



## Silverado and Sierra HD Trucks

The 2011 Silverado and Sierra HD trucks offer heavy-duty truck buyers the most power and most capability available in the segment. Their superior ratings have been carefully developed and thoroughly proven by extensive testing.

Following testing at maximum Gross Combined Weight Rating (GCWR) to validate the durability of the powertrain, drivetrain and brake components, the GCWR has increased to 29,200 pounds. In addition, based on testing to confirm predictable and stable handling, the maximum 5th-wheel towing capacity has increased to 21,700 pounds, and conventional towing capacity increased to 17,000 pounds.

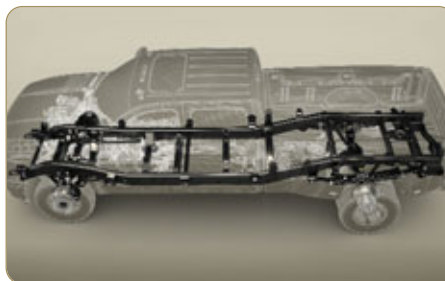
Through the use of higher-strength steel for cargo box cross sills and additional testing with maximum payloads to confirm the stronger cargo box and rear axle components, the maximum payload has been increased to 6,635 pounds.

Gross Combined Weight Rating (GCWR)	29,200 lbs.
Conventional Towing Capacity	17,000 lbs.
5th Wheel Towing Capacity	21,700 lbs.
Payload	6,635 lbs.

### FRAME

The chassis has been redesigned to improve durability and ride, while also

supporting increased capability. Eleven all-new, fully boxed frame assemblies have been developed. The frames have increased cross sections and use more high-strength steel. The front sections are hydroformed. The bending stiffness of the frames is increased 92%.



A hydroformed front section is common to all models. Pickups use a tubular center section and a closed section stamped rail at the rear. Chassis cab models use an open section stamped rail at the center and rear. Body mounts of various designs are used. On extended and crew cabs, hydraulic no. 3 body mounts isolate the frame response modes from the cabin, for a quieter ride.

### Trailer Hitches

Engineers addressed common customer and aftermarket uses when designing the new frames, including adding access holes to the rear frame section to enable easier installation of fifth-wheel/gooseneck-style hitches.

Also, the frame-mounted hitch for conventional trailering is stronger, with a box-tube design. It supports up to 17,000 pounds (7,711 kg).

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## POWERTRAINS

### Vortec 6.0L/Hydra-Matic 6L90 (Gasoline)

The standard engine is the Vortec 6.0L gasoline V-8 (RPO L96). It is teamed with a strengthened version of the Hydra-Matic 6L90 (RPO MYD) six-speed automatic transmission. This combination delivers excellent performance and efficiency, with a greater emphasis on low-rpm power.



The 6L90 transmission has added four attachment bosses to the transfer case adapter (4WD models) for increased strength and smoother, quieter performance. The cross section size of the transfer case adapter is increased for greater strength, and a new, stronger output shaft has been added.

### Duramax 6.6L/Allison 1000 (Diesel)

The new Duramax 6.6L (RPO LML) mechanical features, emission controls and the Diesel Exhaust Fluid system were detailed in the June edition of *TechLink*. Refer to that article for details. Highlights include reduced NOx emissions, greater fuel efficiency and improved performance due to the Piezo-actuated injectors, revised main bearings and oil pump, modified connecting rods and pistons, and an EGR cooler bypass.

The Duramax 6.6L provides quick, reliable start-up, with a starting time on par with gasoline engines. Its glow plug cycle time takes no more than 3 seconds in temperatures as low as -20° F (-29° C). A cab heat-up feature allows the engine to idle faster in low temperatures to warm up the interior faster.

**TIP:** A slightly different version of the 6.6L Duramax (RPO LGH) offered in HD chassis and box-delete models is engineered to meet federal certification standards for incomplete vehicles

The enhanced Allison 1000 transmission (RPO MW7) for 2011 is strengthened to handle the higher torque capability of the new 6.6L Duramax engine, while also helping improve fuel economy. It has a Driver Shift Control feature with tap

up/tap down shifting. The six-speed configuration retains its two overdrive gears for optimal efficiency.

**TIP:** The Diesel Exhaust Fluid (DEF) required for emission reduction is contained in a 5.3 gallon (20 liter) reservoir, providing a range of approximately 5,000 miles (8,000 km) between refills.

