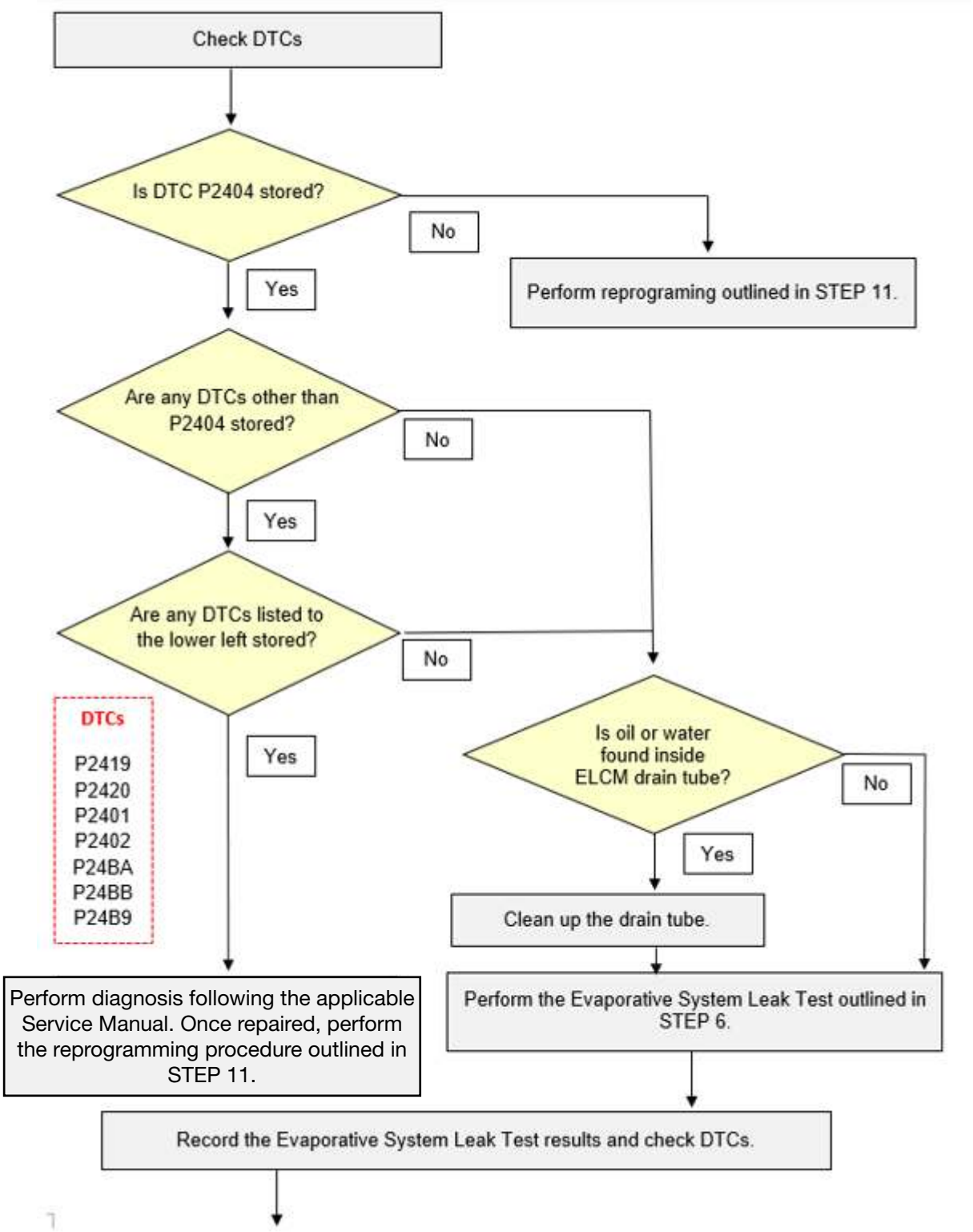
MY	File name	Specification	Old Part Number	Decryption Keyword	New CID #
17	22765AH854.pak	2.5L NA, 6MT	22765AH850 22765AH851 22765AH852 22765AH853	67E0C04A	EB4L200W
	22765AH864.pak	2.5L NA, CVT	22765AH860 22765AH861 22765AH862 22765AH863	D45ED35A	EB4J350R
18	22765AL383.pak	2.5L NA, 6MT	22765AL380 22765AL381 22765AL382	1B3F1BAD	EB4P040W
	22765AL393.pak	2.5L NA, CVT	22765AL390 22765AL391 22765AL392	665EE069	EB4S300R

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.

