Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002C41P
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: M20A-FXS (ENGINE CONTROL): SFI SYSTEM: EVAP System; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

EVAP System

RELATED DTCS

DTC NO.	MONITORING ITEM	LINK
P043E00	Reference orifice low flow	INFO
P043F00	Reference orifice high flow	
P04417E	Purge VSV stuck open	INFO
P04417F	Purge VSV stuck closed	
P04419C	Insufficient purge flow	
P044672	Vent valve (built into canister pump module) stuck open	INFO
P046673	Vent valve (built into canister pump module) stuck closed	INFO
P045011	Canister pressure sensor (built into canister pump module) voltage low	INFO
P045015	Canister pressure sensor (built into canister pump module) voltage high	
P04502F	Canister pressure sensor (built into canister pump module) signal noise	
P142000	Small or 0.02 inch leak from canister	INFO
P142100	Gross leak from canister	
P142200	Small or 0.02 inch leak from fuel tank	INFO
P142300	Gross leak from fuel tank	
P145011	Fuel tank pressure sensor voltage low	INFO
P145015	Fuel tank pressure sensor voltage high	
P14502A	Fuel tank pressure sensor signal noise	
P14502F	Fuel tank pressure sensor abnormal voltage fluctuation (Noise monitor)	
P14CE12	CCV B circuit range check (high current)	INFO
P14CE14	CCV B circuit range check (low voltage)	
P24007E	Leak detection pump (built into canister pump module) stuck on	INFO
P24007F	Leak detection pump (built into canister pump module) stuck off	
P241812	CCV A circuit range check (high current)	INFO
P241814	CCV A circuit range check (low voltage)	
P24507E	Fuel vapor-containment valve stuck open	INFO
P24517F	Fuel vapor-containment valve stuck closed	
P261029	Soak timer (built into ECM)	INFO

DTC NO.	MONITORING ITEM	LINK
P261093		

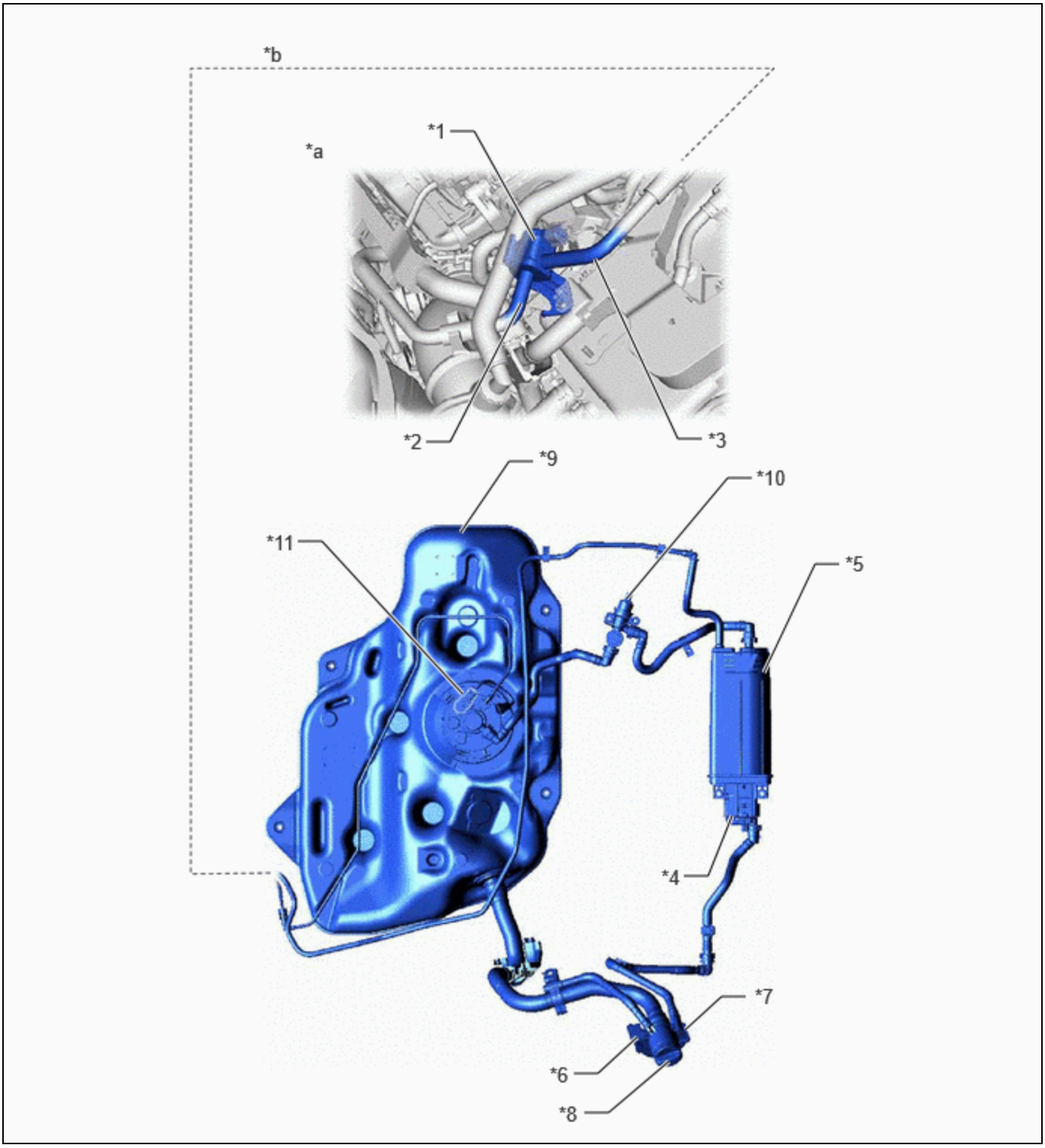
DESCRIPTION

While the engine is running, if predetermined conditions (closed loop, etc.) are met, the purge VSV is opened by the ECM and stored fuel vapors in the canister are purged to the intake manifold. The ECM will change the duty cycle ratio of the purge VSV to control purge flow volume.

Purge flow volume is also determined by the intake manifold pressure. Atmospheric pressure is allowed to enter the canister through the vent valve to ensure that purge flow is maintained when negative pressure (vacuum) is applied to the canister.

The ECM monitors the condition of both the key-off monitor and purge flow monitor to ensure proper operation of the EVAP system.

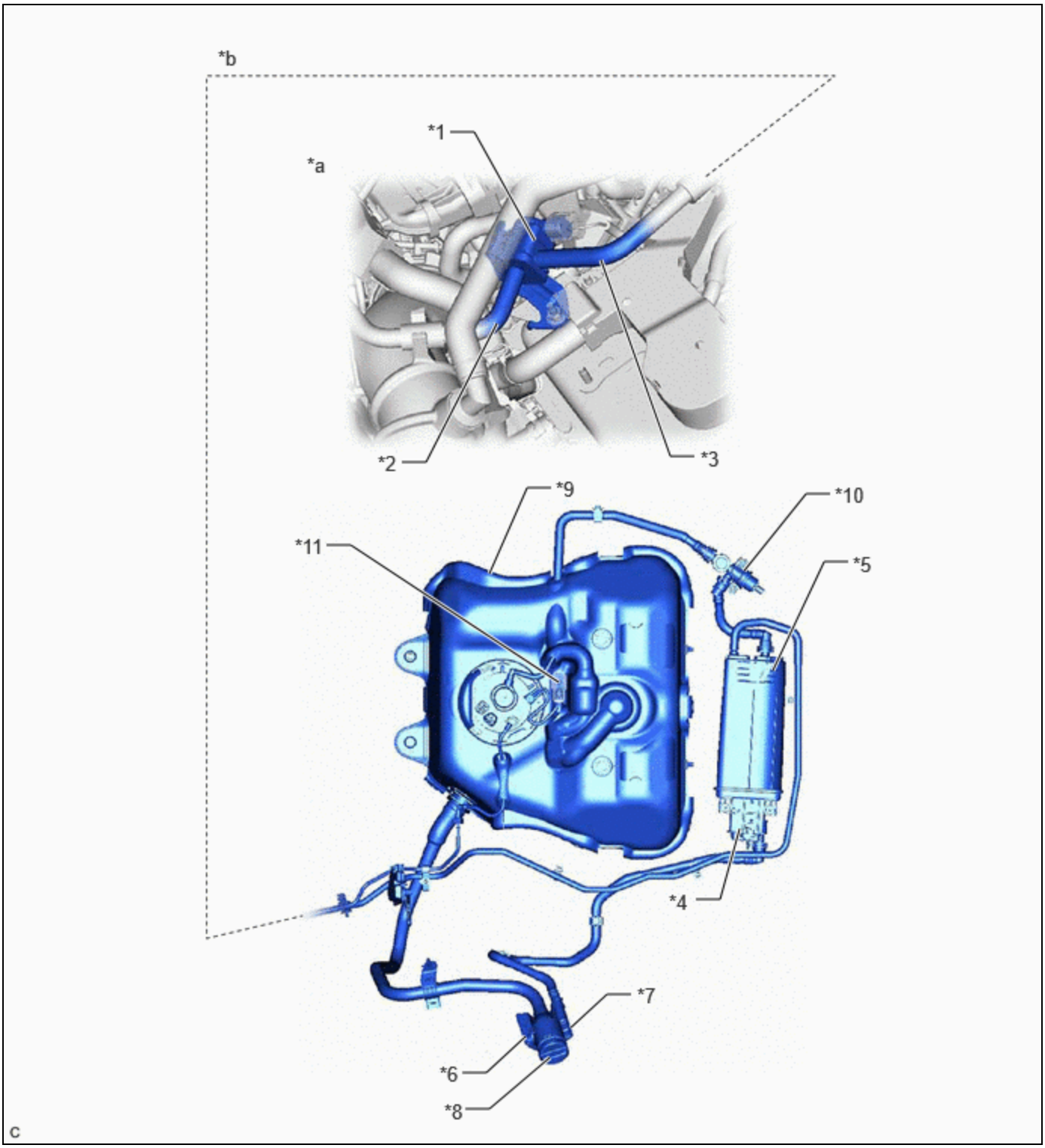
for HEV Model



*1	Purge VSV	*2	Fuel Vapor Feed Hose Assembly (EVAP Hose) (to Intake Manifold)
*3	Fuel Vapor Feed Hose Assembly (EVAP Hose) (from Canister)	*4	Canister Pump Module - Canister Pressure Sensor - Leak Detection Pump - Vent Valve
*5	Canister	*6	Canister Filter
*7	Air Inlet Port	*8	Fuel Tank Cap Assembly
*9	Fuel Tank Assembly	*10	Fuel Vapor-containment Valve

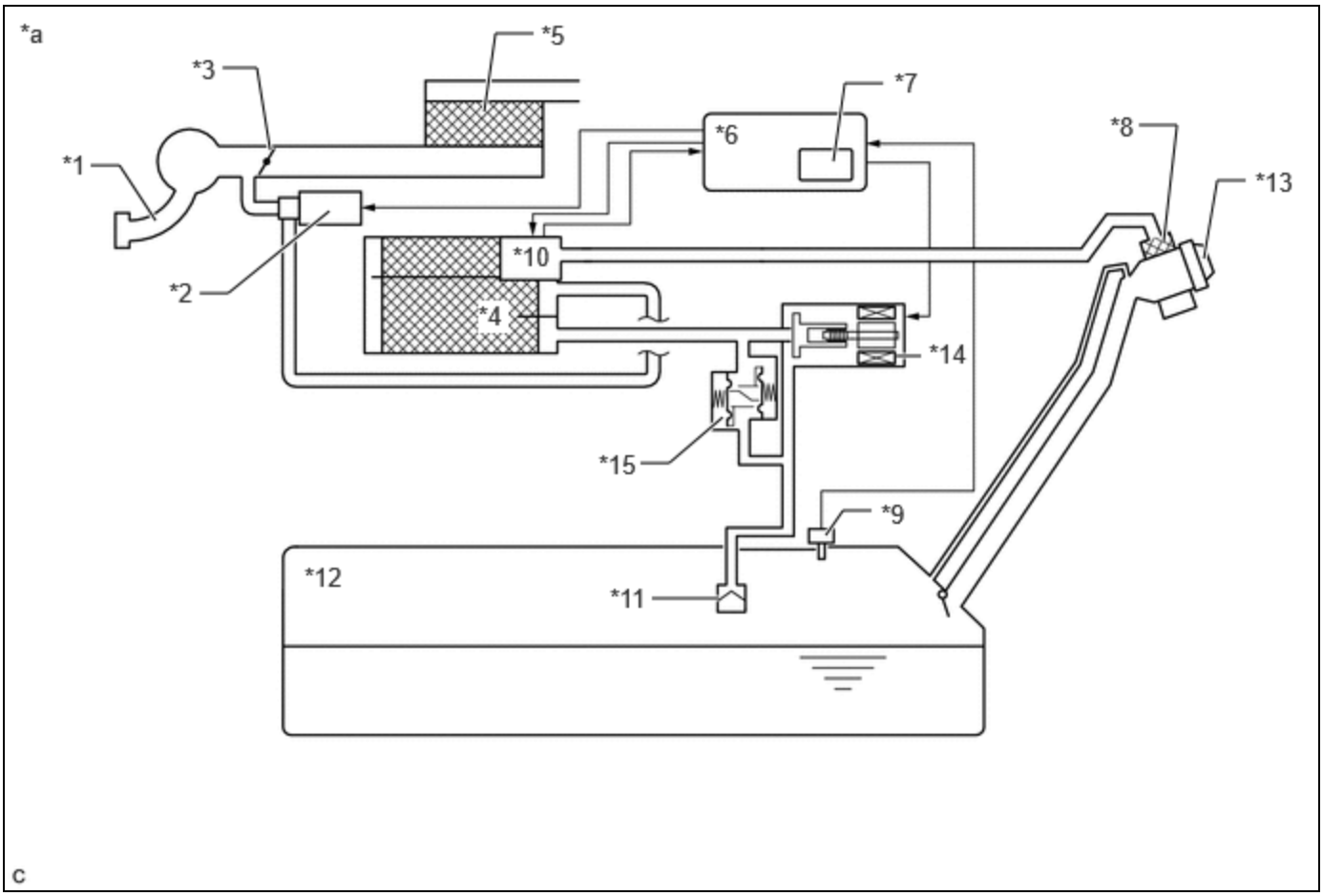
*11	Fuel Tank Pressure Sensor	-	-
*a	Location of EVAP (Evaporative Emission) System	*b	Purge Line

for PHEV Model



*1	Purge VSV	*2	Fuel Vapor Feed Hose Assembly (EVAP Hose) (to Intake Manifold)

*3	Fuel Vapor Feed Hose Assembly (EVAP Hose) (from Canister)	*4	Canister Pump Module - Canister Pressure Sensor - Leak Detection Pump - Vent Valve
*5	Canister	*6	Canister Filter
*7	Air Inlet Port	*8	Fuel Tank Cap Assembly
*9	Fuel Tank Assembly	*10	Fuel Vapor-containment Valve
*11	Fuel Tank Pressure Sensor	-	-
*a	Location of EVAP (Evaporative Emission) System	*b	Purge Line

