



Service Bulletin

PRELIMINARY INFORMATION

Subject: Diagnostic Tips for Stop/Start and AutoStop Operation

Models: 2014-2015 Chevrolet Malibu
2015-2016 Chevrolet Impala (VIN 1)
2016 Chevrolet Malibu (VIN 1)
Equipped with 2.5L Engine (RPO LKW or LCV) and Stop/Start System (RPO KL9)

Attention: This PI also applies to any of the above models that may be Export vehicles.

This PI has been revised to add the 2016 Impala and Malibu. Please discard PI1426.

Condition/Concern

Some customers may comment on one or both of the following concerns:

- Vehicle does not engage in AutoStop mode.
- Vehicle automatically restarts during an AutoStop event.

Recommendation/Instructions

AutoStop mode is based on many factors. It is important first to verify that all conditions are met to enable AutoStop mode.



AutoStop may be deactivated if:

- A minimum vehicle speed is not reached; minimum 20 km/h (12 mph) prior to first AutoStop, then 10 km/h (6 mph) thereafter.
- The ambient, engine and transmission temperatures are not at the required operating ranges.

Note: Refer to the table in the Stop/Start Enable Temperature Criteria below.

- The shift lever is in any gear other than Drive.
- The battery charge is low; less than 12V.
- A/C compressor request from HVAC (A/C or Defrost modes)
- The interior comfort level has not been reached the required level for the climate control system or defog settings. Use the ECO (green indicator on) air conditioning mode for better efficiency. Illustration below of Dual Automatic Climate Control System ECO mode green light.



- Humidity level too high inside the passenger compartment, commanding A/C compressor ON within Vehicle Personalization Settings.
- The AutoStop time is greater than two minutes.
- Hood switch status shows open.
- Note:** AutoStop will be disabled for entire ignition cycle if hood is open at the start of the ignition cycle.
- Brake pedal is not depressed beyond a specific value.
 - Approximately 27% for 2014 Malibu.
 - Approximately 24% for 2015 Impala and Malibu.
 - Approximately 23% for 2016 Impala and Malibu.
- Accelerator pedal is being applied.
- Brake booster vacuum is less than 45 kPa (7 psi)
- Engine speed is above 1,200 RPM.
- Battery state of charge is the ECM is less than 60%.

Stop/Start Enable Temperature Criteria

| | | | | | |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Ambient Temperature | -20°C (-4°F) | -5°C (23°F) | 15°C (59°F) | 35°C (95°F) | 45°C (113°F) |
| Engine Temperature | 70°C (158°F) | 70°C (158°F) | 40°C (104°F) | 50°C (122°F) | 65°C (149°F) |
| Transmission Temperature | 15°C (59°F) | 15°C (59°F) | 15°C (59°F) | 35°C (95°F) | 45°C (113°F) |

Many of the conditions that allow, or shorten, an AutoStop are not visible or controlled by the operator. In general, skipped AutoStop should be considered normal. If a system malfunction is the cause for loss of AutoStop, a diagnostic trouble code (DTC) will be set.

Stop/Start System Training

An overview course is available at the following websites:

- In the United States go to > www.centerlearning.com
- In Canada go to > www.gmprocanada.com

| Course Name | Description | Course Type | Intended Audience |
|-------------|-----------------------|-------------|-----------------------|
| 16040.30W | 12V Stop/Start System | Web | All Service Personnel |

Customer Education Unique Operating Characteristics

Customer Education

It is imperative that the customer be well informed about the unique features and operational characteristics of their vehicle equipped with Stop/Start. For the sales team to be fully prepared, they should use the Getting to Know Your Vehicle (GTK) guide (U.S. Only) as an outline when presenting the vehicle to the customer. Additionally, service and parts leadership, service writers and technicians should familiarize themselves with these materials to avoid attempting repair of normal operating characteristics.

Diagnostic Aids

When attempting to diagnose an AutoStart or AutoStop concern, the technician should review the Autostart Inhibit Reason and/or Autostop Disable Reason lists available in the ECM. This list contains several parameters that are directly related to the Auto Start/Stop feature. They can be found in GDS 2 under ECM/Data Display. These parameters list the current state of several parameters that can inhibit the Stop/Start feature. These parameters can be viewed while operating the vehicle on the road or on a hoist with traction control turned off, to assist in determining why an autostop did not occur.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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