

# Service Bulletin

# **PRELIMINARY INFORMATION**

Subject: 2014 Silverado and Sierra New Model Features and Service Guide

Models: 2014 Chevrolet Silverado 1500 Series (½ Ton Light Duty Trucks)
2014 GMC Sierra 1500 Series (½ Ton Light Duty Trucks)
Equipped with 6 Cylinder, GEN 5, 4.3L, SIDI, V6, VVT, OHV, E85 MAX, Aluminum Engine
— RPO LV3
Equipped with 8 Cylinder, GEN 5, 5.3L, SIDI VVT, AFM, E85 MAX, Aluminum, —
RPO L83
Equipped with 8 Cylinder, GEN 5, 6.2L, SIDI VVT, AFM, Aluminum, — RPO L86
Equipped with Hydra-Matic<sup>™</sup> 6L80 6-Speed Transmission — RPO MYC



**Chevrolet Silverado** 

3448463



#### **GMC Sierra**

The purpose of this bulletin is to help the Service and Sales Department personnel become familiar with the new 2014 Chevrolet Silverado and GMC Sierra 1500 Series light duty trucks, their new features and describe the action the Service Department personnel will need to take to ensure that they are able to fully service these vehicles.

The vehicles have been redesigned from the ground up. While some of the parts maybe be similar, most of the truck is completely new, including all new sheet metal, interior and engines, just to name a few.

## **Pre-Delivery Inspection (PDI) and Preparation**

Performing a quality pre-delivery inspection (PDI) is one of the most important functions the Service Agent (Dealer) can do for the customer. Most customers consider the condition of their new vehicle during delivery as a direct reflection of the Retailer and their service department.

A quality PDI is essential to improving a customer's perception of your facility and increasing his/her satisfaction with their new vehicle.

- The 2014 Silverado form is available via Global Connect > Pre-Delivery Inspection Forms > 2014 Chevrolet Pre-Delivery Inspection Forms > 2014 Silverado.
- The 2014 Sierra form is available via Global Connect > Pre-Delivery Inspection Forms > 2014 GMC Pre-Delivery Inspection Forms > 2014 Sierra and Denali.

These forms contain the same generic PDI steps as before, but also include a section for Special Inspection Items. This Special Inspection Items section is updated frequently and contains special items to look for during the PDI process.

## **Customer Education**

It is imperative that the customer be well informed about the unique features and operational characteristics of their redesigned 2014 light duty trucks. For the sales team to be fully prepared, they should thoroughly review this New Model Features and Service Guide and use the Getting to Know Your Vehicle (GTK) guide (available in the U.S. Only) as an outline when presenting the vehicle(s) to the customer. Additionally, Service and Parts leadership, Service Writers and Service Technicians should familiarize themselves with these materials to avoid attempting repair of normal operating characteristics.

## **Available Product Training**

The majority of the systems found on the Silverado and Sierra are taught in GM's core curriculum from a conceptual theory and operation perspective.

To access all of the available training courses visit the following website:

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

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Course Name - System RPO	Course Number and Description
New Model Launch	10314.18W 2014 C/K Pickup Truck New Model Launch*
Engines	16440.18D Engines New and Updates for RPOs LT1, LV3, LUZ, LKW, LF3, L83, L86**
Electric Power Steering	13041.15W2 GM Steering Systems and Diagnosis 2**
	#19047.20W2 R3 Entertainment Systems 2 (Including MOST) Network**
	#19047.20W3 Entertainment Systems 3**
Entertainment - Infotainment - Audio Systems Radio - Infotainment System, Uplevel with Connectivity -	#19047.22D R2 Infotainment Operation, Diagnosis and Service (VCT)**
RPO IO5 Digital Audio Systems-S-Band And HD - RPO U2M	#19047.23D MOST Network Diagnostics and Infotainment System Programming (VCT)**
Bluetooth Technology - Programming	
Bluetooth for Phone, Personal Cellphone Connectivity to Vehicle Audio System	#19047.20W2 R2 Entertainment Systems 2 (Including
Bluetooth Technology, Functions and Features Diagnosing and Methods of Radio Programming (USB Programming, Scan Tool Programming)	MOST) Network* #19047.16H Entertainment Systems Certification (Canada Only)
Driver Information	
Display Instrument– Driver Info Enhanced (Multi Color Graphic) - RPO UDD	#19047.20W-R2 Entertainment Systems 2*
Driver Assistance Systems Camera - Rear View - RPO UVC Sensor Indicator-Forward Collision Alert - RPO UEU	#22048.42 GM Safety Systems (Includes All Course Components W1 + W2 + W3 + H)
Sensor Indicator-Lane Departure Warning - RPO UFL Sensor Indicator- Rear Parking Assist - RPO UD7	#22048.16H GM Safety Systems Certification (Canada Only)

## Training Course Name and System RPO - Course Number and Description

\*Available in Canada in Q3 of 2013 \*\*Not Available in Canada

Dexos 1<sup>™</sup> Engine Oil



*Notice:* Failure to use the recommended engine oil and correct viscosity or its equivalent can result in engine damage not covered by the vehicle warranty.

Use and ask for engine oils with the dexos 1<sup>™</sup> certification mark (shown above). Oils meeting the requirements of the vehicle will have the dexos 1<sup>™</sup> certification mark on the container. This certification mark indicates that the oil has been approved to the dexos 1<sup>™</sup> specification. If you are unsure that the oil has been approved to the dexos 1<sup>™</sup> specification. If you are unsure that the oil has been approved to the dexos 1<sup>™</sup> specification or use the website address provided below to determine if the oil is approved to the dexos 1<sup>™</sup> specification.

Refer to this General Motors website for dexos 1<sup>™</sup> information about the different licensed brands that are currently available: http://www.gmdexos.com

## **Viscosity Grade**

#### Notice: DO NOT use other viscosity grade oils such as SAE 10W-30, 10W-40, or 20W-50.

- SAE 5W-30 is the required viscosity grade for the 4.3L engine.
- SAE 0W-20 is the required viscosity grade for the 5.3L and 6.2L engines.

## **Engine Oil with Filter Capacity**

The engine oil with filter capacity has increased significantly from Model Year 2013 to Model Year 2014.

- Model Year 2014 4.3L V6 6.0 qt (5.7 L)
- Model Year 2014 5.3L V8 8.5 qt (8.0 L)
- Model Year 2014 6.2L V8 8.5 qt (8.0 L)

## **Oil Life Monitor System**

All trucks feature GM's oil life monitor system, which better protects engines by recommending oil changes based on actual engine operating conditions and can save the owner money by avoiding unnecessary oil changes.