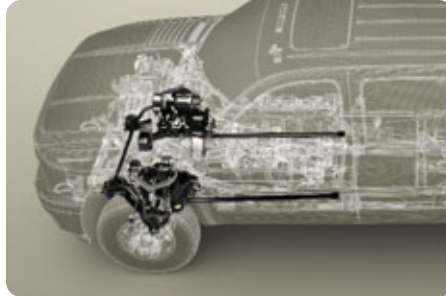
### Transfer Case

The transfer case, adapter and MYD/MW7 transmission interfaces are stiffened for driveline bending integrity. The input seal is changed to a single lip design on all MYD dry cavity applications.

### FRONT SUSPENSION

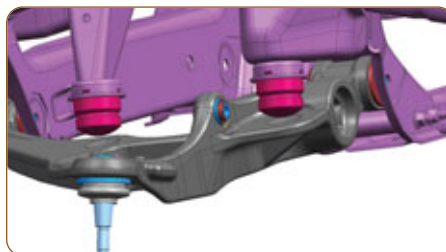
The familiar short-long arm (SLA) torsion bar front suspension design is retained, but now features new, forged steel upper control arms that are stronger and lighter than their predecessors. The new lower control arms are made of precision-machined cast iron to handle the greater loads. Five different torsion bar rates now provide five different Front Gross Axle Weight Ratings (GAWR) — 4400, 4800, 5200, 5600, 6000 — instead of just one in the previous generation. Trim height is adjusted on each bar using a single bolt.

**TIP:** A snow plow can be used on all



4WD cab configurations with the available snow plow prep package.

A pair of urethane jounce bumpers is now used on each side, instead of one, for improved load management and better packaging. One part number covers each location.



The upper shock absorber mount bushing is positively attached to the frame with two fasteners, replacing the threaded shaft and two loose bushings

previously used. This provides a higher load capability with increased bushing durability, eliminating squeaks and clunks.

### REAR SUSPENSION

An asymmetrical rear suspension design is used to reduce wheel hop. The axle is not mounted at the center of the spring, but is located so the "halves" are of unequal lengths. The leaves are increased from 2.5-inches to 3-inches wide. Urethane jounce bumpers provide improved energy management and isolation.



2500HD models are equipped with a 2-stage spring, while 3500HD models have a 3-stage unit.

Rear Gross Axle Weight Ratings (GAWR) are increased across the board.

PREVIOUS GENERATION REAR GAWR	2011 GENERATION REAR GAWR
2500HD 6,084 lbs.	2500HD 6,200 lbs.
3500HD single rear wheel 6,390 lbs.	3500HD single rear wheel 7,050 lbs.
3500HD dual rear wheel 8,200 lbs.	3500HD dual rear wheel 9,375 lbs.

### BRAKES

Brake feel and performance are greatly improved for 2011. The standard four-wheel disc system is completely revamped. Four-wheel, four-channel ABS is standard on all single-rear-wheel models and a three-channel system is standard on dual-rear-wheel models.

The front and rear rotors are larger in diameter — 14 inches (355 mm) — and greater in width on all models to support their increased capacity, weight ratings and trailing ratings. The calipers are stiffer and stronger. The hydroboost brake booster calibration is revised for reduced pedal effort and the travel of the pedal is also revised for a more comfortable, confident feel.

Larger wheel hub and bearing assemblies complement the new brake system and the rear rotors attach to the wheel hubs for easier servicing.

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## OTHER FEATURES

### Hill Start Assist

The Hill Start Assist system is automatically engaged when sensors detect that the vehicle is on grade of 5% or greater. It holds the brakes for about 1.5 seconds or until the throttle pedal is pressed, preventing rollback. It is particularly effective when towing, giving the driver time to switch from the brake pedal to the throttle pedal without rolling.

### Integrated Trailer Sway Control

The Integrated Trailer Sway Control system senses conditions of trailer sway and intervenes with braking and/or reduced engine power to bring the trailer under control and keep it on its

intended path. The system will use electric trailer brakes when a trailer is plugged into the standard wiring harness of the truck and its performance requires no input from the driver.

### Smart Exhaust Brake

A new feature on Duramax-equipped models is an exhaust brake system. This driver-selectable feature uses the turbine control of the variable geometry turbocharger and the compression of the engine to generate backpressure, slowing the vehicle without applying the brakes. It is a smart system integrated with the cruise control feature and varies the braking to account for the grade and vehicle load, which helps prolong brake life and prevents overheating the brakes on long, downhill grades.

– Thanks to B.J. Lackey, Chris Graham and Kevin Larson

## Responding to Diesel Exhaust Fluid Messages

The exhaust aftertreatment technology of the new Duramax 6.6L diesel engine available on the 2011 Silverado and Sierra trucks and 2010 Interim and 2011 Express and Savana vans features the use of Diesel Exhaust Fluid (DEF).