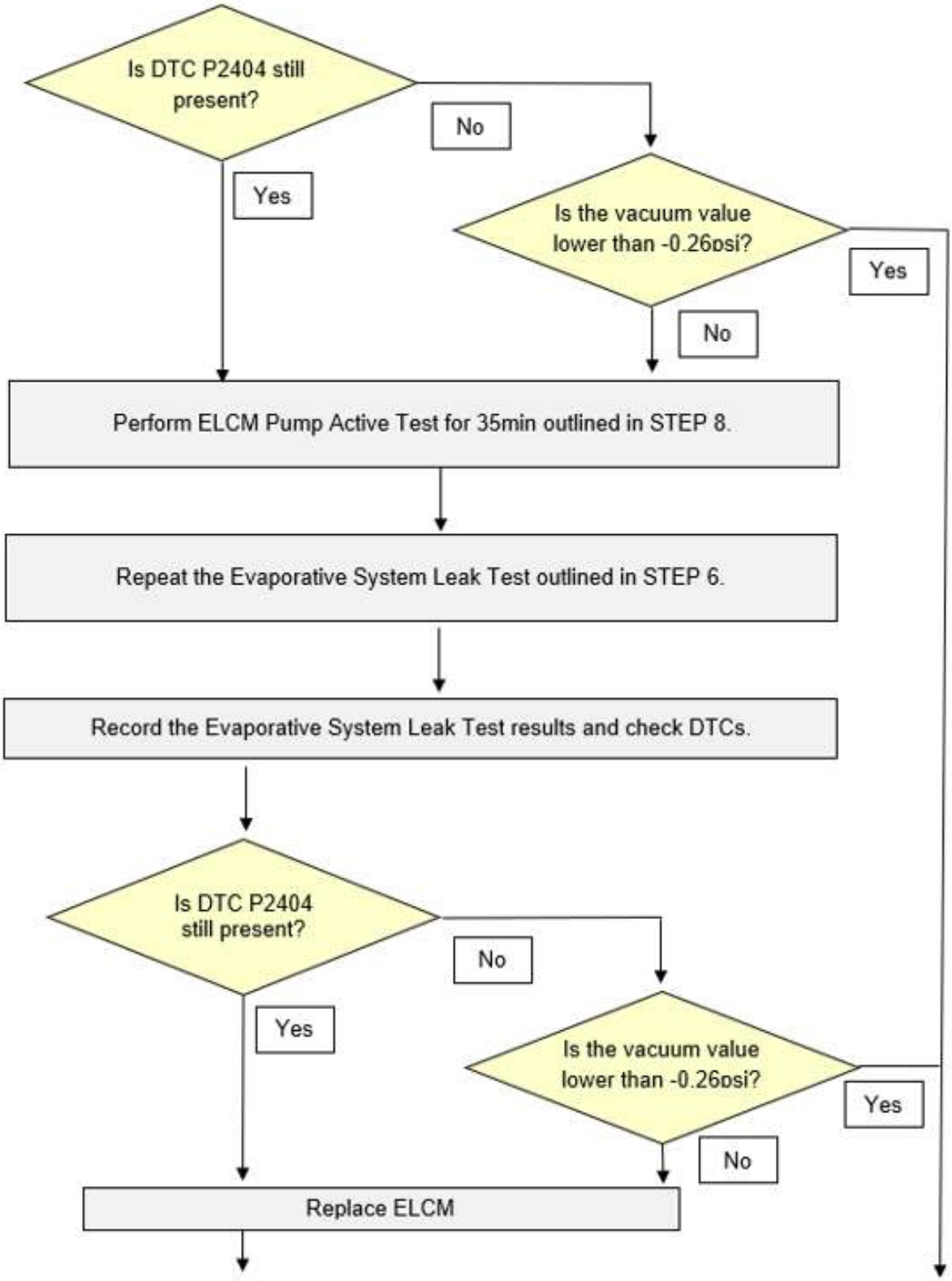
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ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