## Infotainment Features / Connectivity / Chevrolet MyLink / GMC Intellilink

• Chevrolet MyLink / GMC Intellilink uses a Bluetooth<sup>®</sup> or USB connection to link a smartphone, cell phone, USB flash drive or portable audio player/iPod<sup>™</sup> to the touch-screen infotainment display. MyLink / Intellilink enables streaming audio through a smartphone and hands-free voice control. Music also can be played from a USB flash drive.

# *Notice:* To Canadian Service Agents, the following URL link is a United States website that is presented in English only. Canadian carriers are not listed directly, however when identified the phone model functions are similar.

- Before using a Bluetooth<sup>®</sup> enabled device in the vehicle, it must be paired with the in-vehicle Bluetooth<sup>®</sup> system. Not all devices will support all functions. For more information, visit: www.gmtotalconnect.com
- In the United States, for assistance with Bluetooth<sup>®</sup> pairing, application downloading and installation, mobile device compatibility and operation of the MyLink system, contact customer assistance at 1-855-4-SUPPORT (855-478-7767) or visit: www.chevrolet.com/mylink
- In the United States, for assistance with Bluetooth<sup>®</sup> pairing, application downloading and installation, mobile device compatibility and operation of the Intellilink system, visit: http://www.gmc.com/ intellilink-infotainment-system.html
- In Canada for English assistance with Bluetooth<sup>®</sup> pairing, application downloading and installation, mobile device compatibility and operation of the Infotainment system, contact customer assistance at 1-800-263-3777 or visit: www.gm.ca/gm/english/vehicles/chevrolet/infotainment/ (Chevrolet MyLink) or visit: www.gm.ca/gm/ english/vehicles/gmc/infotainment/ (GMC Intellilink)
- In Canada for French assistance with Bluetooth<sup>®</sup> pairing, application downloading and installation, mobile device compatibility and operation of the Infotainment system, contact customer assistance at 1-800-263-3777 or visit: www.gm.ca/gm/french/vehicles/chevrolet/infotainment/ (Chevrolet MyLink) or visit: www.gm.ca/gm/ french/vehicles/gmc/infotainment/ (GMC Intellilink)

The next-generation infotainment systems feature radios with either a 4.2-inch (107 mm) color screen display or an 8-inch (203 mm) color touch-screen display, both are housed in the center stack.

The following are the four available radio options:

- RPO IO3 Radio Infotainment System Base Without Connectivity
- · RPO IO4 Radio Infotainment System Base With Connectivity
- RPO IO5 Radio Infotainment System Uplevel With Connectivity
- RPO IO6 Radio Infotainment System Uplevel With Connectivity and Embedded Navigation

## 4.2-inch (107 mm) Color Display Radio — RPO IO3 and RPO IO4

- 4.2-inch (107 mm) color display This radio is controlled by using the audio system buttons. The display is not a touch screen.
- Favorite Pages displays from one to five pages of favorite radio stations.
- Up to 25 radio stations from AM/FM and Sirius XM Radio<sup>®</sup> can be stored in any order, on up to five pages.

## 8-inch (203 mm) Color Touch-Screen Display Radio — RPO IO5 and RPO IO6

- 8-inch (203 mm) color touch-screen display This radio is controlled by using the audio system buttons and touch screen.
- Storing Favorites Up to 60 radio stations from AM/FM and Sirius XM Radio<sup>®</sup>, media (song, artist, album and genre) can be stored in any order.
- Changeable theme capability RPO IO6 only.
- Natural Voice Recognition Control the music source and make phone calls hands free, after pairing your Bluetooth enabled phone.
- Rear Vision Camera view displayed on the infotainment screen (Rear Cross Traffic Alert and Dynamic Guidelines).
- Compass Navigation using the NAV button RPO IO5.

## *Notice:* This feature involves calling OnStar<sup>®</sup> first, then selecting the NAV button for Turn-by-Turn directions.

- Available Turn-by-Turn Navigation, with OnStar<sup>®</sup> subscription RPO IO5.
- Embedded Navigation RPO IO6 only.

## *Notice:* A weak HD radio signal may cause the HD to drop out and revert back to standard AM/FM band with a noticeable change in tone and volume. HD can be turned OFF in radio preferences.

The **Favorites** button on the left rear steering wheel controls requires an initial button press to bring up the menu in the DIC, then an additional button press to scroll to the desired setting.

#### Using and Personalizing the Infotainment System

For information about using and personalizing the Infotainment System, refer to one of the following Owner Manual Supplements in SI:

- Service Information > Vehicle Publication > Owner Manual > Chevrolet Silverado Infotainment System
- Service Information > Vehicle Publication > Owner Manual > GMC Sierra and Sierra Denali Infotainment System

#### **Cleaning High Gloss Surfaces or Vehicle Displays**

For vehicles with high gloss surfaces or vehicle displays, use a microfiber cloth, P/N 23115486 to wipe surfaces. Before wiping the surface with the microfiber cloth, use a soft bristle brush to remove dirt that could scratch the surface. Then use the microfiber cloth by gently rubbing to clean. Never use window cleaners or solvents. Periodically hand wash the microfiber cloth separately, using mild soap. Do not use bleach or fabric softener. Rinse thoroughly and air dry before next use.

## **Engines** — Transmission



The vehicles are available with a choice of three powerful and efficient engines which includes a 4.3L V-6, a 5.3L V-8 and a 6.2L V-8, all matched with the proven, efficient 6L80 6-speed transmission RPO MYC in the United States and Canada. The EcoTec3 engines feature three state-of-the-art technologies – direct injection (DI), cylinder deactivation, also known as Active Fuel Management (AFM) and continuously variable valve timing (VVT) – to make the most of power, torgue and efficiency across a broad range of operating conditions.

### *Notice:* This engine is E85 capable.

• The new 4.3L V-6 will offer customers a state-of-the art truck engine, SAE-certified at 285 horsepower (212 kW) and 305 lb.-ft. of torque (413 Nm), the most torque of any standard V-6.

### *Notice:* This engine is E85 capable.

The new 5.3L V-8 is SAE-certified at 355 horsepower (250 kW) and 383 lb.-ft. of torque (519 Nm). With EPA-estimated fuel economy of 23 mpg highway (2WD), it is the best fuel economy of any V-8 pickup. Canada's EnerGuide estimated fuel consumption for the 5.3L V-8 is 13.0 L/100 km city and 8.7 L/100 km highway.