The DEF system must be refilled periodically in order to maintain proper operation. Refer to the June edition of *TechLink* for details on DEF system operation.

The DEF required for emission reduction is contained in a 5.3 gallon (20 liter) reservoir, providing a range of approximately 5,000 miles (8,000 km) between refills. If the DEF is not refilled, the vehicle's speed will be limited.

The Driver Information Center (DIC) will provide the driver with current information about the DEF system operation and range. These messages include:

- EXHAUST FLUID RANGE: 1000 MI
- EXHAUST FLUID RANGE: 300 MI

Below 300 miles (500 km) of range, the range message or speed limiting messages will appear every time the vehicle is started.

**TIP:** DEF should be added prior to receiving an Exhaust Fluid Empty DIC message; however, it may take several miles of driving for the DIC message to update.

With an empty DEF tank, limited speed messages will be displayed:

- 55 MPH MAX SPEED UPON RESTART (Vehicle speed limited to 55 mph, 89 km/h, at the next restart.)
- 4 MPH MAX SPEED NEXT FUEL FILL (Vehicle speed limited to 4 mph, 7 km/h, after the second fuel fill without refilling the DEF tank.)

If the Exhaust Fluid Empty message is displayed:

- When refilling, more than one gallon of DEF must be added to release the vehicle from speed limitation.



- Wait for up to 30 seconds with the engine running for the Exhaust Fluid Empty DIC message to clear.
- If the vehicle is driven prior to the Exhaust Fluid Empty message clearing, the vehicle will still be speed limited.
- If the Exhaust Fluid Empty message clears while driving, the vehicle must be brought to a complete stop to release the speed limitation.

If DEF is added under freezing conditions, additional time may be required to release speed limitations.

The DIC also provides similar warning messages for poor quality of DEF and tampering of the DEF system.

– Thanks to B.J. Lackey

## New Power Moding Procedure after BCM Programming

On 2010 LaCrosse and SRX models with push-button start, the power moding procedure for placing the ignition in the On (or Run) position with the engine off changes after reprogramming the BCM.

In order to perform any setup events after BCM reprogramming, the ignition must be in the On position, with the engine off.

### Before BCM Reprogramming

The power moding procedure (ignition on, engine off) on a vehicle that has not had any BCM reprogramming performed is to press the START/STOP button twice without depressing the brake pedal. The instrument cluster will turn on and the green LED indicator on the button will

illuminate. Press the button once again to turn off the ignition.

### After BCM Reprogramming

If the BCM is being reprogrammed, be sure to use the latest software available on TIS2Web. After the reprogramming, the BCM software update will have changed how to place the push-button start ignition into the On position with the engine off.

The new power moding procedure is to press the START/STOP button for 5 to 6 seconds without depressing the brake pedal. The instrument cluster will turn on and the green LED indicator on the button will illuminate.

**TIP:** Ensure that the button LED is green (indicating On/Run mode) and not amber (indicating Accessory mode). Failure to

select the correct mode may cause the component relearn under setup reprogramming to fail.

To turn off the ignition, press the START/STOP button again without depressing the brake pedal.

Be sure to explain the new procedure for placing the ignition in the On position, with the engine off, to the vehicle owner.

**TIP:** It is always best to determine which power mode method the vehicle currently has before beginning any type of relearn or reprogramming event as vehicles that have had the BCM updated will use the new procedure.

– Thanks to Mike Wasczcenko



# The GM Field Service Engineering Team

The Field Service Engineering (FSE) team is responsible for continuous improvement and product problem resolution by providing GM dealerships (U.S.) with service support that focuses on reducing product quality issues and improving dealership service readiness. The FSEs are responsible for cases escalated by the GM Goodwrench Technical Assistance Center (TAC) or the Techline Customer Support Center (TCSC). FSEs also provide quality feedback through Field Product Report investigations or engineering investigations as well as support service club meetings. Overall, the FSE team is charged with providing a vital link between the dealership and General Motors' Brand Quality, Product Development, and Manufacturing teams.

In 2009, GM changed its approach to providing service engineering support. The National FSE team combined the positions of the Regional Service Engineer (RSE) and the Techline Consultant (TC) along with the responsibility for both automotive and Information Technology (IT) support.

The most recent Service Manager Satisfaction Survey identified a communication gap in regard to the role and availability of service engineers in the field. There are 50 FSEs placed strategically around the U.S. to respond to case escalations for TAC or TCSC. The FSE team is dedicated to supporting all GM dealerships. During the past 12 months, the FSE team has responded to over 4,100 dispatch cases from TAC and TCSC in addition to Field Product Reports and other field support activities.