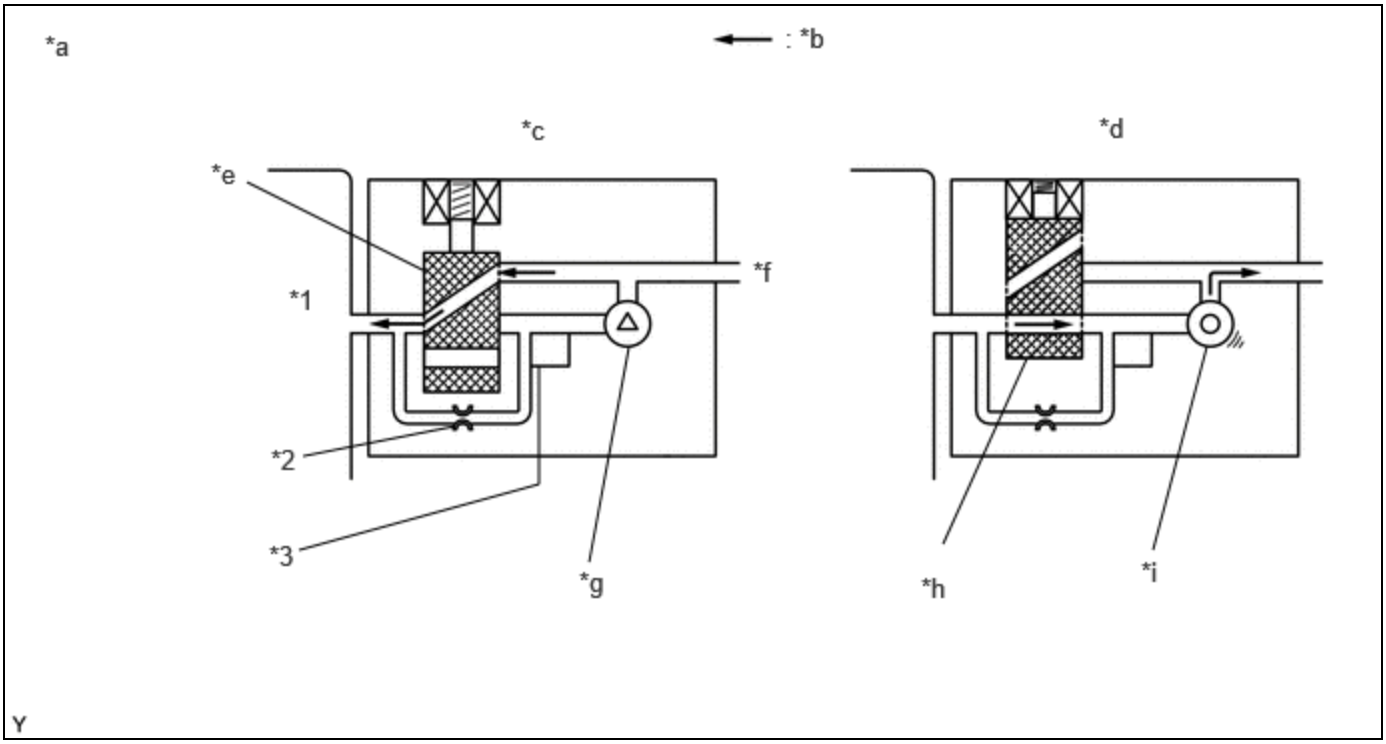


*1	Intake Manifold	*2	Purge VSV
*3	Throttle Valve	*4	Canister
*5	Air Cleaner	*6	ECM
*7	Soak Timer	*8	Canister Filter
*9	Fuel Tank Pressure Sensor	*10	Canister Pump Module - Canister Pressure Sensor - Leak Detection Pump - Vent Valve
*11	Cut-off Valve	*12	Fuel Tank Assembly
*13	Fuel Tank Cap Assembly	*14	Fuel Vapor-containment Valve
*15	Fuel Outlet Valve (Relief Valve)	-	-
*a	EVAP System Circuit	-	-

COMPONENT	OPERATION
Canister	Contains activated charcoal to absorb EVAP (Evaporative Emissions) generated in fuel tank.
Cut-off valve	Located in the fuel tank. Valve closes by its own weight when vehicle is overturned to prevent fuel from spilling out.
Purge VSV (Vacuum Switching Valve)	Opens or closes line between canister and intake manifold. ECM uses purge VSV to control EVAP purge flow. In order to discharge EVAP absorbed by canister to intake manifold, ECM opens purge VSV. EVAP discharge volume to intake manifold controlled by purge VSV duty cycle (current-carrying time). (Open: on, Close: off)
Soak timer	Built into ECM. To ensure accurate EVAP monitor, measures 5 hours (+/-15 min) after ignition switch is turned off. This allows fuel to cool down, stabilizing EVAP pressure. When approximately 5 hours elapsed, ECM activates (refer to fig. 3).
Fuel vapor-containment valve	Opens and closes line between fuel tank and canister. When vehicle is stopped, this valve stays closed to keep fuel vapors in the tank and prevent them from being absorbed by canister. During refueling, valve opens to allow fuel vapors from tank to be absorbed by canister. When the vehicle is being driven, the valve maintains a slight positive pressure in the fuel tank. The ECM controls the opening amount of the fuel vapor-containment valve linearly by energizing the stepper motor.
Fuel tank pressure sensor	Converts pressure in fuel tank into voltage reading for use by ECM. ECM supplies 5 V to sensor, and uses voltage reading that is output as feedback to allow monitoring of fuel tank pressure (refer to fig. 4).
Canister pump module	Consists of (a) to (d) below. Canister pump module cannot be disassembled.
(a) Vent valve*	Vents and closes EVAP system. When ECM turns valve on, EVAP system is closed. When ECM turns valve off, EVAP system is vented. Negative pressure (vacuum) is created in EVAP system to check for EVAP leaks by closing purge VSV, turning on vent valve (closing it) and operating leak detection pump (refer to fig. 1).
(b) Canister pressure sensor	Indicates pressure as voltages. ECM supplies regulated 5 V to pressure sensor, and uses feedback from sensor to monitor EVAP system pressure (refer to fig. 2).
(c) Leak detection pump	Creates negative pressure (vacuum) in EVAP system for leak check.
(d) Reference orifice	Has opening with 0.02 inch diameter. Vacuum is produced through orifice by closing purge VSV, turning off vent valve and operating leak detection pump, to monitor reference pressure. Reference pressure is used when checking for small EVAP leaks.

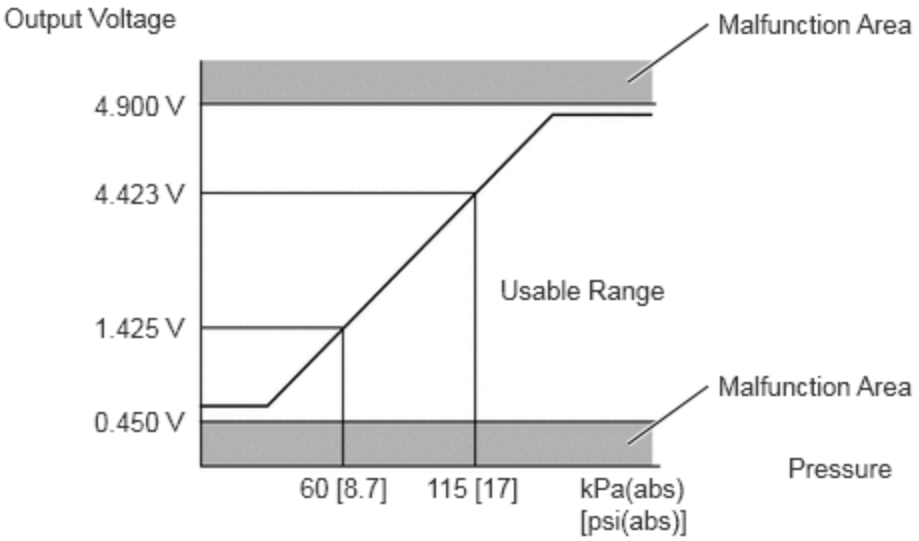
***: Vent Valve Operation**

VENT VALVE		EVAP SYSTEM
Off	Close	Vent
On	Open	Close



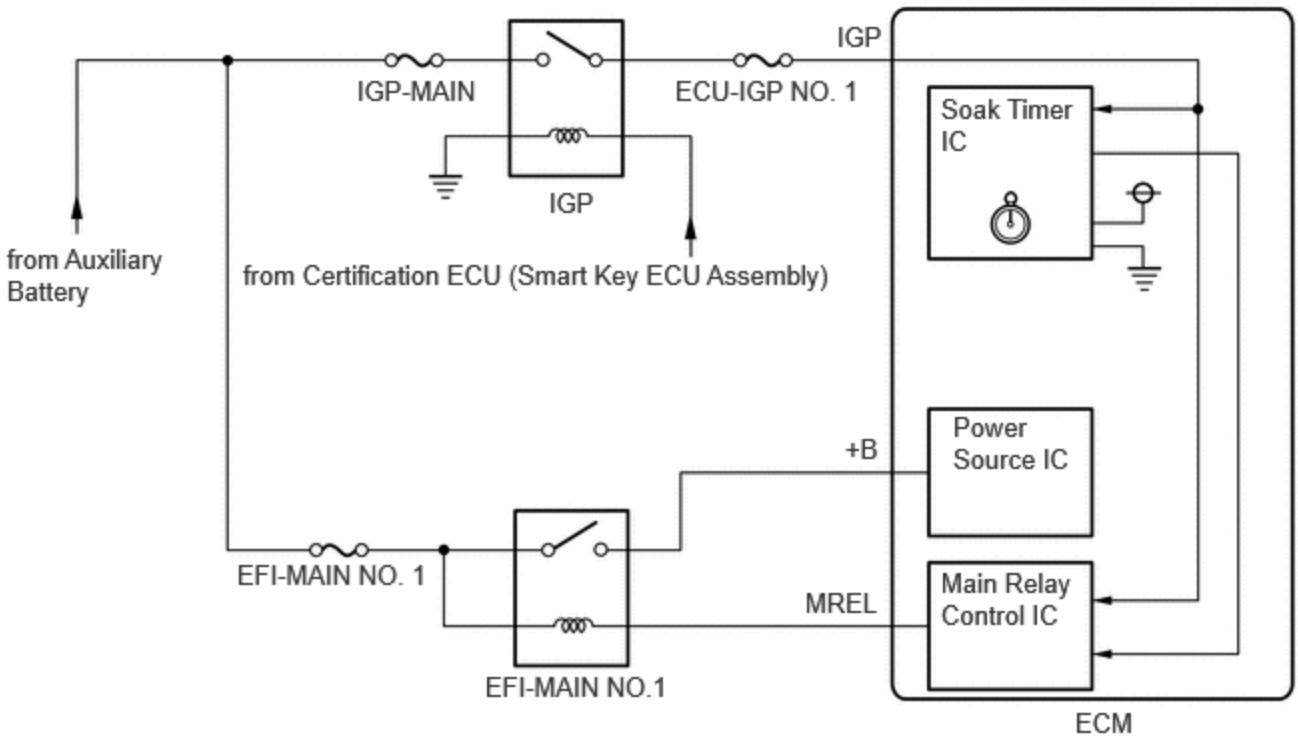
*1	Canister	*2	Reference Orifice (0.02 Inch)
*3	Canister Pressure Sensor	-	-
*a	Canister Pump Module (fig. 1)	*b	Airflow
*c	Condition: Purge Flow	*d	Condition: Leak Check
*e	Vent Valve: off (close)	*f	to Canister Filter (Atmosphere)
*g	Leak Detection Pump: off	*h	Vent Valve: on (open)
*i	Leak Detection Pump: on	-	-

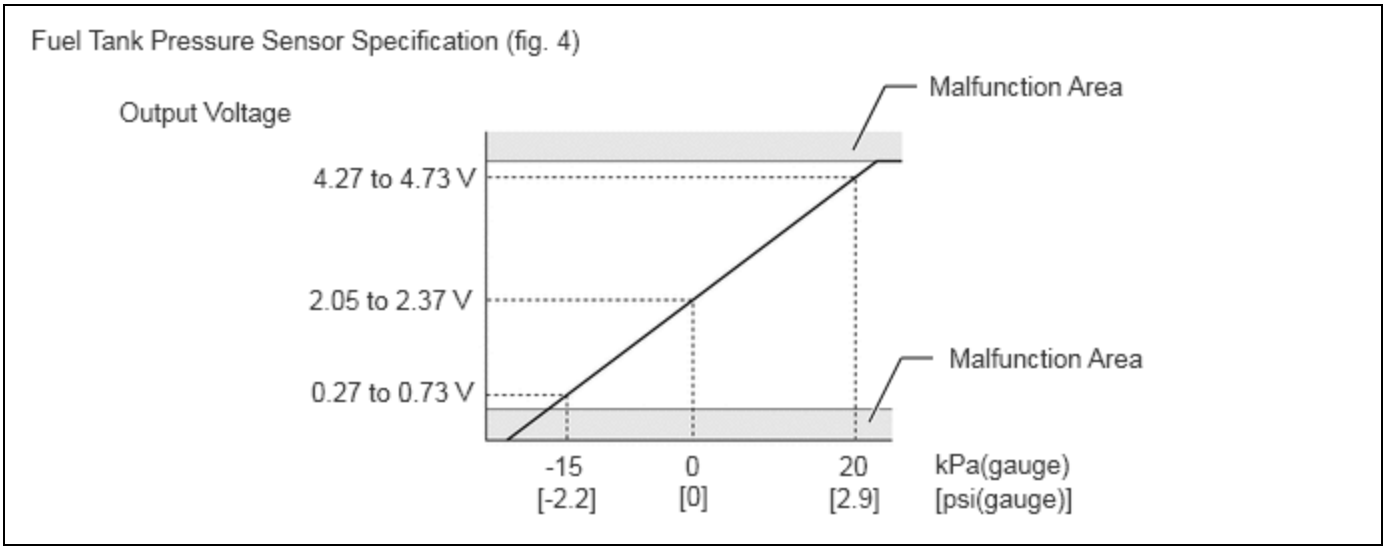
Canister Pressure Sensor Specification (fig. 2)



HINT:
Standard atmospheric pressure is 101.3 kPa(abs) [14.7 psi(abs)]

Soak Timer Circuit (fig. 3)





Key-off monitor

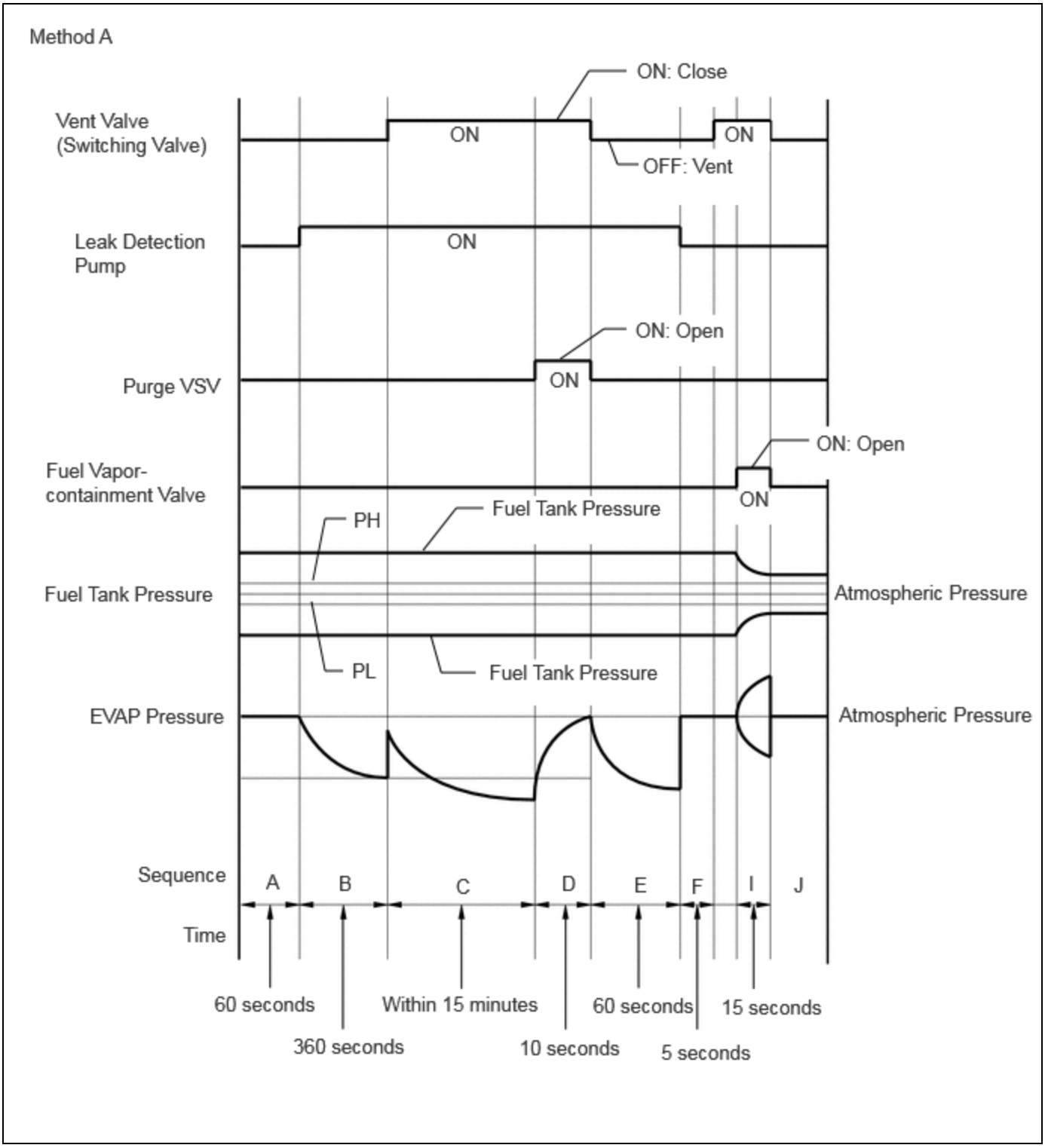
This monitor checks for EVAP (evaporative emission) system leaks and canister pump module malfunctions. The monitor starts 5 hours* after the ignition switch is turned off. At least 5 hours are required for the fuel to cool down to stabilize the EVAP pressure, thus making the EVAP system monitor more accurate.

The leak detection pump creates negative pressure (vacuum) in the EVAP system and the pressure is measured. Finally, the ECM monitors for leaks from the EVAP system, and malfunctions in both the canister pump module and purge VSV based on the EVAP pressure.

