

Bulletin No.: PI1250B

Date: Jul-2015

# Service Bulletin

## PRELIMINARY INFORMATION

Subject: Advanced Diagnostics — Proactive Alert

Models: 2016 Cadillac Escalade, Escalade ESV Equipped with RPO — L86

2015-2016 Chevrolet Equinox Equipped with RPO — LFX

2016 Chevrolet Corvette Equipped with RPO — LT1 or LT4

2016 Chevrolet Silverado LD Equipped with RPO — LV3, L83, L86 or L8B

2016 Chevrolet Suburban, Tahoe Equipped with RPO — L83

2015-2016 GMC Terrain Equipped with RPO — LFX

2016 GMC Sierra LD Equipped with RPO — LV3, L83, L86 or L8B

2016 GMC Yukon, Yukon XL Equipped with RPO — L83

Vehicles Enrolled in OnStar® Vehicle Diagnostics — United States and Canada Only

**Excluding Fleet Vehicles** 

**Excluding Vehicles Equipped with Bi-Fuel, LPG or CNG** 

Excluding Vehicles Equipped with Auxiliary Battery RPO — K4B or Dual Battery RPO — K4D

Attention: Advanced Diagnostics — Proactive Alert was developed using Genuine GM Parts. Due to the wide

variation and the availability of non-GM components, it is possible that using non-GM components may

set false Proactive Alert Service Messages. To maintain proper system performance, always use

ACDelco™ or Genuine GM Parts.

This PI has been revised to change the Subject and any text regarding Vehicle Health Management (VHM) to its new name: Advanced Diagnostics — Proactive Alert, add Models and Model Years, add two sections for Communication Process for Customer and Dealer, update the information, add a voltage drop specification table, add a fuel pressure specification table, and update and add additional Warranty Information. Please discard PI1250A.

**Advanced Diagnostics — Proactive Alert** 

## **System Overview**

Customers that purchase any of the vehicles identified above and are enrolled in OnStar® Vehicle Diagnostics, will be able to enroll in Advanced Diagnostics — Proactive Alert. Proactive Alert monitors the Engine Cranking system and the Fuel Delivery system and if either one of these monitored systems triggers certain performance issues, a Model Year specific Customer and Dealer Communication are sent. For the Model Year specific communication process information, refer to one of the following sections titled:

- Communication Process for Customer and Dealer Model Year 2015 Vehicles
- Communication Process for Customer and Dealer Model Year 2016 Vehicles

Important: It is important to understand that some Proactive Alert Service Messages may be generated without any apparent symptoms being noticed by the Customer.

## **Monitored Systems**

The Engine Cranking system and the Fuel Delivery system components that are monitored are explained as follows:

- Engine Cranking System: Consisting of the Battery and Starter and their performance.
- Fuel Delivery System: Consisting of the Fuel Tank Fuel Pump Module and the Fuel Pressure Sensor, located in the fuel pipe/fuel feed pipe and their performance.

#### Service Message Identifier

Currently, there are nine different repair actions covered under Proactive Alert. Each individual repair is distinguished by its own Service Message Identifier. They are constructed by using the involved service manual section, to create a three letter acronym that is combined with three numerals for a total length of 6 characters. For example: 12 volt battery is covered under the "Starting and Charging" section, resulting in SAC for the first three positions with three numerals for the last three positions. The first "Starting and Charging" Service Message Identifier is called out as SAC001.

Important: Proactive Alert Service Messages are not stored On-Vehicle and cannot be retrieved from the vehicle using a scan tool. Although some other on board system DTCs may also be set, the Service Technician must use the Service Message Identifier when diagnosing. Refer to the Section titled: Service Message Identifiers and Diagnostic Procedures

#### Warranty

Due to the unique nature of the Advanced Diagnostics — Proactive Alert system, special Bulletin Only Labor Operations have been set up to be used in conjunction with the repair of the identified Service Messages. The Service Personnel and Warranty Administration Personnel must use these Bulletin Only Labor Operations for any repair related to these Service Messages. Refer to the applicable Bulletin Only Labor Operation identified in the last Step of each Service Message Identifier and also in the Section titled: Warranty Information, at the end of this Bulletin.

Notice: All parts replaced under this program will be requested back by the Warranty Parts Center (WPC). Ensure that all components are appropriately marked and tracked for return.

