



Technical Service Bulletin

SUBJECT:			No: TSB-23-13-003
DESCRIPTION CORRECTION FOR EVAPORATIVE EMISSION CONTROL SYSTEM AND MULTIPOINT FUEL INJECTION SOLENOID VALVE – SERVICE MANUAL REVISION			DATE: May 2023
			MODEL: 2018-21 Outlander PHEV
CIRCULATE TO	GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY PROCESSOR	SALES MANAGER

PURPOSE

This TSB provides service description correction in the applicable Service Manual sections.

AFFECTED VEHICLES

2018-2021 Outlander PHEV

AFFECTED MANUAL

- 2018 Outlander PHEV Technical Information Manual, Groups 13 and 17
- 2018-2021 Outlander PHEV Service Manual, Groups 13 and 17

PROCEDURE

Please use the following chart as a guide to replace the indicated pages in the affected manual, Group 13 Fuel and Group 17 Engine, Motor and Emission Control.

Applicable Manual	Pub. No.	Applicable Title	Contents
2018 OUTLANDER PHEV Technical Information Manual	MSSP-227B-2018	FUEL └ MULTIPOINT FUEL SYSTEM (MFI) └ ACTUATOR └ FUEL TANK SOLENOID VALVE	Attached sheet 2
		FUEL └ MULTIPOINT FUEL SYSTEM (MFI) └ EVAPORATIVE EMISSION SYSTEM LEAK MONITOR AND EVAPORATIVE EMISSION PURGE FLOW MONITOR └ FUEL TANK SOLENOID VALVE	Attached sheet 3
		ENGINE, MOTOR AND EMISSION CONTROL └ EMISSION CONTROL └ EVAPORATIVE EMISSION CONTROL SYSTEM	Attached sheet 4
2018 OUTLANDER PHEV Service Manual	MSCD-027B-2018	ENGINE, MOTOR AND EMISSION CONTROL └ EMISSION CONTROL └ EVAPORATIVE EMISSION CONTROL SYSTEM └ GENERAL INFORMATION (EVAPORATIVE EMISSION SYSTEM)	Attached sheet 5
2019 OUTLANDER PHEV Service Manual	MSCD-027B-2019		
2020 OUTLANDER PHEV Service Manual	MSCD-027B-2020		
2021 OUTLANDER PHEV Service Manual	MSCD-027B-2021		

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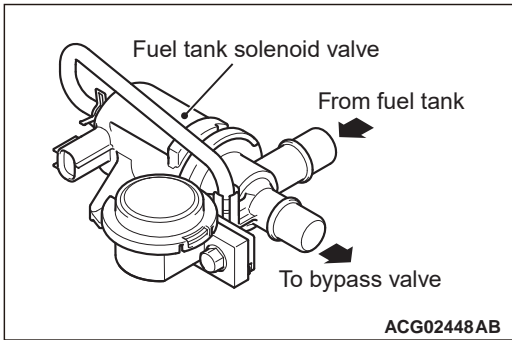
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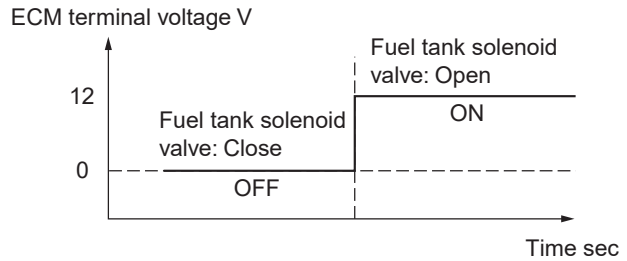
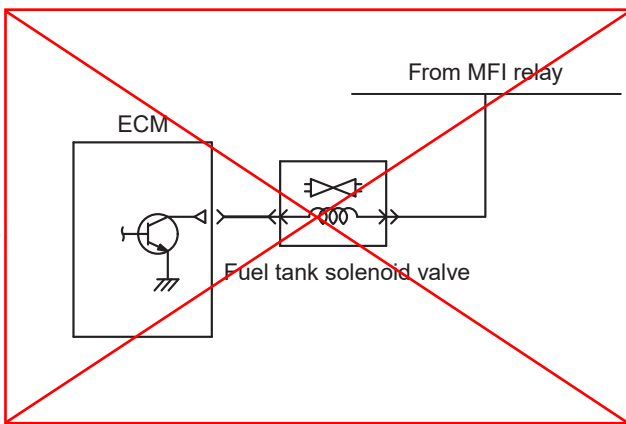
MULTIPOINT FUEL SYSTEM (MFI) ACTUATOR

