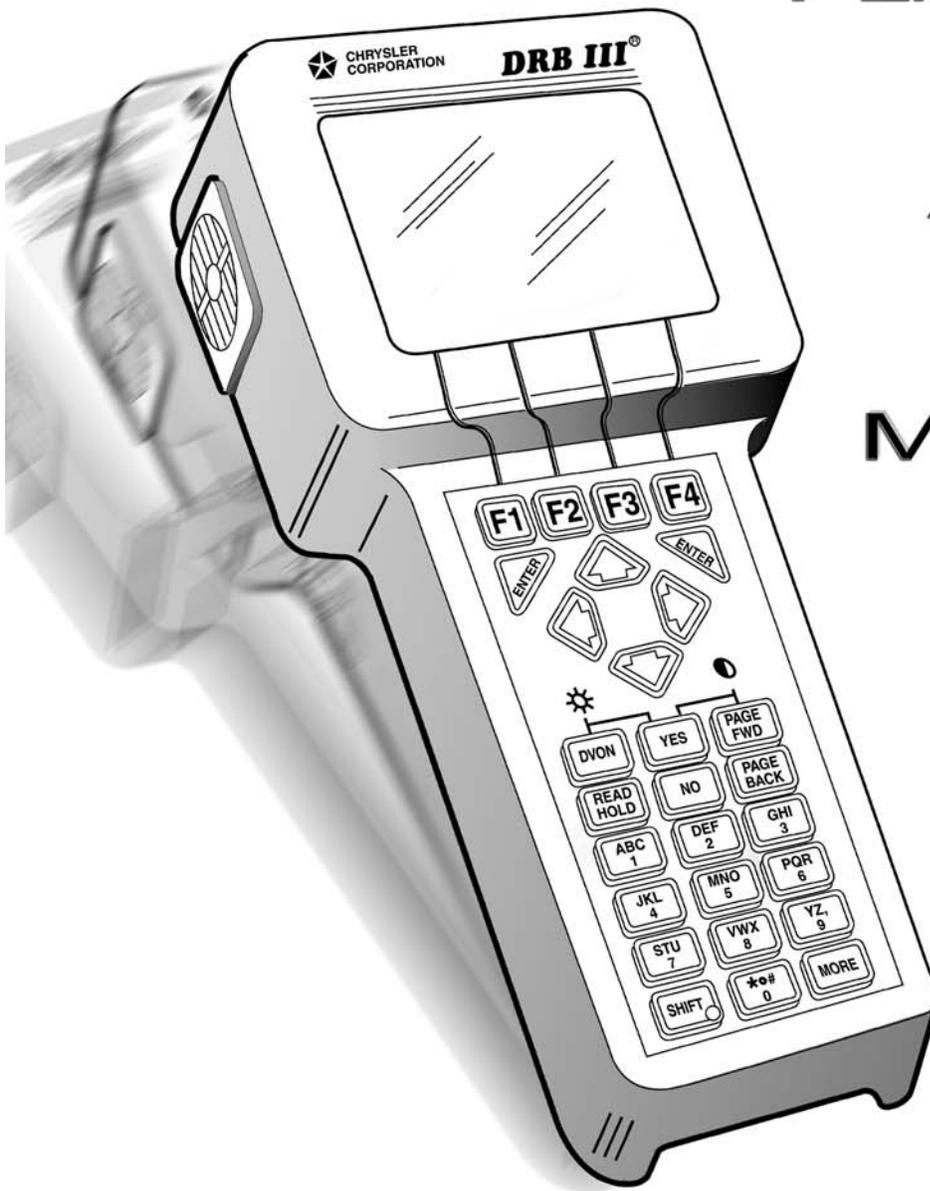


DRB III[®]

FEATURES

AND

MENUS



DRB III® Features & Menus

IMPORTANT INFORMATION

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Chapter 1 About This Document

This document provides an operational overview of the DRB III® as it existed December 2006. The DRB III® Scan Tool can address more than 35 different modules including the model year variations from internal software using a variety of bus architectures. It dynamically builds the display screens from information gleaned when connected to DaimlerChrysler vehicles. The menu structure within DRB III® Standalone was changed for software versions 59.0 and higher, this version of DRB III® Features and Menus updates the previous version to the new menu structure and adds updates from the previous version.

