TECHlink
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Service Programming
Things to Check When You Connect

Performing Remote Service Programming to correct a vehicle condition? It's easy. Connect the Tech 2 to the vehicle and obtain the necessary data from the control module. Then connect the Tech 2 to the PC and download a new calibration file from the PC to the Tech 2. Follow that by reconnecting the Tech 2 to the vehicle and uploading the new calibration file to the control module. It's as simple as that.

But when something happens in between those three simple steps, what do you check and where should you look for possible problems?

There are three Service Programming System (SPS) programming methods. Remote SPS Programming, which we just described. Off-Board Programming, which is used when a control module must be programmed without having the vehicle present, requires using an Off-Board Programming Adapter (OBPA) to provide communication between the control module and the Tech 2. And the latest programming method is Pass-Thru Programming. Pass-Thru was introduced last year and allows the PC to be connected to the vehicle using the Tech 2 as a communications interface. With Pass-Thru, a new calibration file is downloaded straight to the vehicle control module from the PC.

Regardless of which programming method is being used, here are a few questions to ask yourself when you run into some difficulty while performing SPS programming.

Is the battery fully charged?

Check battery voltage at the control module. It should be charged to approximately 12.5-13 volts, which is enough to turn the engine over normally.

During programming, the control module depends on the battery for power. Also during programming, the vehicle's components (such as the blower motor) are set to a default mode that may be turned on, placing additional draw on the battery. If battery voltage goes outside the specified range of 11 to 14 volts, the control modules and the Techline equipment will stop communicating. If this happens, it could cause the control module to become inoperable and require replacement.

If battery voltage is low, fully charge the battery before attempting any reprogramming. The vehicle battery should not be connected to a battery charger during a programming procedure. Incorrect volt-

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GM Service Operations

GM Labor Time Activity

News about labor times is always of interest to technicians. And with good reason. As labor time changes at other automotive manufacturers have recently been in the news, now is an opportune time to review the Labor Time Activity process followed by GM.

Service procedures are the basis for the Labor Time Activity and the main objective of the operation is to establish labor times for regular warranty work in an accurate and realistic manner. The published labor times are a key input for dealership reimbursement for warranty repairs.

GM regularly reviews the method used to determine labor times. The focus is to provide fair labor time allowances. The development of labor times follows established practices based on countless studies under real-world conditions. Presently, these established practices are expected to continue to be used.

Calculating Labor Times

When developing a labor time, hand tools are used throughout the service procedure except when a unique repair is called out in the steps of the procedure.

Steps are timed and rounded up to the nearest 1/2 minute. For example, a step that takes 1:35 to complete in the study is rounded up to a labor time of 2:00.

At the end of each study, an additional allowance (16% of the total study time) is applied for operating variables. These allowances account for items such as obtaining parts and special tools, variation in vehicle condition and a technician personal allowance. Final time study results are then converted to tenths of an hour.

Time also is added as appropriate to account for diagnosis, differences in vehicle option content and for other GM policy related items. Dealership operating practices such as the accuracy of repair order write-up or when vehicle keys or special tools cannot be located are not included in a time study.

Technicians and Vehicles

The technicians who perform time studies come from various backgrounds and levels of certification. Most have recent dealership experience, and although some are master certified automotive technicians, they are typical in skill level. One aspect all technicians share is that they understand the impact of the process on the dealership technician. They follow each step of a service procedure, without taking shortcuts, in order to establish a true labor time.

The vehicles used for the studies are typical of those found in any dealership. They are not new – they have accrued mileage and are usually allocated after going through engineering durability testing and service procedure development. When studies are complete, the vehicles are returned in as received (or better) condition to continue in fleet use.

Other Labor Hours

When a published time does not take into account everything a technician experiences, such as an unusual circumstance or difficult diagnosis, dealers can submit Other Labor Hours (OLH) on the warranty claim in accordance with the GM Service Policies and Procedures and WINS Claims Processing manual.

Reviews and Revisions

Dealers also may submit a Request for Review when there is a concern regarding a published labor time. However, it is important that key information (such as the service procedure followed and any difficulties encountered) be included with each request so that proper analysis can be conducted. All requests are analyzed for the root cause. There are instances when the request must be forwarded to other departments for investigation before action can be taken by the Labor Time Activity.

Times published in the GM Labor Time Guide may be changed/revised for several reasons. For example, when a vehicle line change occurs that affects the packaging of a part or component, a re-study is performed. Times may also change because of improved serviceability methods, repair techniques, or equipment or other advances in the industry. Dealer input, such as through the Request for Review process, may also result in the change of a published time.