FUEL TANK SOLENOID VALVE

The fuel tank solenoid valve, an ON/OFF type solenoid valve, is mounted near the fuel tank on the floor bottom side. The fuel tank solenoid valve is installed between the bypass valve and the fuel tank attached to the evaporative emission canister, and opens/closes the evaporated gas passage. The ECM turns the fuel tank solenoid valve ON to open the evaporated gas passage at the time of refueling and fuel tank internal high pressure purge control. The ECM also controls whether the fuel tank solenoid valve is ON/OFF for the evaporative emission purge flow monitor and evaporative emission leakage monitor.



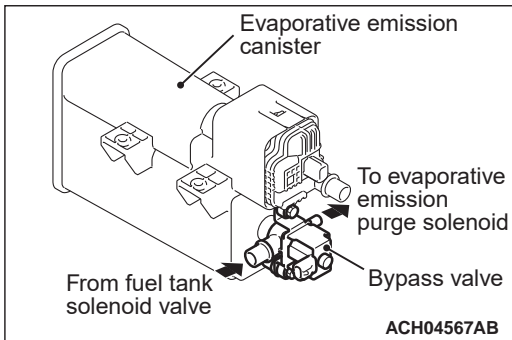
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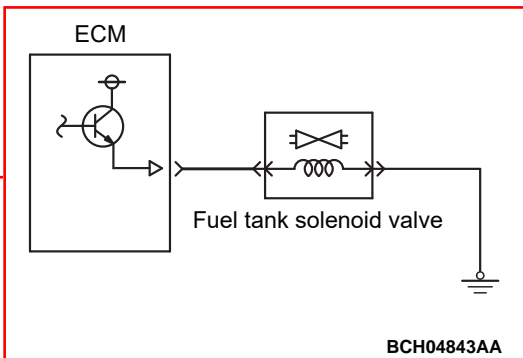
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BYPASS VALVE

The bypass valve, an ON/OFF type solenoid valve, is installed on the evaporative emission canister. The bypass valve is installed between the evaporative emission canister and the fuel tank solenoid valve, and shuts off or opens the purge piping. The ECM turns the bypass valve OFF at refueling to introduce evaporated gas into the evaporative emission canister, and turns the bypass valve ON during the fuel tank internal high pressure purge control to shut off the inflow of evaporated gas to the evaporative emission canister. The ECM also controls whether the fuel tank solenoid valve is ON/OFF for the evaporative emission purge flow monitor and evaporative emission leakage monitor.