Throughout this document, references will be made to other tools, peripherals, and vehicle connection cables. A detailed explanation of these items, including part numbers, can be found in "DRB III® Hardware, Operation, and Accessories Reference Guide"; publication number 510325 is available from PSE under P/N CH6050.

Although every attempt was made to show the information needed to successfully navigate the menu structure, the sheer volume of all the line items available for display goes beyond the scope of this publication.

As with any OEM, there are many specialized terms, names, and acronyms used. Most will be depicted either in the text or in one of the appendixes. If necessary, refer to the specific diagnostic manual, service manual, or training publication to locate more complete or missing explanations.

Additionally, it is the nature of software that it must change to meet new requirements. Consequently, inconsistencies between this publication and what will be viewed on the DRB III® are to be expected.

There are NO plans to update this publication on a regular basis.

This document is intended for all users.

Important Information

The information in this document has been carefully checked and is believed to be accurate. However, DaimlerChrysler Motors LLC (DaimlerChrysler) assumes no responsibility for any technical inaccuracies or typographical errors that may be contained herein. In no event will DaimlerChrysler be held responsible for direct, indirect, special, incidental, consequential or any other loss or damage caused by errors, omissions, misprints, or misinterpretation of the information found in this publication, even if advised of the possibility of such damages. DaimlerChrysler expressly disclaims any and all liability to any person, in respect of anything done or omitted, and the consequences if anything done or omitted, by any such person in reliance on the contents of this publication.

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Chapter 2 Operational Overview

The DRB III® has undergone many changes since its introduction in 1993. To successfully navigate and locate information and features, the user needs to understand the current DRB III® features and menu structure.

In some cases, features are only available if the user has access to other tools and equipment. An example of this is the DaimlerChrysler TechCONNECT part of the DaimlerChrysler DealerCONNECT system. Other than for reference purposes, this publication does NOT cover any combined TECHCONNECT/DRB III® operations. See Appendix B for more information about a self-study web course for more detail.

The DRB III® uses a menu hierarchy structure to provide a repeatable experience for the user. In this document, screens will often be presented with an overview explanation for clarity.

The menu structure also provides placeholders. Since not all vehicles are equipped with all systems, this placeholder feature guarantees the menu structure is consistent and easy to navigate for all vehicles and model years. If an item selection is chosen at the module level that is not supported by either hardware or software for that vehicle/system

*****NOT AVAILABLE*****

will be displayed. If you are unfamiliar with how to navigate DRB III® menus, please review Appendix A now.

Other software resides on supplemental PCMCIA memory cards, such as SuperCard 1 & 2. Diagnostic software for 1983-1997, the ST22, Sprinter and Crossfire vehicles, as well as MDS1 are considered "legacy". A legacy application will require a different set of environmental variables. If an application describes itself as "legacy", the user will be presented with a "Warning!" screen. To provide memory to run the legacy application, the end-user will have to answer YES to continue. This will remove any flash or data recordings currently stored in the DRB III®, which will allow the legacy application to operate.

As with all Scan Tools, the DRB III® queries a module's memory locations to acquire raw data. The DRB III® screens display the appropriate conversion of on/off, pressed/released, percent, time, volts, etc. along with the appropriate raw data conversion.