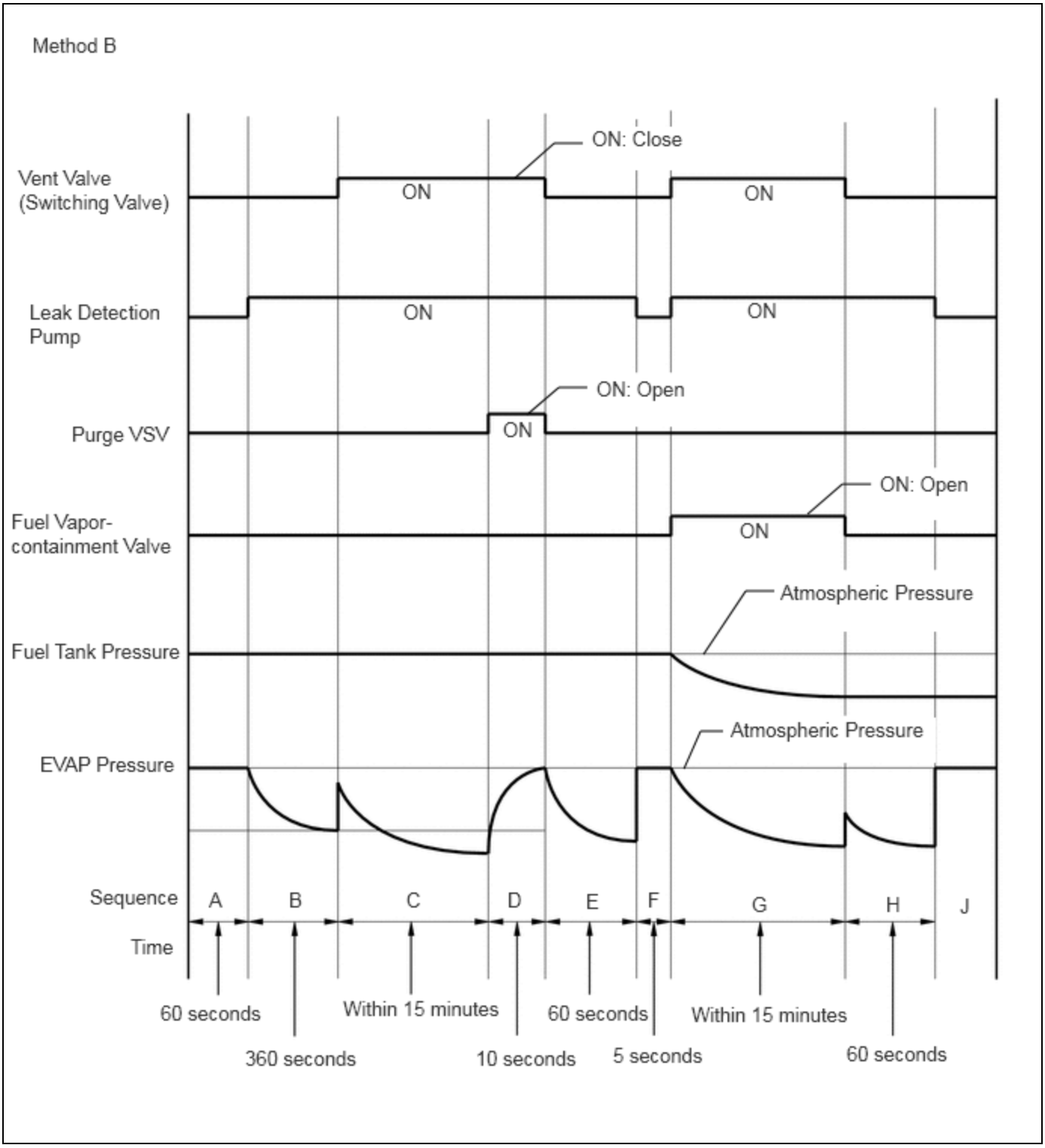
HINT:

*: If the engine coolant temperature is not less than 35°C (95°F) 5 hours after the ignition switch is turned off, the monitor check starts 2 hours later. If it is still not less than 35°C (95°F) 7 hours after the ignition switch is turned off, the monitor check starts 2.5 hours later.

(a) If the fuel tank pressure is higher or lower than the atmospheric pressure, the system determines that there are no leaks in the closed tank system and the system will check for leaks from the piping and canister between the purge VSV and canister pump module. (Method A)



(b) If the fuel tank pressure is almost the same as the atmospheric pressure, vacuum will be allowed to enter the fuel tank and the system will check for leaks from the fuel tank after checking for leaks from the canister. (Method B)

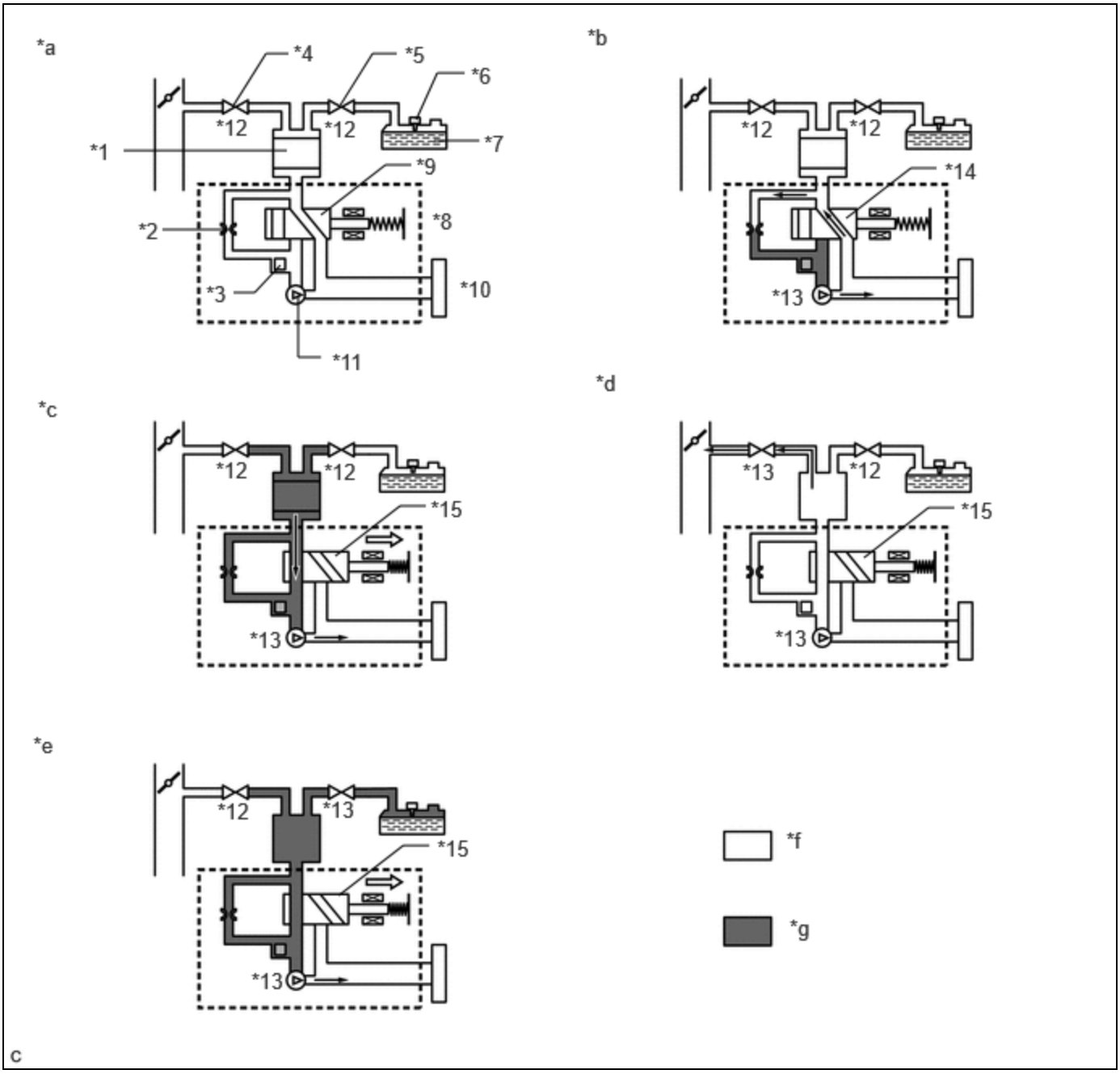


SEQUENCE	OPERATION	DESCRIPTION	DURATION
-	ECM activation	Activated by soak timer, 5 hours (7 or 9.5 hours) after ignition switch is turned off.	-
A	Atmospheric pressure measurement	Vent valve turned off (vent) and EVAP system pressure is measured by ECM in order to register atmospheric pressure. If pressure in EVAP system is not between 70 and 110 kPa(abs) [10.2 and 16 psi(abs)], ECM cancels EVAP system monitor.	60 seconds

SEQUENCE	OPERATION	DESCRIPTION	DURATION
B	First reference pressure measurement	In order to determine reference pressure, leak detection pump creates negative pressure (vacuum) through reference orifice and then ECM checks if leak detection pump and vent valve operate normally.	360 seconds
C	EVAP system pressure measurement	Vent valve is turned on (closed) to shut EVAP system. Negative pressure (vacuum) is created in EVAP system, and EVAP system pressure is then measured. Write down measured values as they will be used in leak check. If EVAP pressure does not stabilize within 15 minutes, ECM cancels EVAP system monitor.	15 minutes
D	Purge VSV monitor	Purge VSV opens and then EVAP system pressure is measured by ECM. Large increase indicates normal.	10 seconds
E	Second reference pressure measurement	After second reference pressure measurement, leak check is performed by comparing first and second reference pressure. If stabilized system pressure is higher than second reference pressure, ECM determines that EVAP system has a leak.	60 seconds
F	Resetting	Fuel tank pressure is compared with atmospheric pressure. If tank pressure is higher than PH or lower than PL, ECM determines that EVAP system is normal and runs sequence I in method A. If tank pressure is around atmospheric pressure, ECM performs sequence G in method B.	5 seconds
G	Fuel tank pressure measurement	Vent valve is turned on (closed). Fuel vapor-containment valve opens to allow negative pressure to enter the fuel tank and fuel tank pressure is measured. Write down measured values because they will be used in leak check. If fuel tank pressure does not stabilize within 15 minutes, ECM stops monitoring.	15 minutes*
H	Third reference pressure measurement	After third reference pressure measurement, leak check of fuel tank is performed. If recorded fuel tank pressure is higher than third reference pressure, ECM determines that EVAP system has a leak.	60 seconds
I	Fuel vapor-containment valve stuck closed check	Fuel vapor-containment valve is opened for a certain amount of time to check whether the valve is stuck closed.	15 seconds
J	Final check	Atmospheric pressure is measured and then monitoring result is recorded by ECM.	-

HINT:

*: If there is only a small amount of fuel in the fuel tank assembly, stabilizing the EVAP pressure takes longer than usual.



*1	Canister	*2	Reference Orifice (0.02 inch)
*3	Canister Pressure Sensor	*4	Purge VSV
*5	Fuel Vapor-containment Valve	*6	Fuel Tank Pressure Sensor
*7	Fuel Tank Assembly	*8	Canister Pump Module
*9	Vent Valve: OFF (Vent)	*10	Canister Filter
*11	Leak Detection Pump: OFF	*12	OFF
*13	ON	*14	OFF (Vent)
*15	ON (Closed)	-	-
*a	Operation A, F	*b	Operation B, E, H
*c	Operation C	*d	Operation D
*e	Operation G	*f	Atmospheric Pressure
*g	Negative Pressure	-	-

Purge flow monitor

The purge flow monitor consists of the 2 monitors. The 1st monitor is conducted every time and the 2nd monitor is activated if necessary.

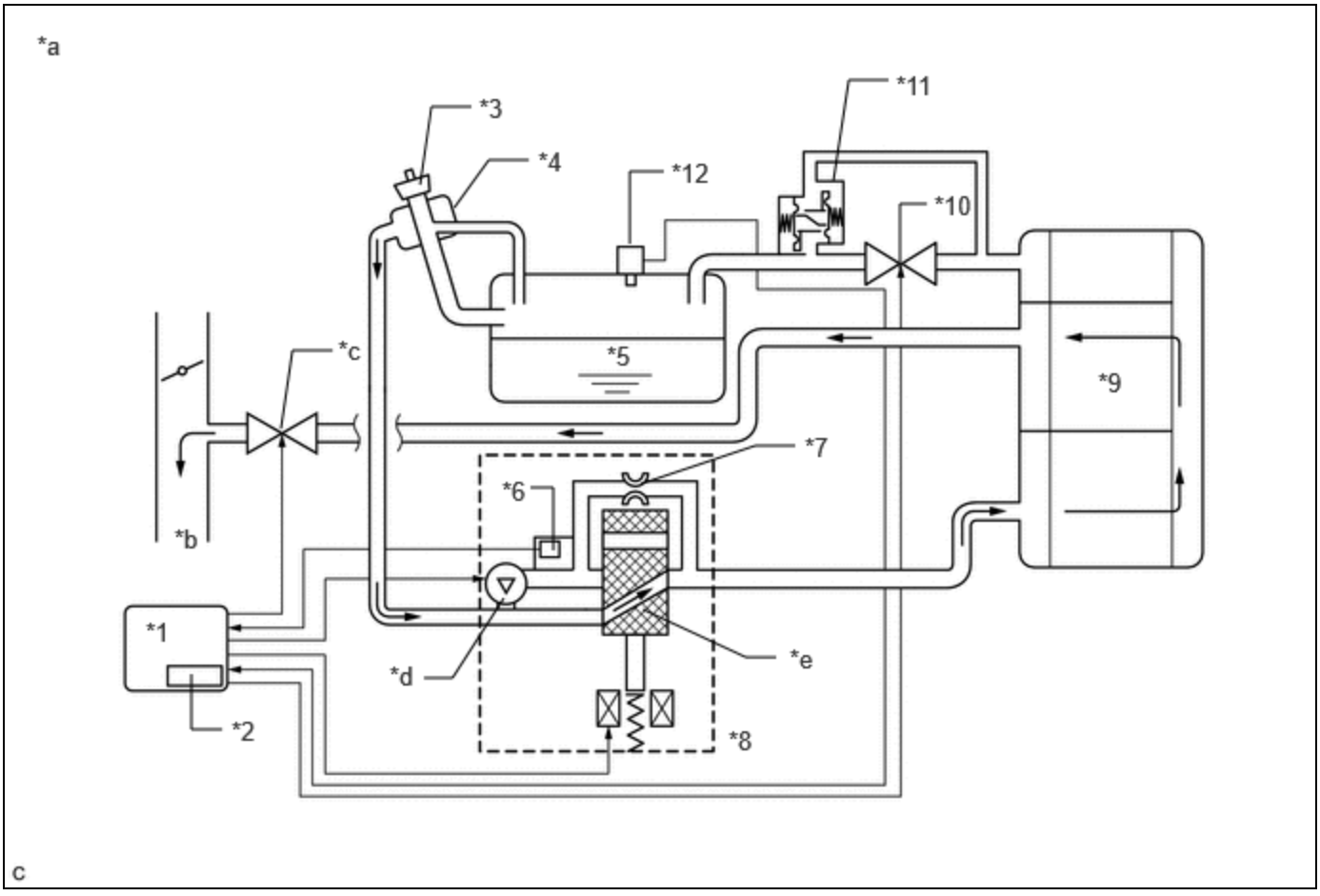
- The 1st monitor

  While the engine is running and the purge VSV (Vacuum Switching Valve) is on (open), the ECM monitors the purge flow by measuring the EVAP pressure change. If negative pressure is not created, the ECM begins the 2nd monitor.
- The 2nd monitor

  The vent valve is turned on (closed) and the EVAP pressure is then measured. If the variation in the pressure is less than 0.396 kPa [0.0574 psi], the ECM interprets this as the purge VSV being stuck closed, illuminates the MIL and stores DTC P04419C (2 trip detection logic).

Atmospheric pressure check:

In order to ensure reliable malfunction detection, the variation in atmospheric pressure, before and after of the purge flow monitor, is measured by the ECM.



*1	ECM	*2	Soak Timer
*3	Fuel Cap	*4	Canister Filter
*5	Fuel Tank Assembly	*6	Canister Pressure Sensor
*7	Reference Orifice (0.02 inch)	*8	Canister Pump Module
*9	Canister	*10	Fuel Vapor-containment Valve
*11	Fuel Outlet Valve (Relief Valve)	*12	Fuel Tank Pressure Sensor
*a	EVAP Purge Flow	*b	to Intake Manifold

*c	Purge VSV (on)	*d	Leak Detection Pump (off)
*e	Vent Valve (off)	-	-

WIRING DIAGRAM

Refer to DTC P045011.

Click here INFO

Refer to DTC P14CE12.