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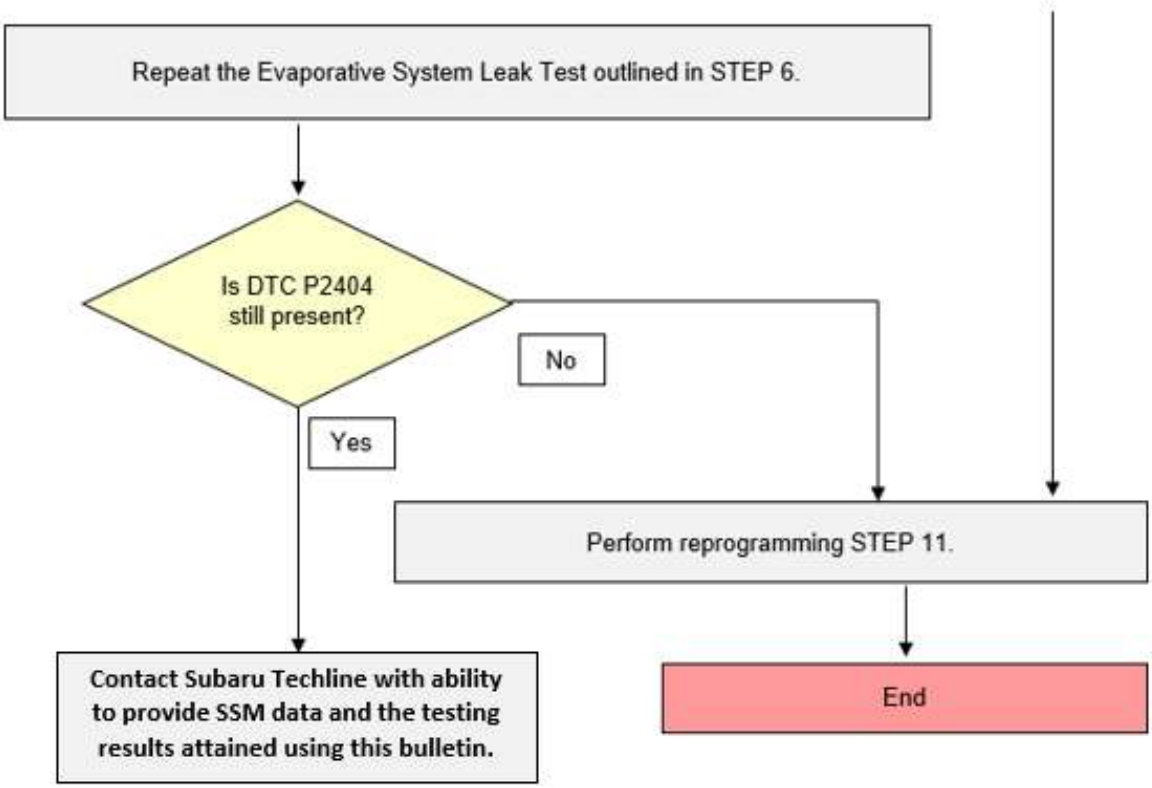
SERVICE PROCEDURE FLOWCHART:



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Is DTC P2404 still present?
No
Yes
Is the vacuum value lower than -0.26psi?
Yes
No
Perform ELCM Pump Active Test for 35min outlined in STEP 8.
Repeat the Evaporative System Leak Test outlined in STEP 6.
Record the Evaporative System Leak Test results and check DTCs.
Is DTC P2404 still present?
No
Yes
Is the vacuum value lower than -0.26psi?
Yes
No
Replace ELCM

Continued...