New Developments

This year, time study development has relocated to a larger facility and additional floor space has been provided for service procedure development. This, along with other process improvement steps, allows for further progress toward synchronizing the development of service procedures and labor times, as well as performing quality checks on deliverables.

This is all part of GM's effort to provide fair labor times, and the means for reviewing and updating the times when needed. That's news you can use.

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. This magazine is a companion to the GM Edge publication.

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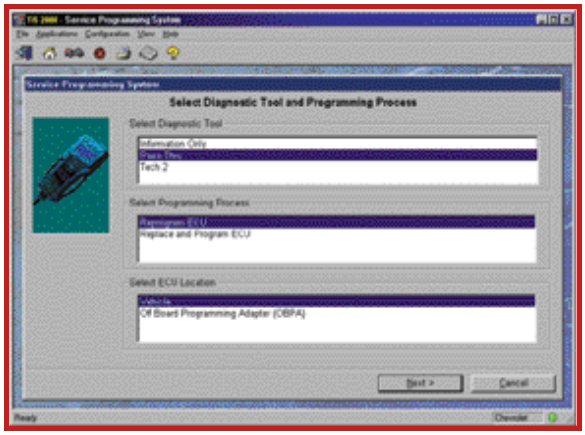
age could cause programming as well as control module failure.

Are the Tech 2 connections OK?

Check that the Tech 2 cable connections are secure. A disconnected cable could cause control module failure.

Verify the connection at the vehicle DLC. Check for any loose or damaged pins.

Also check the integrity of the Tech 2 cables. If they are frayed, broken or twisted, it could result in a loss of communication during the reprogramming event.



Service Programming can be performed using three different methods.

Does the Tech 2 operate properly?

Verify that the Tech 2 will pass the Self Test. Select F3: Tool Options from the Tech 2 main menu and then select F3: Self Test from the tool options menu. The Self Test screen will appear. By selecting Automated Main PCB and VCI, the performance of the main Printed Circuit Board and the Vehicle Communications Interface will be tested. The Tech 2 will display a test-in-progress screen while performing the tests.

If the Tech 2 passes all Automated Main PCB and VCI tests, it's not necessary to run any more tests to verify that the Tech 2 is working properly.

After completing any Self Test, power off the Tech 2 and then turn it back on to continue.

Each time the Tech 2 is turned on, it also runs Power On Self Tests (POST) automatically. At the completion of POST, the Tech 2 will beep once to indicate it is operating normally. If there is no beep, the sound transducer has failed. Three short beeps indicate that the Tech 2 has failed POST. If the Tech 2 indicates a failed condition, the Techline Customer Support Center should be contacted.

When checking for proper Tech 2 operation, also verify communication with the vehicle in the Diagnostics application as well as communication with the PC in the Download application.

In addition, check the PCMCIA card. Reseat the card to ensure that it is properly positioned. It should be inserted into slot zero, which is closest to the Tech 2 screen. Check that the card is not write protected (the correct, or unlocked, position is to the middle of the card). If locked, information cannot be stored and Service Programming will not work.

Is the latest TIS 2000/Tech 2 software being used?

Make sure the latest software is being used. This includes updating the Tech 2 scan tool software as well as updating the PC with the latest version of the TIS 2000 Data CD. Software is updated regularly to reflect changes in vehicle engineering or diagnostics.

Updates to the TIS 2000 application also are sent periodically via satellite broadcasts to dealerships' GM ACCESS servers.

Does the control module communicate?

Verify that the control module can communicate with the Tech 2 by requesting information in SPS. If there is no communication with the control module, check the connections between the Tech 2 and the vehicle. Also check battery voltage and the vehicle wiring to the control module.

Use the Tech 2 Message Monitor to see if other modules on the vehicle will communicate.

Is the problem repeatable?

Always try again at least once to perform the Service Programming function. Sometimes, on the second try, the programming function will operate properly.

Another alternative is to try a different programming method. If the problem occurred while using the Remote Programming method, try to complete the reprogramming using the Pass-Thru method.

Is the correct procedure being used?

When requesting the necessary information at the beginning of the SPS procedure, be sure to request information from the control module to be programmed. For example, when reprogramming an existing control module, request information from that control module. And when programming a new control module, install the new module in the vehicle and then request information from the new module. Do not request information from the control module being replaced.

Also check that the control module is, in fact, SPS programmable. If it is not, the Tech 2 may be able to communicate with it, but it will not be able to be reprogrammed.

If reprogramming using a VCI number, ensure that the correct VCI number is being used.

Check that the correct control module is installed as well. Verify that the part number of the module is correct for the application.

