



Service Bulletin

Bulletin No.: 15-NA-087

Date: October, 2022

TECHNICAL

Subject: Stop/Start System Inhibited with Malfunction Indicator Light (MIL) Illuminated - DTC P16DC, P15FF, P305D, P305E, U01B0, U0284, U0285, U1345, U135A, U135E, U1501, U1510, U1511 Set

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Buick	Enclave	2018	2023	—	—	All	All
	Encore	2016	2022				
	Envision	2016	2022				
	LaCrosse	2017	2019				
	Velite 6	2020	2023				
	Velite 7	2021	2022				
Cadillac	ATS	2017	2019				
	CT6	2016	2023				
	CTS	2019	2019				
	XT4	2019	2023				
	XT5	2017					
	XT6	2020					
Chevrolet	Bolt EV	2021	2023				
	Bolt EUV	2022					
	Cruze (Gen II - VIN B)	2016	2019				
	Equinox	2018	2022				
	Malibu	2017	2022				
	Silverado 1500 (New Model)	2019	2019				
	Silverado 1500	2020	2021				
	Silverado 1500 - LTD (RPO J21, VIN Digit 5 = W/Y)	2022	2022				
	Traverse	2018	2023				
GMC	Acadia	2017	2023				
	Sierra 1500 (New Model)	2019	2019				
	Sierra 1500	2020	2021				
	Sierra 1500 - Limited (RPO J21, VIN Digit 5 = 8/9)	2022	2022				
	Terrain	2018	2023				

Involved Region or Country	North America, Europe, Kazakhstan, Uzbekistan, Russia, Middle East, Israel, Palestine, Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Japan, Cadillac Korea (South Korea), GM Korea Company, China, Thailand, Australia/New Zealand, Egypt, Other (Africa)
Additional Options (RPOs)	Equipped with Engine Control-Stop/Start System (RPO KL9)
Condition	Some customers may comment on any of the following conditions: <ul style="list-style-type: none"> • The Stop/Start system is inoperative. • A "Stop/Start System Disabled" Message appears on the DIC. • The Malfunction Indicator Lamp (MIL) is illuminated.
Cause	The technician may observe on a scan tool one or more of the following DTCs set: <ul style="list-style-type: none"> • P15FF: Battery Monitor Sensor Signal Message Counter Incorrect • P16DC: Battery Sensor Monitor Timer Performance (DTC P16DC disables the Stop/Start System) • P305D: DC/DC Converter Crank Control Circuit High Voltage • P305E: DC/DC Converter Crank Control Circuit Low Voltage • U01B0: Lost Communication with Battery Monitor Module • U0284: Lost Communication with Active Grille Air Shutter 1 Motor Module • U0285: Lost Communication with Active Grille Air Shutter 2 Motor Module • U1345: Engine Control Module LIN Bus 1 • U135A: Lost Communication with Shift to Park Range Actuator • U135E: Lost Communication with Transmission Control Module on Engine Control Module LIN Bus 1 • U1501: LIN Bus • U1510: K20 Engine Control Module Lost Communication with M96 Active Grille Air Shutter Actuator / M60A Active Grille Air Shutter 1 Motor Module on LIN Bus (There are 7 other modules on the BUS that may set this DTC) • U1511: K20 Engine Control Module Lost Communication with M60B Active Grille Air Shutter 2 Motor Module on LIN Bus (There are 3 other modules on the BUS that may set this DTC) Intermittent Conditions and Poor Connections on the LIN Bus may also be a Cause.
Correction	Read the Information section and perform the Service Procedure.

Important: Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.

2016 Cadillac CT6 Reference Investigate Vehicle History

If a 2016 Cadillac CT6 is encountered with this Condition, reference Investigate Vehicle History (IVH) and verify that #43880-02: Service Update - Battery Monitor Module Timer has been performed before proceeding.

Information

Auto Stop Criteria

The Engine Control module (ECM) will send an Autostop state message to the body control module (BCM) and shut down the engine and restart the vehicle when all the criteria is met. The BCM will transmit the Autostop state message to the instrument cluster.

Reference *Stop/Start Disable, Inhibit, and Restart Reasons* in Service Information to see all the parameters and reasons why stop/start does not enable.

Note: Not all parameters may be available in all vehicles.