SERVICE PROCEDURE / INFORMATION:

STEP 1: Using the Subaru Select Monitor (SSM), check for diagnostic trouble codes. Confirm DTC P2404 is stored and proceed to the next step.

NOTE: Always save SSM data and record the results of the following tests.

STEP 2: Are any of the diagnostic trouble codes listed below also stored within the ECM?

- P2419 - Evap System Switching Valve Control Circuit Low
- P2420 - Evap System Switching Valve Control Circuit High
- P2401 - Evap System Leak Detection Pump Control Circuit Low
- P2402 - Evap System Leak Detection Pump Control Circuit High
- P24BA - Evap System Leak Detection Pump Pressure Sensor Circuit Low
- P24BB - Evap System Leak Detection Pump Pressure Sensor Circuit High
- P24B9 - Evap System Leak Detection Pump Pressure Sensor Circuit Range/Performance

NO – Proceed to STEP 3.

YES – Perform diagnosis of the DTC(s) following the procedures outlined in the applicable Service Manual.

Continued...

STEP 3: Refer to the applicable Service Manual and review: General Description > Repair Contents

Action required before & after Battery Disconnect. Additionally, record any stored seat position(s) before proceeding. Relearn any seat position memory after work is complete. If the power rear gate (PRG) height has been customized, that position must also be noted and relearned. **CAREFULLY** disconnect the ground terminal from the battery sensor.

STEP 4: CAREFULLY Raise the vehicle and locate the ELCM located behind the fuel tank. Refer to STIS: Engine > EMISSION CONTROL (AUS. EMISSION CONTROL DEVICES)

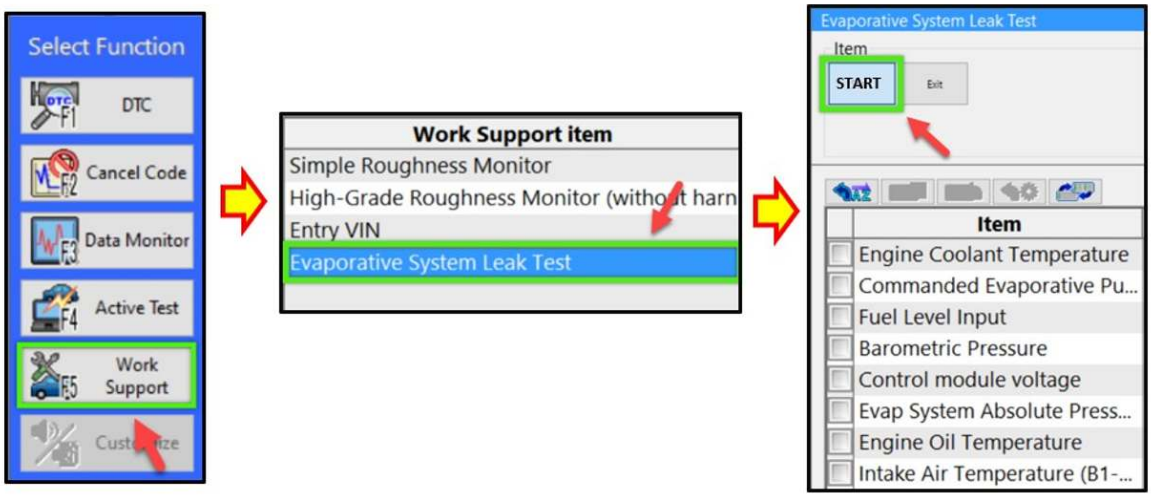
STEP 5: CAREFULLY disconnect the ELCM drain tube. Inspect for signs of water or oil.

Have signs of water or oil been detected within the ELCM drain tube?

YES – Clean and dry the drain tube using a non-alcohol base cleaner. Proceed to STEP 6.

NO – Proceed to STEP 6.

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



Once the evaporative system leak test is complete, check the DTCs and examine the vacuum value results. Record the value shown in the row labeled MID: $3C, TID: $C4, and Scaling ID: $FE. This value should be lower than -0.26 PSI.

