

LED Headlamps



A thin vertical taillamp has been the Cadillac signature for decades. Now, the thin vertical look appears at the front of the vehicle as well, thanks to LED lighting. With the introduction of the 2009 Escalade Platinum, GM enters a new era of lighting technology. The Escalade Platinum features LED headlamps, which are faithful to the jeweled appearance of the already familiar LED taillamps.

LED Headlamp's Unique Features

In the headlamp application, the LED produces a brilliant white light that is closer in color to daylight than the yellowish tungsten halogen lamp or the bluish Xenon projection lamp.

When compared with traditional lighting systems, LEDs offer essentially lifetime durability. Typically, LEDs can last up to 20,000 hours, while tungsten halogen and Xenon systems are good for between 1,000 and 3,000 hours.

And with seven individually tuned optic lenses, the LED lamp creates a smoother light pattern on the road. When illuminated by LED light, signs and moving objects are easier to see and recognize.

Although these first-generation LED headlamps use more energy than other headlamps, there is confidence that future generation lamps will use less.

DESIGN FEATURES

TIP: Although the LED headlamp assembly fits into the same opening as the standard headlamp, they are not interchangeable. Wiring, connectors, calibrations, and other components are different between the systems.

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Techline News

Global Diagnostic System

Over the past several years, there have been many rumors related to the next generation of vehicle diagnostics and what will replace the Tech 2. As vehicle launches move forward with new common architectures, there will be a gradual progression to a new diagnostic tool, GDS – Global Diagnostic System.

Last year, we rolled out the first half of this progression with the MDI. This new interface allowed communication between the vehicle and your service PC. The next step in the diagnostic evolution will be the GM GDS.

GDS will be a PC-based vehicle diagnostic application that will give a technician the ability to manipulate vehicle data in ways not available on the Tech 2. As future vehicle architecture changes, the MDI/GDS combination will be the diagnostic tool used, while all other vehicles will continue to use the Tech 2. This makes the Tech 2, as well as the MDI/GDS, a combination of required diagnostic tools through at least 2012.

The first vehicle to use GDS will be the 2010 Chevrolet Camaro,

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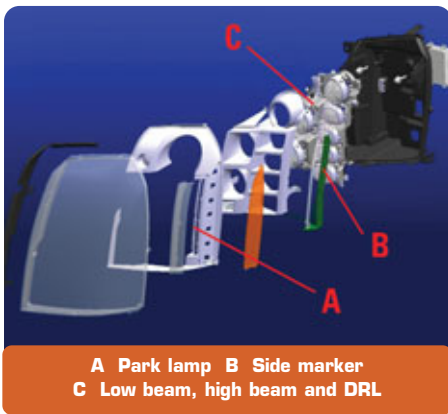
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The following lighting functions are integrated into the Platinum headlamp housing:

- low beam
- high beam
- DRL
- parking lamp
- side marker lamp
- side reflex reflector



Light Driver Module (LDM)



**A Park lamp B Side marker
C Low beam, high beam and DRL**

Low and high beam and DRL functions are controlled by the light driver module (LDM). The LDM controls voltage to the individual LED modules and filters line noise and radiated emissions. The LDM monitors the temperature of the LEDs and adjusts voltage if they get too hot. The LDM monitors LED operation and will alert the BCM in case one or more of the LEDs stops working. When the BCM determines a fault has occurred in either headlamp, it will send a message to the IPC which will alert the driver. The IPC message will indicate that the right or left headlamp needs to be serviced.

The LED headlamp is a completely sealed unit with no internal serviceable parts. The external LDM on the back is serviceable separately.

The appearance of the LED headlamp is dominated by seven glass projector lenses, arranged in two vertical rows.

Behind each lens is an LED module which produces about 13 watts of white light per module.

The five low beam LED modules are stacked vertically outboard in the housing. Each lens is uniquely designed to produce a certain pattern in the low beam light distribution. The combination

of five overlapped patterns produces excellent low beam coverage.