The DRB III®, while a powerful Scan Tool, will not be making a migration to vehicles using the CAN (Controller Area Network) bus for vehicle communication. A new Scan Tool, StarSCAN® was released (fall 2003) followed by the StarMOBILE™ (summer 2005) for DaimlerChrysler vehicles using the CAN communications bus. This includes hybrid

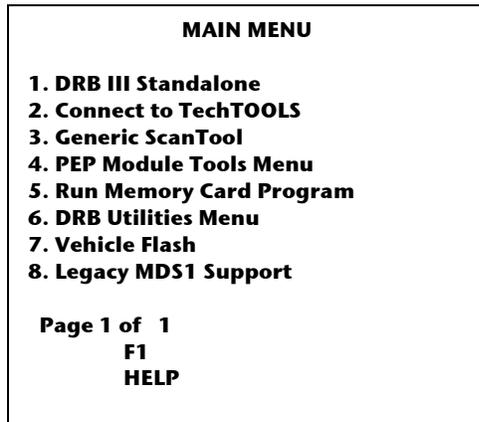
DRB III® Features & Menus

applications where CAN and J1850 are both present, such as SRT-10 truck, KJ Liberty, and PT Cruisers with 1.6L engines sold in International markets.

Support for DRB III® will begin to sunset in the summer of 2007 but will continue for some years to come as the new electrical architecture replaces J1850, CCD, SCI, and ISO-9141 architectures of current and past models.

DRB III® Features & Menus

Chapter 3 MAIN MENU



DRB III Standalone

Choosing standalone allows DRB III® to operate without the TECHCONNECT client or the TechTOOLS application. This choice requires the proper vehicle communication cable and depending on the vehicle may require a supplemental support memory card such as SuperCard 1, SuperCard2, Sprinter, Crossfire, or the ST22 cards.

Connect to TechTOOLS (was Connect to TECHCONNECT)

This choice is for users that have access to a TechTOOLS session. In a given TechTOOLS session, when the DRB III® is connected to the TechTOOLS application, an auto connect feature is invoked. The two tools software applications will “sync-up” and, if needed, the TechTOOLS will communicate whether a DRB III® update is available. If the DRB III® is “current” and a PCMCIA Memory card is present, the TechTOOLS app will also communicate whether an update is available for that PCMCIA card. Subsequent connections may require the user to re-select Option # 2 Connect to TechTOOLS to re-establish communication between the DRB III® and TechTOOLS application. TechTOOLS is a client application which is part of the DealerCONNECT package leased to dealerships. The aftermarket TechTOOLS application is available from the Tech Authority website. See Appendix K.

Generic Scan Tool

Generic Scan Tool is support governed by the EPA and CARB and uses the SAE J1979 messaging structure. GST operation requires the use of the SuperCard2 PCMCIA card, part number CH8361 with a software version of 11.0 or higher. GST allows the DRB III® J1979 communication with Powertrain and Transmission Control Modules on OBD II compliant

DRB III® Features & Menus

vehicles (even those that are not manufactured by DaimlerChrysler). This requires an OBD II compliant vehicle cable such as CH7000A, CH7001A, CH7000, CH7001 or CH7010. Users should review Service Bulletin (TSB) 18-012-2001, which describes Generic Scan Tool (GST) Reference Information booklet 81-170-00008. It is also available from DDS Distribution Services, Ltd. [See Appendix K for contact information.]

Tip: GST can only access the OBD II compliant vehicle modules such as PCM and TCM. Additionally it cannot support vehicles that use CAN communications for GST functions. The optional use of CAN for OBD reporting is optional for 2004-7 and required for MY2008 and beyond,

PEP Module Tools

PEP Module Tools are a suite of peripheral tools that reside on SuperCard2, P/N CH8361. The tools include Pressure/Vacuum Gauge, Lab Scope, Belt Tension Gauge, Inclinator/Viper Alignment and 5 Gas Exhaust Analyzer. All the tools are available and described in the "DRB III® Hardware, Operation, and Accessories Reference Guide", publication number 510325 available from PSE under P/N 6050, with the exception of the 5 Gas Exhaust Analyzer, which is no longer in production.

Run Memory Card

This option is not used for North America. Exceptions are engineering and troubleshooting that is not done by end-users. It allows for launching software located on a PCMCIA memory card by engineering and other groups. ALL PCMCIA cards (CH8000, CH8361, CH8425, CH9087, and CH9044) should be accessed through the other normal DRB III® menu choices.

