Special Tool Organization Website Enhancements

A recent update to the GM Special Tool Organization website at gmtoolorg.service-solutions.com is helping to make this valuable resource even better. The website enables dealerships to quickly inventory and manage newly released and current essential and special service tools.

Available to all U.S. and Canadian dealerships, the website (managed by Bosch Automotive Service Solutions) also helps dealerships organize their special tool investments. Dealerships that use the site regularly benefit from time savings and repair efficiency by having their special tools inventoried and easy to find.

Recent enhancements made to the website include:

• More than 85 image updates
• Monthly tool database updates (210+); special tool shipment notices are posted by year and month
• Application updates/modifications for new 2015/2016 vehicles
• GM Service Information vehicle application updates

Updated Browser Support in New Dealership Infrastructure Guidelines

Internet Explorer (IE) 11 is the only version of the web browser that will continue to receive technical support and security updates from Microsoft. In addition, IE 11 is now the minimum and recommended browser for GM Techline applications.

If IE 10 is still being used in your dealership, it should be updated to IE 11 to ensure a faster, more secure online experience. Failing to take action and running older versions of IE exposes your business to security vulnerabilities.

The use of other browsers is a common question received by the Techline Customer Support Center (TCSC). At this time, GM does not endorse nor is there a plan to approve the use of other browsers, such as Firefox, Safari, Chrome, etc.

For more information on the importance of this upgrade, or for information on how to upgrade your web browser, U.S. dealerships should
Updated Browser Support in New Dealership Infrastructure Guidelines

contact a GM Dealer Information Technologies (GMDIT) network consultant. GMDIT can be reached by calling the GlobalConnect Helpdesk at 1-888-337-1010, option #4, and then option #2, or by visiting www.gmdit.com.

The browser specification is part of the latest GM Dealership Infrastructure Guidelines. Other updates in the guidelines include:

Windows 7 Professional is the only supported operating system. Preliminary testing is being developing for Windows 10 Professional, which is expected to be approved later this year.

The recommended desktop hard drive space is 1 TB. The increase in hard drive size is to accommodate the new Techline Data Service (TDS). Dealerships may determine if they require a drive size of less than 1 TB if the PC will not be used for TDS.

The latest guidelines, including complete details about all supported hardware and software, are available at the GMDIT website.

Canadian GM Dealer Infrastructure Guidelines are available in GlobalConnect within the Reference Libraries under “Business Office” and “Service” departments.

Any questions regarding the updated guidelines should be directed to the TCSC at 1-800-828-6860 (English) or 1-800-503-3222 (French).

Thanks to Lisa Scott

Data Bus Diagnostic Tool Update

The latest version of Data Bus Diagnostic Tool software has been recently released to help technicians better locate wiring and connector concerns in a vehicle’s Controlled Area Network (CAN) bus.

DBDT version 1.3 can now monitor up to four buses (two single and two dual) at one time. A dialog box will appear after the start button is clicked, allowing the user to make a selection.

The old Data Circuit and Baud Rate menus also have been removed and a new column has been added to the module table.

The new software enables the MDI to run a sampling rate of 10,000 Hz, which is 25 times faster than the previous version. This allows for far greater accuracy when identifying bus conditions. The impact of this change can be seen when looking at the data points of the previous approach and the new approach using the MDI and MDI 2.

The Data Bus Diagnostic Tool also now has a faster startup time. Other enhancements include sortable columns and Message Monitor visual improvements. Class 2 is now supported as well.

The updated software can be downloaded by opening GDS 2 through TIS2Web.

Thanks to Chris Henley
Proper Fastener Torque Check on Internal Battery Repairs

During internal high voltage battery repairs on hybrid and electric vehicles, it’s critical to always double check the torque of all fasteners and follow all warnings and cautions covered in the appropriate Service Information.

High voltage fasteners are identified in the Service Information along with a note to perform a second torque verification check following reassembly.

Failure to properly torque these fasteners may result in increased resistance, which produces heat that can lead to damage to the battery. This damage may be due to a prior repair attempt and may not be covered under warranty.

For example, when reinstalling the Battery Bulkhead Disconnect Unit (BDU) on 2011-2015 Volts, double check that the fasteners are torqued to the proper specification. Otherwise, the result may be damage to the bus bar or other components.

† Thanks to Keith Newbury, Steve Falko and Chuck Wieseckel

The need for a second torque verification check is noted in the Service Information.

The Breaking Point: Use Caution around Exposed Volt Windshield

When the Dash Upper Extension Panel Opening Cover on the 2016 Volt is removed, be sure to use caution working around the exposed windshield. Contacting the bottom edge of the windshield may cause the glass to chip, crack or break.

A crack on the exposed lower edge of the windshield.

The lower part of the windshield is not supported by the body structure. It cannot support a technician’s weight when leaning on the lower edge of the windshield while performing repairs. The glass also may crack if the exposed edge of the windshield is hit with a ratchet or other tool.

With the opening cover removed, along with the Front Suspension Strut House Brace, it is recommended to slide a 3-ft. (0.9 m) piece of 5/16-inch rubber hose, cut along its length, along the edge of the windshield to prevent any accidental damage. Remove the hose before reinstalling the opening cover, and save it for the next repair.

Damage to the windshield during a repair is not considered a warranty item.

† Thanks to Chuck Wieseckel

Use a rubber hose to protect the edge of the windshield during repairs.
Diesel Exhaust Fluid Quality Poor Message Conditions

The Exhaust Fluid Quality Poor message, sometimes followed by other Diesel Exhaust Fluid (DEF) messages, may appear on the Driver Information Center of 2010–2016 Express and Savana vans and 2010–2016 Silverado HD and Sierra HD models equipped with the 6.6L Duramax diesel engine (RPOs LGH, LML).