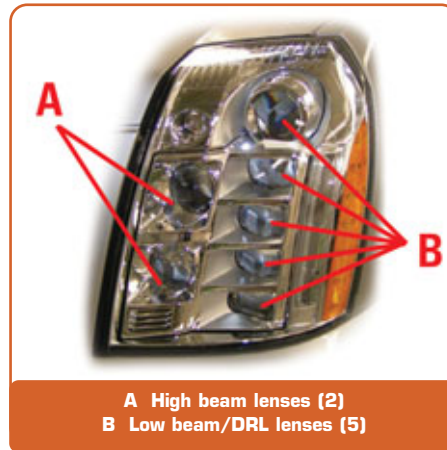
Two additional LED modules are used for the high beams. They are stacked inboard of the low beams. Again, each lens produces a unique pattern, and together they produce excellent high beam coverage far down the road. To ensure that closer objects remain visible, the low beams remain lit when the high beams are turned on.

Typically, HID systems produce 830/1,200 lumens of light (low/high) and halogen systems produce 400/600. The

Escalade Platinum headlamp system provides around 730 lumens on low beam and 1,000 on high beam. The lighting manufacturer individually tunes each LED module to ensure that all of the available light is directed exactly where it's needed. This helps address a criticism of oncoming glare often directed at HID lighting. In both low and high beam, the light pattern spreads

seamlessly, without streaks. Because LED lighting is so evenly distributed, it does not have the sharp cutoff that is often typical of HID lights.

The LED modules are mounted to heat sinks to dissipate heat. A cooling fan creates airflow inside the



**A High beam lenses (2)
B Low beam/DRL lenses (5)**

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scheduled to be released in the first quarter of 2009, followed closely by the 2010 Buick LaCrosse (Allure in Canada). Before the vehicle release, there will be a GDS familiarization class, 16048.26W, available mid-late first quarter.

In order to prepare your dealership for this next step, we recommend the following: First, verify you have your MDI configured for your dealership's network and updated to the latest software version available in TIS2WEB/SPS. If you haven't done so yet, please review MDI Familiarization course 16048.25W. Also, realize that the MDI is now being used as a diagnostic tool, as well as SPS, so you may need to reassess how many MDIs your service department will require. Additional units can be ordered through 1-800-GM-TOOLS.

The second item to be addressed is mobility. In order to take full advantage of PC-based vehicle diagnostics, notebook and tablet computers will give the technician more mobility. The technician's ability to perform diagnostics on a road test, as well become more efficient by not having to go back and forth between the vehicle and a desktop PC, will be a key issue as older PCs are replaced. If your dealership is looking into purchasing additional computers, notebooks or desktops, a follow-up GM messenger will be sent with the latest PC specs.

- Thanks to Matt Singer



New Interface - New Look and Feel



headlamp housing. Ducts direct the air to the heat sinks in order to dissipate heat created by the LEDs. The warmed air is then circulated inside the headlamp to keep the outer lens free of condensation. Circulating warmed air is also useful to melt ice on the front lens, because the LED does not produce radiant heat as conventional light sources do.

The fan operates when any of the main functions (low beam, high beam, DRL) is switched on. The fan operates at a constant rpm.

In addition to the always-on cooling fan, the temperature of the LEDs is

designed to continue operating. If necessary, the light driver module can reduce current to the LEDs, within legal lighting requirements, to regulate their operating temperature.

OUTAGE SIGNAL

An outage signal is provided under the following conditions:

- LED opens (open load)
- bad LED connection (open load)
- broken wire (open load)
- bad connection on temperature sensor (open load)
- broken wire to temperature sensor (open load)
- short to battery voltage on temperature sensor wires

TIP: The diagnosis interface does not signal which failure occurs, only that a failure has occurred.

SERVICE TIPS

IMPORTANT: Due to the intensity of the LEDs, do not look directly at the lamp when it is operating. Eye damage could result.

PART NUMBERS

25999509	LH LED Headlamp Assembly	
	25883862	Module – Headlamp Control (1 required per side)
	11561804	Screw (4 required per side)
	25883863	Cover – Park Lamp Access Hole (1 required per side)
	RH LED Headlamp Assembly	
	25883862	Module – Headlamp Control (1 required per side)
	11561804	Screw (4 required per side)
	25883863	Cover – Park Lamp Access Hole (1 required per side)

Because the LED headlamp represents cutting edge technology, initially there will be a 100% return policy. If a unit must be replaced in service, the original must be returned for analysis.

Be sure the customer understands proper operation before attempting to address customer concerns. The operation of LED headlamps is different from previous headlamps. For instance, the output is instantaneous, compared with HID lights which require several seconds to reach full intensity.