DRB Utilities

DRB Utilities are a suite of applications that are not essential for operating the DRB III®. User options are generally set once and do not require periodic changing. A more detailed description can be found in Appendix B.

Vehicle Flash

Vehicle Flash is used, when available, to flash re-program (update) modules on vehicles. Flash files are available for download from the TechTOOLS which is available either from TechCONNECT or Tech Authority systems. Users should review the appropriate Service Bulletin before flash reprogramming. The instructions (from Service Bulletins or SBs) are accessed and viewed from the TechTOOLS application. For AfterMarket and fleets, this information is available using the TechAuthority website. On this website there is access to Powertrain flash calibration files in the J2534 Pass-thru programming format as well.

See Appendix K for contact information.

DRB III® Features & Menus

Legacy MDS1 Support

DaimlerChrysler Corporation is no longer actively supporting the MDS1. This menu choice is for users that still have a functioning MDS1 unit to establish communication between the MDS1 and DRB III®. This is a legacy application.



Code Version

The version of DRB III® code in operation is displayed on the bottom line of most screens. Currently all code shown should be 63 or higher followed by a decimal ranging from 0 to 9. Generally, the whole number is incremented when new model vehicle support has been added or when a feature has been modified for use with the TechCONNECT. While revisions to the decimal signify incremental versions released periodically to address issues relating to software fixes and/or changes for flashing modules.

Using TechTOOLS, users can compare their DRB III® software version to the supported version on TechTOOLS, which is displayed in the upper right corner of the TechTOOLS screen after the technician has logged on.

The 3 lines of information displayed on TechTOOLS are worth mentioning.

The first line "Device Status:" DRB "Connected" or "Disconnected" provides status where the two tools software applications are "In-Sync" or not from the TechCONNECT point of view.

The second line shows what version of DRB III® software is currently available.

The third line states what version of DRB III® software of the currently connected DRB III® scantool.

DRB III® Features & Menus

Additional support cards have been issued.

- SuperCard1 provides:
 - MY1983-1993 coverage
- SuperCard2 provides:
 - MY1994-1997 coverage
 - MY1998-2000 FJ coverage
 - Generic Scan Tool software
 - PEP Utilities
- ST22 card provides:
 - MY2001-2005 coverage
- Crossfire card provides
 - MY2004-2006 coverage (Also used on non-NAFTA 2007 vehicles)
- Sprinter card provides
 - MY2003-2006 coverage

These are all legacy applications.

Tip: When operating SuperCard1, the Function key icon line of the DRB III® screen will show a “SuperCard Shield” to identify the current card application to the user. On SuperCard2, the user will see an “S2” in the lower right and left corners. Other vehicles will show their two character vehicle body code.

Function Keys

There are four function keys available on the top row of the DRB III® keypad. They are labeled F1, F2, F3, and F4. On the DRB III® screen they show up as icons.

Items worth noting:

- Icons are only displayed when the function key is active.
- Key functions can change, reflecting what is needed for that screen.
- If the icon displays SYS, pressing that F-key will return the user to the SYSTEMS Menu
- If the icon displays MAIN, pressing that F-key will return the user to the MAIN Menu

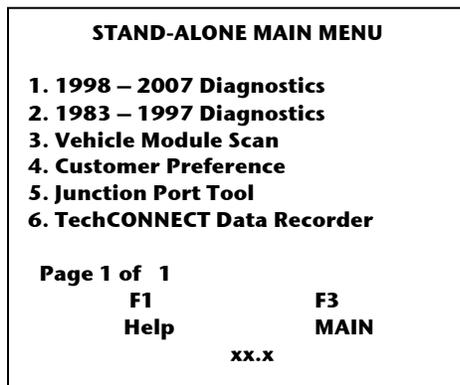
Refer to Appendix A for more information about the keypad functionality.