## Communication Process for Customer and Dealer — Model Year 2015 Vehicles

When a Proactive Alert Service Message is *triggered*, a Service Message is *generated* and in the United States, the Customer Assistance Center (CAC), or in Canada, the Customer Care Centre (CCC) will contact the vehicle Customer to set up an appointment with their preferred service provider. CAC or CCC then contacts the preferred service provider to assist with the service appointment and communication of the Proactive Alert Service Message to ensure proper serviceability. Duplicate Proactive Alert Service Message information is also sent to both the Customer and the selected preferred service provider by email.

- ⇒ If the Proactive Alert Service Message is unclear, perform one of the following:
- <u>In the United States</u>, if a Customer contacts your dealership about a Proactive Alert Service Message by the CAC and the Service Message information is not clear, call the Dealer Business Center (DBC) Aftersales, Monday Friday, 8 am 9 pm EST at: 888-414-6322, prompt 3, with the involved VIN, and ask to speak to a Dealer Business Center agent. They will be able to provide the Proactive Alert Service Message information in order for the Service Department Personnel to proceed in the appropriate diagnostic direction.
- In Canada, if a Customer contacts your dealership about a Proactive Alert Service Message by the CCC and the Proactive Alert Service Message information is not clear, call the CCC Monday Friday 8 am 11 pm EST at the CCC Dealer Line: 800-561-4515 with the involved VIN, and ask to speak to a Vehicle Health Management Specialist. They will be able to provide the Proactive Alert Service Message information in order for the Service Department Personnel to proceed in the appropriate diagnostic direction.

## Communication Process for Customer and Dealer — Model Year 2016 Vehicles

When a Proactive Alert Service Message is *triggered*, a Proactive Alert Service Message is *generated* and it will play through the vehicle's audio system shortly after the vehicle is started. In addition, a text message and email will be sent to the customer using the phone number and email address they provided when they opted into the service.

Starting in the fall of 2015, an email will also be sent to the selected preferred service provider, which was also identified by the customer, when they opted into the service. The Customer Experience Manager will be the recipient at GM Dealers.

⇒ If the Proactive Alert Service Message is unclear, perform the following:

Ask the customer for a copy of the email they received or press the blue OnStar® button in the subject vehicle. The OnStar® advisor will be able to provide the Proactive Alert Service Message information.

## **Service Message Identifiers and Diagnostic Procedures**

Service Message Identifier SAC001

Predicted Starting and Charging — Battery — Low Cranking Capacity Due to Shorted Cell

- 1. This Service Message **DOES NOT** require any diagnosis.
- 2. Replace the battery. DO NOT use the EL-50313 Midtronics GR8 Battery Tester/Charger. Refer to Battery Replacement in SI.
- 3. No other action is required as the Service Message will automatically clear once the battery is replaced and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set if the vehicle experienced a low voltage condition.
  - Use the scan tool to clear ALL DTCs prior to releasing the vehicle to the Customer.

Notice: The battery warranty code is not required when using this Bulletin Only Labor Operation.

4. Submit the correct Bulletin Only Labor Operation for this repair: 4080568\*.

#### Service Message Identifier SAC002

## Predicted Starting and Charging — Low Cranking Capability Due to High Resistance

Notice: The Service Technician MUST complete every Step of this diagnostic.

- 1. Verify the battery cable connections are clean and tight. Refer to Battery Inspection/Test in SI.
- 2. Ignition OFF, measure the battery voltage at the battery terminals. The voltage should be between 12.0–15.0 V
  - ⇒ If not within the specified range, refer to Battery Charging in SI.
  - ⇒ If within the specified range, Go to Step 3, for Corvette Go to Step 4.

Positive Cable	Test Value		
Equinox & Terrain	.5 V		
Corvette	.5 V		
Full Size Truck	.9 V		

## Notice: For Corvette testing, Go to Step 4.

- 3. Test for less than the specified value between the positive battery cable at the battery and the positive battery cable at the M64 starter motor as the ignition is placed in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- 4. Test for less than 0.5 V between terminal A X6 at the X50D Fuse Block Battery and terminal A X6 at the X50A Fuse Block Underhood as the ignition is placed in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 5.
- 5. Test for less than 0.5 V between terminal A X6 at the X50A Fuse Block Underhood and terminal A X2 at the M64 Starter Motor as the ignition is place in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the starter solenoid cable. Refer to Starter Solenoid Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- 6. Test for less than 0.5 V between the negative battery cable and the M64 starter motor case as the ignition switch is placed in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the negative battery cable. Refer to Battery Negative Cable Replacement in SI.
  - ⇒ If less than the specified value, replace the battery. **DO NOT use the EL-50313 Midtronics GR8 Battery Tester/Charger.** Refer to Battery Replacement in SI.
- 7. No other action is required as the Service Message will automatically clear once the battery is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set if the vehicle experienced a low voltage condition.

Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.

Notice: The battery warranty code is not required when using this Bulletin Only Labor Operation.

8. Submit the correct Bulletin Only Labor Operation for this repair: 4080578\*.

## Service Message Identifier SAC003

## Predicted Starting and Charging — Battery — Low Cranking Capability Due to Low State of Charge

Notice: Normal operation of the vehicle MAY have recharged the battery.

- 1. Follow the instructions in SI for Battery Inspection/Test and Battery Charging using the EL-50313 Midtronics GR8 Battery Tester/Charger.
- 2. Perform the Battery Electrical Drain/Parasitic Load Test in order to verify the cause of the low battery, such as aftermarket equipment, Customer driving

- habits, etc. Refer to SI.
- 3. No other action is required as the Service Message will automatically clear once the battery is charged properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set if the vehicle experienced a low voltage condition.
  - Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.
- 4. Submit the correct Bulletin Only Labor Operation for this repair: 4080588\*.

## Service Message Identifier SAC004

## Predicted Starting and Charging — Low Cranking Capability Due to High Resistance in Starter System

Notice: The Service Technician MUST complete every Step of this diagnostic.

- 1. Verify the battery cable connections are clean and tight. Refer to Battery Inspection/Test in SI.
- Turn OFF the ignition. Measure the battery voltage at the battery terminals. The voltage should be between 12.0–15.0 V
  - ⇒ If not within the specified range, refer to Battery Charging in SI.
  - ⇒ If within the specified range, Go to Step 3, for Corvette Go to Step 4.

Positive Cable	Test Value		
Equinox & Terrain	.5 V		
Corvette	.5 V		
Full Size Truck	.9 V		

## Notice: For Corvette testing, Go to Step 4.

- 3. Test for less than the specified value between the positive battery cable at the battery and the positive battery cable at the M64 starter motor as the ignition is placed in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- 4. Test for less than 0.5 V between terminal A X6 at the X50D Fuse Block Battery and terminal A X6 at the X50A Fuse Block Underhood as the ignition is placed in the **CRANK/START** position.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 5.
- 5. Test for less than 0.5 V between terminal A X6 at the X50A Fuse Block Underhood and terminal A X2 at the M64 Starter Motor as the ignition is place in the **CRANK/START** position.
  - ⇒ If greater than the specified value, replace the starter solenoid cable. Refer to Starter Solenoid Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- 6. Test for less than 0.5 V between the negative battery cable and the M64 starter motor case as the ignition switch is placed to the CRANK/START position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the negative battery cable. Refer to Battery Negative Cable Replacement in SI.
  - ⇒ If less than specified value replace the Starter. Refer to Starter Replacement in SI.
- 7. No other action is required as the Service Message will automatically clear once the starting system is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set if the vehicle experienced a low voltage condition.
  - Use the scan tool to clear ALL DTCs prior to releasing the vehicle to the Customer.
- Submit the correct Bulletin Only Labor Operation for this repair: 4080598\*.

## Service Message Identifier SAC005

Predicted Starting and Charging — System Performance — Low Cranking Capability Due to High Resistance in Battery or Short in Starter

## Notice: The Service Technician MUST complete every Step of this diagnostic.

- 1. Verify the battery cable connections are clean and tight. Refer to Battery Inspection/Test in SI.
- 2. Turn OFF the ignition. Measure the battery voltage at the battery terminals. The voltage should be between 12.0–15.0 V.
  - ⇒ If not within the specified range, refer to Battery Charging in SI.
  - ⇒ If within the specified range, Go to Step 3, for Corvette testing Go to Step 4.