The LED headlamps are aimed in exactly the same way as conventional HID headlamps, using an aiming screen. See SI for details.

In case of an LED failure, the driver is notified by a message in the Driver Information Center:

- Service LH Headlamp Soon
- Service RH Headlamp Soon
- *Thanks to Bill Apple and Paul Gallo*

Sulfur Odor From Exhaust

This information applies to all 2007-09 GM vehicles.

U.S. Federal regulations were finalized in 2006 limiting the amount of sulfur in gasoline to 80 PPM. One exception – certain small refineries received an exemption that allows them to produce gasoline containing up to 450 PPM until January 1, 2011. California's limit has been 30 PPM since 2006. Canadian regulations limit the amount of sulfur in gasoline to 80 PPM or less, no exceptions.

Sulfur odor in exhaust from vehicles equipped with gasoline engines is caused by excess sulfur in gasoline, and cannot be eliminated unless the source of the sulfur is eliminated. Replacement of catalytic converters for this condition is not an appropriate repair, and will not correct the condition by itself.

Customers with vehicles which exhibit sulfur odor should be advised of this information, and advised to switch the brand of gasoline they are using.

In most cases, this will result in elimination of the sulfur odor by the time one tank full of gasoline is consumed, if the

gasoline that was added is within the 80 PPM federal limit. For the odor to be eliminated, two things must occur. The gasoline added to the vehicle must be at or below the federal 80 PPM limit, and the vehicle must have run long enough to have consumed one tank of fuel containing a sulfur content of 80 PPM or less.

Although there is no way for a dealership to easily measure the amount of sulfur in gasoline, it's a good practice when asked for a recommended brand of gasoline, to recommend any of the Top Tier Detergent Gasoline Brands. Although Top Tier brands have not demonstrated that they contain a lower sulfur content than other brands, their detergent additive package makes them a preferred choice when choosing a brand of gasoline for a vehicle. A complete list of Top Tier Brands can be found in bulletin 04-06-04-047H (U.S.), and 05-06-04-022E (Canada) or by accessing the website www.toptiergas.com.











- *Thanks to Jay Dankovich*

Schematic Electronic Navigation and Connector End Views Update

As has been previously communicated (*TechLink*, September 2007), the global format of the service schematics was implemented beginning with the 2008 model year. Part of the format implementation was to significantly improve the electronic navigation standard. Due to technical difficulties beyond our control, the complete electronic navigation enhancement cannot be implemented at this time.

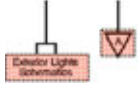


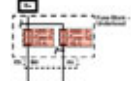
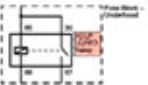




Starting in February 2009, the links for all 2008 and 2009 model year schematics will begin to be activated along with the implementation of some electronic navigation enhancements. Additionally all 2010 model year vehicles will adopt this same strategy.

The following are the links that are possible on schematics:

Schematic Icon	LINK Definition
Component Location List Icon 	Link will be active and will link to the Master Electrical Component List document.
Description & Operation Icon 	Link will be active and will link to the System Description and Operation document.
Programming Information Icon 	Link will be active and will link to the Control Module References document.
Previous Schematic Icon 	If the schematic contains this icon, the link will be active and will link to the Previous Schematic in the list of schematics.
Next Schematic Icon 	If the schematic contains this icon, the link will be active and will link to the Next Schematic in the list of schematics.
Supplemental Inflatable Restraint Icon 	If the schematic contains this icon, the link will be active and will link to the Master Electrical Schematic Icons document.
Information Icon 	If the schematic contains this icon, the link will be active and will link to the Master Electrical Schematic Icons document.
Caution Icon 	If the schematic contains this icon, the link will be active and will link to the Master Electrical Schematic Icons document.
High Voltage Icon 	If the schematic contains this icon, the link will be active and will link to the Master Electrical Schematic Icons document.
Danger Icon 	If the schematic contains this icon, the link will be active and will link to the Master Electrical Schematic Icons document.

In addition to the icons, schematics have other active hotspots that link to supporting information.