## *Notice:* This engine is not E85 capable.

• The new 6.2L V-8, available later this year, is expected to be the most capable engine offered in any light-duty pickup truck. Vehicles equipped with the 6.2L V8 engine, **MUST** use premium unleaded gasoline with a posted octane rating of 91 or higher.

## Flexible Fuel Sensor — 4.3L V-6 and 5.3L V-8

The flexible fuel sensor measures the ethanol-gasoline ratio of the fuel being used in a flexible fuel (E85 capable) engine as identified in this section. Flexible fuel vehicles can be operated with a blend of ethanol and gasoline, up to 85 percent ethanol.

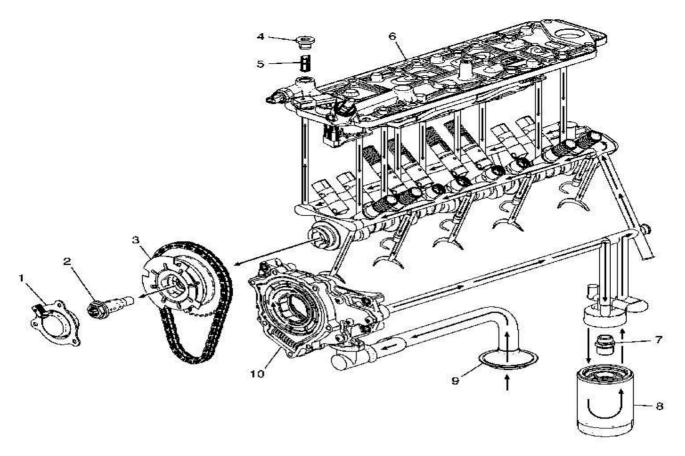
The flexible fuel sensor uses quick-connect style fuel connections, an incoming fuel connection, and an outgoing fuel connection. All fuel passes through the flexible fuel sensor before continuing on to the fuel rail.

The flexible fuel sensor **measures** the two different fuel related parameters, and sends an electrical signal to the engine control module (ECM) to indicate ethanol percentage, and fuel temperature.

The Flexible Fuel Sensor **measures** the actual percentage of ethanol in the fuel. Because of this it is no longer necessary to wait for an empty fuel tank in order to refill with E85.

# Variable Displacement Two-Stage Vane-Type Oil Pump — Oil Pressure Gauge Needle Oscillation

Variable Displacement Two-Stage Vane-Type Oil Pump



The variable displacement two-stage vane-type oil pump is new to the EcoTec3 engines that are available in the 2014 Silverado and Sierra.

Engine lubrication is supplied by the variable displacement two-stage vane-type oil pump assembly (10). An oil control solenoid valve, controlled by the engine control module (ECM), and mounted to the oil pump provides two stage functionality. The oil pump is mounted on the front of the engine block and driven directly by the crankshaft sprocket. The pump rotor and vanes rotate and draw oil from the oil pan sump through a pick-up screen and pipe (9). The oil is pressurized as it passes through the pump and is sent through the engine block lower oil gallery.

Pressurized oil is directed through the engine block lower oil gallery to the full flow oil filter (8) where harmful contaminants are removed. A bypass valve is incorporated into the oil filter, which permits oil flow in the event the filter becomes restricted.

Oil is then directed from the filter to the upper main oil galleries and the valve lifter oil manifold assembly (6). Oil from the left upper oil gallery is directed to the crankshaft and camshaft bearings. Oil that has entered both the upper main oil galleries also pressurizes the valve lifter assemblies and is then pumped through the pushrods to lubricate the valve rocker arms and valve stems. Oil returning to the pan is directed by the crankshaft oil deflector. The oil pressure sensor (11) is located at the top front of the engine.

An oil passage at camshaft bearing location 2 permits oil flow into the center of the camshaft. Oil enters the camshaft exiting at the front and into the camshaft position (CMP) actuator solenoid valve (2). The CMP valve spool position is controlled by the engine control module (ECM) and CMP magnet (1). When commanded by the ECM, the CMP magnet repositions the CMP actuator solenoid valve spool directing pressurized oil into the CMP actuator to control valve timing.

#### Instrument Cluster Oil Pressure Gauge Needle Oscillation Due to Two-Stage Oil Pump Self Test

After a **cold soak**, when the engine is first started and the vehicle is driven, the ECM will perform a functionality test of the two stage oil pump.

This functionality test will occur three times in a short time span and can be observed on the oil pressure gauge as a brief increase (spike) in the oil pressure gauge needle. Upon completion of the three tests, the self test will not occur again until after the engine is turned **OFF** and another **cold soak** has completed. The **EXCEPTION** to this self test occurs if the vehicle has come to a stop **BEFORE** the three tests have been completed. If that occurs, the self test will run again until the test can complete.

Additionally, at 3,500 RPM or greater, the two-stage oil pump switches over to **high stage** and the oil pressure gauge needle will move to the **high** position.

## Axle — New Synthetic Axle Gear Oil for 2014

## *Notice:* DO NOT use any axle gear oil other than the part numbers identified in this section.

The new synthetic axle gear oil is a 75W85 viscosity.

- In the United States use GM P/N 19300457
- In Canada use GM P/N 19300458

## Brakes — New Brake Fluid for 2014

### Notice: DO NOT use any brake fluid other than the part numbers identified in this section.

The new brake fluid has enhanced corrosion inhibitors and significant improvements in lubricity, engineered to eliminate master cylinder squeak/noise.

- In the United States use GM P/N 19299818
- In Canada use GM P/N 19299819

## **Brakes — Performance Enhancement Systems**

### Brakes — Duralife<sup>™</sup> Brake Rotors

The Silverado and Sierra have a TRW EBC460 4-wheel disc brake antilock brake system (ABS) with Duralife<sup>™</sup> brake rotors.

Duralife<sup>™</sup> brake rotors – a GM-exclusive technology – feature a hardened and strengthened surface to reduce corrosion. Duralife<sup>™</sup> brake rotors are expected to last twice as long as conventional rotors and provide quieter braking with less vibration.

The electronic brake control module and the brake pressure modulator are serviced separately. The brake pressure modulator uses a four circuit configuration to control hydraulic pressure to each wheel independently.

### **Performance Enhancement Systems**

Depending on options, the following additional vehicle performance enhancement systems are provided:

- Dynamic Rear Proportioning
- Hill Descent Control System RPO JHD
- Hill Hold Start Assist
- Cornering Brake Control
- Hydraulic Brake Assist
- Optimized Hydraulic Braking System
- Intelligent Brake Assist
- Integrated Trailer Brake Control System RPO JL1
- Trailer Sway Control

#### **Dynamic Rear Proportioning**

The dynamic rear proportioning is a control system that replaces the mechanical proportioning valve. Under certain driving conditions the electronic brake control module (EBCM) will reduce the rear wheel brake pressure by commanding the appropriate solenoid valves ON and OFF.