## Requesting Support

As part of the reorganization, the process for requesting the support of an FSE was also changed. In the past, a dealership could request the support of a Regional Service Engineer or Techline Consultant by calling directly for assistance. However, the direct request process circumvented TAC and TCSC, which are more readily accessible technical resources. Additionally, valuable information on vehicle repairs was not properly documented for use on related vehicle concerns that can result in Preliminary Information or Bulletins.

The new request process more effectively utilizes the FSE team only on the cases that are unresolved through the call centers. Under the new process, a request for an FSE to become engaged in a vehicle or IT repair must be supported by an active TAC or

TCSC case. The call center will determine if FSE involvement is needed.

Technicians who are working with either TAC or TCSC that feel progress is not being made can request escalation of the case to an FSE. It is highly recommended that before doing so that the local Fixed Operations Manager (FOM), or District Service Manager (DSM) for Regional Contact Center dealerships, is engaged. All requests for escalation of a case to an FSE will be reviewed by an Escalation Team to ensure the resolution cannot be handled by the call center. Requests for escalation of a case where the technician has not been actively engaged in providing accurate information could cause delay until the requested information is provided to the call center.

## FSE Contact

Once a call center dispatches a case, an FSE will be assigned to the case usually within two hours of case escalation and all other FSEs are copied on the details to enable best practice sharing among the team. The FSE assigned to the case will contact the dealership within 24 hours. The actual FSE contact date with the dealer will be determined by current case load and case priority.

Responsibilities of the FSE also include communication of dealership service readiness to the dealership's FOM/DVM and the GM zone and regional staff. After a dealership contact, a summary contact report is completed regarding the dealership's overall service readiness along with any "action items."

FSEs also are available to participate in Service & Parts Managers club meetings, Sharpshooters clubs (regional clubs of shop foremen and technicians), and other special events. Requests can be made directly to an FSE.

According to the most recent post-case closing dealer surveys, when an FSE was involved in providing assistance at a dealership, the quality of service and professionalism of the FSE exceeded expectations. Every effort is being made to ensure that FSE responsiveness and the ability to provide an accurate diagnosis and repair for each case occurs in a timely manner. When assistance is needed, following the established process with the GM TAC and TCSC will ensure that all necessary resources are available to dealerships and that, when required, an FSE is available to provide direct dealership support.

– *Thanks to Michael R. Durkin  
Director, Dealer Service and  
Warranty Operations*

# New GM Goodwrench Technical Assistance Center Hours and Support

Mention GMTAC and you may find you are behind the times. That's because the new GM Goodwrench Technical Assistance Center (U.S.) is here, with highly-trained ASE Goodwrench technical consultants to help with difficult repair challenges on all GM products.

You asked and we listened. Technician feedback is very important to the overall success of the Technical Assistance Center, and based on that feedback, the center has returned to supporting all model year vehicles.

Plus, hours of service have been extended to 8:00 a.m. to 8:00 p.m. Eastern Time. In the past, hours of service were from 8:00 a.m. to 5:00 p.m. by time zone.

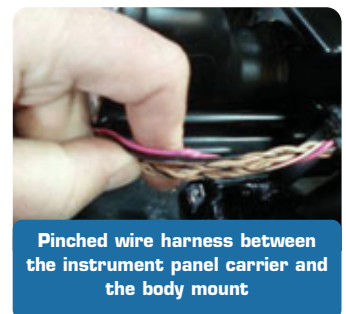
In addition to the newly formed Escalation Team, which provides in-depth support for the most complex repairs, the staff of seasoned professionals of the GM Goodwrench Technical Assistance Center brings a multitude of experience to help GM dealership service departments in all aspects of diagnostics and repair.

– *Thanks to Steve Oakley*

## Intermittent Instrument Cluster Gauges

Some 2009-2010 Cobalt models equipped with the configurable Driver Information Center (DIC), RPO UAF, may have several instrument cluster warning lights illuminated as well as intermittent gauge operation. DTCs P0575, U0140, U0121, U0073 and P0703 may be stored.

These conditions may be caused by a pinched wire harness between the instrument panel carrier and the body mount.



**Pinched wire harness between the instrument panel carrier and the body mount**

Remove the instrument cluster and the instrument panel cover to gain access to the DIC harness. Inspect the harness 14 inches from the display at the instrument panel carrier mount on the left side of the instrument panel for pinched wiring and repair as necessary.