These hotspots can be either text based or symbol based. The shaded

Schematic Hotspot	LINK Description	Global Standard Feature Status
Schematic Circuit References 	Link will be active and will link to the specific Subsystem Schematic page that shows the circuit in detail.	All features implemented.
Serial Data Functional Circuit Icon 	Link will be active and will link to the Data Communication Schematics list where all of the serial data circuits are shown.	All features implemented.
Twisted Pair Symbol 	Link will be active and will link to the Master Electrical Schematic Icons document.	All features implemented.
Fuse Symbol/ Name in Subsystem Schematics 	Link will be active and will link to the specific Power Distribution or Power Moding Schematic page that shows the circuit in detail.	Additional link to the Electrical Center Identification Views from this symbol is not possible at this time.
Relay Name (located within a block) in Subsystem Schematics 	Link will be active and will link to the Electrical Center Identification Views document.	Link will be to the entire list of blocks. Individual block information was planned on being grouped together in a single Document ID, but is not possible at this time.
Ground Symbol/ Name in Subsystem Schematics 	Link will be active and will link to the specific Ground Distribution Schematic page that shows the circuit in detail.	Additional link to the Ground Views from this symbol is not possible at this time.
Component Name/Box in Power and Ground Distribution Schematics 	Link NOT Implemented.	Links to the Subsystem Schematics from this symbol are not possible at this time.
Component Name in Subsystem Schematics 	Link NOT Implemented.	Links to the specific Component Locator View and Connector End View are not possible at this time.
Splice/Splice Pack/Inline Harness Connector Item Names 	Link NOT Implemented.	Links to the specific Harness Routing View and Connector End View are not possible at this time.

Terminal Repair Strategy

It is important to be able to repair large harnesses (body, engine, chassis, forward lamp, instrument panel) rather than to replace them. One method is to replace the bent or damaged terminal within the connector.

boxes in the table identify the areas that may or may not have an active hotspot.

The enhancements to the navigation are not limited to schematics. Navigation to a component locator or connector end view will also be improved. At present, when trying to navigate to a component view or connector end view from the Master Electrical Component List, a result of the link is a list of views or connectors.

The enhancement to this area is that the Master Electrical Component List will now link directly to the specific locator view or directly to the specific connector end view for the component listed.

This enhancement will also change the way connector end views are displayed on the web as well as affect how they are printed. At present, when navigating directly to, and opening, the Component Connector End Views title, the complete list of connectors for the vehicle and the connector images/pinout tables are expanded. This is where you would have to wait for all of the connector graphic images to load before being able to get to the connector that you wanted. The enhancement will now expand only the list of connectors and not load each and every connector image/pinout table, just like how component views presently work. The result of this is a faster load time and the ability to print out just a single connector end view. The downside is that printing out just two or three connectors will have to be done individually.

Once the technical ability exists, all of the remaining planned features that are not being implemented as part of this electronic navigation update will be implemented.

– Thanks to Lou Winters

North America Terminal Repair Strategy

In North America, the terminal repair kit J38125 contains most of the terminals used on North American vehicles. For most vehicles, service information (SI) connector end views provide the probe tool, the release tool, the crimp tool, and the terminal within the cavity. This procedure reduces the repair cost and time for customers.

The terminal repair kit J38125 for North American dealers will be maintained. Replacement terminals can still be purchased through SPX (1.800.468.6657) or through your local Barnes contact. Higher demand terminals will be assigned a GM part number and can be purchased from GMSPO. Rollout of these new numbers will be shown in SI as well as SPX's new terminal book.

Changes to GM's Terminal Repair Strategy for Global Platforms

Due to the growing number of new terminals released for global platforms, it is necessary to implement another method of terminal repair. Going forward, all the terminals on the global platforms will be released as terminated leads. These terminated leads will be available through GMSPO.

A terminated lead is a length of appropriate TXL gauge size wire with a production terminal machine-terminated onto it.

SI will call out the terminated lead for each cavity. If there is a terminal within J38125 that correlates with the terminated lead, it will also be called out.

TIP: These SI changes will be documented in an upcoming *TechLink* article.



Terminated lead



Terminal Repair Kit J38125



Typical SI terminal information

Summary

On all large harnesses, the technician should repair the harness by replacing terminals instead of replacing the harness. In the future, GM North American technicians will have two methods to replace these damaged terminals. On current and past programs, the terminal repair kit J38125 can be used. On global platforms; terminated leads will be available.