#### Hill Descent Control System

The hill descent control system allows a smooth and controlled hill descent in rough terrain without the driver needing to touch the brake pedal. The vehicle will automatically decelerate to a low speed and remain at that speed while activated. Some noise or vibration from the brake system may be apparent when the system is active. The descent control system may be activated, if equipped, by pressing the button on the console. To activate, press the button when traveling at speeds less than 30 mph (50 km/h). To deactivate, press the button on the console, the brake pedal, or the accelerator. Descent control enables the vehicle to descend using the ABS to control each wheel's speed. If the vehicle accelerates without driver input, the system automatically applies the brakes to slow the vehicle down to the desired speed.

#### **Hill Hold Start Assist**

The hill hold start assist allows the driver to launch the vehicle without a roll back while moving the foot from the brake pedal to the accelerator pedal. The EBCM calculates the brake pressure, which is needed to hold the vehicle on an incline and locks that pressure for a certain time by commanding the appropriate solenoid valves ON and OFF when the brake pedal is released. Hill hold start assist is activated when the EBCM determines that the driver wishes to move the vehicle up-hill, either backwards or forwards.

#### **Cornering Brake Control**

Cornering brake control is a slip control function that is intended to improve the vehicle's lateral/yaw stability during combined braking and cornering situations. The EBCM will reduce the brake pressure to the inside wheels by commanding the appropriate solenoid valves ON and OFF.

## Hydraulic Brake Assist

The hydraulic brake assist function is designed to support the driver in emergency braking situations. The EBCM receives inputs from the brake pressure sensor. When the EBCM senses an emergency braking situation, the electronic brake control module will actively increase the brake pressure to a specific maximum.

### **Optimized Hydraulic Braking System**

With some engines the EBCM monitors the vacuum in the brake booster with a vacuum sensor and controls a brake booster vacuum pump depending on vacuum sensor input. It also has a hydraulic brake boost feature which supplements the brake system to maintain consistent brake performance under conditions of low brake booster vacuum.

Low brake booster vacuum conditions can be caused by any of the following conditions: initial start up after the vehicle has been parked for several hours, very frequent brake stops, or high altitude driving. The hydraulic brake boost system activates only during a brake apply under low vacuum conditions. In this case the EBCM will actively increase and control the hydraulic brake pressure by turning the pump motor ON and the appropriate solenoid valves ON and OFF. When hydraulic brake boost is active, a series of rapid pulsations is felt in the brake pedal.

#### Intelligent Brake Assist

The intelligent brake assist function is designed to provide limited braking to help prevent front and rear low speed collisions. The EBCM receives inputs from the brake pedal position sensor, wheel speed sensors, short range radar and ultrasonic sensors to detect a collision. When the EBCM senses a possible collision, it will actively increase the hydraulic brake pressure to apply the brakes.

#### **Trailer Brake Control System**

A trailer brake control system is used to control the amount of trailer braking power that is made available to trailers with brakes that require a controlled output electrical signal for actuation. The trailer brake control system determines the trailer brake system type, as either Electric Brake or Electric Over Hydraulic Brake automatically.

#### **Trailer Sway Control**

Trailer sway control will detect any vehicle **yaw (rotation)** instability, caused by an attached trailer. When instability is detected, the EBCM attempts to correct the vehicle's yaw motion by applying brake pressure to one or more of the wheels. The engine torque may be reduced also, if it is necessary to slow down the vehicle.

## **Body Features**

#### Wheelhouse Liners

The new design wheelhouse liners are standard equipment on the front of the vehicle and are available on the rear. The wheelhouse liners are created from a fiber.

This fiber design improves sound deadening and reduces interior cabin noise created from objects that would be thrown against them by the tires from road debris. Typical road debris will not stick to these wheelhouse liners.

#### Anti-Chip Coating On Rockers

New to the 2014 Silverado and Sierra is an anti-chip coating on the rockers, designed to maintain vehicle appearance by reducing paint chipping and the subsequent effects of corrosion.

## HVAC — RPO CJ2 Only

Some customers may comment that they were in a HVAC mode **other** than defrost and the blower speed was manually adjusted to the lowest setting. After selecting the defrost mode to clear the windows, the blower will ramp up to high and they were unable to manually adjust the blower speed lower. This feature is intended to allow for the fastest window clearing possible.

⇒ If the customer turns the blower knob lower to reduce blower speed it will not respond. However, if they first adjust the blower speed higher, then they will be able to adjust the blower speed to a lower setting.

The system is operating as designed and no repairs should be attempted.

## **Electric Power Steering System**

#### **Electric Power Steering System**

The belt driven electric power steering system consists of the following components:

- The integrated electromechanical power steering unit, containing the power steering control module, its sensors, the power steering motor, a belt drive and a ball nut mechanism.
- The steering gear (rack and pinion).

The power steering control module is part of the power steering assist motor assembly and is replaceable as a complete unit independent of the steering gear assembly. The torque sensor is integrated with the steering gear pinion and is serviced as part of the steering gear.

The belt driven electric power steering system reduces the amount of effort needed to steer the vehicle utilizing the power steering control module to control the power steering motor to maneuver the steering gear. The power steering control module also uses a combination of the torque sensor, motor rotational sensor, battery voltage circuit and serial data circuit to perform the system functions. The power steering control module monitors vehicle speed and engine speed from the engine control module via the serial data circuit to determine the amount of steering assist needed to steer the vehicle. At low speeds more assist is provided for easy turning during parking maneuvers. At higher speeds less assist is provided for improved road feel and directional stability.

### Serviceable Components

The following components are serviceable:

- Motor and controller subassembly
- Vehicle battery and signal wiring harness
- Torque sensor wire harness
- · Outer tie rods are greaseable
- Inner tie rods
- Tie rod boots
- · Tie rod adjustment nuts and boot clamps

### **Smooth Road Shake Compensation**

The power steering control module has a software feature referred to as Smooth Road Shake Compensation that reduces steering wheel vibration caused by an imbalance from the front tire/wheel assemblies. The vibration transmitted to the steering wheel is referred to as Smooth Road Shake and is a phenomenon that occurs only at highway speeds and on smooth roads. The power steering control module employs active controls to sense and reduce the periodic torque component applied to the steering wheel caused by the wheel imbalance force. This software feature will compensate for a specific range of imbalance. If the imbalance is above a certain level, the power steering control module will disable the smooth road shake compensation and set a DTC C044B to indicate that it has been disabled.