Click here INFO

CAUTION / NOTICE / HINT

NOTICE:

- Inspect the fuses for circuits related to this system before performing the following procedure.
- The GTS is required to conduct the following diagnostic troubleshooting procedure.

HINT:

- Using the GTS monitor results enables the EVAP (Evaporative Emission) system to be confirmed.
- If the cable is disconnected from the auxiliary battery terminal, the fuel vapor containment valve cannot close completely and an EVAP SYSTEM DTC will be stored. If the DTC is output, drive the vehicle at a speed of 10 km/h (6 mph) or more and then leave the vehicle for 30 seconds or more. Then perform the Evaporative System Check again.

CONFIRMATION DRIVING PATTERN

HINT:

After a repair, check Monitor Status by performing the Key-Off Monitor Confirmation and Purge Flow Monitor Confirmation described below.

KEY-OFF MONITOR CONFIRMATION

NOTICE:

- The Evaporative System Check (Automatic Mode) consists of 9 steps performed automatically by the GTS. It takes a maximum of approximately 40 minutes.
- Do not perform the Evaporative System Check when the fuel tank is more than 90% full because the cut-off valve may be closed, making the fuel tank leak check unavailable.
- Do not start the engine during this operation.
- When the temperature of the fuel is 35°C (95°F) or higher, a large amount of vapor forms and any check results become inaccurate. When performing the Evaporative System Check, keep the fuel temperature less than 35°C (95°F).

1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Turn the ignition switch off and wait for at least 30 seconds.
3. Enter the following menus: Powertrain / Engine / Utility / Evaporative System Check / Automatic Mode.
4. After the "Evaporative System Check" is completed, check for All Readiness by entering the following menus: Powertrain / Engine / Utility / All Readiness.
5. Input the DTC: P043E00, P043F00, P04417E, P04417F, P044672, P44673, P045011, P045015, P04502F, P142000, P142100, P142200, P142300, P145011, P145015, P14502A, P14502F, P24007E, P24007F, P24507E or P24517F.
6. Check the DTC judgment result.

HINT:

- If the judgment result is NORMAL, the system is normal.
- If the judgment result is ABNORMAL, the system is malfunctioning.

PURGE FLOW MONITOR CONFIRMATION (P04419C)

HINT:

Perform this monitor confirmation after the Key-Off Monitor Confirmation shows Complete.

1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Turn the ignition switch off and wait for at least 30 seconds.
3. Put the engine in Inspection Mode (Maintenance Mode).

   Click here INFO
4. Start the engine and wait 15 minutes or more.
5. Enter the following menus: Powertrain / Engine / Trouble Codes.
6. Read the pending DTCs.

   HINT:

   - If a pending DTC is output, the system is malfunctioning.
   - If a pending DTC is not output, perform the following procedure.
7. Enter the following menus: Powertrain / Engine / Utility / All Readiness.
8. Input the DTC: P04419C.
9. Check the DTC judgment result.

   HINT:

   - If the judgment result is NORMAL, the system is normal.
   - If the judgment result is ABNORMAL, the system is malfunctioning.

MONITOR RESULT

Refer to detailed information in Checking Monitor Status.

Click here INFO

P2401: Evaporative System / VACUUM PMP OFF

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$CB	Multiply by 0.001	kPa	Test value for leak detection pump stuck OFF

P2402: Evaporative System / VACUUM PMP ON

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$CD	Multiply by 0.001	kPa	Test value for leak detection pump stuck ON

P2422: Evaporative System / VENT VALVE OFF

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$CE	Multiply by 0.001	kPa	Test value for vent valve OFF stuck (P2422)

P2421: Evaporative System / VENT VALVE ON

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$CF	Multiply by 0.001	kPa	Test value for vent valve ON stuck (P2421)

P043E: Evaporative System / ORIFICE CLOGGED

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D0	Multiply by 0.001	kPa	Test value for reference orifice low flow

P043F: Evaporative System / ORIFICE HI-FLW

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D1	Multiply by 0.001	kPa	Test value for reference orifice high flow

P0441: Evaporative System / PURGE VSV CLOSED

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D4	Multiply by 0.001	kPa	Test value for purge VSV stuck closed

P0441: Evaporative System / PURGE VSV OPENED

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D5	Multiply by 0.001	kPa	Test value for purge VSV stuck open

P0441: Evaporative System / PURGE FLOW

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D7	Multiply by 0.001	kPa	Test value for purge flow insufficient

P1420: Evaporative System / CNST SMALL LEAK

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D8	Multiply by 0.001	kPa	Test value for canister small leak

P1421: Evaporative System / CNST GROSS LEAK

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$D9	Multiply by 0.001	kPa	Test value for canister gross leak

P1422: Evaporative System / TANK SMALL LEAK

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$DA	Multiply by 0.001	kPa	Test value for fuel tank small leak

P1423: Evaporative System / TANK GROSS LEAK

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$DB	Multiply by 0.001	kPa	Test value for fuel tank gross leak

P2451: Evaporative System / TANK CLS VAL OP

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$DC	Multiply by 0.001	kPa	Test value for tank closed valve close stuck

P2450: Evaporative System / TANK CLS VAL CL

MONITOR ID	TEST ID	SCALING	UNIT	DESCRIPTION
$3D	$DD	Multiply by 0.001	kPa	Test value for tank closed valve open stuck

PROCEDURE

1.	**CONFIRM DTC**

(a) Turn the ignition switch off and wait 10 seconds.

(b) Turn the ignition switch to ON.

(c) Turn the ignition switch off and wait 10 seconds.

(d) Turn the ignition switch to ON.

(e) Confirm the DTCs and freeze frame data.

Powertrain > Engine > Trouble Codes

EVAP Related DTCs

DTC NO.	MONITORING ITEM
P043E00	Reference orifice low flow
P043F00	Reference orifice high flow
P04417E	Purge VSV stuck open
P04417F	Purge VSV stuck closed
P04419C	Insufficient purge flow
P044672	Vent valve (built into canister pump module) stuck open
P046673	Vent valve (built into canister pump module) stuck closed
P142000	Small leak from canister
P142100	Gross leak from canister
P142200	Small leak from fuel tank
P142300	Gross leak from fuel tank
P24007E	Leak detection pump stuck on
P24007F	Leak detection pump stuck off
P24507E	Fuel vapor-containment valve stuck open
P24517F	Fuel vapor-containment valve stuck closed

DTC and Malfunction Cross-reference

MALFUNCTION	OUTPUT DTC
Reference orifice low flow	P043E00, P043F00, P044672, P24007E, P24007F
Reference orifice high flow	P043E00, P043F00, P044672, P24007E, P24007F
Leak detection pump stuck off	P043E00, P043F00, P044672, P24007E, P24007F
Leak detection pump stuck on	P043E00, P043F00, P044672, P24007E, P24007F
Vent valve (built into canister pump module) stuck closed	P043E00, P043F00, P044672, P24007E, P24007F
Vent valve (built into canister pump module) stuck open (vent)	P046673
Insufficient purge flow	P04419C
Purge VSV stuck open	P04417E, P142100
Purge VSV stuck closed	P04417F
Small leak from canister	P142000
Gross leak from canister	P04417E, P142100
Small leak from fuel tank	P142200
Gross leak from fuel tank	P142300
Fuel vapor-containment valve stuck open	P142300, P24507E
Fuel vapor-containment valve stuck closed	P24517F

NEXT

2.	**CLEAR DTC**

(a) Clear the DTCs.

Powertrain > Engine > Clear DTCs

(b) Turn the ignition switch off and wait for at least 30 seconds.

NEXT

3.	**PERFORM EVAPORATIVE SYSTEM CHECK (AUTOMATIC MODE)**

NOTICE:

- The Evaporative System Check (Automatic Mode) consists of 9 steps performed automatically by the GTS. It takes a maximum of approximately 40 minutes.
- Do not perform the Evaporative System Check when the fuel tank is more than 90% full because the cut-off valve may be closed, making the fuel tank leak check unavailable.
- Do not start the engine during this operation.
- When the temperature of the fuel is 35°C (95°F) or higher, a large amount of vapor will from and any check result will be inaccurate. When performing the Evaporative System Check, keep the fuel temperature less than

35°C (95°F).

(a) Remove the fuel tank cap assembly and reinstall the fuel tank cap assembly.

(b) After the Evaporative System Check is completed, check for pending DTCs.

RESULT	CONCLUSION	PROCEED TO
A pending DTC is stored	A malfunction occurs and troubleshooting can be performed	A
A pending DTC is not stored	No malfunctions occur and it is difficult to perform troubleshooting	B
A pending DTC is not stored and any of the current DTCs (P142200, P142300, or P24507E) is stored	DTCs are stored because the fuel tank cap assembly is not tightened firmly	C

Powertrain > Engine > Utility

TESTER DISPLAY
Evaporative System Check

B ▶ **GO TO STEP 6**

C ▶ **END**

A

4.	**IDENTIFY TROUBLE AREAS USING DTC**

(a) Refer to the table below to determine the next procedure according to the output DTCs.

MALFUNCTION	OUTPUT DTC	PROCEED TO
Reference orifice low flow	P043E00, P043F00, P044672, P24007E, P24007F	B
Reference orifice high flow	P043E00, P043F00, P044672, P24007E, P24007F	
Leak detection pump stuck off	P043E00, P043F00, P044672, P24007E, P24007F	
Leak detection pump stuck on	P043E00, P043F00, P044672, P24007E, P24007F	
Vent valve (built into canister pump module) stuck closed	P043E00, P043F00, P044672, P24007E, P24007F	

MALFUNCTION	OUTPUT DTC	PROCEED TO
Vent valve (built into canister pump module) stuck open (vent)	P046673	C
Insufficient purge flow	P04419C	A
Purge VSV stuck open	P04417E, P142100	
Purge VSV stuck closed	P04417F	
Small leak from canister	P142000	D
Gross leak from canister	P04417E, P142100	A
Small leak from fuel tank	P142200	
Gross leak from fuel tank	P142300	
Fuel vapor-containment valve stuck open	P142300, P24507E	
Fuel vapor-containment valve stuck closed	P24517F	

B ▶ **GO TO STEP 37**

C ▶ **GO TO STEP 39**

D ▶ **GO TO STEP 22**

A

5.	**IDENTIFY TROUBLE AREAS USING DTC**

(a) Refer to the table below to determine the next procedure according to the output DTCs.

MALFUNCTION	OUTPUT DTC	PROCEED TO
Insufficient purge flow	P04419C	A
Purge VSV stuck open	P04417E, P142100	
Purge VSV stuck closed	P04417F	
Gross leak from canister	P04417E, P142100	
Small leak from fuel tank	P142200	B
Gross leak from fuel tank	P142300	
Fuel vapor-containment valve stuck open	P142300, P24507E	C
Fuel vapor-containment valve stuck closed	P24517F	

A ▶ **GO TO STEP 21**

B ▶ GO TO STEP 17

C ▶ GO TO STEP 33

6.	**CLEAR DTC**

(a) Clear the DTCs.

Powertrain > Engine > Clear DTCs

(b) Turn the ignition switch off and wait for at least 30 seconds.

NEXT

7.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE)**

HINT:

In the manual operation check, the EVAP system can be checked in several steps. Valve operation and pressure in each step can also be checked.

(a) Remove the fuel tank cap assembly and reinstall the fuel tank cap assembly.

(b) Perform the Evaporative System Check using the GTS.

Powertrain > Engine > Utility

TESTER DISPLAY
Evaporative System Check

NOTICE:

- The Evaporative System Check (Automatic Mode) consists of 9 steps performed automatically by the GTS. It takes a maximum of approximately 40 minutes.
- Do not perform the Evaporative System Check when the fuel tank is more than 90% full because the cut-off valve may be closed, making the fuel tank leak check unavailable.
- Do not start the engine during this operation.
- When the temperature of the fuel is 35°C (95°F) or higher, a large amount of vapor will from and any check result will be inaccurate. When performing the Evaporative System Check, keep the fuel temperature less than 35°C (95°F).

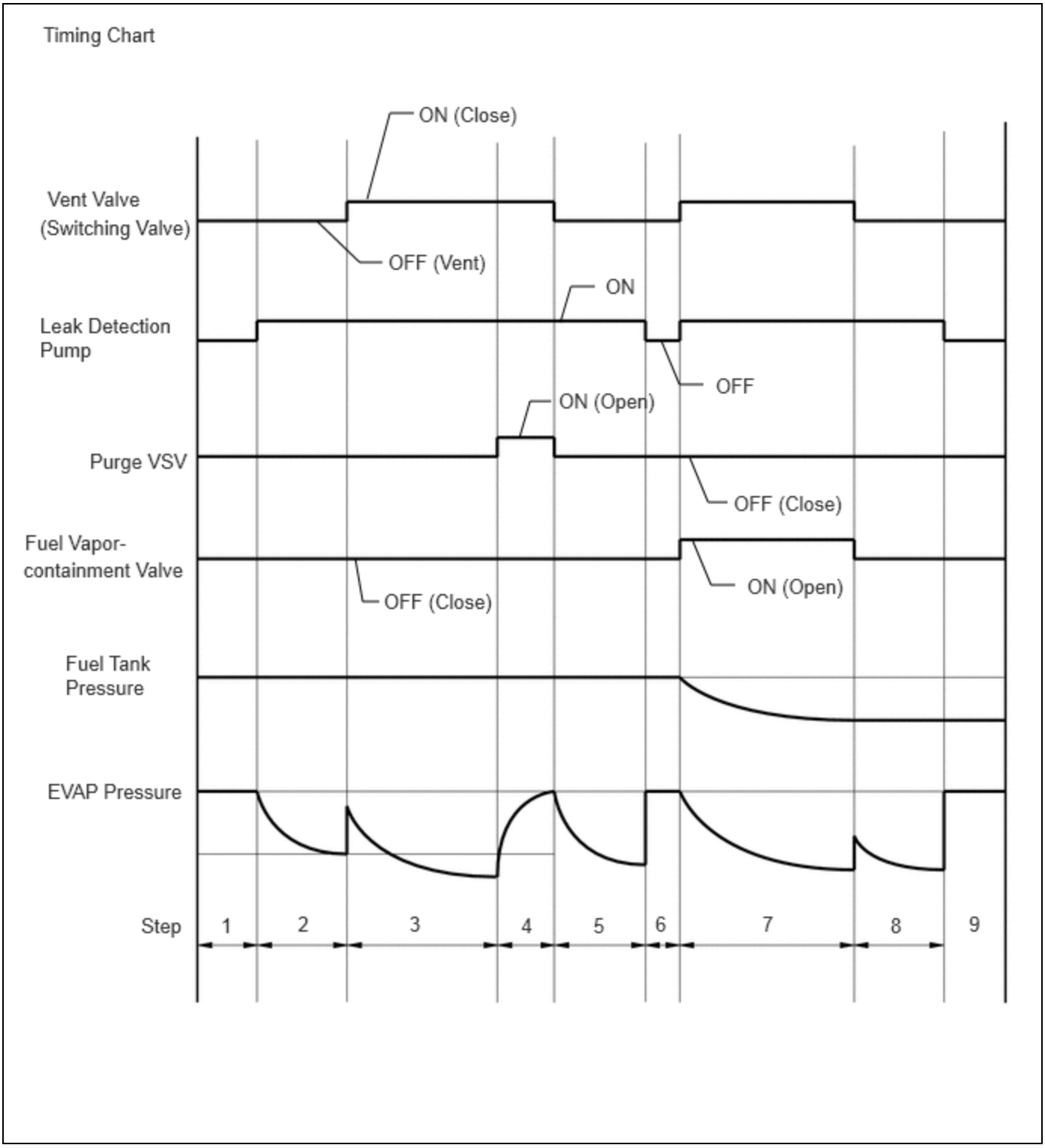
GTS Display

DISPLAY	DETAIL
Atmosphere Press Check	The number of steps and step names are displayed
Purge VSV	Purge VSV condition is displayed: ON (Open)/OFF (Closed)
Vent Valve	Vent valve condition is displayed: ON (Closed)/OFF (Open)

DISPLAY	DETAIL
Vacuum Pump	Leak detection pump condition is displayed: ON/OFF
Fuel VCV	Fuel vapor-containment valve condition is displayed: ON (Open)/OFF (Closed)
Tank Pressure	Fuel tank pressure (Absolute pressure)
Vapor Pressure (Gauge)	EVAP pressure (Gauge pressure measured at canister pump module)
Vapor Pressure (Absolute)	EVAP pressure (Absolute pressure measured at canister pump module)
Time (Step)	Elapsed time for each step
Time (VENT)	Accumulated vent valve open time
Time (PUMP)	Accumulated leak detection pump operating time

Manual Operation Step

STEP	OPERATIONS
1. Atmosphere Pressure Check	Atmospheric pressure measurement
2. Reference Pressure (0.02 inch) Check 1	First reference pressure measurement
3. Canister Leak Check	EVAP system pressure measurement
4. Purge VSV Check	Purge VSV monitor
5. Reference Pressure (0.02 inch) Check 2	Second reference pressure measurement
6. Resetting	Resetting
7. Tank Leak Check	Fuel tank pressure measurement
8. Reference Pressure (0.02 inch) Check 3	Third reference pressure measurement
9. Atmosphere Pressure Check	Atmospheric pressure measurement



NEXT

8.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 1)**

(a) Select step 1 and wait 10 seconds.

