

DTC P057F:00 [SKYACTIV-D 2.2]

id0102s4401000

Details On DTCs

DESCRIPTION	Power system: Battery deterioration	
DETECTION CONDITION	Determination conditions	• The battery charge/discharge flow exceeds the specification.
	Preconditions	• Not applicable
	Drive cycle	• 2
	Self test type	• CMDTC self test
	Sensor used	• Current sensor
FAIL-SAFE FUNCTION	• Inhibits engine-stop by operating the i-stop function.	
VEHICLE STATUS WHEN DTCs ARE OUTPUT	• Flashes i-stop warning light (amber). • Illuminates master warning light. • The engine cannot be started or the engine may stall due to battery voltage decrease.	
POSSIBLE CAUSE	• Battery malfunction • Current sensor malfunction • Front body control module (FBCM) malfunction • PCM malfunction	

System Wiring Diagram

- Not applicable

Function Explanation (DTC Detection Outline)

- The battery assures voltage for engine starting and while the vehicle is being driven, and for the vehicle's electrical devices when the engine is stopped by i-stop. If the frequency of battery charging/discharging is high, the battery will deteriorate which could result in poor engine startability and the loss of assured supply voltage to the vehicle's electrical load.

Repeatability Verification Procedure

1. Start the engine.

PID Item/Simulation Item Used In Diagnosis**PID/DATA monitor item table**

Item	Definition	Unit/Condition	Condition/Specification (Reference)
BATT_DAY	Number of days elapsed since current sensor initialization	—	• Displays vehicle battery days in service

Function Inspection Using M-MDS

STEP	INSPECTION	RESULTS	ACTION
1	PURPOSE: VERIFY RELATED SERVICE INFORMATION AVAILABILITY <ul style="list-style-type: none">• Verify related Service Information availability.• Is any related Service Information available?	Yes	Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
2	PURPOSE: VERIFY IF BATTERY VOLTAGE IS FALSELY RECOGNIZED BY DTC RELATED CURRENT SENSOR <ul style="list-style-type: none">• Switch the ignition off, then ON (engine off).• Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].)• Is the PENDING CODE/DTC P058A:00 also present?	Yes	Go to the applicable PENDING CODE or DTC inspection. (See DTC P058A:00 [SKYACTIV-D 2.2].)
		No	Go to the next step.

STEP	INSPECTION	RESULTS	ACTION
3	PURPOSE: VERIFY IF BATTERY VOLTAGE IS FALSELY RECOGNIZED BY DTC RELATED CAN OR LIN COMMUNICATION <ul style="list-style-type: none"> Perform the PCM and front body control module (FBCM) DTC inspection using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) Are DTCs related CAN or LIN communication recorded? 	Yes	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [SKYACTIV-D 2.2].) (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].)
		No	Go to the next step
4	PURPOSE: VERIFY IF A MALFUNCTION OCCURRED DUE TO FAILURE OF PERFORMING THE BATTERY INITIAL SETTING <ul style="list-style-type: none"> Access the BATT_DAY PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Has it only been a short while since the battery was replaced? 	Yes	Verify the battery replacement record (servicing record or consultation with customer), and if it can be determined that the battery initial setting was not performed, perform the battery initial setting. (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) Go to the troubleshooting procedure to perform the procedure from Step 2.
		No	Go to the troubleshooting procedure to perform the procedure from Step 1.

Troubleshooting Diagnostic Procedure Intention of troubleshooting procedure

- Step 1
 - Perform a unit inspection of the battery.
- Step 2—3
 - Verify that the primary malfunction is resolved and there are no other malfunctions.

STEP	INSPECTION	RESULTS	ACTION
1	PURPOSE: DETERMINE INTEGRITY OF BATTERY <ul style="list-style-type: none"> Inspect the battery. (See BATTERY INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Replace the battery, then go to the next step. (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
2	PURPOSE: VERIFICATION OF VEHICLE REPAIR COMPLETION <ul style="list-style-type: none"> Always reconnect all disconnected connectors. Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) Implement the repeatability verification procedure. (See Repeatability Verification Procedure.) Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Is the PENDING CODE for this DTC present? 	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) Go to the next step.
		No	Go to the next step.
3	PURPOSE: VERIFY IF THERE IS ANY OTHER MALFUNCTION <ul style="list-style-type: none"> Is any other DTC or pending code stored? 	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	DTC troubleshooting completed.