– Thanks to Rob Prough

Service Charging System Message on DIC

Some owners of a 2005-09 Corvette or 2004-09 XLR may comment that the Service Charging System message displays on the DIC. DTC P0621 is stored. This may be a result of aftermarket spark plugs or an open in circuit number 2540.

1. Check for aftermarket spark plugs. Plugs that are designed with a "pulse" technology may interfere with this circuit and cause the Service Charging System message in the DIC and/or P0621 DTC to store in the ECM. If aftermarket plugs are installed, replace the plugs with OEM parts. This is not considered a warranty repair and all cost associated with this repair should be the customer's responsibility.
2. Circuit 2540 is supplied voltage from the horn fuse, position 2 in the UBEC. Try the horn to see if it works. If the horn does not work, suspect an open fuse. This fuse may open if the horn is shorted due to water intrusion. If the horn is functional, check the integrity of circuit 2540 between the UBEC and the generator. Refer to SI document 1481125 for the schematic. Repair circuit 2540 as needed and re-evaluate the customer's concern.

– Thanks to Dino Poulos

Camshaft Phaser

On a 2009 Aveo, G3, or Wave (Canada) with 1.6L Engine (VIN 6 – RPO LXV) you may find the following DTCs:

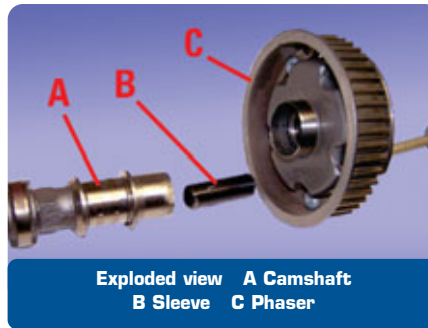
- P0011 Intake Camshaft Position (CMP) System Performance
- P0014 Exhaust Camshaft Position (CMP) System Performance
- P0016 Crankshaft Position (CKP) – Intake Camshaft Position (CMP) Correlation
- P0017 Crankshaft Position (CKP) – Exhaust Camshaft Position (CMP) Correlation.

Typically these DTCs set after a cam phaser has been removed and replaced. If the engine timing has been verified and you have followed SI diagnostics and the code(s) returned, the following may help.

The 1.6L (RPO-LXV) engine has a unique black plastic sleeve that is inserted into the end of the cam phaser and camshaft. This sleeve directs oil to the phaser to advance or retard the cam timing. If the sleeve is missing or damaged, the ECM cannot control the phaser movement which may result in a DTC P0011, P0014, P0016 and or P0017. This sleeve may be confused with a shipping aid, as it comes with new phasers. Be careful when service work is performed to insure installation of this sleeve when reassembling the engine.

TIP: These sleeves are not shown in EPC and are available only as part of the camshaft phaser assembly at this time. Additional information will be made available when changes are made.

– Thanks to Jeff Gorenflo



Low Engine Power

Some owners of a 2008 Hummer H3 with 5.3L engine (RPO LH8) may notice that the engine lacks power when there is a brake input with the transfer case in low range 4WD. Typically, this occurs while performing low speed off road maneuvers and the brakes are applied and released frequently. No DTCs will set with this concern. This may be a result of brake torque management mode due to brake and throttle inputs being received at the same time.

If SI diagnostics do not isolate a cause for this concern, reprogram the ECM with the latest TIS2Web calibrations and re-evaluate the concern. The latest ECM calibrations are designed to address this concern.

– Thanks to Jamie Parkhurst

No Crank

In rare instances a 2009 Aveo may exhibit a no crank condition with DTC P16F3 (Control Module Redundant Memory Performance) setting in the ECM.

To remedy this concern, reprogram the ECM with the latest calibration available from TIS2Web.

– Thanks to Jeff Gorenflo

Catalytic Converter Break-In

On an Escalade, Escalade Hybrid, Avalanche, Express, Silverado, Suburban, Tahoe, Tahoe Hybrid, Savana, Sierra, Yukon, Yukon Hybrid, Hummer H2 and H3 with a V8 Engine, a SES light may be experienced on low mileage vehicles, or vehicles that have recently had the catalytic converter replaced. Upon inspection, DTCs P0420 or P0430 may be stored.

On a new vehicle, catalytic converter efficiency DTCs P0420 and P0430 are disabled for the first hour of engine run time to allow break-in of the catalytic converter. The following scenarios may allow a DTC P0420 or P0430 to set after this hour of engine run time has expired.