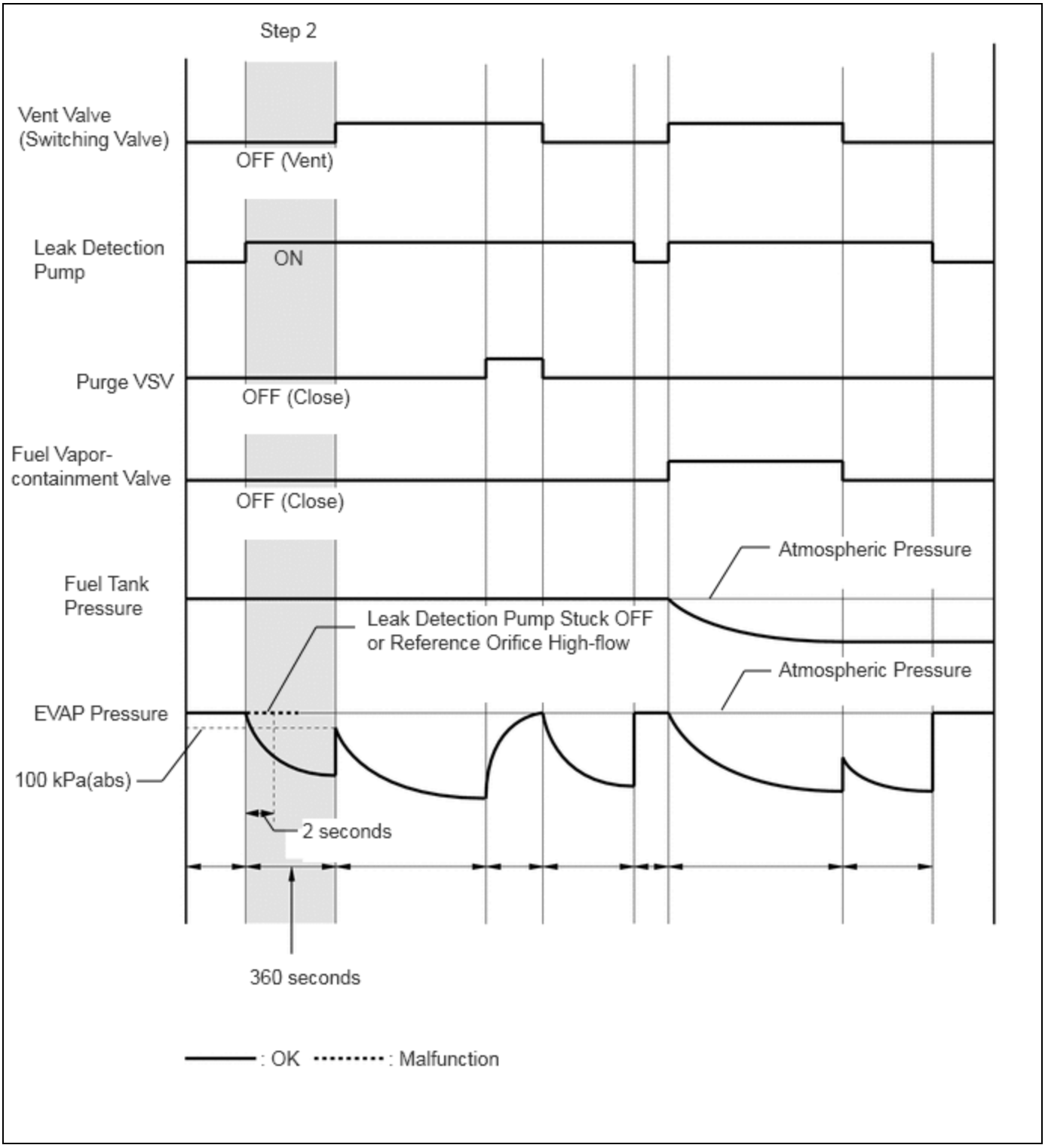
NEXT

9.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 2)**

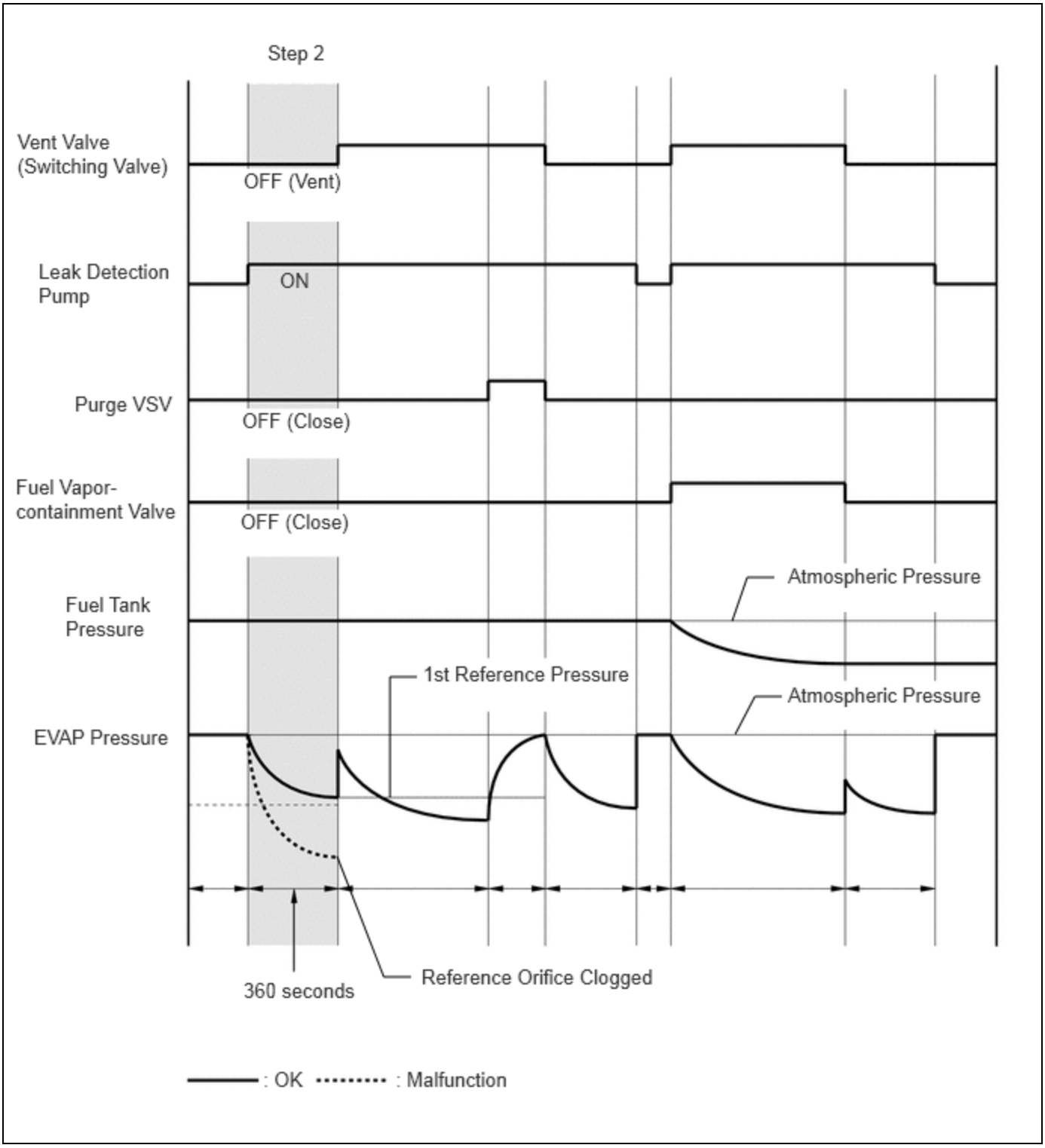
(a) Perform step 2.

(b) Check the evaporative pressure 2 seconds after the leak detection pump is activated* (A).

*: The leak detection pump begins to operate at the start of step 2.



(c) Check the evaporative (EVAP) pressure again when it has stabilized (B). This pressure is the first reference pressure.



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
EVAP pressure in inspection item (B) is between -4.85 and -1.068 kPa(gauge) [-0.7 and -0.155 psi(gauge)]	Not yet determined	A
EVAP pressure in inspection item (B) is -1.068 kPa(gauge) [-0.155 psi(gauge)] or higher	• Reference orifice high-flow • Leak detection pump stuck off	B

RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
EVAP pressure in inspection item (B) is less than -4.85 kPa(gauge) [-0.7 psi(gauge)]	Reference orifice clogged	C

B ▶ **GO TO STEP 37**

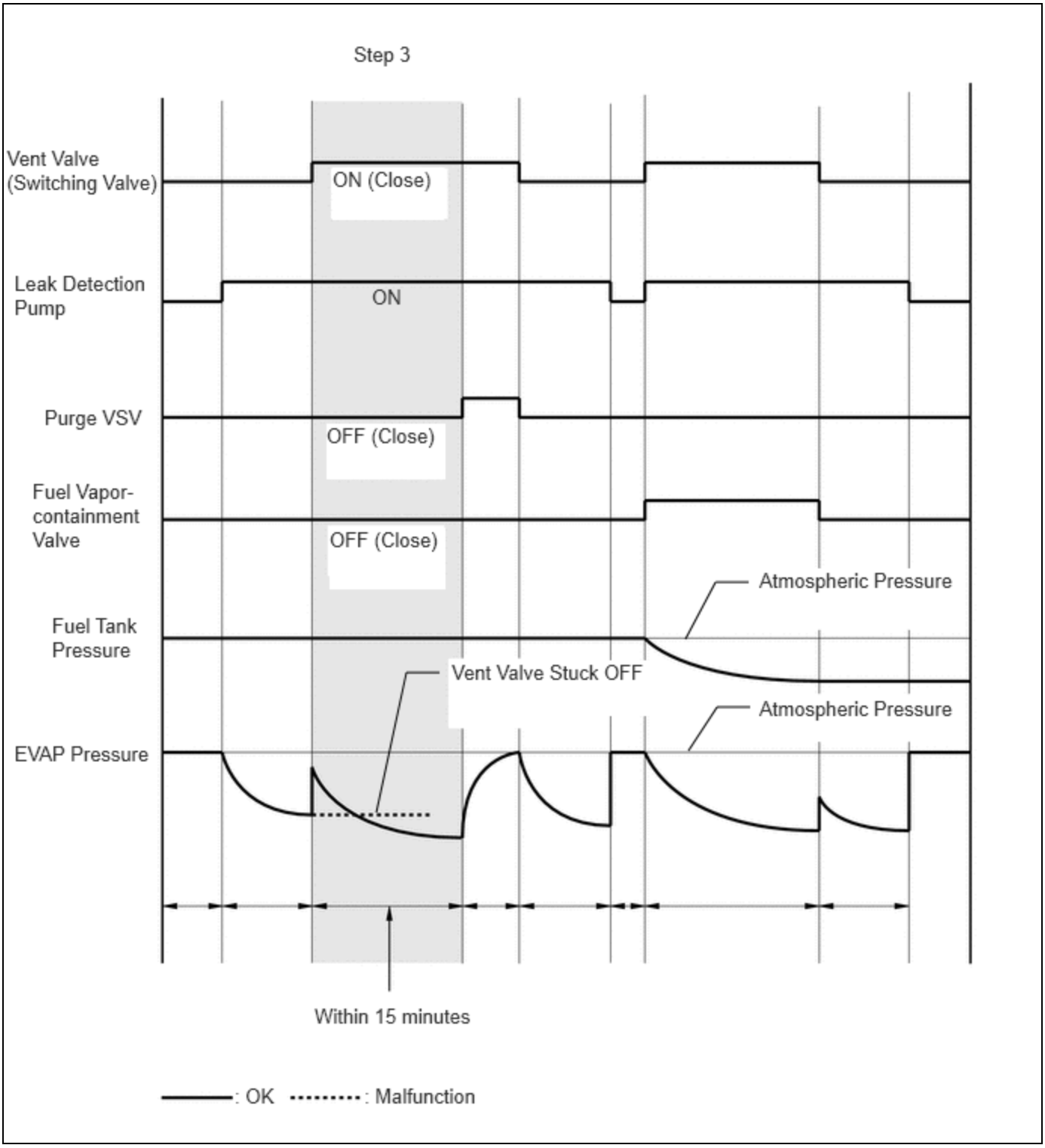
C ▶ **GO TO STEP 43**

A

10.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 3)**

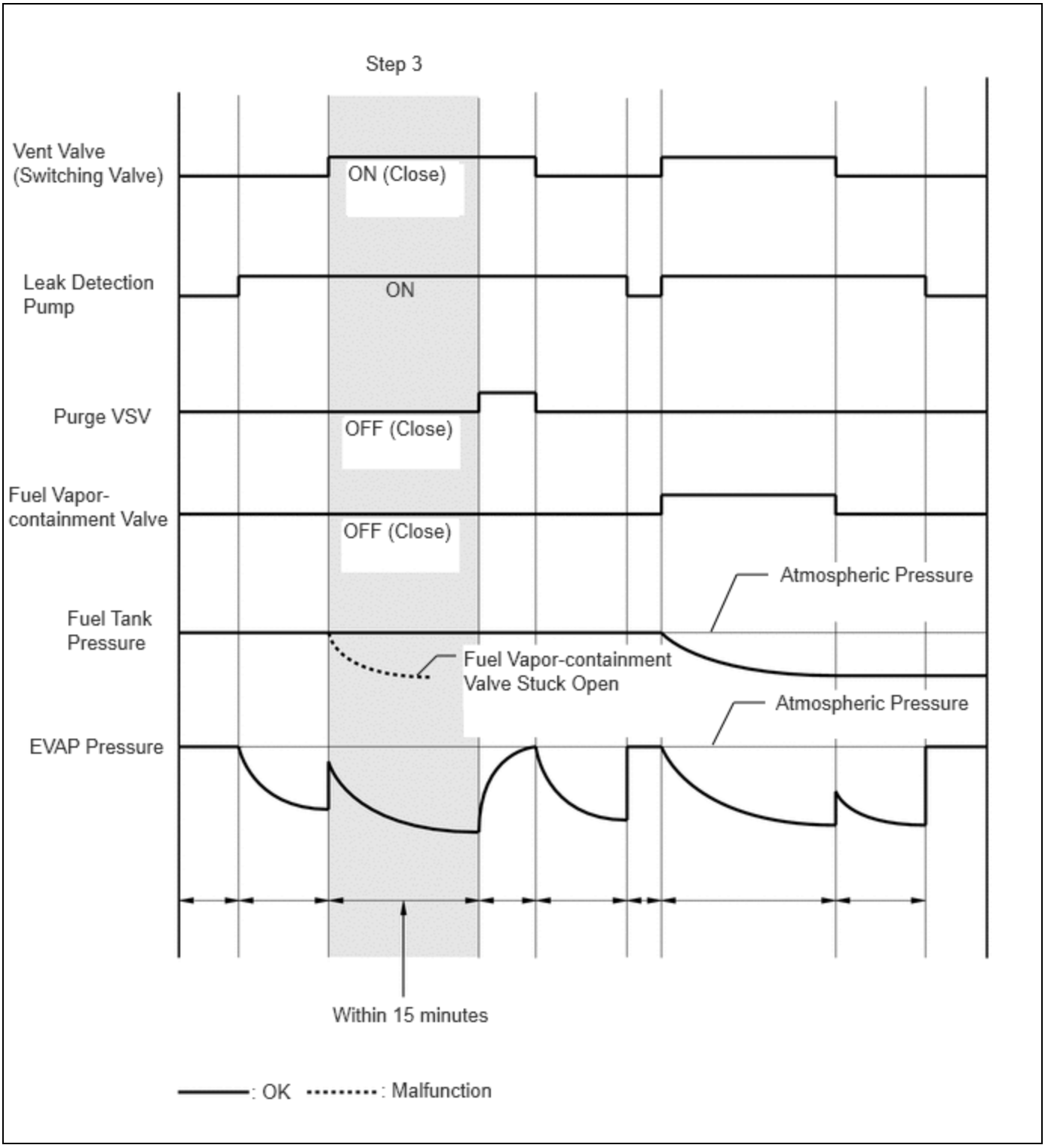
(a) Perform step 3.

(b) Check the evaporative (EVAP) pressure change in step 3 (A).