DRB III® Features & Menus

Chapter 4 STAND-ALONE MAIN MENU

The Stand-Alone Main Menu is used to access information from the various systems and modules. While the number of systems and modules vary by year and vehicle line the DRB III® uses a consistent menu system to allow the user to find the same item in the same place regardless of the vehicle system or year. A short description of each line item in this menu is provided in the remaining pages of this chapter.

Convention: The most useful means for selecting the numbered line items in each menu is through a feature called “Speed Dialing”. Using the numbered keypad on the DRB III® to select the numbered line items in each menu triggers this feature. Speed dialing is much quicker than pressing the arrow key to scroll through the numbered line items and then pressing the Enter key to trigger the selection (**Reverse Highlighted**). For example, pushing 1, 1, (pause), Enter, 1, 1, 2, 1, (pause), 2, 1 will go from the Main Menu through the submenus and selects the appropriate line item to check for DTCs on vehicles equipped with an EATX (TCM) controller. The Speed Dialing sequences in this document, when shown, will show the speed dialing sequence in brackets and assumes the user is at or on the Main Menu.



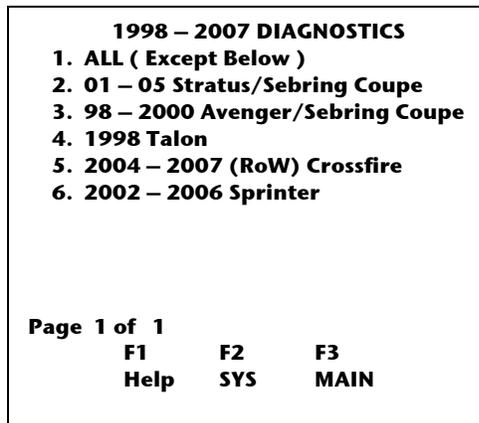
Diagnostics

The diagnostic options are divided by model year. If the user has access to the three memory cards and the correct vehicle/system cable, the DRB III® will communicate with all DaimlerChrysler vehicles as far back as 1983. Vehicles that require a memory card for access operate in a legacy application mode, which was already described elsewhere. On most new vehicles (except ST22, Sprinter and Crossfire) the information is carried “on-board” the DRB III® and will be updated periodically during a given model year. The coverage changes yearly as you might expect. Each year another model year must be added. At some point the older vehicle information is off-loaded to a PCMCIA card as memory space issues arise.

DRB III® Features & Menus

1998 – 2007 Diagnostics

Selecting the 1998 – 2007 Diagnostics will present the user with a sub-menu with the same title. This was done to provide a common entry point for the supported vehicles.

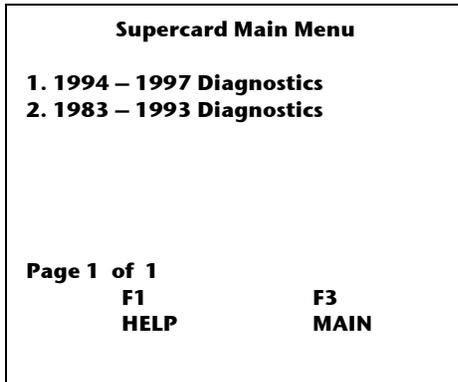


- 1. ALL (Except Below)** requires the CH7000A or the longer CH7001A vehicle cable since all vehicles 1996 and newer are OBDII vehicles. Because this is **NOT** a legacy application, it accesses software that is currently on-board the DRB III®. [1, 1, 1]
- 2. 01 – 05 Stratus/Sebring Coupe** requires vehicle cable CH7010. It also requires the ST22 memory card, CH8425, because it is a legacy application.
- 3. 98 – 2000 Avenger/Sebring Coupe** requires vehicle cable CH7010. It also requires the SuperCard2 memory card, CH8361, because it is a legacy application.
- 4. 1998 Talon** requires vehicle cable CH7010. It also requires the SuperCard2 memory card, CH8361, because it is a legacy application.
- 5. 2004 – 2006 (2007 for RoW) Crossfire**, whether a 2-dr coupe or the convertible sometimes references as "CX" requires vehicle cable(s) CH7000A, Crossfire PCMCIA card CH9044, and adapter box CH9043. For 2007 DRB III® will support Crossfire for RoW (Rest of World) while StarSCAN® will support the 2007 Crossfire for the NAFTA markets. This is because the NAFTA Crossfire uses CAN architecture for ORC system. Note that it will need a new StarSCAN® cable because of where the ORC is terminated in the J1962 connector.
- 6. 2002 – 2006 Sprinter** requires vehicle cables CH7000/CH7000A, Dodge NAFTA Sprinter PCMCIA card CH9087, and adapter box CH9043.