1. If these DTCs are found on a new or low mileage vehicle, use the Tech 2 to verify engine run time on the Engine Hour Meter in the IPC Data Display/Data 1 List. If the engine run time is less than one hour, the battery may have been disconnected, or another vehicle power loss event may have occurred during vehicle manufacturing. This may allow the catalyst efficiency diagnostics to run before one hour of engine run time has been achieved. If this occurs, the catalytic converter may not have completed a thorough break-in cycle, causing a false DTC P0420 and/or P0430 to set. If this occurs, clear the DTCs and perform the drive cycle below.
2. If the DTCs set shortly after the catalytic converter is replaced, it may be a result of the engine run time restrictions no longer being in place because the vehicle is no longer new. As a result, the catalytic converter may not have completed a thorough break-in cycle after replacement, possibly resulting in a false DTC P0420 and/or P0430. If this occurs, clear the DTCs and perform the drive cycle below.

Drive Cycle

In order to achieve proper catalytic converter temperature and allow the mat material to out-gas (break-in), perform the following drive cycle and suggestions:

1. Drive the vehicle at sustained highway speed for 25 – 30 minutes.
2. Bring the vehicle to a stop.
3. Shut off the engine for one minute..
4. Restart the engine and resume highway speed for an additional 10 – 15 minutes.
5. Bring the vehicle to a stop.
6. Shut off the engine for one minute.
7. Restart the engine and operate the vehicle at the conditions for running the DTC P0420/430 tests and assure that the vehicle passes these diagnostic tests. If the diagnostics for DTC P0420 and P0430 have passed, return the vehicle to customer for evaluation. If the diagnostics do not pass, perform SI diagnostics and repair as necessary.

– Thanks to Jamie Parkhurst

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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Fuel Pump Control Module (FPCM)

Examples of vehicles equipped with an FPCM include:

- 2008-09 Hummer H2
- 2008-09 Saturn VUE
- 2008-09 C/K trucks (most engines)
- 2009 Chevrolet Corvette ZR1 (manual transmission)

With the increase in electronic returnless fuel systems (ERFS), it is important to know that there is a new module associated with ERFS. The new module is called the Fuel Pump Control Module (FPCM) and it is a serviceable GMLAN device. It is a microprocessor that controls the voltage supplied to the fuel pump (located within the fuel tank) to achieve the desired fuel pressure requested by the Engine Control Module (ECM). There is also a new fuel line pressure sensor, which sends a feedback signal to the FPCM, so the FPCM can determine whether the desired pressure is being achieved.

Fuel Pump Control Module DTC P069E

The FPCM stores diagnostic information, and if a fault is detected it will send a message to the Engine Control Module (ECM) to illuminate the malfunction indicator lamp (MIL). When this occurs, DTC P069E will set in the ECM. The specific faults themselves, however, are stored within the FPCM, and must be retrieved using the FPCM menu on the Tech 2 scan tool. Faults may be due to issues with the electrical wiring or connectors in the FPCM circuit; or they may be due to performance issues within the FPCM module itself, the fuel line pressure sensor, the fuel pump MRA, or communications with the ECM. The FPCM also has Special Functions within the Tech 2 for controlling the Fuel Pump Duty Cycle and Fuel Rail Pressure.

TIP: The FPCM can sometimes be overlooked when diagnosing a problem involving the fuel system. If while using a scan tool (Tech2) a DTC P069E is detected, return to the Powertrain menu and select Fuel Pump Control Module for additional diagnostic information.

Checking the FPCM for DTCs could lead to more accurate diagnosis of a problem, faster determination of root cause, and shorter vehicle repair times.

– Thanks to Alan Lustre and George Nagrant

Fluid Leak From Transfer Case Adapter Gasket

This information applies to the 2007-09 Escalade, Silverado, Suburban, Tahoe, Sierra and Yukon equipped with a Magna transfer case (RPO NQF, NQG, NQH) and 2ML70, 6L80, 6L90 automatic transmission (RPO M99, MYC, MYD).

A customer may comment of a fluid leak that appears to be automatic transmission fluid. Inspection may reveal a fluid leak that appears to be from the transmission to transfer case adapter gasket.