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
EVAP pressure change in inspection item (A) is 0.3 kPa [0.04 psi] or higher	Not yet determined	A
EVAP pressure change in inspection item (A) is less than 0.3 kPa [0.04 psi]	Vent valve (switching valve) stuck off	B

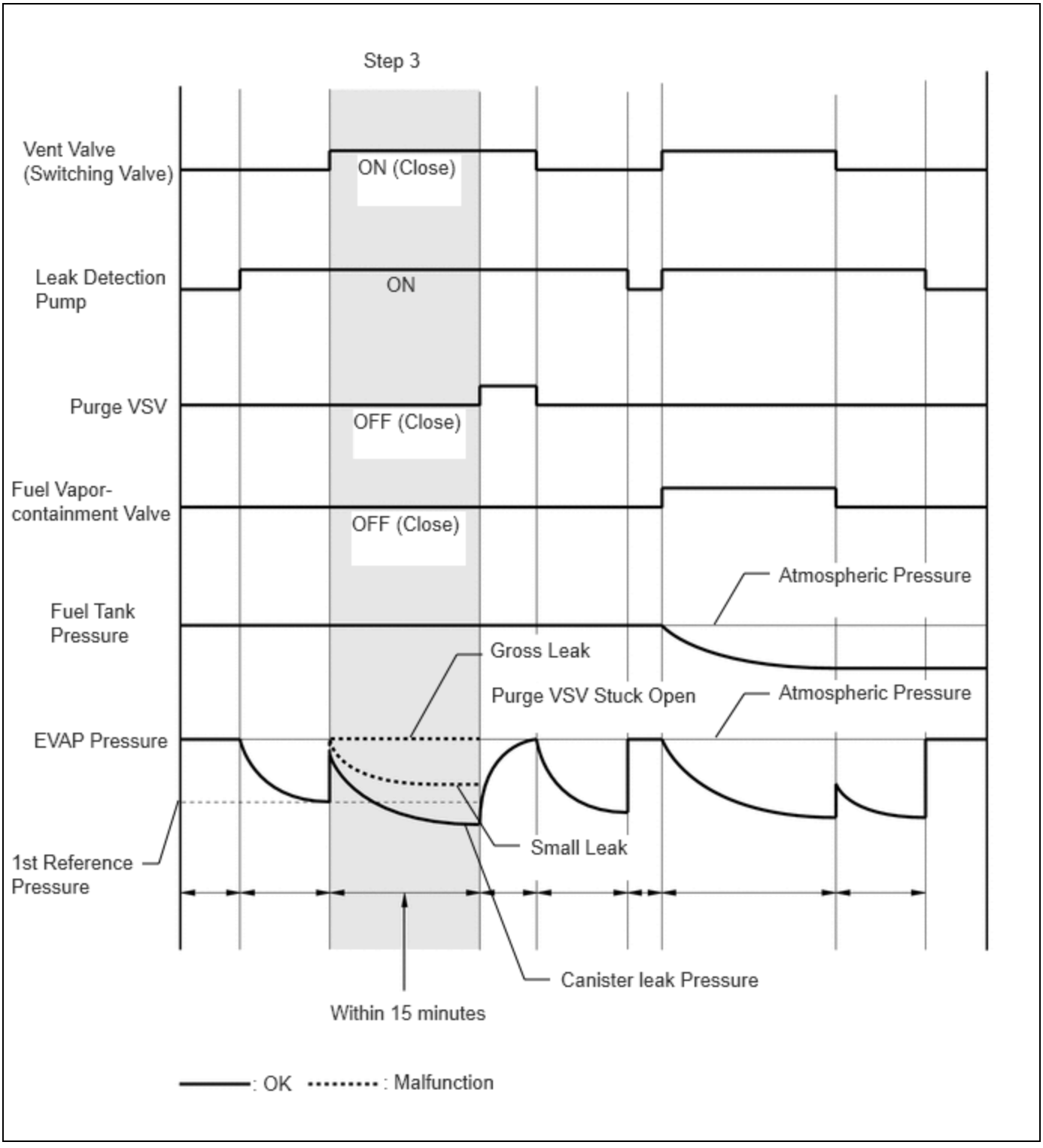
(c) Check the fuel tank pressure change in step 3 (B).



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Fuel tank pressure change in inspection item (B) is less than 0.5 kPa [0.07 psi]	Not yet determined	A
Fuel tank pressure change in inspection item (B) is higher than 0.5 kPa [0.07 psi]	Fuel vapor-containment valve stuck on (open)	C

(d) Check the EVAP pressure again when it has stabilized. This pressure is the canister leak pressure.

(e) Compare the first reference pressure with the canister leak pressure.



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Lower than first reference pressure	Not yet determined	A
First reference pressure or higher	• Purge VSV stuck open • Leakage from line between purge VSV and canister	D

B ▶ GO TO STEP 39

C ▶ **GO TO STEP 33**

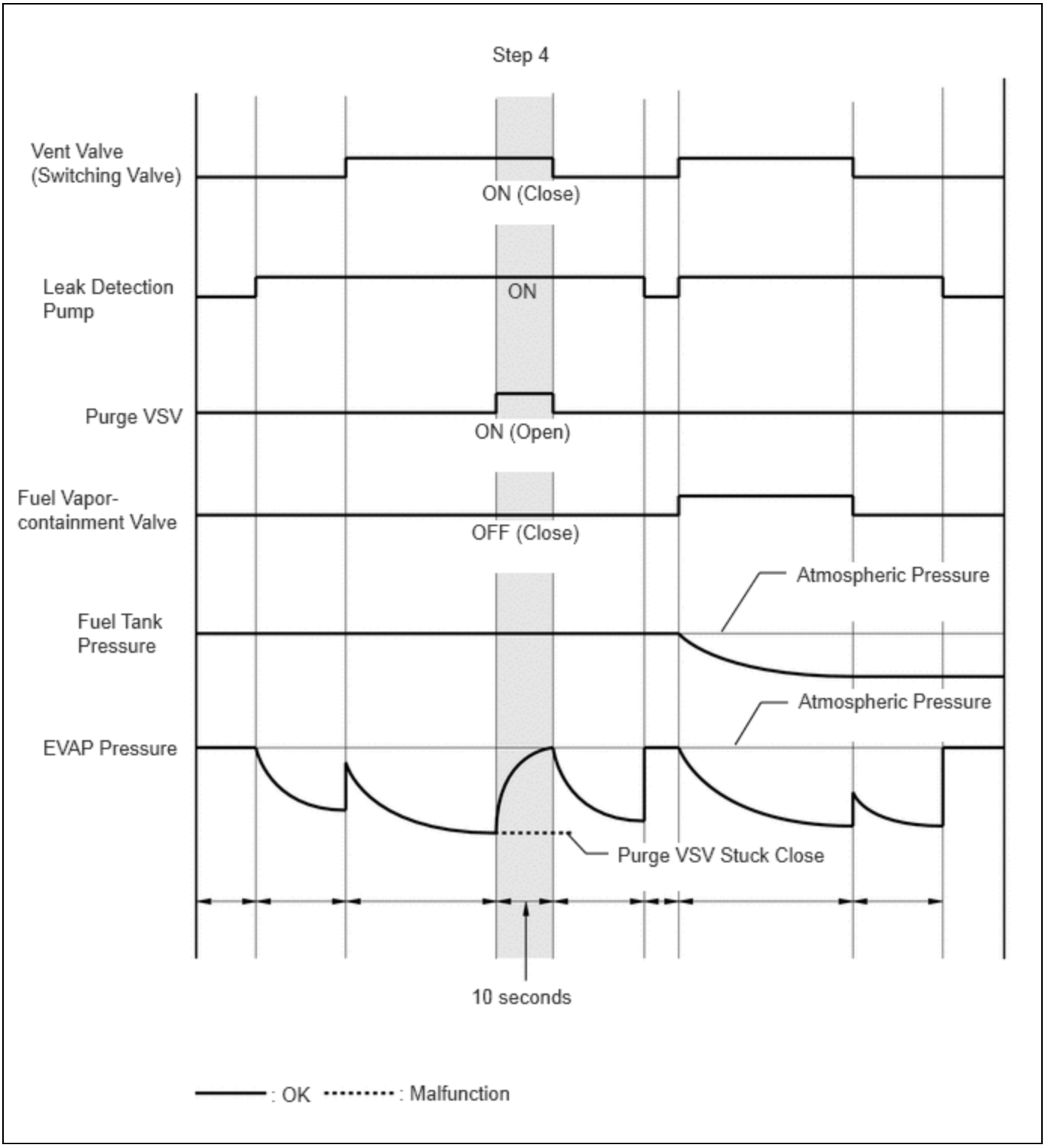
D ▶ **GO TO STEP 28**

A

11.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 4)**

(a) Perform step 4.

(b) Check the evaporative (EVAP) pressure change in step 4 (A).



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
EVAP pressure increases by 0.3 kPa [0.04 psi] or higher within 10 seconds of proceeding from step 3 to 4	Not yet determined	A
Variation in EVAP pressure is less than 0.3 kPa [0.04 psi] for 10 seconds, after proceeding from step 3 to 4	Purge VSV stuck closed	B

B ▶ **GO TO STEP 21**

A

12.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 5)**

(a) Perform step 5 and wait 60 seconds.

(b) Check the evaporative (EVAP) pressure. This pressure is the second reference pressure.

NEXT

13.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 6)**

(a) Perform step 6 and wait 5 seconds.

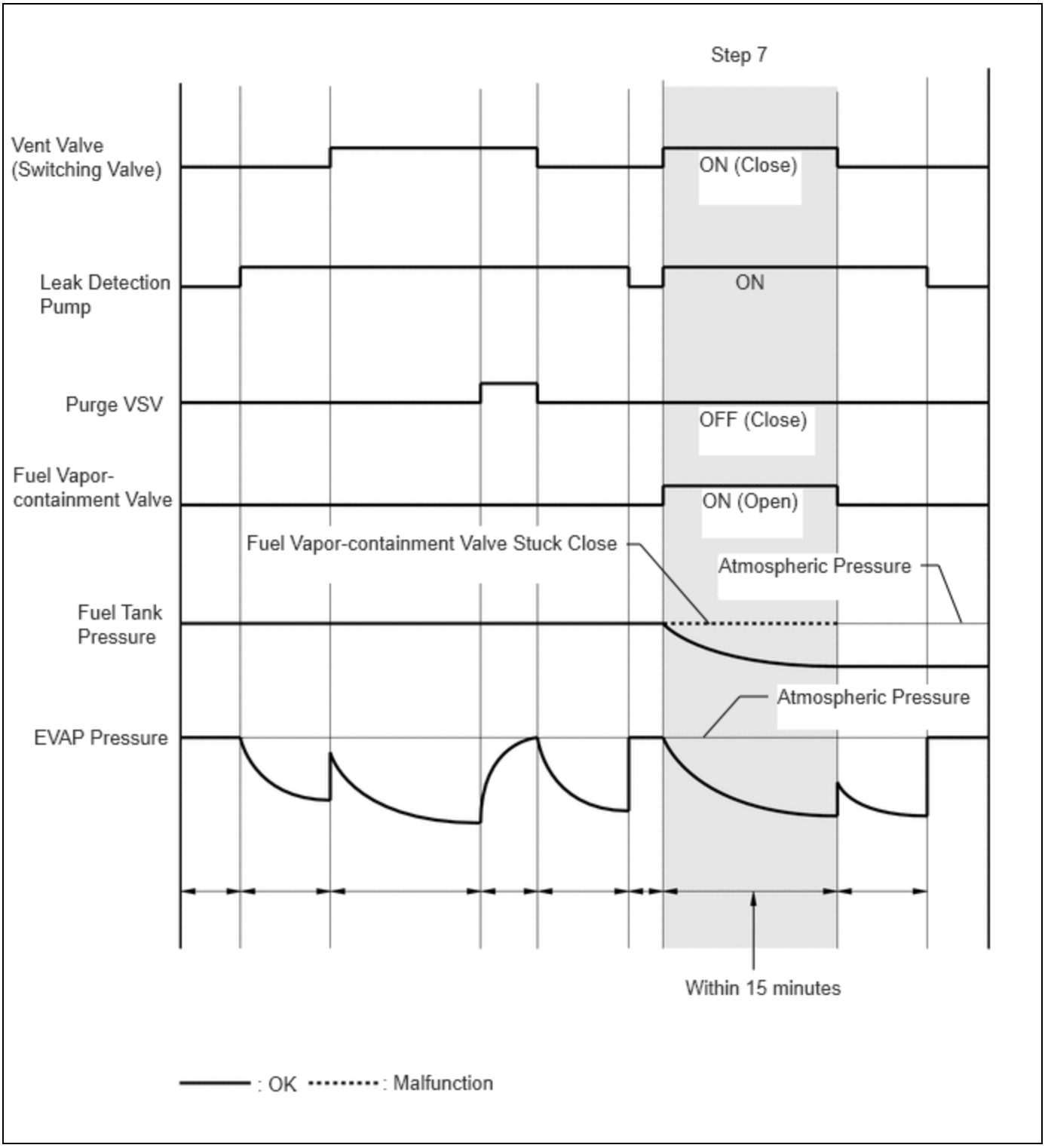
NEXT

14.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 7)**

(a) Perform step 7.

(b) Check that the tank pressure and EVAP pressure change.

(c) Check the tank pressure again when it has stabilized. This pressure is the fuel tank leak pressure.



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Fuel tank pressure change is higher than 0.5 kPa [0.07 psi] and EVAP pressure is higher than 0.9 kPa(gauge) [0.1 psi(gauge)]	Not yet determined	A
Fuel tank pressure change is less than 0.5 kPa [0.07 psi] and EVAP pressure is less than 0.9 kPa(gauge) [0.1 psi(gauge)]	Fuel vapor-containment valve stuck OFF (closed)	B

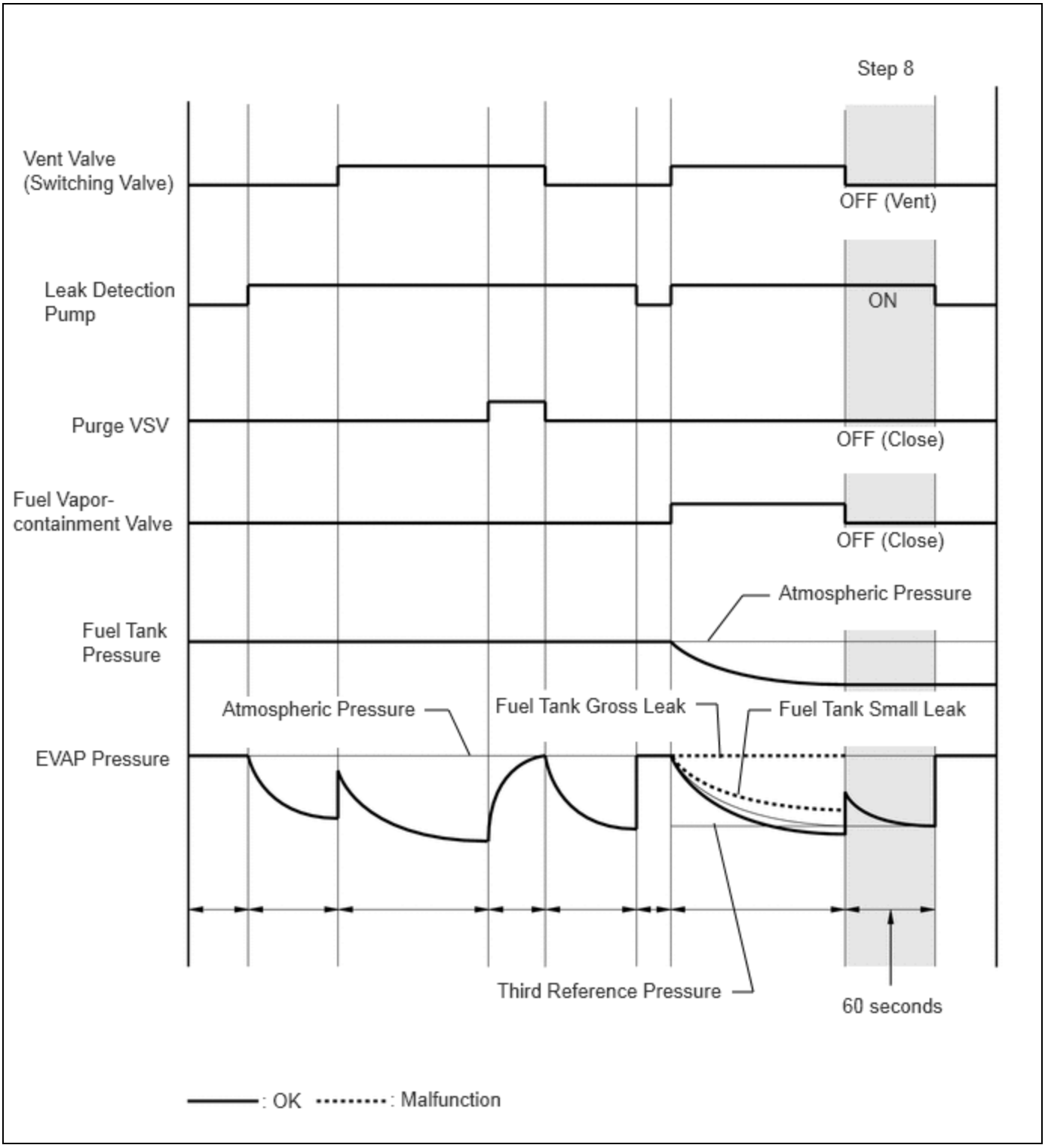
B ▶ **GO TO STEP 33**

15.	**PERFORM EVAPORATIVE SYSTEM CHECK (MANUAL MODE STEP 8)**

(a) Perform step 8 and wait 60 seconds.