– *Thanks to Bryan Brunner*

# Electrical Wiring System Global Labor Codes

In an effort to improve customer satisfaction and better understand wiring repair warranty data, the GM Quality/Reliability/Durability Group (QRD) and Customer Care & Aftersales Engineering have created and implemented several enhancements within Global Labor Codes, Global Service Information (SI), and Global Warranty System to facilitate inclusion of more detailed repair information.

## Global Labor Codes

The new global labor codes correlate with the global wire repair strategy that encourages repair versus wiring harness replacement. The labor codes have been reduced to six different Power and Signal Distribution – Wiring Systems and Power Management codes.

When performing a wiring system repair, technicians need to select the correct labor operation and write it and the additional required information for that operation on the repair order. In the Cause and Correction fields, be sure to indicate your observations on what the cause of the condition was (connector not connected, terminal pushed out, loose ground fastener, etc.) and what was done to correct the issue.

Labor Code	Repair Strategy	When to Apply
N6650	Terminal Replacement	<ul style="list-style-type: none"> <li>– bent or damaged terminal</li> <li>– terminal replacement or a terminated lead</li> </ul>
N6651	Connector Kit Replacement	<ul style="list-style-type: none"> <li>– broken connector body that is 9 circuit cavities or greater</li> <li>– repair can be just the connector plastic or a full kit that contains CPAs, TPAs and the connector body</li> </ul>
N6652	Connector with Leads Assembly Replacement (Pigtail Repair)	<ul style="list-style-type: none"> <li>– repairs requiring a connector assembly (pigtail)</li> <li>– pigtail is a connector body that has 8 circuit cavities or less, each cavity is populated with the largest gage size wire that the terminal can hold</li> </ul>
N6653	Wire-to-Wire Repair	<ul style="list-style-type: none"> <li>– damaged wire insulation due to cut or rubbing/chafing, resulting in exposed copper strands</li> <li>– utilizing New SI Grid Formatting feature to help give details on the location of the chafing issue</li> </ul>
N6654	Connector Reconnection	<ul style="list-style-type: none"> <li>– disconnected connector</li> <li>– utilizes SI Connector End View Doc ID</li> </ul>
N6655	Harness Replacement	<ul style="list-style-type: none"> <li>– use when having to replace the wiring harness</li> </ul>

NOTE: For ALL categories –  
 – Use only ONE labor code per repair  
 – Labor code is set by cause of issue

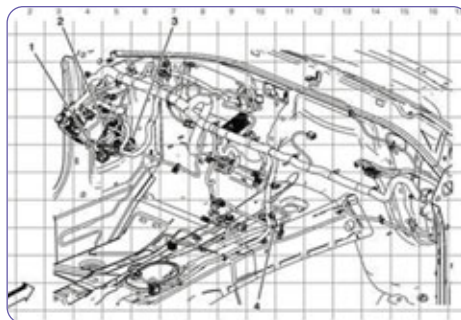
Go to GM *TechLink* online for examples.

## Grid Formatting

In addition, a new Service Information (SI) feature is Grid Formatting. Use the coordinates shown in the grid in SI to identify the point of repair. This information will be requested when submitting warranty claims.

Refer to bulletin #10-00-89-005 for additional information about labor operations and warranty administration.

– Thanks to Rob Prough and Pamma Chana



# Appearance of Hydraulic Brake Booster Fluid Leak

On some 2003-2006 Escalade models, Avalanche, Suburban, Tahoe, Yukon, Yukon XL, Yukon Denali, Yukon Denali XL; 2003-2010 Express, Silverado Classic, Silverado; Savana, Sierra Classic, Sierra; and 2003-2007 Hummer H2, with a hydraulic brake booster, there may be the appearance of power steering fluid leaking at the front of the hydraulic brake booster.

The hydraulic brake booster is filled with power steering fluid and tested after assembly. During this test procedure, power steering fluid may get on the outside of the hydraulic brake booster and not be cleaned off after the test procedure is completed. Once the brake booster is installed on the truck, the power steering fluid left on the outside of the brake booster will run down and collect at the bottom of the booster. This fluid may lead to the appearance of the hydraulic brake booster leaking and unnecessarily replacing the booster.

When diagnosing a leak around the hydraulic brake booster, clean any power steering fluid off the outside of the booster, then add power steering dye to the system and use a black light to check for leaks.

– Thanks to Jim Will

# Accessory Cruise Control

There have been several dealership inquiries about the installation of OEM-style cruise control on 2005-2010 Cobalt, 2005-2006 Pursuit and 2007-2010 G5 models.

There are no provisions to add cruise control to these models. Please do not call the GM Technical Assistance Center, Techline Customer Support Center or PARTECH for assistance with this request. GM recommends that a properly equipped vehicle be located for customers.