DEF quality-related conditions also may be found on 2016 Colorado and Canyon models equipped with the new 2.8L diesel engine (RPO LWN) and 2014-2016 Cruze equipped with the 2.0L diesel engine (RPO LUZ).

Diesel Exhaust System Components

The diesel exhaust system includes the following components:

(A) Turbocharger downpipe
(1) NOx sensor number 1
(2) Exhaust Gas Temperature (EGT) sensor 1
(3) Hydrocarbon (HC) injector

(B) Diesel Oxidation Catalyst (DOC)
(4) Exhaust Gas Temperature (EGT) sensor 2
(5) Diesel Exhaust Fluid (DEF) Reductant injector
(6) NOx sensor number 2
(7) Exhaust Gas Temperature (EGT) sensor 3

(C) Selective Catalyst Reduction (SCR)
(8) Exhaust Gas Temperature (EGT) sensor 4

Exhaust Fluid Quality Poor Message

There are various reasons why diesel exhaust system determines the DEF is poor quality, including a contaminated or diluted fluid, low-quality fluid or a frozen DEF tank.

Contaminated Fluid – While contamination could result from any number of fluids, it’s most likely that it will involve common automotive fluids. Owners may mistakenly fill the DEF tank with other fluids. DEF should be a clear liquid. Test a sample from the reductant fluid tank and then refer to Contaminants in Diesel Exhaust Fluid Diagnosis in the appropriate Service Information. Use special tools J26568 Coolant and Battery Fluid Tester or ENS0422 Diesel Exhaust Fluid Refractometer for fluid testing.

Refer to #PIP5370 for additional examples of contaminated DEF.

Low-Quality Fluid – Clean, fresh DEF is critical for optimal SCR efficiency. SCR efficiency is determined by monitoring the nitrogen oxide (NOx) sensors located upstream and downstream of the SCR. When the ECM detects a drop in the SCR NOx reduction efficiency — suggesting a diluted or contaminated DEF supply — the vehicle alerts the driver with several prompts and warnings.

Once initiated, the warnings grow increasingly more serious as the vehicle continues to be driven. The vehicle’s current DEF quality warning status is displayed on the scan tool. When a drop in SCR efficiency is detected, the normally OFF Reductant Field Quality Warning Indicator Command will display certain Warning Levels (1 through 5), depending on the number of miles driven, the number of ignition cycles, and whether a refueling event was detected. The series of warnings alert the driver that system service is urgently needed.

If it’s difficult to clear the Exhaust Fluid Quality Poor message or complete the RFQT, refer to #PIP5007.

Frozen Tank Status – Another possible reason for the Exhaust Fluid Quality Poor message is whether the vehicle has been in a cold climate condition of 20° F (−7° C) or lower for several days, thereby triggering a Frozen Tank status. If this occurs, it may prevent a Reductant Fluid Quality Test (RFQT) from evaluating a result when triggered. The reductant tank temperature may be warmer after extended engine run time; however, only the conditions at key-on are considered.

To exit Frozen Tank Status, refer to #PIP4864 and Bulletin #10-06-04-013.

Other DEF-Related Messages

In addition to the Exhaust Fluid Quality Poor message, the following DEF messages may also appear:

• Service Exhaust Fluid System (Tamper)
• Exhaust Fluid Range
• Service Emission System

If any of these messages are displayed, refer to the Bulletin #12-06-04-002.

Order of Repair

If a combination of DEF-related messages or conditions exists simultaneously on a vehicle, an order of repair must be followed, using the Driver Information Center as the guide as to what needs to be corrected first.

The messages will always display in the correct order of repair. For example, if a tamper condition and a poor quality condition exist together, the Service Exhaust Fluid System message will display until the tamper condition is corrected. The Exhaust Fluid Quality Poor message will then display, which will need to be corrected next.

Thanks to Larry Yaw
No 4th, 5th, and 6th Gears

Some 2015-2016 Silverado, Suburban, Tahoe, Sierra, Yukon and Yukon XL models equipped with the 6L80 automatic transmission (RPO MYC) may have a condition where the 4th, 5th, and 6th gears cannot be engaged. DTC P0796 (Pressure Control Solenoid Valve 3 – Stuck Off) may be set and the Check Engine MIL may be illuminated.

These conditions may be caused by a broken 4–5–6 Clutch (with the Output Carrier Shaft) Hub Assembly. The fluid pan assembly will be clean, containing little or no debris, and the fluid will be clean with no visible signs of distress.

If the 4–5–6 Clutch Hub Assembly is broken, replace the assembly.

If DTC P0796 is set along with the 4–5–6 Clutch Hub Assembly being broken, the Control Solenoid Valve and Transmission Control Module Assembly (or TEHCM – Transmission Electro-Hydraulic Control Module) is not the cause and should not be replaced.

( شكراً إلى Mike Johnston)

Fuel Gauge Will Not Read Below 1/2 Tank

The fuel gauge may not go above or below 1/2 tank on some 2015-2016 Colorado and Canyon models.

If this condition is found, inspect the fuel level sender to ensure it is in the correct slot of the fuel module. If the fuel level sender is in the wrong slot, it may contact the side of the fuel tank, resulting in an incorrect fuel level reading.

The following shows the correct location (left fuel module) and the incorrect location (right fuel module) of the fuel level sender on the fuel module.

( شكراً إلى Ken Cole)
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