Positive Cable	Test Value
Equinox & Terrain	.5 V
Corvette	.5 V
Full Size Truck	.9 V

#### Notice: For Corvette testing, Go to Step 4.

- 3. Test for less than the specified value between the positive battery cable at the battery and the positive battery cable at the M64 starter motor as the ignition is placed in the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- **4.** Test for less than 0.5 V between terminal A X6 at the X50D Fuse Block Battery and terminal A X6 at the X50A Fuse Block Underhood as the ignition is placed in the **CRANK/START** position.
  - ⇒ If greater than the specified value, replace the positive battery cable. Refer to Battery Positive Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 5.
- 5. Test for less than 0.5 V between terminal A X6 at the X50A Fuse Block Underhood and terminal A X2 at the M64 Starter Motor as the ignition is place in the **CRANK/START** position.
  - ⇒ If greater than the specified value, replace the starter solenoid cable. Refer to Starter Solenoid Cable Replacement in SI.
  - ⇒ If less than the specified value, Go to Step 6.
- **6.** Test for less than 0.5 V between the negative battery cable and the M64 starter motor case as the ignition switch is placed to the **CRANK/START** position. Refer to Measuring Voltage Drop in SI.
  - ⇒ If greater than the specified value, replace the negative battery cable. Refer to Battery Negative Cable Replacement in SI.
  - ⇒ If less than specified value, Go to Step 7.
- 7. Perform a battery inspection/test using the EL-50313 Midtronics GR8 Battery Tester/Charger.
  - ⇒ If the battery fails the test, replace the Battery. Refer to Battery Replacement in SI.
  - ⇒ If the battery passes the test, replace the starter. Refer to Starter Replacement in SI.
- 8. No other action is required as the Service Message will automatically clear once the battery and/or starting system is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set if the vehicle experienced a low voltage condition.
  - Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.
- Submit the correct Bulletin Only Labor Operation for this repair: 4080608\*.

## Service Message Identifier ECF001

## Predicted Fuel Pump System – Fuel Tank Fuel Pump Module

- 1. Remove the fuel tank (on the Corvette, the left fuel tank). Refer to Fuel Tank Replacement in SI.
- 2. Replace the Fuel Tank Fuel Pump Module. Refer to Fuel Tank Fuel Pump Module Replacement in SI.
- 3. Install the fuel tank.
- 4. No other action is required as the Service Message will automatically clear once the fuel tank fuel pump module is replaced and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set.
  - Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.
- 5. Submit the correct Bulletin Only Labor Operation for this repair: 4080618\*.

## Service Message Identifier ECF002

## Predicted Fuel Pump System — Fuel Tank Fuel Pump — System High Resistance

- 1. Test the wiring, terminals and connectors of the Body Harness to Fuel Tank Harness (on the Corvette the Rear Chassis Harness to Fuel Tank Primary Harness), and the K111 Fuel Pump Driver Control Module and the ground circuit that it uses for good continuity and for intermittent conditions and poor connections. Refer to Testing for Continuity, Testing for Electrical Intermittents, Testing for Intermittent Conditions and Poor Connections and Ground Distribution Schematics in SI.
  - ⇒ If a condition is found, repair as necessary. Refer to Wiring Repairs, Repairing Connector Terminals and Connector Repairs in SI.
  - ⇒ If a condition is not found, Go to Step 2.
- 2. Remove the fuel tank (on the Corvette, the left fuel tank). Refer to Fuel Tank Replacement in SI.

## Notice: This Step MUST be performed.

- Test the wiring, terminals and connector running to the fuel tank fuel pump module for good continuity and intermittent conditions and poor connections.
   Refer to Testing for Continuity, Testing for Electrical Intermittents and Testing for Intermittent Conditions and Poor Connections in SI.
  - ⇒ If a condition is found, repair as necessary. Refer to Wiring Repairs, Repairing Connector Terminals and Connector Repairs in SI.

    Then, Go to Step 4.
  - ⇒ If a condition is not found, Go to Step 4.
- Replace the fuel tank fuel pump module. Refer to Fuel Tank Fuel Pump Module Replacement in SI.
- **5.** Install the fuel tank.
- 6. No other action is required as the Service Message will automatically clear once the fuel system is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set.
  - Use the scan tool to clear ALL DTCs prior to releasing the vehicle to the Customer.
- Submit the correct Bulletin Only Labor Operation for this repair: 4080628\*.

## Service Message Identifier ECF003

## Predicted Fuel Pump System — Fuel Tank Fuel Pump and Pressure Sensor System Performance

1. Turn **OFF** the ignition.

Notice: If the engine coolant temperature is above 140°F (60°C), high fuel pressure readings may result due to hot soak fuel boiling. With the engine OFF, the fuel pressure may increase beyond the pressure relief regulator valve's setting point of 100psi (690 kPa) ± 5 percent.