DRB III® Features & Menus

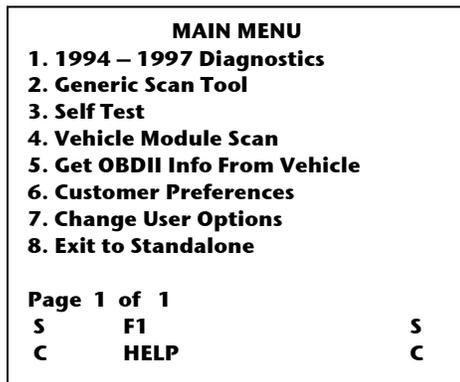
1983 – 1997 Diagnostics

A single access point for older vehicle support provides the user with the following submenu.



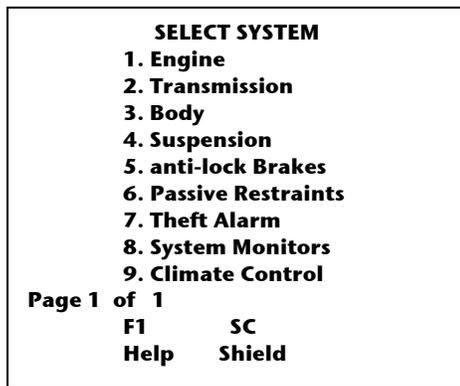
The user will be presented 2 choices.

1. 1994 – 1997 Diagnostics will require SuperCard2 (CH8361) and the proper vehicle cable. Prior to the introduction of the DLC – Data Link Connector (SAE J1962) vehicles were allowed to have a manufacturer-specific connector. [1, 1, 2, 1]



DRB III® Features & Menus

2. 1983 – 1993 Diagnostics will require the original SuperCard (CH8000) and the proper vehicle cable. Prior to the introduction of the DLC – Data Link Connector (SAE J1962) vehicles were allowed to have their own connectors. **NOTE:** The user is cautioned that this PCMCIA card was constructed for use with the DRB III® so that it could provide diagnostic access for older vehicle systems that were diagnosed with the previous generation Scan Tool, the DRB II™. Operation of this card mimics DRB II™ operation, which will not be expanded upon in this document. When selected, an OTC splash screen will be displayed first, and then the main menu will display.



Vehicle Module Scan

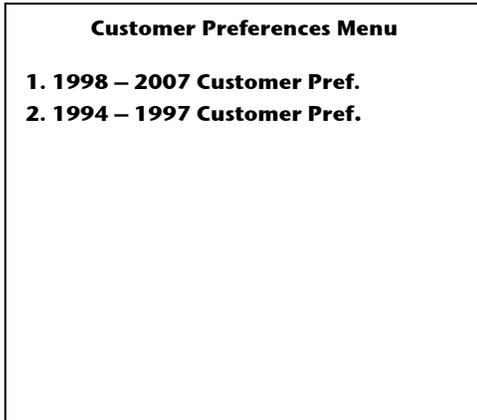
The vehicle module scan provides a one-stop check of what modules a vehicle is equipped with and that responded. A sub-menu will let you check just for modules (faster) or check for modules including DTCs. Additionally, when reviewing the modules that are present, note any asterisks (*) before the module name. An asterisk (*) means the module has a DTC. [1, 1, 3]

Refer to Appendix D for additional screens and information.