– Thanks to Jim Loomis

# Inoperative Sunroof Sunshade

The sunroof sunshade may be inoperative or has fallen down on one side on some 2010 SRX models. The sunroof sunshade drive cable may have a fractured plastic retaining tab.

If this condition is present, replace the sunshade drive cable. The left side cable is WPC491 and the right side cable is WPC492. Refer to PIT4928A for the appropriate order form. The part must be ordered from the WPC. It will include a drive cable, sunshade retainer clip and instruction sheet.

– Thanks to Jeremy Richardson

# AFIT Adapter for Direct Injection Engines and Duramax Diesels

A new adapter with cables to connect to all current GM Spark Ignited Direct Injection (SIDI) engines has been developed as an accessory to the Active Fuel Injector Tester (AFIT, CH-47976). It can be used to diagnose fuel injection system issues on 2001-2010 Duramax Diesel engines as well. The adapter, called the SIDI Drive and Measurement Unit (DMU), CH-47976-500, will not be shipped as an essential tool and must be purchased as required. Call 1-800-GMTOOLS for more information.



SIDI DMU adapter kit CH-47976-500

The AFIT/DMU can be used to diagnose fuel system-related conditions such as crank, no-start; hard start; misfire codes; injector wiring codes; bank lean/rich codes; and power loss.

## Why the Need for a New Adapter

New SIDI engine technology represents a significant departure in the way fuel is controlled and injected into the cylinders of the engine. This technology has many benefits in improved performance, economy, and emissions. However, diagnosis of the system presents new challenges. Fuel pressures are much higher and the components are new and typically less accessible on SIDI systems compared to port injection engines. The new systems are dramatically different; technician familiarity and experience working on port injection systems does not apply to diagnosing SIDI systems except in a very general way.

This tool automates the process and provides accurate, reliable information about all the elements of the fuel injection system. Current Service Information requires manual calculation and interpretation of the results to reach a diagnosis. The AFIT and DMU perform all the measurements and calculations automatically, giving an accurate diagnosis.

The AFIT tool with the DMU Adapter tests all the components of the fuel injection system. From start to finish, testing, on average, takes less than 10 minutes. The test routine is completely prompted in the same way the AFIT tool does for port injection fuel systems.

**TIP:** A number of diagnostic codes, such as P0300 – P0306, P0171, P0172, P0174, P0175, and many symptoms that do not set codes can be caused by a number of engine components. One of the values of this tool is to confirm the operation of the fuel system.

## How the AFIT/DMU Works on SIDI Fuel Systems

Using one of two mating cables, the DMU connects to the vehicle battery, the original AFIT main unit, and to the vehicle ECM engine harness connector. The tester prompts the technician for the proper cable when the vehicle is selected on the AFIT main unit.

When prompted, the technician cranks the engine on the AFIT. The tool stops the cranking, and after each crank, one of the

vehicle's injectors is tested.

The fuel pumps (high and low pressure), starting system, and regulator also are tested for proper operation. When the test is complete, the results are displayed on the AFIT main unit in a format that is similar to the result screens for a port injection vehicle.

SIDI systems use fuel pressures in excess of 1000 PSI provided by the engine driven fuel pump. The fuel injectors are mounted so they inject fuel directly into the cylinders. Although they look different, they still rely on fuel pumps and regulators delivering the right pressures and injectors flowing the proper fuel amounts each cycle.

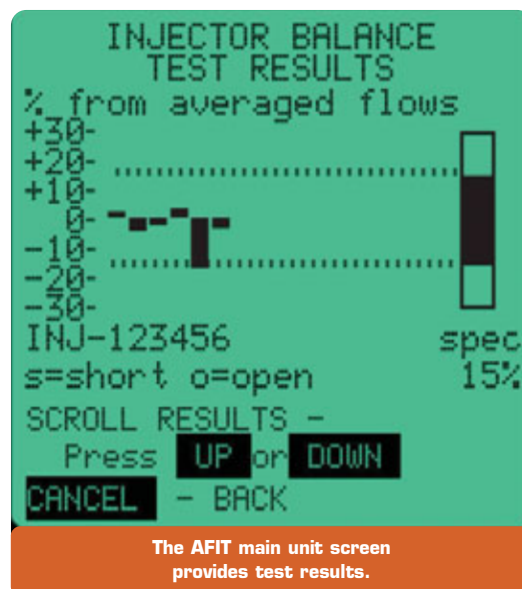
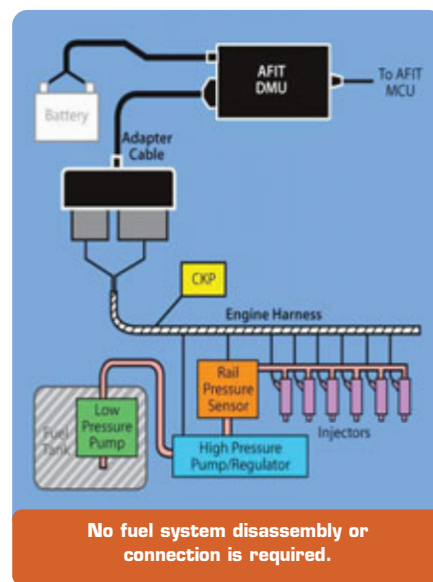
While cranking the engine, the tool measures battery voltage and cranking RPM and compares those results to specifications for the vehicle. The tool determines high-pressure pump characteristics by measuring the fuel pressure developed at various engine speeds during each crank and comparing the results to the expected Pressure vs. RPM built into the tool's database. In addition, it verifies the low-pressure pump is delivering proper pressure to the high-pressure pump.