(b) Check the evaporative (EVAP) pressure. This pressure is the third reference pressure.

(c) Compare the fuel tank pressure checked in step 7 with the third reference pressure.



RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Lower than third reference pressure	Not yet determined	A
Third reference pressure or higher	Leakage from line between fuel vapor-containment valve and fuel tank	B

B ▶ **GO TO STEP 17**

A

16.	**PERFORM CONFIRMATION DRIVING PATTERN**

(a) Refer to Confirmation Driving Pattern.

NEXT **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

17.	**CHECK FUEL TANK CAP ASSEMBLY**

(a) Check that the fuel tank cap assembly is correctly installed and confirm that the fuel tank cap assembly meets OEM specifications.

(b) Tighten the fuel tank cap assembly firmly (only one click sound could be heard).

HINT:

If an EVAP tester is available, check the fuel tank cap assembly using the tester.

(1) Remove the fuel tank cap assembly and install it onto a fuel tank cap adapter.

(2) Connect an EVAP tester pump hose to the adapter, and pressurize the cap to 3.2 to 3.7 kPa(gauge) [0.46 to 0.54 psi(gauge)] using an EVAP tester pump.

(3) Seal the adapter and wait for 2 minutes.

(4) Check the pressure. If the pressure is 2 kPa(gauge) [0.3 psi(gauge)] or higher, the fuel tank cap assembly is normal.

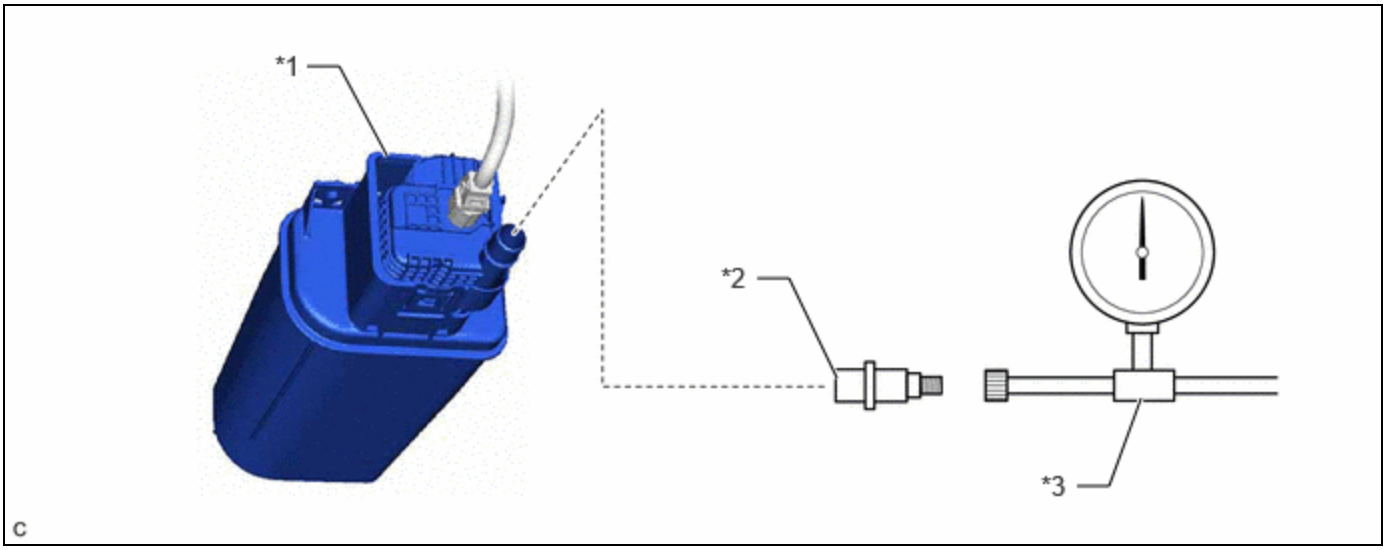
RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Fuel tank cap assembly correctly installed	-	A
Fuel tank cap assembly loose	• Fuel tank cap assembly improperly installed • Defective fuel tank cap assembly • Fuel tank cap assembly does not meet OEM specifications	B

B **GO TO STEP 20**

A

18.	**CHECK HOSES (FUEL VAPOR-CONTAINMENT VALVE - FUEL TANK)**

(a) Connect the EVAP pressure tester tool to the canister pump module with the adapter.



*1	Canister Pump Module	*2	Adapter
*3	EVAP Pressure Tester Tool	-	-

(b) Turn the fuel vapor-containment valve open (on) using the GTS.

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the Fuel Vapor-Containment Valve

(c) Confirm good connection at the canister pump module.

(d) Pressurize the EVAP system to between 3.2 and 3.7 kPa(gauge) [0.46 to 0.54 psi(gauge)].

NOTICE:

Higher than 4.7 kPa(gauge) [0.7 psi(gauge)] of pressure will damage the EVAP system. Pay attention to the pressure.

(e) Apply soapy water to the piping and connections of the EVAP system.

(f) Look for areas where bubbles appear.

HINT:

If the system has leaks, a whistling sound will be heard.

NEXT

19.	**REPLACE MALFUNCTIONING PART**

(a) Repair or replace the leak point.

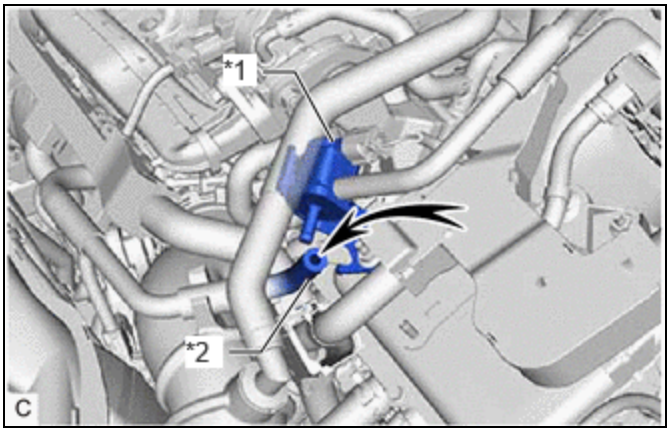
NEXT **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

20.	**REPLACE FUEL TANK CAP ASSEMBLY**

(a) Replace the fuel tank cap assembly.

NEXT **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

21.	**CHECK VACUUM HOSE (PURGE VSV - INTAKE MANIFOLD)**



*1	Purge VSV
*2	Fuel Vapor Feed Hose Assembly (to Intake Manifold)

(a) Disconnect the fuel vapor feed hose assembly (connected to the intake manifold) from the purge VSV.

(b) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility

TESTER DISPLAY
Inspection Mode

(c) Start the engine.

(d) Use your finger to confirm that the hose has suction.

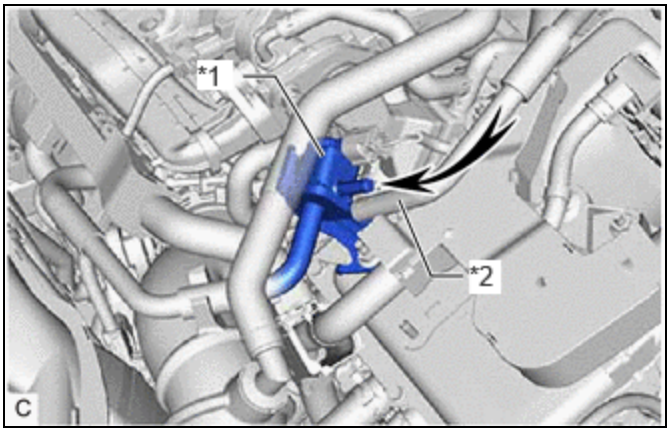
TEST RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Suction applied	EVAP hose between purge VSV and intake manifold normal	A

TEST RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
No suction	• Intake manifold port • EVAP hose between purge VSV and intake manifold	B

B ▶ **GO TO STEP 30**

A

22.	**PERFORM ACTIVE TEST USING GTS (ACTIVATE THE VSV FOR EVAP CONTROL)**



*1	Purge VSV
*2	Fuel Vapor Feed Hose Assembly (to Canister)

(a) Disconnect the fuel vapor feed hose assembly (connected to the canister) from the purge VSV.

(b) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility

TESTER DISPLAY
Inspection Mode

(c) Start the engine.

(d) Using the GTS, turn off the purge VSV (Activate the EVAP Purge VSV: OFF).

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the EVAP Purge VSV

(e) Use your finger to confirm that the purge VSV has no suction.

(f) Using the GTS, turn on the purge VSV (Activate the EVAP Purge VSV: ON).

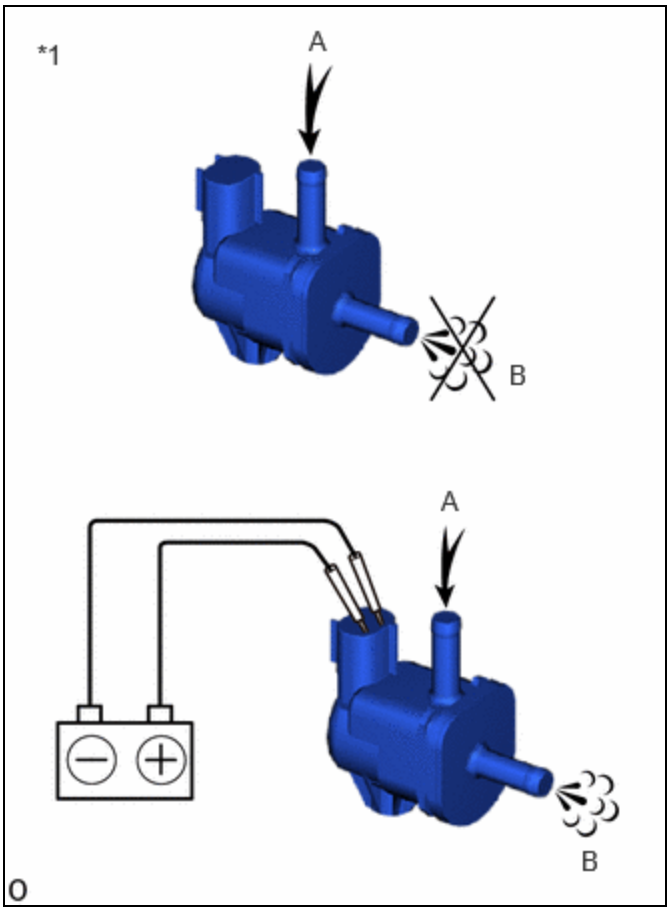
(g) Use your finger to confirm that the purge VSV has suction.

RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Suction applied when purge VSV turned off	• Purge VSV stuck open • ECM	A
No suction when purge VSV turned on	Purge VSV stuck closed	
No suction when purge VSV turned off, and suction applied when turned on	Purge VSV normal	B

B ▶ **GO TO STEP 28**

A ▼

23.	**CHECK PURGE VSV**



*1	Purge VSV

(a) Remove the purge VSV.

(b) Apply compressed air to the purge VSV, and confirm that no air flows from A to B as shown in the illustration.

(c) Apply auxiliary battery voltage to the terminal of the purge VSV.

(d) While applying compressed air, confirm that air flows from A to B as shown in the illustration.

RESULT	PROCEED TO
Air flows from A to B only when auxiliary battery voltage applied to purge VSV. Conclusion: purge VSV is normal	A
No air flows from A to B when auxiliary battery voltage is applied to purge VSV. Conclusion: purge VSV is malfunctioning.	B
Air flows from A to B when auxiliary battery voltage is not applied to purge VSV. Conclusion: purge VSV is malfunctioning	

B ▶ **GO TO STEP 27**

A ▼

24.	CHECK TERMINAL VOLTAGE (POWER SOURCE OF PURGE VSV)

(a) Disconnect the purge VSV connector.

(b) Turn the ignition switch to ON.

(c) Measure the voltage according to the value(s) in the table below.

EWD INFO

Click Location & Routing(C29)
Click Connector(C29)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	SUSPECTED TROUBLE AREA	PROCEED TO
C29-1 (+B) - Body ground	Ignition switch ON	11 to 14 V	Purge VSV power source normal • Wire harness or connector between purge VSV and ECM	A
		Other than result above	Wire harness or connectors between purge VSV and auxiliary battery	B

B ▶ **GO TO STEP 47**

A

25.	**CHECK HARNESS AND CONNECTOR (PURGE VSV - ECM)**

(a) Disconnect the purge VSV connector.

(b) Disconnect the ECM connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(C29,C52)
Click Connector(C29)
Click Connector(C52)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
C29-2 (EVP1) - C52-66 (PRG)	Always	Below 1 Ω
C29-2 (EVP1) or C52-66 (PRG) - Body ground and other terminals	Always	10 kΩ or higher

NG ▶ **GO TO STEP 47**

OK

26.	**REPLACE ECM**

Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

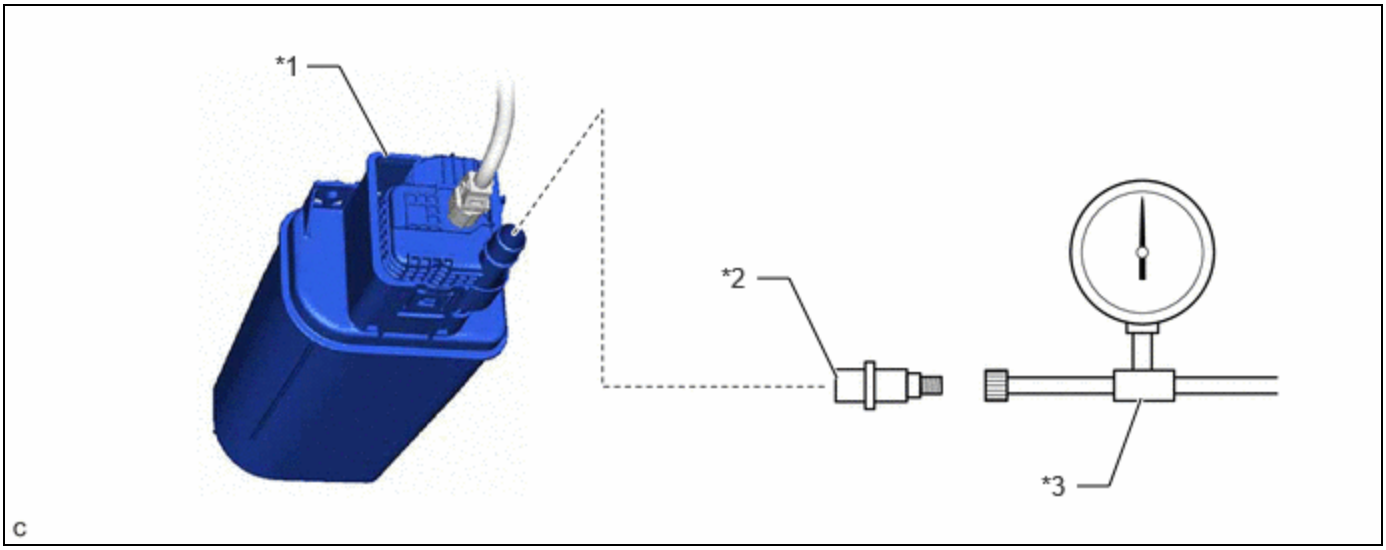
27.	**REPLACE PURGE VSV**

Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

28.	**CHECK HOSES (PURGE VSV - CANISTER)**

(a) Connect the EVAP pressure tester tool to the canister pump module with the adapter.



*1	Canister Pump Module	*2	Adapter
*3	EVAP Pressure Tester Tool	-	-

(b) Confirm good connection at the canister pump module.

(c) Pressurize the EVAP system to between 3.2 and 3.7 kPa(gauge) [0.46 and 0.54 psi(gauge)].

NOTICE:

Higher than 4.7 kPa(gauge) [0.7 psi(gauge)] of pressure will damage the EVAP system. Pay attention to the pressure.

(d) Apply soapy water to the piping and connections of the EVAP system.

(e) Look for areas where bubbles appear.

HINT:

If the system has leaks, a whistling sound will be heard.

NEXT

29.	**REPLACE MALFUNCTIONING PART**

(a) Repair or replace the leak point.

NEXT **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

30.	**INSPECT INTAKE MANIFOLD (EVAP PURGE PORT)**

(a) Disconnect the fuel vapor feed hose assembly from the intake manifold.