- 2. Install the CH-37287-1A Fuel Pressure Gauge Adapter and the CH-48027 Digital Fuel Pressure Gauge. Refer to Fuel Pressure Gauge Installation and Removal in SI.
- Turn ON the ignition, with the engine OFF.
- 4. Command the Fuel Pump Enable ON several times, in order to obtain the highest possible fuel pressure.

Fuel Pressure	Test Value
Equinox & Terrain	50-100 psi (345-690 kPa)
Corvette	46-88 psi (320-608 kPa)
Full Size Truck	46-88 psi (320-608 kPa)

- 5. Verify that the CH-48027 fuel pressure is within the specified range with the fuel pump running.
  - ⇒ If the CH-48027 fuel pressure is within the specified range, Go to Step 6.
  - ⇒ If the CH-48027 fuel pressure is not within the specified range, refer to Fuel System Diagnosis in SI.
- Verify that the CH-48027 fuel pressure and the Fuel Pressure Sensor parameter agree or are within a range of +/− 5 psi (34 kPa).
  - ⇒ If the CH-48027 fuel pressure and the Fuel Pressure Sensor parameter are not within the specified range, perform the following:
  - **6.1.** Inspect the fuel system pipes and hoses for damage, such as kinks or pinches.
  - **6.2.** Test the wiring, terminals and connectors of the Body Harness to Fuel Tank Harness (on the Corvette the Rear Chassis Harness to Fuel Tank Primary Harness), the B47 Fuel Pressure Sensor and the K111 Fuel Pump Driver Control Module and the ground circuit that it uses for good continuity and intermittent conditions and poor connections. Refer to Testing for Continuity, Testing for Electrical Intermittents and Testing for Intermittent Conditions and Poor Connections and Ground Distribution Schematics in SI.
  - ⇒ If any fuel system pipes or hoses exhibit damage, repair as necessary.
  - ⇒ If poor continuity or intermittent conditions and poor connections are found, repair as necessary. Refer to Wiring Repairs, Repairing Connector Terminals and Connector Repairs in SI.
  - ⇒ If fuel system pipe or hose damage is not observed and poor continuity and intermittent conditions and poor connections are not found, replace the B47 Fuel Pressure Sensor. Refer to Fuel Pressure Sensor Replacement in SI.
- 7. No other action is required as the Service Message will automatically clear once the fuel system is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set.
  - Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.
- 8. Submit the correct Bulletin Only Labor Operation for this repair: 4080638\*.

## Service Message Identifier ECF004

## Predicted Fuel Pressure Sensor — Fuel Pressure Sensor (Fuel Pipe or Fuel Feed Pipe) System Performance

1. Turn **OFF** the ignition.

Notice: If the engine coolant temperature is above 140°F (60°C), high fuel pressure readings may result due to hot soak fuel boiling. With the engine OFF, the fuel pressure may increase beyond the pressure relief regulator valve's setting point of 690 kPa (100 PSI)  $\pm 5$  percent.

- 2. Install the CH-37287-1A Fuel Pressure Gauge Adapter and the CH-48027 Digital Fuel Pressure Gauge. Refer to Fuel Pressure Gauge Installation and Removal in SI.
- 3. Turn ON the ignition, with the engine OFF.
- 4. Command the Fuel Pump Enable ON several times, in order to obtain the highest possible fuel pressure.
- 5. Verify that the CH-48027 fuel pressure and the Fuel Pressure Sensor parameter agree or are within a range of +/- 5 psi (34 kPa). If the CH-48027 fuel pressure and the Fuel Pressure Sensor parameter are not within the specified range, inspect the wiring, terminals and connector of the B47 Fuel Pressure Sensor for poor continuity and intermittent conditions and poor connections. Refer to Testing for Continuity and Testing for Intermittent Conditions and Poor Connections in SI.
  - ⇒ If a condition is found, repair as necessary. Refer to Wiring Repairs, Repairing Connector Terminals and Connector Repairs in SI.
  - ⇒ If a condition is not found, replace the B47 Fuel Pressure Sensor. Refer to Fuel Pressure Sensor Replacement in SI.
- **6.** No other action is required as the Service Message will automatically clear once the fuel pressure sensor system is serviced properly and the vehicle is operated over a number of ignition cycles. Other on board DTCs may have set.
  - Use the scan tool to clear **ALL** DTCs prior to releasing the vehicle to the Customer.
- Submit the correct Bulletin Only Labor Operation for this repair: 4080648\*.