The tool also performs a high-pressure leak-down test to determine if the system can maintain proper pressure and is not leaking.

When all the injector tests are completed, the results are displayed on the AFIT main unit screen in both graphical and numeric form along with vehicle specific good/bad tolerances for the injectors. The results can also be uploaded to the AFIT Upload Utility installed on the shop PC.


The tool can help technicians pinpoint the causal component in the fuel system that requires repair as well as eliminate the fuel system as the cause of a drivability condition.

– Thanks to Scott Pesonen



GM TechLink is a monthly magazine for all GM retail technicians and service consultants providing timely information to help increase knowledge about GM products and improve the performance of the service department.


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# Corvette Z06 Carbon Fiber Body Kit

A new dealer-installed carbon fiber body kit (RPO CFZ) is available on 2011 Corvette Z06 models. It includes black carbon fiber rocker moldings, splitter and roof panel with a full-width body color spoiler.

## Installation Tips

Refer to the instruction sheets that accompany the loose parts for installation details.

When lifting the vehicle, be sure there is sufficient clearance between the lift arms and the rocker panels for installation of the moldings.

Before installing the rocker moldings, install the ceramic rotor foam protectors from the inside of the wheel to protect the rear ceramic brake rotors; then remove the rear wheel.

To protect the rear carbon fiber rocker molding flange from chipping due to debris from the front wheel and road surface, apply the butyl patch onto the inside of the rear rocker flange. It should cover the rivets, the entire rear flange of the rocker and the lower portion of the wheel molding.

## Lifting Precautions

Once the lower body carbon fiber components are installed, the vehicle's ground clearance can be as little as 3 3/4 inches (12 cm). Search online for ZR1 Body Kit (August 2008 TechLink) for lifting tips.

Due to the low ground clearance, it's necessary to be extra careful when driving the vehicle onto a ramp (such as an alignment rack) or when using a hydraulic lift.

**TIP:** Carbon fiber is brittle and easily damaged. It bends very little before breaking. And replacement parts are extremely costly.

Lifts are not all alike. Heights, adjustability, dimensions, and floor contour can vary, so specific instructions are not possible. Compare the vehicle's dimensions with your lift or alignment rack to determine what accommodations are needed to lift the vehicle without damage.

It may be necessary to drive all four of the vehicle's tires onto low ramps to allow the lift arms to fit under the vehicle, and provide the necessary clearance for the rocker moldings.

On a lift with telescoping lift arms, check the height of the outer (larger) portion — it may contact the rocker panel even if the smaller (inner) portion clears.

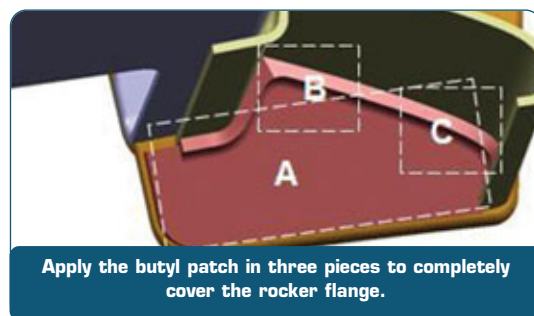
On an alignment rack, the splitter may contact the ramp on the rack due to the shallow approach angle. To prevent this, it may be necessary to extend the ramps to reduce the angle. A ratio of at least 8.5 inches of length to each 1 inch of height is recommended. This means that if the surface of the alignment rack is 10 inches from the floor, the approach ramp must be at least 85 inches long.

For more information about the service procedures that apply to new Z06 carbon fiber components, refer to the Corvette ZR1 Unique Service Procedures TechAssist 50250.27T1. The components of the ZR1 are similar to the new carbon fiber components now available on the Z06.