Don't forget to make sure the correct VIN is being used too. Double-check that the VIN displayed by the Tech 2 matches the vehicle VIN. If the displayed VIN is incorrect, write down the actual VIN and input it when prompted at the Techline computer terminal.

Do other control modules need to be physically disabled?

Using the Tech 2 Message Monitor, check which other modules are communicating. Physically disconnect other modules only if there are known problems that may interfere with the reprogramming process.

Will the old control module program?

If the control module is being replaced, check to see if the old module will program. If it will, the new module may be the source of the problem.

Do like vehicles program?

If the reprogramming problem seems to be isolated to a particular vehicle, try programming another like vehicle. If the other vehicle can be programmed correctly, there may be a vehicle problem that requires further diagnosis.

After completing any kind of control module programming, verify that the programming was successful. Turn the vehicle off, wait the appropriate amount of time, and then start the vehicle and test the control module's operation.

Update the Tech 2 and PC with the latest software before reprogramming.

Keep in mind that some vehicles require that Theft Deterrent Relearn, Crankshaft Variation Learn and other procedures are performed after reprogramming.

– Dave Puzzuoli

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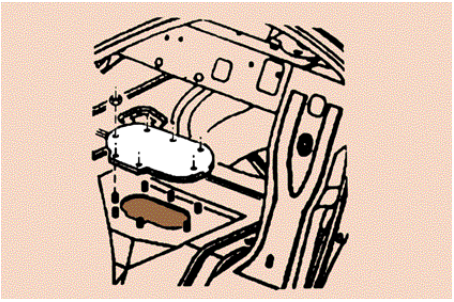
Fuel Sender Assembly Access

If you're looking for an easy way to access the fuel sender, take a look in the trunk. That's where you'll find the fuel sender assembly access panel on 1997-2001 Buick Regal and Century and



Pontiac Grand Prix models, 1998-2001 Oldsmobile Intrigue models and 2000-01 Chevrolet Impala and Monte Carlo models.

The fuel sender assembly access panel on these vehicles is underneath the rear compartment trim. It may be necessary to remove the spare tire cover and rear compartment trim. The fuel sender access panel can be found near the front of the trunk. It can be reached either through the trunk, or on vehicles with folding rear seats, through the rear seat area. Check the appropriate service manual for complete repair information.

– Gary McAdam

Impala Headlamp Lens

The headlamps on some 2000-01 Impala models may have a condition where it appears that there is water, condensation or dirt accumulating inside the perimeter of the headlamp lens.

The water or dirt is not inside the headlamp lens, but is actually collecting behind the lens extension (where the lens extends beyond the headlamp housing) and the rubber lip seal outside of the headlamp housing. The black rubber lip seal creates the close-out from the headlamp lens to the body.

The headlamp assembly should not be replaced if there is a visible accumulation of water or dirt between the seal and the lens. Parts returned to the Warranty Parts Center for this condition have shown no signs of actual leakage of the headlamp assembly.

A change to a painted black-out of the lens extension of the headlamp assembly will be implemented shortly to improve the appearance of this condition.

– Gary McAdam

Setup Procedures for New Configurable Modules, Part 2

Last month, we brought you the setup procedures for BCM-controlled modules found on the mid-size cars in the GM lineup. We're continuing the setup procedures this month by covering luxury cars.

Remember that the setup procedures must be performed when replacing a configurable body module in order for other modules on the Class 2 data bus to work together properly. Otherwise, the control modules of other vehicle systems may not receive the information they are looking for and will not function properly. Ensure the scan tool is updated with the latest software version before performing any module setup procedure.

Also, as a first step in the setup procedures, be sure to write down any personalization features that were set on the vehicle (if they are available). The new control module should be programmed with these settings.

1998–2001 Cadillac Seville

2000–01 Cadillac DeV ille

2000–01 Buick LeSabre

2000–01 Pontiac Bonneville

2001 Oldsmobile Aurora

DIM Setup Pr ocedures:

• Record Personalization settings under Personalization > Set Options prior to DIM replacement

• Run DIM Reprogramming under DIM > Special Functions on Tech 2

• Run Point of Sale under DIM > Special Functions > Set Options on Tech 2

• Set Personalization settings under Personalization > Set Options on Tech 2

• Clear DIM DTCs

Important: The Air Bag Indicator light may remain ON after the DIM Module is replaced and during the

A/C Leak Detection Dye Now Used in Assembly Plants

One of the most effective ways to detect a refrigerant leak in an air conditioning system is to inject fluorescent leak detection dye into the system. Find the glowing dye, and chances are, you'll find the leak.