MID	TID	Scaling ID	Value	Unit	Minimum	Maximum	Result
$3C	$C1	$FE	0.00	psi	0.00	0.00	OK
$3C	$C2	$FE	0.00	psi	0.00	0.00	OK
$3C	$C3	$FE	0.00	psi	0.00	0.00	OK
$3C	$C4	$FE	0.00	psi	0.00	0.00	OK
$3C	$C5	$FE	0.00	psi	0.00	0.00	OK
$3C	$C6	$35			0.00	0.00	OK
$3C	$C7	$FE			0.00	0.00	OK
$3C	$C8	$FE			0.00	0.00	OK
$3C	$C9	$FE	0.00	psi	0.00	0.00	OK
$3C	$CA	$FE	0.00	psi	0.00	0.00	OK

Value Must Be Lower Than -0.26 PSI

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Is DTC P2404 stored within the ECM?

NO – Proceed to STEP 7.

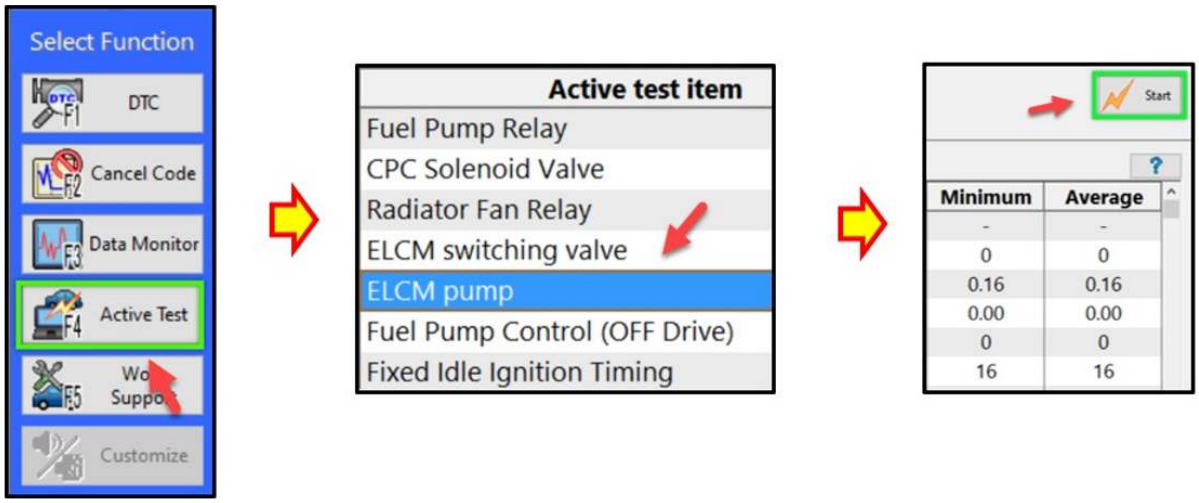
YES – Proceed to STEP 8.

STEP 7: Was the vacuum value result observed in STEP 6 found to be lower than -0.26 PSI?

YES – Proceed to STEP 11.

NO – Repeat the Evaporative System Leak Test (outlined in Step 6) then proceed to STEP 9.

STEP 8: 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.



Once the ELCM Pump Active Test has been performed for a period of 35 minutes or more, repeat the Evaporative System Leak Test outlined in STEP 6. Check the DTCs and the vacuum value results.

Is DTC P2404 stored within the ECM?

NO – Proceed to STEP 7.

YES – Proceed to STEP 8.

STEP 9: Was the vacuum value result observed during the second Evaporative System Leak Test found to be lower than -0.26 PSI?

YES – Proceed to STEP 11.

NO – Proceed to STEP 10.

STEP 10: Replace the Evaporate Leak Check Module and repeat the Evaporative System Leak Test outlined in STEP 6. Check the DTCs and the vacuum value results.

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Is DTC P2404 stored within the ECM?

NO – Proceed to STEP 11.

YES – Contact Subaru Techline with ability to provide SSM data and the testing results attained using this bulletin.

STEP 11: Reprogram the ECM following the normal FlashWrite procedure. See **APPENDIX A** for addition 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	2.6H	

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.

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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.