DRB III® Features & Menus

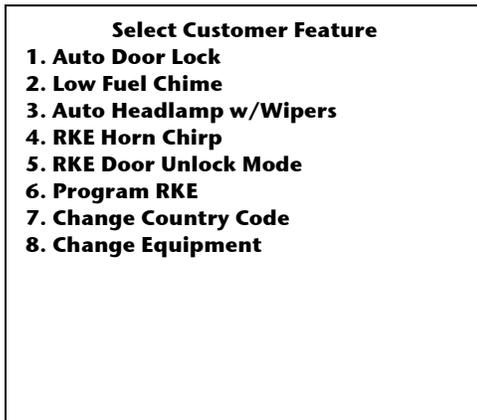
Customer Preferences

The Customer Preferences Menu provides technicians with the ability to set and/or change configurable items for a given module.



The user will be presented 2 choices.

1. 1998 – 2007 Customer Pref. Requires the CH7000A or the longer CH7001A vehicle cable because all vehicles since 1996 use the J1962 (OBDII standard) connector. Secondly, it accesses software that is currently on-board the DRB III®. The typical screens are shown. [1, 1, 3, 1 –means you can speed dial using the menu numbers rather than scrolling and hitting enter.]



2. 1994 – 1997 Customer Pref. Requires SuperCard2 (CH8361) and the proper vehicle cable, either the CH7000A/7001A or the CH7020. Usage will be the same as for 1998 – 2007. This is a legacy application.

DRB III® Features & Menus

Junction Port Tool

Selecting Junction Port Tool from the MAIN MENU will provide the user with two submenus.

- The first choice, **1. J1850 Module Scan** reports which modules are actively communicating on the PCI BUS.
- The second choice, **2. J1850 BUS Control Mode** requires the Diagnostic Junction Port Tool (P/N 8339) which is used to help diagnose communications problems on vehicles using PCI/J1850 BUS systems. This tool plugs into the DLC, the Diagnostic Junction Port connector, and the DRB III®. This tool is inserted in series with the vehicle's communication (BUS) wiring and works through interaction with the DRB III®.
- ***For reference, the PCI Bus is a superset of the J1850 architecture, basically a higher level of J1850.***

Refer to Appendix E – Junction Port Tool for more information.

DRB III® Features & Menus

TechTOOLS Data Recorder

As you might expect, this option is available to users having access to TechTOOLS. Using data recording requires the user to download templates that the DRB III® will use to record data from a given module. Data recordings are binary files and must be viewed on the TechTOOLS application. A TechTOOLS data recording is limited to MY1996 and newer vehicles that use SCI communications. Originally only available for Powertrain Control Modules, the feature has been adapted to work on vehicles with standalone Transmission Control Modules such as the DaimlerChrysler EATX controller as well as some NGC (Next Generation Controller) modules which combine the Engine and Transmission controllers within a single module.

Data Recording is a special instance of DRB III® applicability that is used in conjunction with the TechTOOLS application. To learn more about Data Recording, please contact the DaimlerChrysler Training Academy for information about course offerings.

When this choice is selected, one of two sub-menus is displayed.

```
--- DRB III DATA RECORDER ---  
  
      WARNING  
      NO DATA TEMPLATE EXISTS  
      To correct the condition,  
      connect the DRB III to the  
      TechCONNECT  
      GPIB cable and download a  
      template for the vehicle (VIN)  
      you want to record.  
  
      Press any key to continue
```

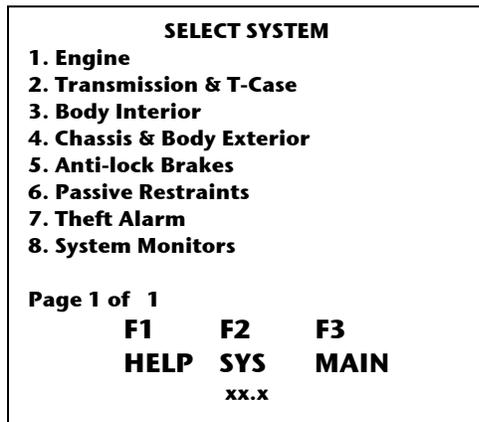
```
--- DRB III DATA RECORDER ---  
  
      Template Name : engine  
      Template Items: 69  
  
      1. Event Manage  
      2. Options  
  
      Press [ENTER] to record the  
      next available event or press  
      [Page Back] to restart DRB.
```

Typical screen shown.