In order to make A/C leak detection easier right from the beginning and ensure quality, leak detection dye is being added to some vehicle lines at the assembly plant.

By the end of September, a wet patch containing leak detection dye will be placed inside the A/C accumulator dehydrator desiccant bag of the following car lines: F, Y, W, J, N, C, H, E, K and G.

A new A/C charge label that indicates that the A/C

system "contains refrigerant dye" will be placed on vehicles receiving the leak dye. Some vehicles, however, will receive the leak dye before the label is available.

A/C Leak Dye

Air conditioning leak detection dye is a fluorescent chemical substance that mixes with the refrigerant oil to assist in leak detection.

The leak dye mixes with the refrigerant oil when the air conditioning system is operating and circulates throughout the entire refrigerant portion of the A/C system. The leak dye does not attach itself to the refrigerant, but is carried through the system by the refrigerant oil.

When a refrigerant leak occurs, the leak dye will migrate through the leak along with the refrigerant oil.

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programming procedure for the DIM until after the procedure is completed and the ignition key is cycled OFF and ON.

1998–2001 Cadillac Seville

2000–01 Buick LeSabre

2000–01 Pontiac Bonneville

2001 Oldsmobile Aurora

IPM Setup Pr ocedures:

- Select Instrument Panel Module
- Select Special Functions
- Select Miscellaneous Test
- Select IPM Recalibration
- Clear IPM DTCs

1998–2001 Cadillac Seville

2000–01 Cadillac DeV ille

2000–01 Buick LeSabre

2000–01 Pontiac Bonneville

2001 Oldsmobile Aurora

RIM Setup Pr ocedures:

- Under the Chassis Main Menu, select Rear Integration Module
- Select Recalibration
- Follow the scan tool on screen instructions to recalibrate the automatic level control

1997–99 Cadillac DeVille BCM Setup Pr ocedures:

- Record Personalization settings under Personalization > Set Options prior to BCM replacement
- Clear BCM DTCs

1997–2001 Cadillac Eldorado BCM Setup Pr ocedures:

- Record Personalization settings under Personalization > Set Options prior to BCM replacement
- Clear BCM DTCs

1997–2001 Buick Park A venue BCM Setup Pr ocedures:

- Run BCM Reprogramming under DIM > Special Functions on Tech 2
- Clear BCM DTCs

– Todd Traver, Michael Van Houten

Two-Pivot Mirror Adjustment

The sun visors may contact the inside rearview mirror on some 2001 Buick Regal and Century models equipped with the OnStar® System (RPO UE1).

The OnStar System is operated by push-buttons that are located on the rearview mirror. The OnStar rearview mirror is wider than the standard mirror that is used on vehicles that are not equipped with the OnStar System. With the wider mirror, the driver or passenger sun visor may come in contact with the outboard edge of the mirror when either visor is in the lowered position.

To obtain clearance between the visors and the mirror, center the mirror between the visors using the adjusting pivot located at the windshield attachment point. Once the mirror is centered, adjust the mirror as necessary using the other adjusting pivot located on the backside of the mirror. It is not necessary to remove the mirror from the windshield when centering the mirror between the sun visors. All rearview mirrors on GM vehicles include two pivot adjustment points.

– Wayne Zigler

The Patch

The leak dye patch that is being installed at the assembly plant is part of a specially built Accumulator Dehydrator (A/D). The saturated leak dye patch is inside the desiccant bag of the A/D.

After the A/C system is charged, the dye leaches out of the patch during air conditioning compressor operation.

Detecting a Leak

To perform refrigerant leak testing, you'll need an ultraviolet light and yellow glasses. These items are available from Kent-Moore. Begin the testing by operating the vehicle with the A/C compressor running for a minimum of five minutes. This allows the leak detection dye to circulate throughout the air conditioning system.

With a clear view of the A/C system, direct the ultraviolet lamp across all refrigerant portions of the air conditioning system while wearing the yellow glasses. Pay special attention to areas where a leak may be more likely to occur, such as line fittings and joints.

The ultraviolet light will give the leak dye a glowing bright green-yellow color when viewed through the yellow glasses. When you see this color, you've found the leak. But be sure to trace the leak to the source.

When a refrigerant leak is found, evacuate the refrigerant as is normally done to repair an A/C system and make the repair. Afterward, operate the system and check the repair.

Cleaning the Dye

Use a clean shop towel and the R-134a leak dye cleaner to clean the dye

from the repair area. Also clean all A/C system joints that were dissembled for leak service as well as all opened fittings.