### Steering Wheel Torque Lock — Turning the Ignition Key

Steering wheel torque lock, which makes it difficult to turn the ignition key can occur anytime the steering wheel is not "**Parked**" in the straight ahead position when turning the ignition **OFF**. Apply pressure to the steering wheel in a rotational direction to relieve the tension in order to turn the ignition key easily.

#### Steering Wheel Lead/Pull

At a constant highway speed on a typical straight road, lead/pull is the amount of effort required at the steering wheel to maintain the vehicle's straight path.

The electronic brake control module (EBCM) receives serial data message inputs from the steering wheel angle sensor. The steering wheel angle sensor signal is used to calculate the intended driving direction and compensates for road crown.

The steering wheel angle sensor does not require centering often. However, if the steering wheel angle sensor is not correctly centered it may create a lead/pull condition.

⇒ If this condition is encountered, always perform the Steering Angle Sensor Centering procedure in SI **BEFORE** performing a wheel alignment.

# New Side Cut Key for Ignition and All Door Locks — Key Code Security Rules — Key Cutting Equipment



The Silverado and Sierra use a new side cut key for the ignition and all door locks. This key is not integrated into the Key Fob as in some other Chevrolet and GMC products.

If it becomes difficult to turn a key, inspect the key blade for debris. Periodically clean with a brush or pick. See your Service Agent if a replacement key or an additional key is needed.

With an active OnStar<sup>®</sup> subscription, an OnStar<sup>®</sup> Advisor may remotely unlock the vehicle.

## **Key Code Security Rules**

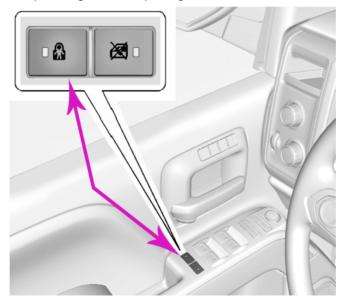
The key is provided with a bar-coded key tag that the Service Agent (Dealer) or qualified locksmith can use to make new keys. Store this information in a safe place, not in the vehicle. Refer to the latest version of Corporate Bulletins 10-00-89-009 (US) or 10-00-89-010 (Canada): Key Code Security Rules and Information on GM KeyCode Look-Up Application for additional information.

#### **Key Cutting Equipment**

Due to the uniqueness of the ignition/door lock key, special equipment is required to cut a side cut key. If you do not have the required equipment, a cut/coded key can be ordered through GM Customer Care and Aftersales. Refer to the latest version of Corporate Bulletin Number 09-00-89-029 Key Cutting Procedure for Obtaining Replacement Key for additional information.

## **Rear Door Safety Locks**

The rear door safety locks prevent passengers from opening the rear doors from inside the vehicle.



Press the **Safety Lock** button to activate the safety locks on the rear doors. The vehicle must be ON, in ACC/ ACCESSORY, or in retained accessory power (RAP). The safety lock indicator light turns **ON** when activated.

 $\Rightarrow$  If the indicator light flashes, the feature may not be working properly.

## **Rear Safety Belt Comfort Guides**

Rear safety belt comfort guides, Service P/N20944862 are available from the Service Agent and provide added safety belt comfort for older children who have outgrown booster seats and for some adults. When installed on a shoulder belt, the comfort guide positions the shoulder belt away from the neck and head.

## **Cooled Front Seats**

When the seats are set to cool, the warm air generated from the cooling of the thermoelectric device being used to cool the seat, is exhausted through the vents in the top of the seat backs. This is a normal characteristic of system operation.

## **Replace Battery in Remote Key Message Displayed in DIC**

Caution: When replacing the battery in the remote keyless entry (RKE) transmitter, do not touch any of the circuitry on the transmitter. Static electricity from your body could damage the transmitter.

Replace the battery in the RKE transmitter as soon as possible when the **REPLACE BATTERY IN REMOTE KEY** message displays in the DIC.

To replace the battery perform the following:



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1. Separate and remove the back cover of the transmitter with a flat, thin object, such as a coin.



- 2. Press and slide the battery down toward the pocket of the transmitter in the direction of the key ring. Do not use a metal object.
- 3. Remove the battery.
- 4. Insert the new battery, positive side facing up. Replace with a CR2032 or equivalent battery.
- 5. Push together the transmitter back cover top side first, and then the bottom toward the key ring.

## EZ Lift-and-Lower Tailgate — CornerStep Bumper

### EZ Lift-and-Lower Tailgate — RPO PPA

The available EZ Lift-and-Lower tailgate is standard on some models. The EZ Lift-and-Lower tailgate is easily removable without tools.

A heavy tailgate that's difficult to open when holding cargo – or worse, slams down the moment the latch is released, makes loading cargo more difficult. The new EZ Lift-and-Lower tailgate eliminates those compromises. An internal torsion bar reduces the effort to raise and lower it, while a rotary damper allows for a controlled and more gradual lowering motion when opening it.

#### CornerStep Bumper — RPO BWN



3457086

## Notice: The CornerStep Bumper is not available on vehicles with body color painted bumpers.

The new CornerStep bumper, along with ergonomically shaped handholds built into new box rail protectors, provides easier access when it's time to climb in the box or retrieve items from it. Integrated steps at each corner of the rear bumper are designed to accommodate work boots and feature textured pads for sure-footed grip.

## **Electrical Architecture**

## Global Diagnostic System 2 (GDS 2)

The 2014 Silverado and Sierra are utilizing GM's Global A electrical architecture, which is common with other newer GM vehicles. This architecture requires the use of the Global Diagnostic System 2 (GDS 2) software and the Multiple Diagnostic Interface (MDI) module.

Service Agents requiring assistance in the process of installing GDS 2 and the MDI should contact the Techline Customer Support Center @1-800-828-6860 (English) or 1-800-503-3222 (French).

## Generator

The engine drive belt drives the generator which has an isolated pulley, engineered to reduce drive belt noise. If there is a diagnosed failure of the generator, it must be replaced as an assembly.

## Cold Cranking Amperage (CCA)

## *Notice:* An underhood electrical center is positioned on top of the battery. Technicians when performing the PDI or Battery Charging and Testing will be unable to see the CCA label on top of the battery.

The cold cranking amperage is an indication of the ability of the battery to crank the engine at cold temperatures. A new larger battery has been utilized for these vehicles. The new battery has a **730 CCA** rating for all engines, 4.3L, 5.3L and the 6.2L.