Battery Sensor Module

The B110 Battery Sensor Module also known as the intelligent battery sensor (IBS) is an ECM LIN sensor that tells the vehicle important 12V information such as state of charge (SOC), voltage, current charge, drain, etc. There are critical 12V features that depend on the sensor:

- Battery Maintenance report
- Start/Stop System
- Over the Air (OTA) updates
- Future features

Diagnostic Aids

- Unplugging Battery Sensor connector or removing it from the negative battery post will reset the learn status.
- An excessive battery draw higher than ~100 mA will prevent the B110 Battery Monitor Module learn from completing successfully in 4 Hrs.
- If the SOC is 65% or below, the Stop/Start will be disabled.

Preventing Sensor Reset



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Unless the 12V battery or the sensor is being replaced, the IBS should stay attached to the negative stud with its connector attached at all times.

- OK to disconnect at Green circled point or any point further downstream towards chassis ground stud.
- DO NOT disconnect IBS from the negative battery post or the connector.

Service Procedure

Important: Depending on the Model Year, the vehicle and the information that the Service Personnel is referencing, the Battery Monitor Module is also identified as the Battery Sensor Module and the Battery Monitor Sensor in Service Information, the EPC and the Global Labor Time Guide.

1. Perform the Diagnostic System Check - Vehicle. Refer to *Diagnostic System Check - Vehicle* in SI.
2. Are any of the listed Diagnostic Trouble Codes (DTCs) Set?
 - ⇒ If one or more of the listed DTCs are Set, Go to Step 3.
 - ⇒ If none of the listed DTCs are Set, refer to Diagnostic Trouble Code (DTC) List - Vehicle. Refer to *Diagnostic Trouble Code (DTC) List - Vehicle* in SI.

3. Diagnose the DTCs in the order that is defined in the Diagnostic System Check - Vehicle.
4. Did you find and correct the Condition?
 - ⇒ If you found and corrected the Condition, then perform the Diagnostic Repair Verification. Refer to *Diagnostic Repair Verification* in SI.
 - ⇒ If you did not find and correct the Condition, Go to Step 5.
5. Perform the following:

Note: You must use regionally required battery test equipment for warranty repairs.

- Perform the Battery Inspection/Test procedure.
 - Inspect for water intrusion at the Active Grille Shutter Actuator in-line connector if equipped.
 - Verify that the connectors/connections are clean and secure for the Local Interconnect Network (LIN) circuit between the Battery Monitor Module, the Active Grille Shutter Actuators (if equipped), the Engine Control Module, the Default to Park Actuator and the Transmission Control Module. During the inspection, verify that any unused connector terminals/cavities have seals as needed. Refer to *Testing for Intermittent Conditions and Poor Connections* in SI.
 - ⇒ If you found and corrected the Condition, then perform the Diagnostic Repair Verification. Refer to *Diagnostic Repair Verification* in SI.
 - ⇒ If you did not find and correct the Condition, Go to Step 6.
6. Replace the Battery Monitor Module. Refer to *Battery Monitor Module Replacement (KL9)* in SI.
 7. Perform the Diagnostic Repair Verification. Refer to *Diagnostic Repair Verification* in SI.

Parts Information

Causal Part	Description	Part Number	Qty
X	Battery Sensor Module	Refer to EPC	1

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4040070	Battery Monitor Module Replacement	Use Published Labor Operation Time

Version Information

Version	11
Modified	<p>Revised February 29, 2016 – Added the 2016 Encore, CT6, Cruze, 2017 XT5 Models and removed an SI reference from Correction.</p> <p>Revised March 16, 2016 – Removed the Malibu model.</p> <p>Revised April 25, 2016 – Removed the Cadillac ATS/CTS models.</p> <p>Revised February 21, 2017 – Added the 2017 LaCrosse to Model section.</p> <p>Revised May 23, 2017 – Added DTCs, Updated the Model, Condition, Correction and Customer Information sections.</p> <p>Revised August 10, 2018 – Added Battery Sensor Information and updated the Model Years.</p> <p>Revised- August 30, 2018 – Changed the Customer Information title to Service Procedure and updated the Labor Time under Warranty Information.</p> <p>Revised December 12, 2018 – Added the Holden Equinox model and DTCs P305D and P305E.</p> <p>Revised February 13, 2019 – Removed Holden Equinox, added Descriptors to the DTCs, inserted an Important that states the Battery Monitor Module may also be called the Battery Sensor Module and the Battery Monitor Sensor and created an updated Service Procedure.</p> <p>Revised October 25, 2022 – Added Additional Vehicles to Model List, 2019–2023 Model Years, Correction information, Important statement under Correction, and Information section.</p>

Additional SI Keywords: IBS, Intelligent Battery Sensor,
Battery Monitor Module, Battery Sensor