(b) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility

TESTER DISPLAY
Inspection Mode

(c) Start the engine.

(d) Use your finger to confirm that the port of the intake manifold has suction.

RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Suction applied	EVAP hose between intake manifold and purge VSV	A
No suction	Intake manifold	B

B ▶ **GO TO STEP 32**

A ▼

31.	**REPAIR OR REPLACE EVAP HOSE (INTAKE MANIFOLD - PURGE VSV)**

(a) Repair or replace the fuel vapor feed hose assembly.

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

32.	**REPAIR OR REPLACE INTAKE MANIFOLD (EVAP PURGE PORT)**

(a) Check that the EVAP purge port of the intake manifold is not clogged. If necessary, replace the intake manifold.

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

33.	INSPECT FUEL VAPOR-CONTAINMENT VALVE

for HEV Model: Click here INFO

for PHEV Model: Click here INFO

NG ▶ **GO TO STEP 36**

OK ▼

34.	CHECK HARNESS AND CONNECTOR (FUEL VAPOR-CONTAINMENT VALVE - ECM)

(a) Disconnect the fuel vapor-containment valve connector.

(b) Disconnect the ECM connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(R65,A92)
Click Connector(R65)
Click Connector(A92)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R65-1 (+UL) - A92-12 (CCA+)	Always	Below 1 Ω
R65-2 (+UM) - A92-20 (CCA-)	Always	Below 1 Ω
R65-3 (+UN) - A92-19 (CCB-)	Always	Below 1 Ω
R65-4 (+UP) - A92-11 (CCB+)	Always	Below 1 Ω
R65-1 (+UL) or A92-12 (CCA+) - Body ground and other terminals	Always	10 kΩ or higher
R65-2 (+UM) or A92-20 (CCA-) - Body ground and other terminals	Always	10 kΩ or higher
R65-3 (+UN) or A92-19 (CCB-) - Body ground and other terminals	Always	10 kΩ or higher
R65-4 (+UP) or A92-11 (CCB+) - Body ground and other terminals	Always	10 kΩ or higher

NG ▶ **GO TO STEP 47**

OK ▼

35.	**REPLACE ECM**

Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

36.	**REPLACE FUEL VAPOR-CONTAINMENT VALVE**

for HEV Model: Click here INFO

for PHEV Model: Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

37.	**PERFORM ACTIVE TEST USING GTS (ACTIVATE THE VACUUM PUMP)**

(a) Turn the vacuum pump (leak detection pump) on with the GTS.

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the Vacuum Pump

(b) Touch the canister pump module and check if the leak detection pump is moving.

OK:
Leak detection pump operates.

NG ▶ **GO TO STEP 42**

OK ▼

38.	**PERFORM ACTIVE TEST USING GTS (ACTIVATE THE VSV FOR VENT VALVE)**

(a) Touch the canister pump module, use the GTS to turn the vent valve on and off, and check if the vent valve is moving.

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the VSV for Vent Valve

OK:
Vent valve vibration can be felt.

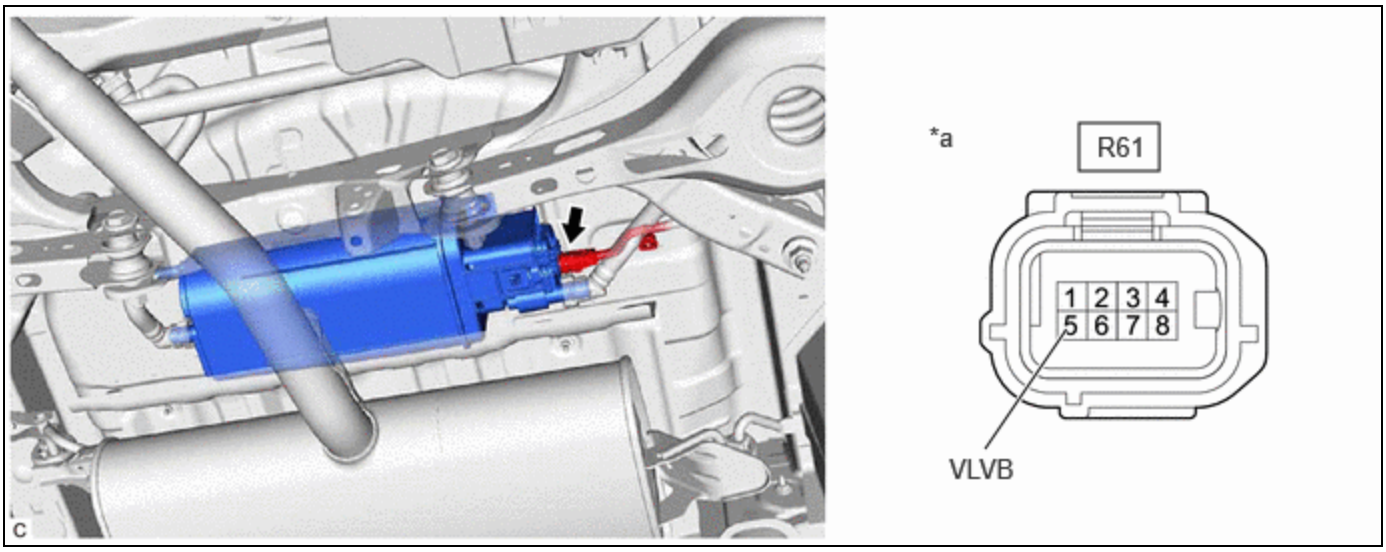
OK ▶ **GO TO STEP 43**

NG
▼

39.	CHECK CANISTER PUMP MODULE (VENT VALVE POWER SOURCE CIRCUIT)

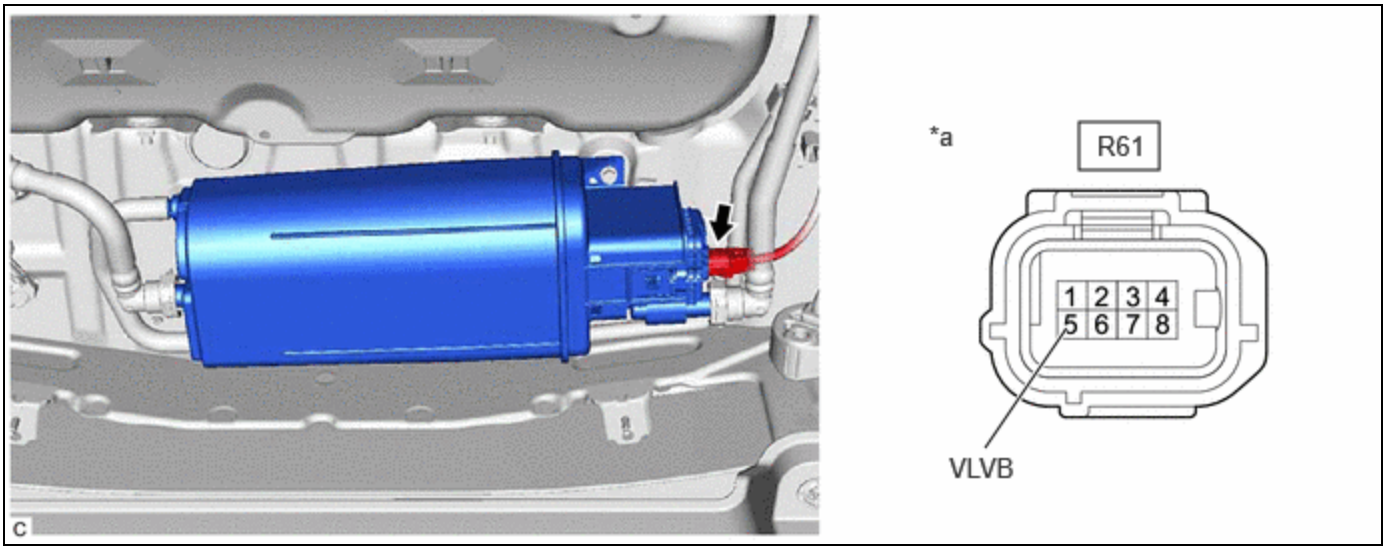
(a) Disconnect the canister pump module connector.

for HEV Model



*a	Front view of wire harness connector (to Canister Pump Module)	-	-

for PHEV Model



*a	Front view of wire harness connector (to Canister Pump Module)	-	-

(b) Turn the ignition switch to ON.

(c) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

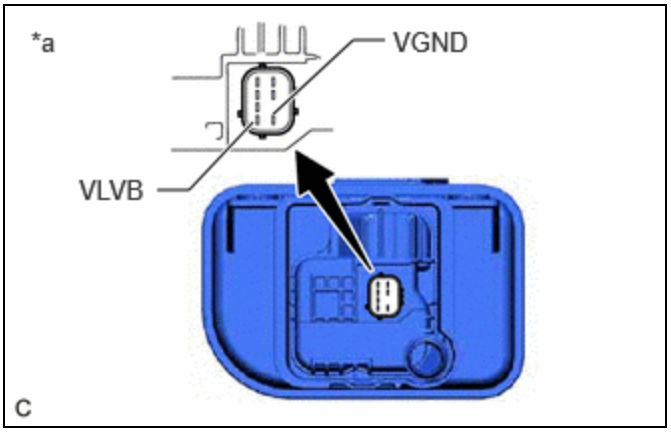
Click Location & Routing(R61)
Click Connector(R61)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R61-5 (VLVB) - Body ground	Ignition switch ON	10 to 14 V

NG ▶ **GO TO STEP 47**

OK ▼

40.	**INSPECT CANISTER PUMP MODULE (VENT VALVE OPERATION)**



*a	Component without harness connected (Canister Pump Module)

(a) Disconnect the canister pump module connector.

(b) Apply auxiliary battery voltage to VLVB and VGND terminals of the canister pump module.

(c) Touch the canister pump module to confirm the vent valve operation.

RESULT	SUSPECTED TROUBLE AREA	PROCEED TO
Operating	ECM	A
Not operating	Vent valve	B

B ▶ **GO TO STEP 43**

A ▼

41.	**REPLACE ECM**

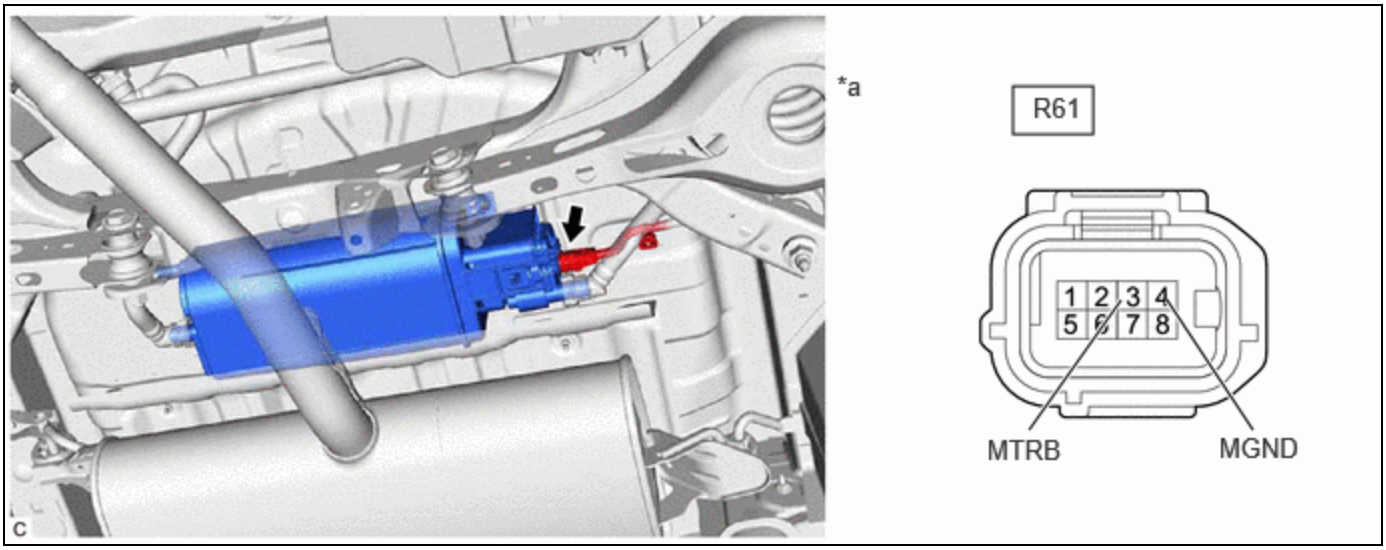
Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

42.	**CHECK TERMINAL VOLTAGE (CANISTER PUMP MODULE)**

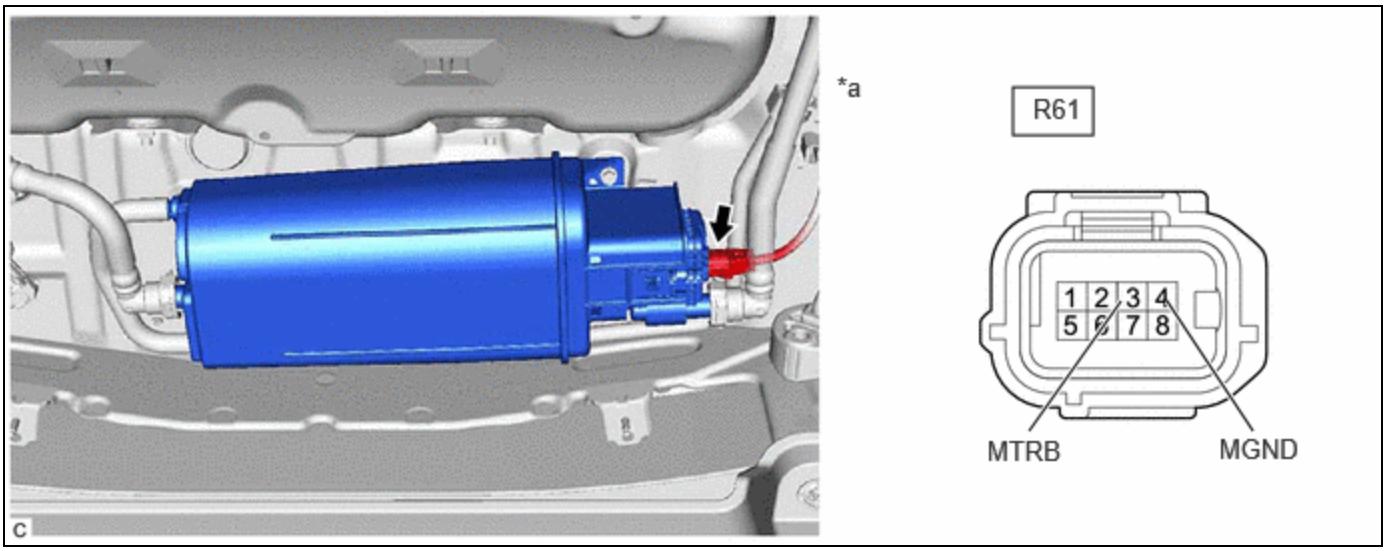
(a) Disconnect the canister pump module connector.

for HEV Model



*a	Front view of wire harness connector (to Canister Pump Module)	-	-

for PHEV Model



*a	Front view of wire harness connector (to Canister Pump Module)	-	-

(b) Turn the ignition switch to ON.

(c) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

Click Location & Routing(R61)
Click Connector(R61)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R61-3 (MTRB) - R61-4 (MGND)	Ignition switch ON	10 to 14 V

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
	Ignition switch off	Below 3 V

NG ▶ **GO TO STEP 44**

OK ▼

43.	**REPLACE CHARCOAL CANISTER ASSEMBLY**

for HEV Model: Click here INFO

for PHEV Model: Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

44.	**CHECK HARNESS AND CONNECTOR (CANISTER PUMP MODULE - BODY GROUND)**

(a) Disconnect the canister pump module connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(R61)
Click Connector(R61)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R61-4 (MGND) - Body ground	Always	Below 1 Ω

NG ▶ **GO TO STEP 47**

OK ▼

45.	**CHECK HARNESS AND CONNECTOR (CANISTER PUMP MODULE - ECM)**

(a) Disconnect the canister pump module connector.

(b) Disconnect the ECM connector.

(c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

EWD INFO

Click Location & Routing(R61,A92)
Click Connector(R61)
Click Connector(A92)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R61-3 (MTRB) - A92-4 (MPMP)	Always	Below 1 Ω
R61-3 (MTRB) or A92-4 (MPMP) - Body ground and other terminals	Always	10 kΩ or higher

NG ▶ **GO TO STEP 47**

OK ▼

46.	**REPLACE ECM**

Click here INFO

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**

47.	**REPAIR OR REPLACE HARNESS OR CONNECTOR**

(a) Repair or replace harness or connector.

NEXT ▶ **PERFORM EVAPORATIVE SYSTEM CHECK AGAIN (AUTOMATIC MODE)**