## **Environment Identification**

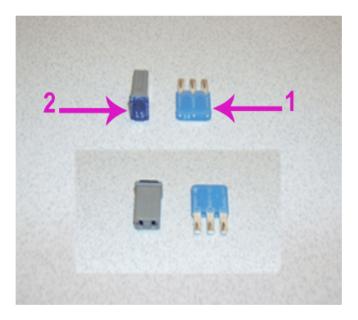
## **Environment Identifier**

## *Notice:* DO NOT swap modules in an attempt to diagnose a vehicle condition.

When certain modules are programmed and configured during installation, the module learns a specific environment identifier which is unique to the vehicle. The environment identifier is used to **prevent** swapping modules between vehicles. If an incorrect immobilizer identifier or a specific number of incorrect environment identifiers are sent or received, vehicle starting is disabled.

For more information, refer to > Safety and Security > Immobilizer > Description and Operation > Immobilizer Description and Operation in SI.

## M-Case<sup>™</sup> and Micro-3<sup>™</sup> Fuses



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New to the 2014 Silverado and Sierra are MCASE<sup>™</sup> Cartridge Fuses (2) and MICRO3<sup>™</sup> Blade Fuses (1).

- The MCASE<sup>™</sup> is a cartridge style fuse with female terminals for 2.8 mm male terminals. It has a miniaturized footprint for optimal usage of space. It is a time delayed fuse and can handle inrush currents.
  - GM EPC P/N 19119329 FUSE, M-CASE (15 AMP) (GREY) (CARTRIDGE STYLE SMALLER AND FLATTER THAN J-CASE)
  - GM EPC P/N 19119330 FUSE, M-CASE (30 AMP) (PINK) (CARTRIDGE STYLE SMALLER AND FLATTER THAN J-CASE)
- The MICRO3<sup>™</sup> Fuse is the new standard for vehicle circuit protection. The MICRO3<sup>™</sup> Fuse has 3 terminals and 2 fuse elements with a common center terminal. Its sub-miniature design meets the need for more circuits to be protected while utilizing less space and has the ability to cope with high temperatures in adverse environments.
  - GM EPC P/N 19209797 FUSE, MICRO3 (3 BLADE STYLE) (05.0 AMP) (32V) (TAN)
  - GM EPC P/N 19209798 FUSE, MICRO3 (3 BLADE STYLE) (07.5 AMP) (32V) (BROWN)
  - GM EPC P/N 19209799 FUSE, MICRO3 (3 BLADE STYLE) (10 AMP) (32V) (RED)
  - GM EPC P/N 19209800 FUSE, MICRO3 (3 BLADE STYLE) (15 AMP) (32V) (BLUE)

## **Airbag System**

Airbags are designed to supplement the protection provided by safety belts. The vehicle **has** the following airbags:

- A frontal airbag for the driver.
- A frontal airbag for the front outboard passenger.
  - The vehicle may also have the additional following airbags:
  - A seat-mounted side impact airbag for the driver.
  - A seat-mounted side impact airbag for the front outboard passenger.
  - A roof-rail airbag for the driver and the passenger seated directly behind the driver.
  - A roof-rail airbag for the front outboard passenger and the person seated directly behind the front outboard passenger.

All of the airbags in the vehicle will have the word AIRBAG on the trim or on a label near the deployment opening. For frontal airbags, the word AIRBAG is on the center of the steering wheel for the driver and on the instrument panel for the front outboard passenger.

For seat-mounted side impact airbags, the word AIRBAG is on the seatback closest to the door. For roof-rail airbags, the word AIRBAG is on the ceiling or trim.

# Driver Information Center (DIC) (Uplevel) — Oil Life Remaining — Maintenance Due In

The DIC displays are shown in the center of the instrument cluster in the Info app. The displays show the status of many vehicle systems. The controls for the DIC are on the right steering wheel control.

## **DIC Info Page**



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The Info pages on the DIC can be turned ON or OFF through the Settings menu. Some items may not be available for your particular vehicle and some may not be turned ON by default but can be turned ON through the Settings app.

Press the "checkmark" icon while an item is highlighted to select or deselect that item. When an item is selected, a checkmark will appear next to it.

#### **Oil Life Remaining**



This display shows an estimate of the oil's remaining useful life. If OIL LIFE 96% Remaining is displayed, that means 96% of the current oil life remains. The Oil Life display must be reset after each oil change. It will not reset itself. Do not reset the Oil Life display at any time other than when the oil has just been changed.

#### Maintenance Due In



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This display shows how many miles or kilometers depending on the Settings, until the next maintenance is needed. This displays counts down from 7,500 miles (12,000 km) and is tied to the Service and Maintenance > Maintenance Schedule > Maintenance > Tire Rotation and Required Services Every 12,000 km / 7,500 miles in the Owner Manual.

This display can be reset by pressing and holding the "checkmark" icon on the steering wheel. It **does not** reset automatically.

## **Assistance Systems for Driving**

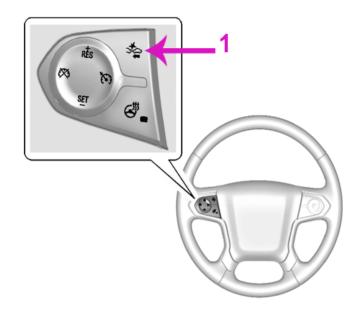
This vehicle may have features that work together to help avoid crashes or reduce crash damage while driving, backing, and parking.

Some driver assistance features alert the driver of obstacles by beeping. If equipped with the Safety Alert Seat, the driver seat cushion may provide a vibrating pulse alert instead of beeping. Refer to Vehicle Personalization in the Owner Manual.

Forward Collision Alert (FCA) System — Collision Alert — Tailgating Alert

Notice: FCA is a warning system only and does not apply the brakes.

The FCA system may help to avoid or reduce the harm caused by front-end crashes. FCA provides a red flashing alert on the windshield, and beeps or pulses the Safety Alert Seat when approaching a vehicle directly ahead too quickly. FCA also provides a visual alert if following another vehicle much too closely. FCA detects vehicles within a distance of approximately 197 ft (60 m) and operates at speeds above 25 mph (40 km/h). FCA warnings will not occur unless the FCA system detects a vehicle ahead. The vehicle ahead indicator will display green when a vehicle is detected in front. Vehicles may not be detected on curves, highway exit ramps, or hills; or due to poor visibility. FCA will not detect another vehicle ahead until it is completely in the driving lane.