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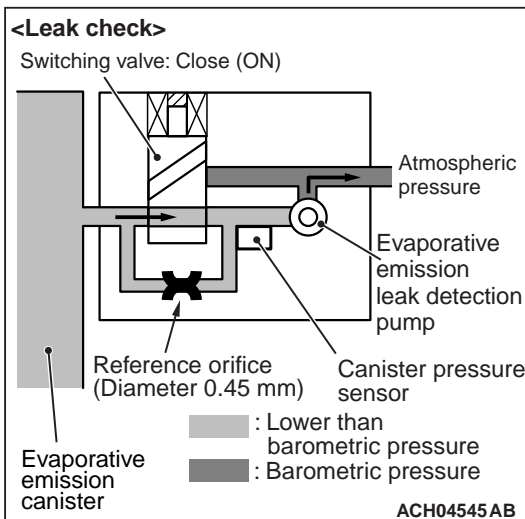
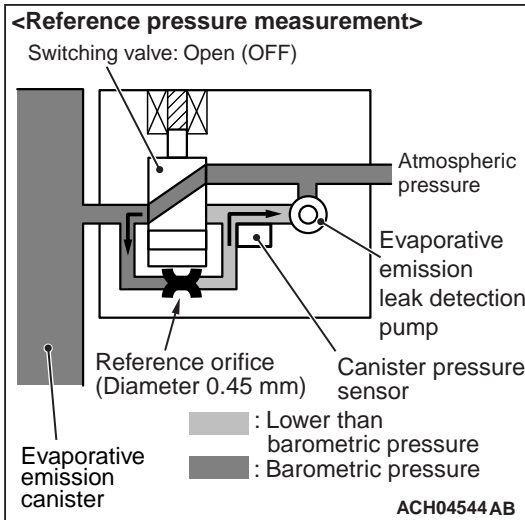
2. Overview of the evaporative emission system leak monitor

After the electric motor switch is turned OFF, and when the fuel state stabilizes (soaks) after a predetermined time (5 to 8.5 hours) has elapsed, the evaporative emission system leak monitor is executed.

Compares the reference pressure when the closed space with the inner diameter of 0.45 mm (0.018 in.) reference orifice in the ELCM is depressurized with the evaporative emission leak detection pump and the pressure when the evaporative emission system (the fuel tank and the evaporative emission canister section) is depressurized, and judges the existence of evaporative emission system leaks.

Fuel tank internal pressure is measured with the fuel tank pressure sensor and the internal pressure of the evaporative emission canister is measured with the canister pressure sensor.

Leak diagnosis is performed by separating the diagnosis area into the fuel tank side and the evaporative emission canister side at the bypass valve as the boundary.



After starting monitoring, when the evaporative emission canister pressure changes by a predetermined value or more when the fuel tank solenoid is turned from the closed (OFF) to open (ON) state with the switching valve closed (ON), leak diagnosis only on the evaporative emission canister side is performed, assuming that there is no leak in the fuel tank, and fuel tank internal pressure is retained while soaking.

When the fuel tank solenoid is turned from the closed (OFF) to open (ON) state, if the internal pressure of the evaporative emission canister does not change, it cannot be judged that there is no leak on the fuel tank side, so the leak diagnosis of the evaporative emission system including the fuel tank is performed.

The range of the closed space to be depressurized is changed by opening/closing the fuel tank solenoid, bypass valve, and switching valve of the ELCM, which allows identifying the location of the leak.

<When the fuel tank side is depressurized>

- Fuel tank solenoid: Open (ON)
- Bypass valve: Open ON ← OFF <Correct>
- Switching valve: Close (ON)
- Evaporative emission purge solenoid: Close (OFF)
- Evaporative emission leak detection pump: ON

<Added>

Attached sheet 13(3/3)

<When the evaporative emission canister side is depressurized>

- Fuel tank solenoid: Close (OFF)
- Bypass valve: Close ~~(OFF)~~ ← (ON) <Correct>
- Switching valve: Close (ON)
- Evaporative emission purge solenoid: Close (OFF)
- Evaporative emission leak detection pump: ON

In addition to leak diagnosis, the functions of evaporative emission-related parts (the fuel tank solenoid, bypass valve, ELCM, evaporative emission purge solenoid and fuel tank pressure sensor) are checked in monitoring as well.

Because monitoring is not performed when refueling, it is not monitored when refueling is started by pressing the fuel tank filler door switch or when the fuel filler lid is forcibly opened.

EXHAUST GAS RECIRCULATION CONTROL

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Refer to GROUP 17 – Emission Control <MPI> – Exhaust Gas Recirculation System [P.17-14](#).