The refrigerant oil will stain painted surfaces, and the leak dye will highlight the stain, so be sure to clean your hands prior to touching other areas of the vehicle.

Ordering Information

All of the necessary leak dye equipment, including the ultraviolet light, yellow glasses and leak dye cleaner, is available by contacting Kent-Moore at 1-800-345-2233.

– Debbie DoorenBos

Tech 2 Start Up Conditions

When powering up some new Tech 2 scan tools, "System Initializing" may appear off-centered on the screen, and the Power On Self Test (POST) screen may appear scrambled and un-readable.

These problems are due to incorrect positioning of the cursor on the screen caused by an updated video display driver now being used on the Tech 2.

The scrambled POST screen has been corrected by modifying the Tech 2 software to correctly position the cursor before writing the test results. The "System Initializing" screen however, will not be corrected. Careful research and evaluation revealed that major software modifications would be required to correct this condition. Implementing this correction would be risky to the system operation of the scan tool.

These modifications will be available on the December 2000 Techline Data CD.

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The TAC Database: Case Closed

Two years ago, the Technical Assistance groups of each GM division were combined into the Technical Assistance Center (TAC) located in Pontiac, MI. As a team, the goal of TAC is to assist dealerships in repairing a customer's vehicle as quickly as possible.

One of the most important resource tools used at TAC to achieve that goal is the TAC database. To demonstrate to you how the database is used to track vehicle conditions and how your vehicle repair information is fed into the system, here's a quick review on how it works.

The repairs you make and the information you supply when you call in and when you close a TAC case directly impact the effectiveness of the database.

The TAC Database

This is the main "tool" used by TAC consultants for researching vehicle repair information for you. All TAC cases are maintained in the database as well as any Preliminary Information (PI) or Technical Service Bulletins (TSB).

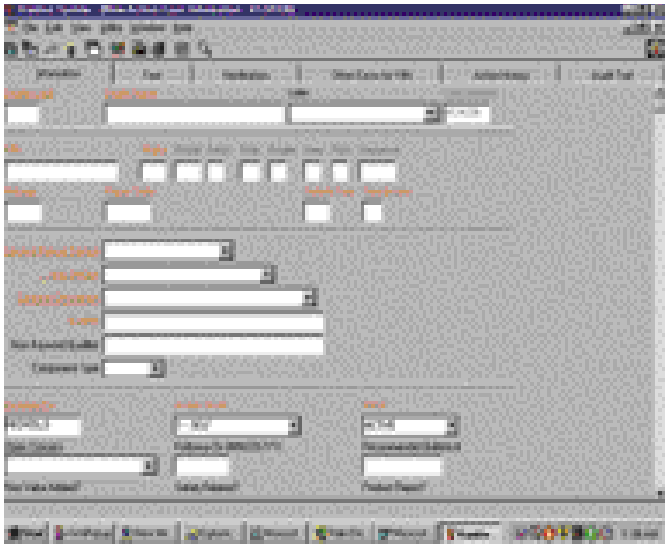
When you call TAC, the consultant uses your dealership's five digit Dealer Code to search the database for your dealership's information and any "Active or Pending" cases your dealership may have. These are cases that have not yet been closed.

If you are calling back on one of these cases, the consultant will bring up that case in the database and continue where the last consultant left off. If you are calling on a new concern, a new TAC case will be generated.

The basis of each TAC case is built with the dealer code, dealership name, the caller's name, VIN, vehicle mileage and the repair order number. Additional information needed for the TAC case includes the Service Manual Section and Subsection along with a symptom description. The TAC consultant's name, case status and case closing information are also part of each TAC case.

The TAC consultants also use a Strategy Based Diagnosis template. Sound familiar? This template is designed to gather pertinent information related to the case and the customer. Callers who have answers to as many of these questions as possible, before calling TAC, will greatly improve their chances of getting the help they need for a repair (see sidebar).

Once all the required information for each case is entered into the database, the TAC consultants document what diagnosis or repairs have been done so far and what is recommended to be done next.



The TAC database provides data on every vehicle condition reported to TAC.

The information you provide is used by the TAC consultant to search the database using keywords. The keyword search will bring up TSBs, PIs and other cases with the same keywords or symptoms. The TAC consultant uses this information combined with service manuals, SI 2000 and their own knowledge to formulate the next steps recommended to you.

It's easy to see the importance and benefits of obtaining as much information as possible before calling TAC. The more details supplied up front, the better the chances are for providing the information needed to repair the vehicle.

The TAC consultants use the following Strategy Based Diagnosis template to gather pertinent information related to the case and the customer. Try to answer as many of these questions as possible before calling TAC.