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Press the collision alert button (1) on the steering wheel to set the FCA timing to Far, Medium, Near, or OFF. The first button press shows the current setting on the DIC. Additional button presses will change this setting. The chosen setting will remain until it is changed and will affect the timing of both the Collision Alert and the Tailgating Alert features. The timing of both alerts will vary based on vehicle speed. The faster the vehicle speed, the farther away the alert will occur. Consider traffic and weather conditions when selecting the alert timing. The range of selectable alert timing may not be appropriate for all drivers and driving conditions.

#### **Collision Alert**

When your vehicle approaches another vehicle too rapidly, six red lights will flash on the windshield. In addition, either eight beeps will sound from the front, or both sides of the Safety Alert Seat will pulse five times.

#### **Tailgating Alert**

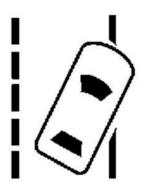
The vehicle ahead indicator will display amber when you are following a vehicle ahead much too closely.

FCA may provide unnecessary alerts for turning vehicles, vehicles in other lanes, objects that are not vehicles, or shadows. These alerts are normal operation and the vehicle does not need service.

⇒ If the FCA system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

#### Lane Departure Warning (LDW)

If equipped, LDW may help avoid crashes due to unintentional lane departures. LDW uses a camera sensor on the windshield ahead of the rearview mirror to detect the lane markings. It only operates at speeds of 35 mph (56 km/h) or greater. It may provide a warning if the vehicle is crossing a detected lane marking without using a turn signal in the lane departure direction. When the vehicle is started, the LDW indicator on the instrument cluster will turn **ON** briefly.



To turn LDW ON and OFF, press the LDW button on the center stack.

If LDW is **ON**, the LDW indicator will appear green if the system detects a left or right lane marking while the vehicle is traveling at 35 mph (56 km/h) or greater. If the vehicle crosses a detected lane marking without using the turn signal in the lane departure direction, this indicator will change to amber and flash. In addition, three beeps will be sounded from the left or right side, or the Safety Alert Seat will pulse three times on either the left or right side of the seat, depending on the lane departure direction.

⇒ If the LDW camera system does not seem to operate properly, cleaning the outside of the windshield in front of the camera sensor may correct the issue.

## Assistance Systems for Parking or Backing — RVC — URPA — Front Park Assist

#### **Rear Vision Camera (RVC)**

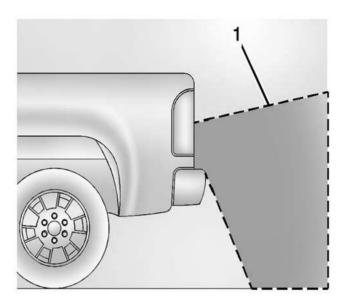
## *Notice:* The RVC and Rear Parking Assist will not work properly if the tailgate is down. If the tailgate is down, do not use these systems.

When the vehicle is in R (Reverse), the Rear Vision Camera (RVC) and Rear Parking Assist may help the driver to avoid a crash or to reduce crash damage.

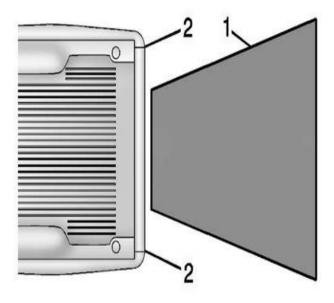
When the vehicle is shifted into R (Reverse), the RVC displays an image of the area behind the vehicle in the center stack display. The previous screen displays when the vehicle is shifted out of R (Reverse) after a short delay. To return to the previous screen sooner, press a button on the infotainment system, shift into P (Park), or reach a vehicle speed of 5 mph (8 km/h).

A warning triangle may display on the RVC screen to show where the Ultrasonic Rear Parking Assist (URPA) has detected an object. This triangle changes from amber to red and increases in size when moving closer to the object. With URPA, as the vehicle backs up at speeds of less than 5 mph (8 km/h), the system detects objects up to 8 ft (2.5 m) behind the vehicle that are within a zone 10 in (25 cm) high off the ground and below bumper level.

#### Side View of Area Displayed by the RVC (1)



Displayed images may be farther or closer than they appear. The area displayed is limited. Overhead View of Area Displayed by the RVC (1) — Corners of Rear Bumper (2)



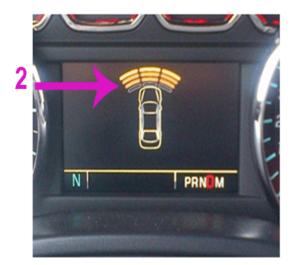
3459413

Displayed images may be farther or closer than they appear. The area displayed is limited and objects that are close to either corner of the bumper or under the bumper **do not** display.

#### Ultrasonic Rear Park Assist (URPA) and Front Park Assist — Instrument Cluster Parking Assist Display

URPA and Front Park Assist (if equipped), operate at speeds of less than 5 mph (8 km/h) and detect objects 10 in (25 cm) high off the ground and below bumper level, using the sensors on the bumpers. URPA detects objects up to 8 ft (2.5 m) behind the vehicle, and Front Park Assist detects objects up to 1.2 m (4 ft) in front of the vehicle. These detection distances may be less during warmer or humid weather.





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The vehicle may have an instrument cluster (IC) parking assist display for the Rear Park Assist (1), with bars that show "distance to object" and object location information for URPA, and on some vehicles, an IC display for the Front Park Assist (2). As the object gets closer, **more bars** will light up.

When an object is first detected in the rear (1), one beep will be heard from the rear, or both sides of the Safety Alert Seat will pulse two times. When an object is very close, such as less than 2 ft (0.6 m) in the vehicle rear (1), or less than 1 ft (0.3 m) in the vehicle front (2), a continuous beep will sound from the front or rear, or both sides of the Safety Alert Seat will pulse five times. Beeps for Front Park Assist are higher pitched than for Rear Park Assist.

#### Park Assist OFF, ON or ON with Towbar Settings

Rear park assist can be turned **OFF**, **ON or ON with Towbar** through vehicle personalization. The **ON with Towbar** setting allows for the parking assist to work properly with a small item attached to the trailer hitch. Turn **OFF** parking assist when towing a trailer, or if using a large drawbar.

Use the audio system controls to access the personalization menus for customizing vehicle features. Depending on the vehicle, some personalization features may not be available. For personalization instructions, Go to > Owner Manual > Instruments and Controls > Vehicle Personalization.

## **Blind Spot Mirror**

If equipped, there is a small convex mirror built into the upper and outer corner of the driver outside rearview mirror. It can show objects that may be in the vehicle's blind zone.