The vehicles with the transmission and transfer case combinations listed above have a dry cavity adapter area. The gasket is in place due to dissimilar metals between the transmission case and transfer case. If one of these vehicles has a leak from the adapter gasket or weep hole, add fluid dye to the automatic transmission to isolate the leak. If dye appears when tested with a black light, the transmission output shaft seal is the source of the leak and will require replacement. If the dye does not appear, the transfer case input shaft seal is the source of the leak and will require replacement.

IMPORTANT: In the above listed vehicles, replacing only the gasket will result in a repeat leak.

TIP: There are other vehicles with a 4-speed automatic transmission or Allison transmission that still use a wet cavity adapter. Refer to the latest version of PIP4530 to identify those vehicles.

– Thanks to Chuck Krepp



Car Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2007-09	All – Sulfur odor in exhaust	Change source of gas	Don't replace components	09-06-05-001
2006-09	All – Identifying aftermarket engine and transmission calibrations	Perform calibration verification	Don't perform warranty repairs when damage caused by customer modifications.	08-06-04-033C - Gas 08-06-04-006B - Diesel
2009	Vibe – Loose or missing wheel cap	Replace wheel cap	Don't use RTV to reinstall wheel cap	08-03-10-011A
2009	DTS – Radio audio does not mute	Reprogram radio	Don't replace radio	08-08-46-009
2005-09	Corvette – Low clutch pedal, difficult to shift	Install new clutch and pressure plate	Don't use part 24246378	09-07-30-001
2007-09	AURA – Moisture in tail lamps	Replace tail lamp capsule	Don't replace tail lamp assembly	09-08-42-001
2009	Vibe – Chipped paint on liftgate	Replace seal	Don't repair paint without replacing seal	09-08-51-001
2004-09	Cobalt, DTS, Equinox, G5, HHR, Lucerne, STS, Torrent, Vibe – Sunroof frame rattle	Install flocking tape	Don't replace sunroof frame assembly	09-08-67-001
2008-09	Lacrosse, Impala, Allure – P0463 or no reading from fuel sender card	Perform drag test on terminals	Don't replace sender	PIC4927B
2006-09	Impala, Malibu, G6, AURA – Power steering noise	Bleed power steering system	Don't replace power steering pump or gear	08-02-32-004B
2007-09	Cobalt, G5 – RVS inoperative during cold weather	Order special hood latch from WPC	Don't order hood latch from SPO	PIC5082
2006-08	HHR – Wind/air deflector hooks on sunroof module break	Replace air deflector hooks	Don't replace complete sun roof module assembly	08-08-67-018
2003-08	Cobalt, G5, HHR, ION – Noise in front suspension over rough roads	Inspect front strut(s) for evidence of leak	Don't replace components not part of noise	04-03-08-006C



Truck Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2004-06	Canyon, Colorado, H3 – New procedure for cylinder head	Remove cylinder head w/o removing front cover	Don't remove front cover	06-06-01-017F
2008 and Prior	With memory mirrors – Curb Park Assist	Check wiring, reflash driver's door module	Don't replace mirror or door module	07-08-64-022B
2006-09	Avalanche, Escalade – Midgate water leak	Align and adjust midgate components	Don't replace seals	08-08-57-007
2005-08	Equinox, Torrent – MIL, P0442 or P0455 Set	Inspect, replace rubber grommet	Don't replace fuel cap	09-06-04-001
2006-09	HHR – Outside rearview mirror wind noise	Install flocking tape and shim stock	Don't replace mirror	09-08-58-001
2006-09	H3 – Front bumper fascia loose	Install U-nut and bolt	Don't replace fascia	09-08-62-001
2008-09	HHR – Rear side cargo door not opening with button activation	Add washers to check link	Don't replace check link	09-08-64-001
2006-09	H3 – Exhaust tick noise	Replace exhaust manifold gasket, broken bolts w/o removing cylinder head	Don't remove head to replace manifold gasket, bolts	08-06-05-008

**Know-How
Broadcasts
for
April**

10209.04D Emerging Issues
New Model Features

April 9, 2009 9:30 AM and 12:30 PM Eastern Time

For Web NMF courses, log on to the GM Training Website (www.gmtraining.com). Select Service Know-How/TechAssists from the menu, then choose New Model Features for a selection of courses.



– Thanks to John Miller