## **Warranty Information**

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time 2015-2016 Equinox, Terrain	Labor Time 2016 Corvette	Labor Time 2016 Escalade, Escalade ESV, Silverado LD, Suburban, Tahoe, Sierra LD, Yukon, Yukon XL
4080568*	Service Message Identifier SAC001	0.3 hr	0.4 hr	Escalade, Escalade ESV, Suburban, Tahoe 0.5 hr — Silverado, Sierra 0.4 hr

4080578*	Service Message Identifier SAC002	0.3 hr Diagnostic Add Time: 05 hr	Battery Replacement 0.4 hr Diagnostic Add Time: 05 hr OR Battery Cable Positive Replacement 3.3 hrs Diagnostic Add Time: 05 hr OR Starter Solenoid Cable Replacement 1.5 hrs Diagnostic Add Time: 05 hr OR Battery Cable Negative Replacement 0.3 hr Diagnostic Add Time: 05 hr	Escalade, Escalade ESV, Suburban, Tahoe 0.5 hr Diagnostic Add Time: 05 hr — Silverado, Sierra 0.4 hr Diagnostic Add Time: 05 hr
4080588*	Service Message Identifier SAC003	0.3 hr Diagnostic Add Time: 05 hr	0.3 hr Diagnostic Add Time: 05 hr	0.3 hr Diagnostic Add Time: 05 hr
4080598*	Service Message Identifier SAC004	0.6 hr Diagnostic Add Time: 05 hr	Starter Replacement 0.7 hr Diagnostic Add Time: 05 hr OR Battery Cable Positive Replacement 3.3 hrs Diagnostic Add Time: 05 hr OR Starter Solenoid Cable Replacement 1.5 hrs Diagnostic Add Time: 05 hr OR Battery Cable Replacement 0.3 hr Diagnostic Add Time: 05 hr	Escalade, Escalade ESV, Suburban, Tahoe 0.5 hr Diagnostic Add Time: 05 hr — Silverado, Sierra 0.8 hr Diagnostic Add Time: 05 hr

4080608*	Service Message Identifier SAC005	0.6 hr Diagnostic Add Time: 05 hr	Battery Replacement 0.4 hr Diagnostic Add Time: 05 hr OR Starter Replacement 0.7 hr Diagnostic Add Time: 05 hr OR Battery Cable Positive Replacement 3.3 hrs Diagnostic Add Time: 05 hr OR Starter Solenoid Cable Replacement 1.5 hrs Diagnostic Add Time: 05 hr OR Starter Solenoid Cable Replacement 1.5 hrs Diagnostic Add Time: 05 hr OR Battery Cable Negative Replacement 0.3 hr Diagnostic Add Time: 05 hr	Escalade, Escalade ESV, Suburban, Tahoe 0.5 hr Diagnostic Add Time: 05 hr — Silverado, Sierra 0.8 hr Diagnostic Add Time: 05 hr
4080618*	Service Message Identifier ECF001	FWD 1.7 hrs AWD 2.5 hrs	11.9 hrs	1.8 hrs
4080628*	Service Message Identifier ECF002	FWD 1.7 hrs Diagnostic Add Time: 05 hr AWD 2.5 hrs Diagnostic Add Time: 05 hr	11.9 hrs Diagnostic Add Time: 05 hr	1.8 hrs Diagnostic Add Time: 05 hr

4080638*	Service Message Identifier ECF003	Fuel Tank Fuel Pump Module Replacement	Fuel Tank Fuel Pump Module Replacement	Fuel Tank Fuel Pump Module Replacement
		FWD 1.7 hrs	11.9 hrs	1.8 hrs
		Diagnostic Add Time: 05 hr	Diagnostic Add Time: 05 hr	Diagnostic Add Time: 05 hr
		AWD 2.5 hrs	OR	OR
		Diagnostic Add Time: 05 hr	Fuel Pressure Sensor	Fuel Pressure Sensor
		OR	Replacement	Replacement
		Fuel Pressure Sensor Replacement	1.7 hrs Diagnostic Add Time: 05 hr	0.3 hr Diagnostic Add Time: 05 hr
		0.3 hr		
		Diagnostic Add Time: 05 hr		
4080648*	Service Message Identifier ECF004	0.5 hr Diagnostic Add Time: 05 hr	1.7 hrs Diagnostic Add Time: 05 hr	0.3 hr Diagnostic Add Time: 05 hr
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<sup>\*</sup>This is a unique Labor Operation for Bulletin use only. It will not be published in the Labor Time Guide.

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