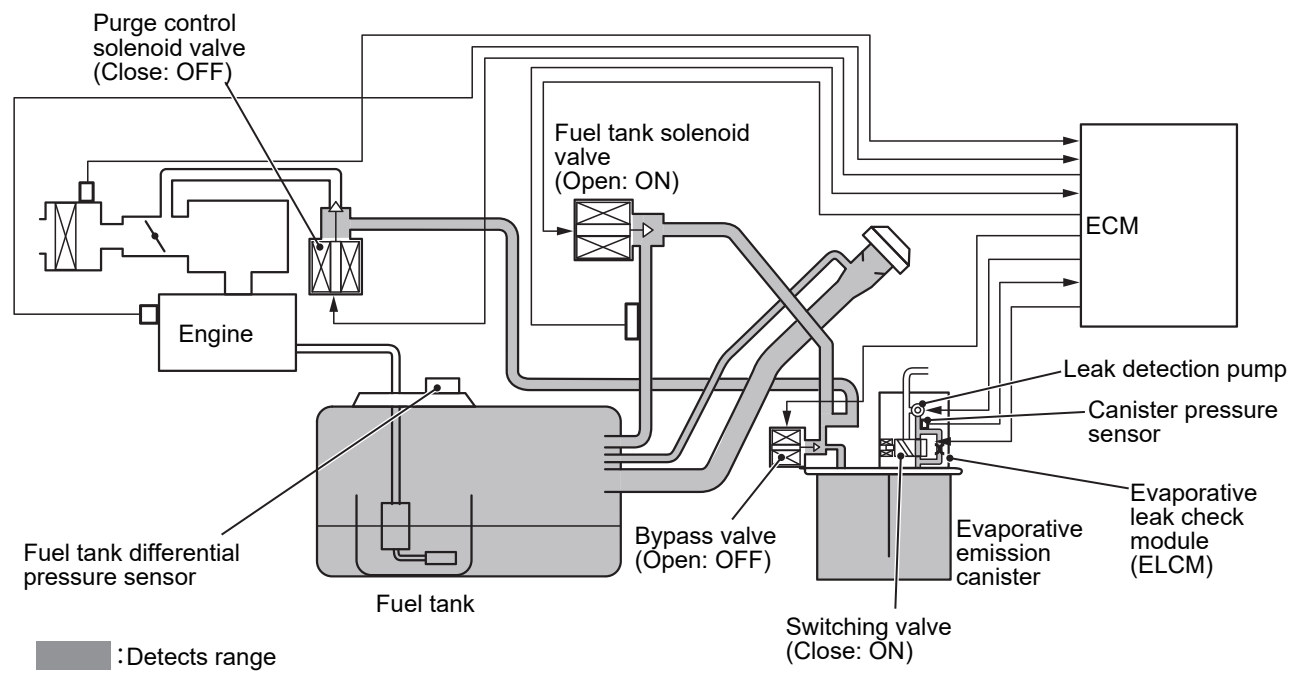
REFUEL CONTROL AND FUEL TANK PRESSURE CONTROL

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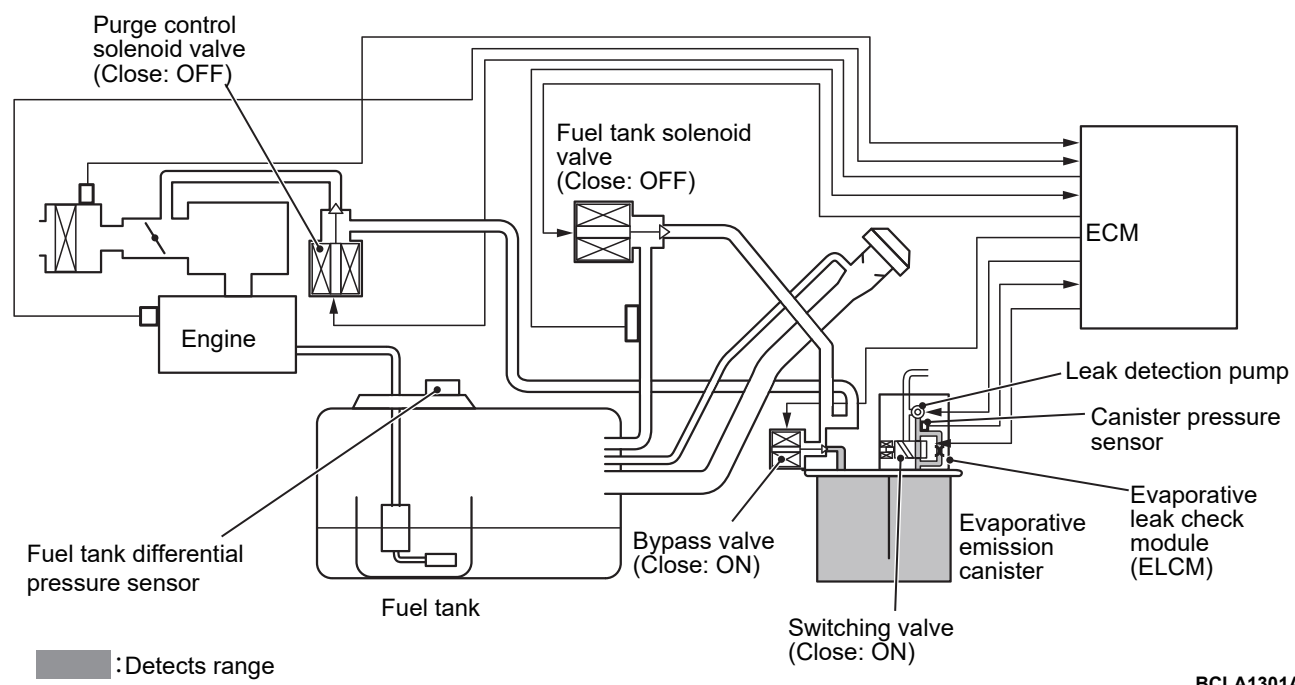
In order to prevent evaporated gas generated in the fuel tank and the evaporated gas generated during refueling from being released into the atmosphere, a closed fuel tank system that controls the pressure in the fuel tank and the adsorption of evaporated gas to the canister is adopted for PHEV models.

In addition, the electric fuel filler lid system is adopted in order to enable refueling only when the fuel tank internal pressure is reduced to atmospheric pressure.