STRATEGY BASED DIAGNOSTICS

__ Number of times in for the same condition

__ Number of days vehicle in dealership for same condition

__ (Y/N) Is the vehicle in the dealership?

__ (Y/N) Is the vehicle modified/non-production accessories? (if yes, list)

__ (Y/N) Can complaint be duplicated? (if yes, freq., hot, cold, etc.)

__ (Y/N) Have you compared this with an identical vehicle?

__ (Y/N) Can you isolate the area of the customer's concern?

__ (Y/N) S/M search completed? (if yes, list section, pg.)

__ (Y/N) Bulletin or PI search performed?

__ (Y/N) Is the customer concern the same as symptom description? (if no, list)

__ (Y/N) Condition details (list DTCs, etc.)

__ (Y/N) Diagnosis (parts replaced, vehicle history, etc.)

Case Closings

A large source of repair information in the TAC database comes from case closings. TAC receives and closes an average of 800 cases per day. An accurate, detailed case closing enables TAC consultants to provide repair information for other vehicles that exhibit the same condition. It may even lead to a PI or TSB being released. Cases should be closed in a timely manner; ideally, on the same day the vehicle is repaired or the repair order is closed.

Imagine a technician at a dealership in Oregon finds the root cause of a noise that has taken three days to diagnose. A detailed closing is sent in to TAC and a TAC consultant uses it to help a technician in Florida repair another vehicle in one day. Reducing the amount of time a vehicle is in the dealership for repairs is one of the main objectives of TAC.

Many dealerships keep a log of their case numbers so they know if the case has been closed. TAC will periodically send out DCS messages requesting case closing information. If the cases are kept in a dealership log, it will be easy to find the information to close them.

This leads to an important point. The better the case closing information is, the better the database information will be. And the better the database information is, the better the odds of using it to repair other vehicles. In other words "garbage in – garbage out"

Details are truly the key to a successful case closing. For example, say you had a fuse that was blowing intermittently. You went through quite a bit of trouble and diagnosis, including calling TAC and setting up a TAC case, to locate a harness that was rubbed through in a certain location under the carpet. Now imagine when you called TAC, a case in

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TAC Tips

OnStar Button Test

There may not be a response when the OnStar button is pressed on 1998-2000 OnStar equipped vehicles. In addition, the OnStar VS-3B buttons may not operate and the telltale LED may not flash after the OnStar Center button or Emergency button is pressed. A DTC B2476 also may be present in the system. If any of these conditions are present, refer to the OnStar Diagnostic Table DT3 (OnStar Button Assembly Test). However, the values given in step 7 of the test are incorrect.

When performing OnStar Diagnostic Table DT3, the proper procedure for step 7 should read:

1. Ignition in On position.

2. Check to ensure Voltage of 7- 10 Volts between Pin E6 and E1. If there is no voltage here and the wire at terminal E^ is not shorted to ground, Replace the VIU.

3. Back probe the blue VIU connector for Voltage between terminals E4 and E1. There should be no voltage when the system is On and no buttons are depressed.

4. Press and hold the Call Answer/End button. The Voltage should be 0.33 volts +/- 10%.

5. Press and hold the OnStar Services button. The voltage should be 1.3 Volts +/- 10%.

6. Press the Call Answer/End button to end the call to OnStar.

7. Press and hold the Emergency button. The voltage should be 2.2 Volts +/- 10%

If the readings do not agree with the specified values, the button assembly must be replaced. If this is a mirror mounted button assembly, the mirror must be replaced.

The affected models include: 1998-2000 Cadillac DeVille, Seville and Eldorado; 1999-2000 Cadillac Catera and Escalade 4WD; 1998-2000 Chevrolet Lumina and Monte Carlo; 1999-2000 Chevrolet Blazer 2WD & 4WD; 2000 Chevrolet Impala, Suburban 2WD & 4WD, Tahoe 2WD & 4WD and Venture; 1999-2000 GMC Envoy 4WD and Jimmy 2WD & 4WD; 2000 GMC Yukon 2WD & 4WD and Yukon XL 2WD & 4WD; 2000 Pontiac Bonneville, Grand Prix, Montana; 2000 Buick Century, LeSabre, Park Avenue, Regal; 1999-2000 Oldsmobile Bravada; 2000 Oldsmobile Intrigue

2001 C/K Trucks A/C Compressors

The A/C compressor on 2001 Sierra/Silverado full-size pick-ups equipped with the GEN III (V8) gas engines have either a Denso A/C Compressor or a Delphi Harrison A/C Compressor. These compressors are not interchangeable, so it is important to be sure you have the correct part number when ordering replacement units.