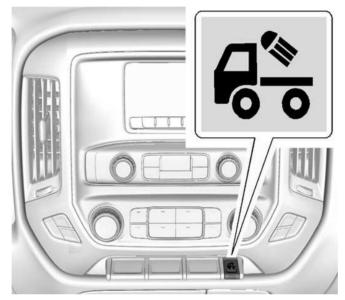
## **Outside Rearview Camper Mirrors**

Some owners may request to change their original mirror option to the camper mirror option. When a truck is ordered from the factory with the Camper Mirror option — RPO DF2 or DPN, a larger door reinforcement patch is built into the door. This larger door reinforcement patch provides additional support for the added load of the camper mirrors. Additionally, camper mirrors have a fourth mounting attachment bolt that the standard mirrors — RPO DE2, DL8 or DL3 do not use. A truck built from the factory with standard mirrors will not have this additional fourth hole in the door to mount the camper mirrors.

## At this time it is recommended to NOT install camper mirrors on a truck built with standard mirrors.

## Cargo Lamp

The cargo lamp provides more light in the cargo area of the vehicle, if needed. The lights inside of the pickup box also turn on, if equipped.



3468746

## *Notice:* This switch DOES NOT illuminate when the lights are turned ON. If the lights are inadvertently left ON, with the ignition OFF, for an extended period of time, excessive battery discharge may occur.

Press the switch down to turn the cargo lamp **ON** or **OFF**. The shift lever must be in the P (Park) position to operate the cargo lamp.

## **Passenger Compartment Air Filter**

The passenger compartment air filter removes dust, pollen and other airborne irritants from the outside air that is pulled into the vehicle. Inspect the air filter every 22,500 miles (36,000 km) or two years, whichever comes first. Replace if necessary. Replacement may also be needed if there is a reduction in air flow, excessive window fogging, or odors.

## **Transport Mode**

The vehicles are shipped in Transport Mode and it must be deactivated. For the procedure to turn the Transport Mode **OFF** and **ON**, refer to the latest version of Corporate Bulletin: #11-08-49-001: Transport Mode On Message Displayed in Driver Information Center (DIC) and/or Battery Light is Flashing in SI.

## New Larger Rear Axle Ring Gear Sizes and Available Ratios

The vehicles have new larger rear axle ring gear sizes and available ratios as follows:

- Mexico Only
  - V6 4.3L Engine 9.5 inches with 4.10 ratio RPO GT5 and Manual Transmission

## Notice: All of the following are available in the United States, Canada, Mexico and Export

- V6 4.3L Engine 8.6 inches with 3.23 ratio RPO GU5
- V6 4.3L Engine 8.6 inches with 3.42 ratio RPO GU6
  - V8 5.3L Engine 9.5 inches with 3.08 ratio RPO GU4
  - V8 5.3L Engine 9.5 inches with 3.42 ratio RPO GU6
  - V8 5.3L Engine 9.76 inches with 3.73 ratio RPO GT4
  - V8 6.2L Engine 9.76 inches with 3.42 ratio RPO GU6
  - V8 6.2L Engine 9.76 inches with 3.73 ratio RPO GT4

These axles use SAE 75W85 Synthetic Gear Oil, GM P/N 19300457, in Canada GM P/N 19300458.

## **Towing A Disabled Vehicle**

Notice: Please share this information with your towing providers.

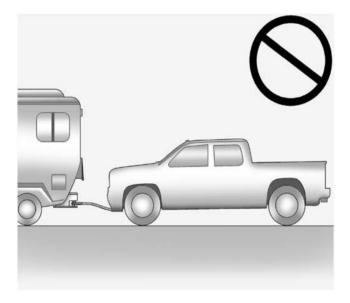
#### Towing the Vehicle / Wheel Lift Tow Truck

## *Notice:* Incorrectly towing a disabled vehicle may cause damage. The damage would not be covered by the vehicle warranty.

Have the vehicle towed on a flatbed car carrier or a wheel lift tow truck. If a wheel lift tow truck is used, the drive wheels cannot contact the road while the vehicle is being towed. A wheel dolly must be used to lift all drive wheels off the ground.

## **Recreational Vehicle Towing**

## **Dinghy Towing Two Wheel Drive Vehicles**



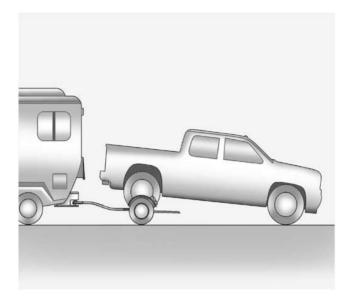
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**DO NOT** tow the vehicle with all four wheels on the ground. If the vehicle is towed with all four wheels on the ground, the drivetrain components could be damaged. The repairs would not be covered by the vehicle warranty. Two-wheel-drive transmissions have no provisions for internal lubrication while being towed.

## **Dinghy Towing Four Wheel Drive Vehicles**

You **MUST** see your dealer for the procedure to tow a four wheel drive vehicle.

Towing Two Wheel Drive Vehicles With the Rear Wheels Off the Ground



Use the following procedure to dolly tow a two-wheel-drive vehicle from the rear:

- 1. Attach the dolly to the tow vehicle following the dolly manufacturer's instructions.
- 2. Drive the rear wheels onto the dolly.
- 3. Firmly set the parking brake.
- 4. Put the transmission in P (Park).
- 5. Secure the vehicle to the dolly following the manufacturer's instructions.
- 6. Use an adequate clamping device designed for towing to ensure that the front wheels are locked into the straight position.
- 7. Turn the ignition to LOCK/OFF.

## Towing Four Wheel Drive Vehicles

You **MUST** see your dealer for the procedure to tow a four wheel drive vehicle.

## **Special Tools**

The following new tools have been released for the 2014 Silverado and Sierra:

Tool #	Description
EN-51267	Oil Pump Housing Adapter
EN-42385–50	Head Bolt Thread Repair Kit
DT-50802	Output Shaft Grease Can Installer
DT-50871	Pinion Seal Installer
DT-51173	Pinion Shim Selection Adapter Kit
EN-46999–15	Active Fuel Management Tester Harness – Small Block V6
EN-46999–18	Active Fuel Management Tester Air Adapter
EN-46999–20	Active Fuel Management Tester Harness – Small Block V8
EN-49248	Injector Rail Assembly Remover
EN-51091	Crank Front Oil Seal Installer
EN-51092	Fuel Pump Installation Gauge
EN-51096	Seal Remover (Rear Crank Seal)
EN-51097	Injector Retaining Clip Replacer
EN-51105	Injector Seal Installer Adapter
GE-50576–A	Acoustic Belt Tension Tester
EN-41479–10	Crankshaft Rear Seal Installer Adapter
DT-45380	Transfer Case Rear Bushing Remover and Installer

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