<When the fuel tank side is depressurized>



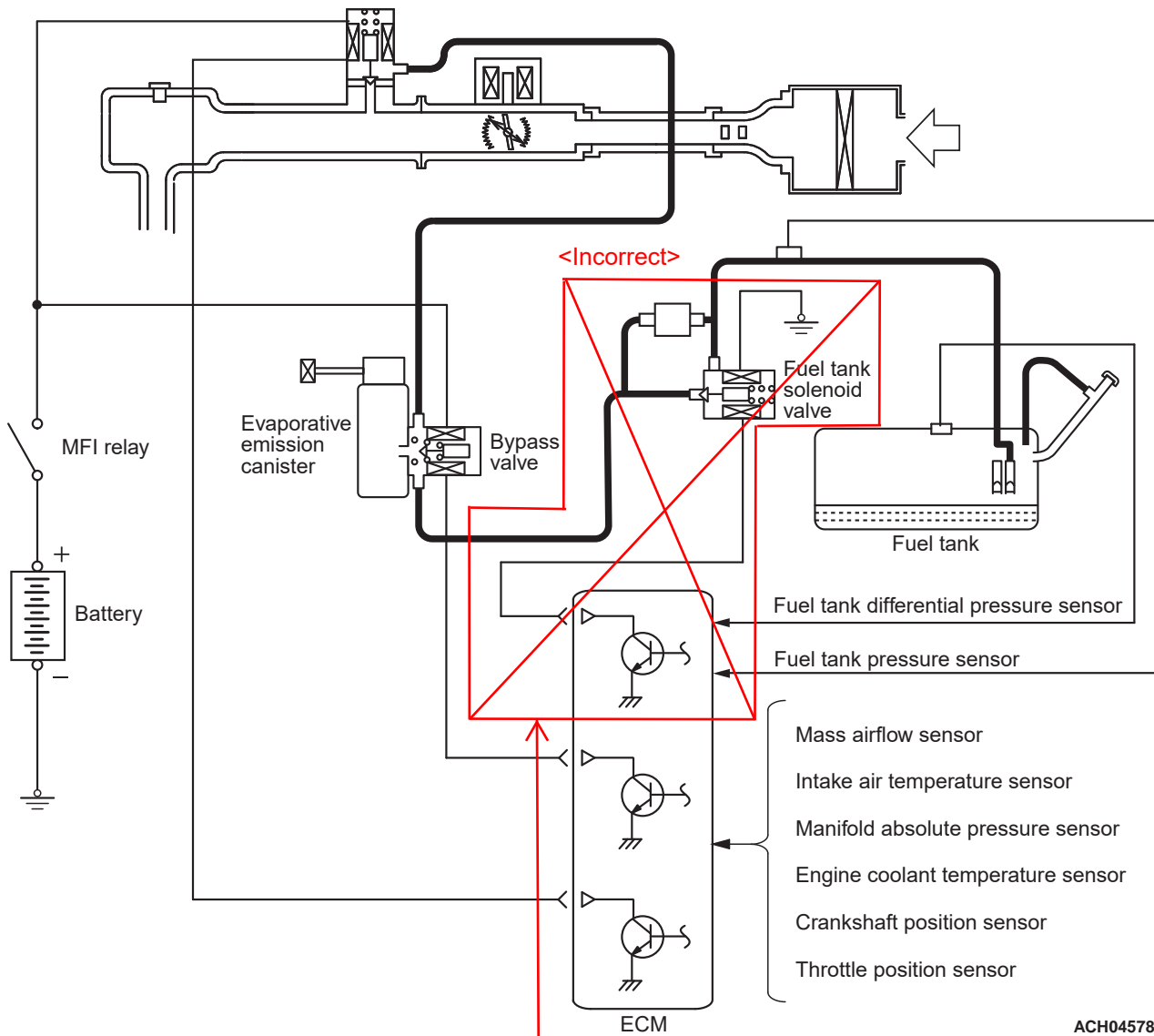
<When the evaporative emission canister side is depressurized>



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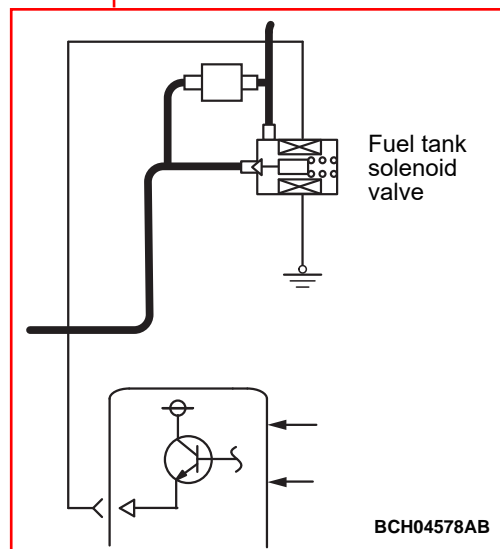
EVAPORATIVE EMISSION CONTROL SYSTEM