Trucks built at the Oshawa Assembly Plant (identified by a 1 in VIN code position #11) receive a Denso compressor and those assembled at Fort Wayne and Pontiac East (identified by a Z or E in VIN code position 11, respectively) have a Delphi compressor.

BCM Set-Up Failed Message on the Tech 2

A BCM Set-Up Failed message may appear on the Tech 2 after replacing the BCM on some 1997-2000 Buick Century and Regal models and 1998-99 Oldsmobile Intrigue models. Tech 2 software release 20.005 has some missing data parameters that may cause the tool to lose communication or fail to set up.

To properly set-up the new BCM, backload Tech 2 software from 20.005 to 20.004 and reprogram the BCM.

3.5L V6 LX5 Engine Miss

Some 2001 Oldsmobile Auroras with the 3.5L V6 (LX5) engine may exhibit an engine miss condition. This condition may be caused one or more bent or broken wire terminal ends in the fuel injector wiring harness.

If the fuel injector wiring harness contains bent or broken wire terminal ends, the wiring harness should be repaired by replacing the terminal ends. It is not necessary to replace the injector wiring harness.

Note: Currently, the replacement injector wire terminals are not included in the dealership's essential wire terminal repair kit. Contact Delphi Packard Electric Systems at 1-800 PACKARD to obtain the injector wire terminal ends, (P/N 15305174).

– GM Technical Assistance

the TAC database fit your description to a tee. The TAC consultant reads the closing information only to find "Repaired shorted wire." There is nothing entered about where or what – just that comment and a Labor Op. number.

What is needed when closing a case is the "fix" information. Providing TAC with circuit numbers, wire colors and the exact location of the rub through, along with any other details, will help someone else fix the very same condition on another vehicle.

Two Ways to Close

Currently, there are two ways to close a TAC case:

1. Call the VME phone-in system at 1-888-446-8227, prompt 1

2. Use the fax-in system by sending a fax to 1-800-541-1761.

When calling the VME system, the menu options will guide you to the correct mailbox. Then just press 2 and record the message. This is the quickest and easiest way to close a case. You can provide the detailed information TAC needs without having to write it down.

To fax in a case closing, simply fill out the TA-99 form and fax it to TAC. Again the more detail provided, the better the case closing and the better the chances are of TAC helping you fix the next one.

With both case closing methods, there are some key pieces of information needed to close the case correctly. The most important information is:

- the TAC Case number
- the dealer code
- the Labor Operation number
- details, details, details.

You can see the benefits in supplying detailed information when closing TAC cases. Everyone understands that tools are only useful when they are properly maintained and in good working order. The TAC database is a valuable tool you have at your disposal.

– Jim Nicholls

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Bulletins – August 2000

This review of service bulletins released through mid-August lists the bulletin number, superseded bulletin number (if applicable), subject and models.

GENERAL INFORMATION:

00-00-89-015; Repair Order (RO) Documentation; 2001 and Prior Passenger Cars and Trucks

00-00-89-016; Information – June, 2000 Bulletin Summary; 2001 and Prior Passenger Cars and Trucks

00-00-89-017; August, 2000 Labor Time Guide Updates; 1996-2001 Passenger Cars and Trucks

HVAC:

00-01-38-002A; Replaces 00-01-38-002; Air Conditioning Not Cold Enough/Inoperative (Replace "O" Rings/Recharge System); 1999-2000 Chevrolet Tracker

BRAKES:

00-05-25-002; Electronic Brake Control Module (EBCM) Replacement; 1990-2000 Chevrolet and GMC Medium Duty Conventional, T-Series Tilt Cab and B7 School Bus Models, With 7.4L Engine (VINs B, D – RPOs L21, LP4) or 7.2L Caterpillar® Diesel Engine (VIN C –RPO LG5) and Hydraulic ABS Brakes Built Prior to March 7, 2000 and VIN Breakpoints

ENGINE/PROPULSION SYSTEM:

00-06-01-015A; Replaces 00-06-01-015; Engine Oil Level Indicator and Tube Change; 2000 Chevrolet and GMC C/K Pickup Models (Silverado and Sierra) with 4.8L, 5.3L or 6.0L V8 Engine (VINs V, T, U – RPOs LR4, LM7, LQ4)

00-06-04-027; Revised Diagnostic Information for Diagnostic Trouble Code (DTC) P0400, Exhaust Gas Recirculation System Performance; 1996-98 Chevrolet Tracker with 1.6L Engine (VIN 6 – RPO L01)

TRANSMISSION/TRANSAXLE:

00-07-30-014; Vehicle Slips in Reverse, No Reverse, Slips in D1, or No D1 Range (Replace Reverse Oil Pipe Seal); 2000 Chevrolet Cavalier, 2000 Pontiac Sunfire, With 2.2L Engine (VIN 4 – RPO LN2) and Hydra-Matic® 3T40 Transaxle/Transmission (RPO MD9) (Transmission built between Julian dates 9270-9292)

BODY AND ACCESSORIES:

00-08-42-004; Tail Lamp Wiring Harness Routing; 2000 Chevrolet Monte Carlo

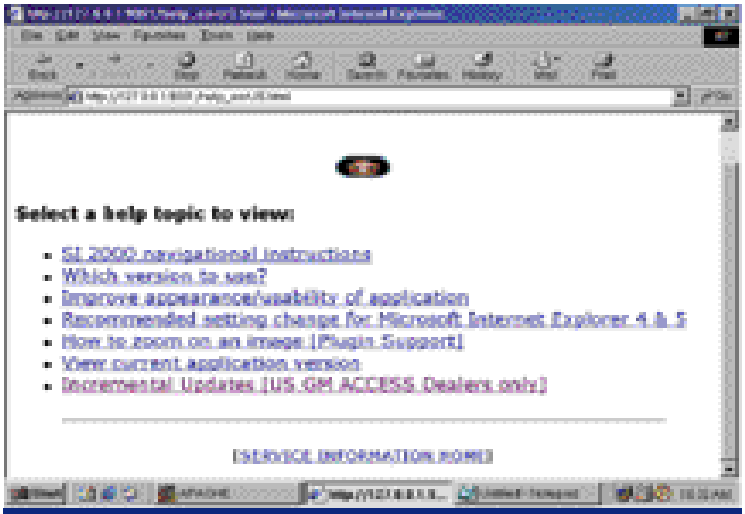
00-08-44-006A; Replaces 00-08-44-006; Power Antenna Not Working Properly or is Completely Inoperative (Replace Antenna O-Ring Assembly/Cap Nut & Clean Mast; 2000 Chevrolet Camaro, Corvette, 2000 Pontiac Firebird, 2000 Chevrolet and GMC G-Van

00-08-61-001; Revised Assist Step Installation Procedure; 2000 Chevrolet and GMC C/K1-2 Utility Trucks (Suburban, Tahoe, Yukon, Yukon XL)

00-08-63-003A; Replaces 00-08-063-003; Noise at Torsion Bar Location, Cab Difficult to Open, Torsion Bar Broken (Inspect/Replace Cab Pivot Torsion Bar); 1997-98 Chevrolet and GMC F Model T-Series Medium Duty Tilt Cab Trucks

RESTRAINTS:

99-09-40-002A; Replaces 99-09-40-002; Rear Seat Belt Buckle Identification and Correct Positioning; 1999-2000 Chevrolet Tracker



Updating SI 2000

SI 2000 is updated on a regular basis to bring dealerships the most advanced information on servicing GM vehicles. To keep this information up to date in the service department, dealerships need to download the SI 2000 incremental updates every two weeks. In the July issue of TechLink, we provided an overview of the updating procedure. Here are a few more details.

The incremental updates are broadcast via satellite to dealerships' GM ACCESS server every two weeks on a Friday night. From late June 2000 until now, there have been six incremental updates. Instructions for updating SI 2000 with an incremental update are located under the HELP (?) selection on the SI 2000 Service Information Home screen (the screen that displays "Enhanced" or Basic"). Click on the ? icon for a list of Help topics. One of the listed topics is Incremental Updates. From here, update instructions are available for Microsoft Internet Explorer and Netscape Navigator users.

Each SI 2000 incremental update must be downloaded to the dealership's PCs from the GM ACCESS server in the order that the incremental updates were broadcast. The incremental updates cannot be performed out of order since the user cannot access the second update without completing the first. Only one link is available at a time. The next link gets "loaded" after the previous incremental update is completed. Each update is not a cumulative collection of previously released information.

When downloading the incremental updates, the GM ACCESS server does not slow down. It only takes a minute or two to download the incremental update from the GM ACCESS server to the PC running SI 2000 in the service department. However, it may take up to 50–60 minutes to execute the incremental update at the PC. The faster the PC, the faster the incremental update is completed.

SI 2000 incremental updates will continue to include the latest service information as it is released and updated. To enhance the convenience of the incremental updates, GM Service Operations is looking at ways to make the update process faster and easier. Check for the latest incremental update broadcast to your dealership to ensure the dealership has the very latest GM service information.

– Lisa Scott

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