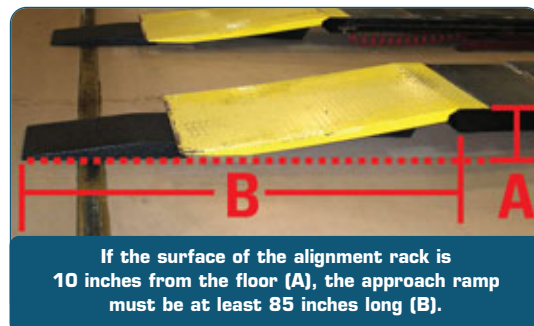
– Thanks to Brad Thacher



2011 Corvette Z06 Carbon Limited Edition



Apply the butyl patch in three pieces to completely cover the rocker flange.



If the surface of the alignment rack is 10 inches from the floor (A), the approach ramp must be at least 85 inches long (B).



## Car Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2010	Malibu – Power steering message displayed in DIC, DTC C0475 set	Check for signs of water leaks	Do not repair DTC C0475 without ensuring that any water leak(s) are resolved	PI0116
2003-2010	CTS, CTS-V, CTS Sports Wagon, CTS-V Sports Wagon, SRX, STS – Rear axle clunk noise on turns	Change the fluid using DEXRON® LS and retest axle	Do not replace the differential or clutch plates	10-04-20-001B
2008-2010	CTS – Low beam headlamp bulb diagnosis	Inspect the bulb and connector	Do not replace the headlamp assembly	10-08-42-001
2009	Cobalt, G5 – Passenger seat wiring harness disconnected or damaged, SIR/airbag indicator light on, DTC B0081 71 set	Repair or replace OAS wiring harness	Do not replace the SDM	09-08-50-008B
2004-2010	Aveo, G3/Wave – HVAC blower motor inoperative, blower motor operates on high speed only	Replace both the blower and the resistor	Do not replace only the resistor	10-01-37-001C
2003-2008	Vibe – Front brake rattle noise when driving over bumps	Replace the caliper bracket and brake pads	Do not replace the rotors	10-05-23-003
2008-2010	Lucerne – Side door center molding chrome insert loose	Replace only the loose body side molding chrome insert with the part numbers listed in the bulletin	Do not replace the entire molding if only the chrome insert is loose	PI0120
2002-2010	All Vehicles – Low tire pressure, leaking cast aluminum wheels	Reseal the wheel to correct the porosity	Do not replace wheels with repairable porosity	05-03-10-003F
2000-2011	All Vehicles – Information on tire Radial Force Variation (RFV)	Thoroughly check the RFV against specifications in the bulletin before replacing tires	Do not replace tires with less than 15 miles (24 km) on the odometer	00-03-10-006F
2006-2011	Interior Cleaning – product availability	Used approved GM cleaner, per bulletin, to clean the vehicle's interior	Do not use any cleaners that are not approved by GM, which may cause damage	06-00-89-029F



## Truck Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2010	Equinox, Torrent – Shudder in vehicle under moderate to hard acceleration	Add RDM washers and re-evaluate before replacing the spring or the halfshafts	Do not replace the front drive axles or springs	09-03-08-009A
2007-2010	Acadia, Enclave, OUTLOOK – Console-mounted shifter control binding or noisy	Clean the shifter assembly	Do not replace the shifter assembly	09-07-30-002A
2010	Canyon, Colorado – Electronic Traction Control (ETC) switch inoperative/switch does not light	Confirm on 2WD trucks that traction control switch will not turn the system off. Repair with the harness and procedure in the bulletin	Do not replace the traction control switch	10-05-25-001
2010	SRX – MIL on, hard/no start, water on driver's front floor	If a water leak is identified on the right front floor area, connector X350 should be inspected for water intrusion. This can be accomplished by disconnecting the pass-thru connector from the underside of the vehicle	Do not forget to inspect pass-thru connector X350 when water leaks are found on the right front floor area	10-08-45-002A
2009	Vibe – MIL on, DTC P0015, P0300, P0301, P0302, P0303 or P0304 set, hard start after cold soak	Reprogram the PCM	Do not replace the PCM	10-06-04-006
2010	Vibe – MIL on, DTC P0456 (EVAP system very small leak detected)	Reprogram the PCM	Do not replace the PCM	10-06-04-007
2010	Sierra, Silverado – Engine surge or harsh/bump shifts into reverse	Reprogram the TCM	Do not replace the TCM, transmission or transmission components	10-07-30-007

### Service Know-How

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