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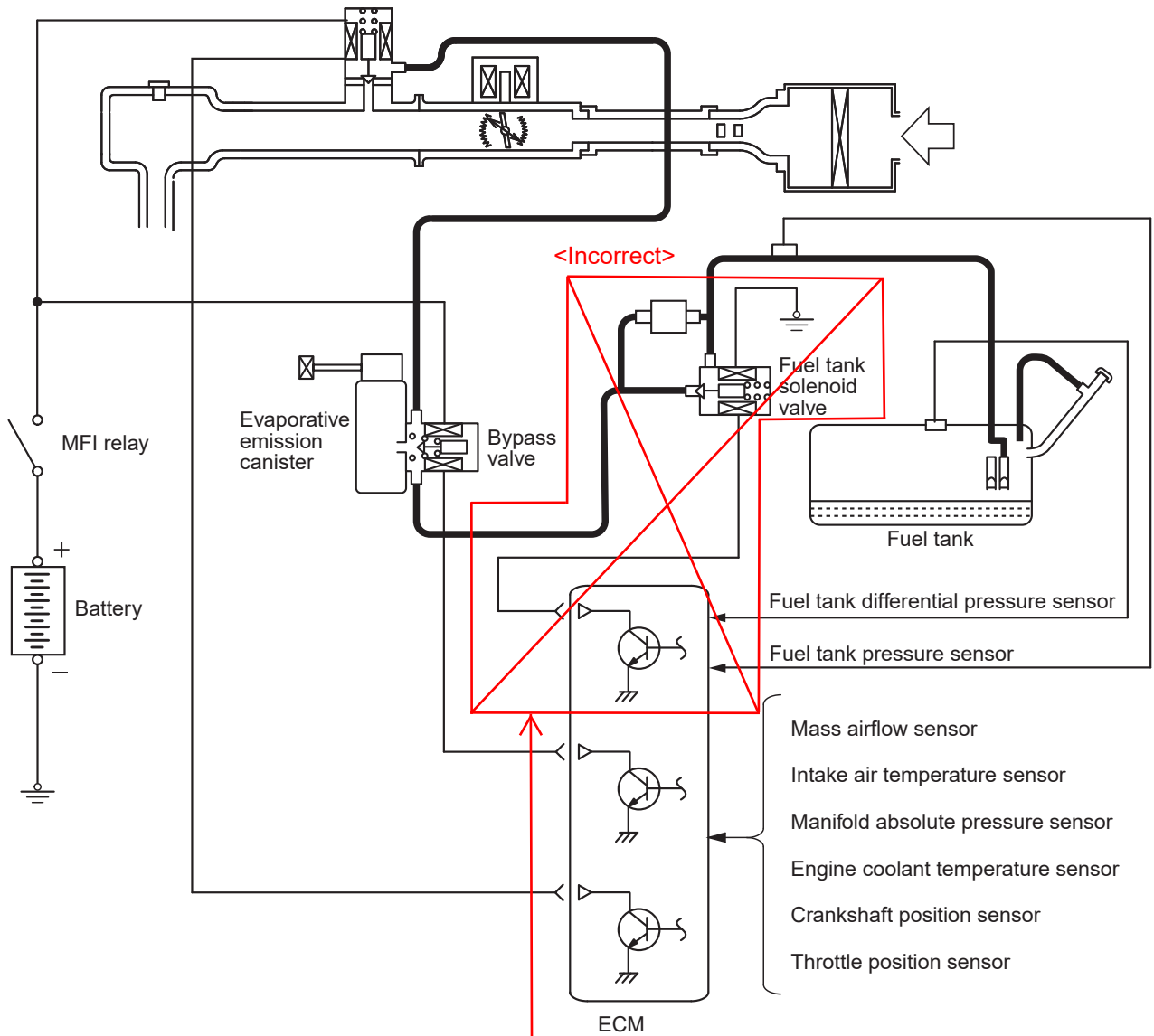
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ENGINE, MOTOR AND EMISSION CONTROL
EMISSION CONTROL

SYSTEM DIAGRAM



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