NOTE: Dealers that still have a functioning MDS1 can use that unit for data recording on pre-1996 vehicles. (That option is available from the **Main Menu, 7. Legacy MDS1 Support**).

DRB III® Features & Menus

Chapter 5 SELECT SYSTEM - MENU STRUCTURE



The Select System Menu displays seven (7) major service categories:

- Engine
- Transmission & T-Case
- Body Interior
- Chassis & Body Exterior
- Anti-lock Brakes
- Passive Restraints
- Theft Alarm

Selecting any one of these major service categories will bring up a system menu displaying options relating to that category. For example, selecting 6. Passive Restraints will bring up the Select Restraint system Menu which currently displays four options, 1. Airbag, 2. Side Airbag, 3. Air Bag On/Off Switch System, and 4. Occupant Classification System. (Some options displayed in the sub-menus may not be available for a given vehicle). Selecting an available option will start DRB III® communication with that system's control module. Once successful communication has occurred, a module information screen will be displayed, followed by a Select Function Menu. The Select Function Menu is described in chapter 6.

The eighth category, System Monitors, covers Bus communication functions. Selecting item 8. System Monitors will bring up the Select Monitor Menu. There are three options: 1. CCD Bus Test, 2. CCD Bus Voltage, and 3. J1850 Module Scan. Refer to Chapter 14 for more information about the Select Monitor Menu items.

The DRB III® does not support CAN bus communications. Please use the either StarSCAN® or StarMOBILE™ when testing vehicles with CAN bus architectures.

DRB III® Features & Menus

Items Worth Noting

- The DRB III® auto identification of the module. This large software undertaking is virtually transparent to the operator. The software communicates with the system on the vehicle, pulls together information about the module being queried, and reports it to the user. Other tools often need VIN digits or other manual inputs to arrive at the same place. The data is shown on the Select System - Module Information Screen.

Powertrain Control Module Info
2001 RS/RG 3.8L V6 SFI
Module: Phase 6.2. Jul 18
Natural Asp, Unleaded Fuel
National Low Emissions (NLEV)
Automatic Trans, FW Drive
Chrysler Engine, SBEC3B
Two Fans, Variable Speed
PCM Part#: 04727403A1
Homologation ID:
CARB OBD II Vehicle

The module information screen displays information about the system's control module and vehicle options. This information is gleaned from the control module's software.

Always compare this information with the equipment on the actual vehicle. This will help verify if the system control module is correct for that vehicle. However, there are occasionally exceptions to this rule.

Note: In certain instances, powertrain software is carried forward from past model years. (i.e. 2000 LH carried forward to 2001 LH vehicles.)

Note: In other instances flash re-programming may put updated software into older vehicles.

Tip: The information is also available from the Select Function Menu, Item 3.

DRB III® Features & Menus

– Secondly, during the initialization a ‘learned status’ window is drawn. This trend has been growing in recent years. A base module can ‘learn’ options from the vehicle (i.e. as built or when options are dealer-installed). The software polls the ‘learned’ locations and displays the data, if available.

```
-- VEHICLE LEARNED CONFIG --
A/C Status           : Equipped
S/C Status           : Equipped
Auto Trans Type      : 4 Speed EATX
Leak Detect Pump     : Equipped
EGR                  : Equipped
Prop Purge Sol       : Equipped
J1850 BUS            : Equipped
PWM O2 Heater        : Equipped
Inlet Air Sensor     : Equipped
Linear IAC           : Equipped
Amb Temp Calc        : Equipped
Charge Temp Calc     : Equipped

Press ENTER to Continue

F1    F2    F3
HELP  SYS  MAIN
      xx.x
```

Building Screens

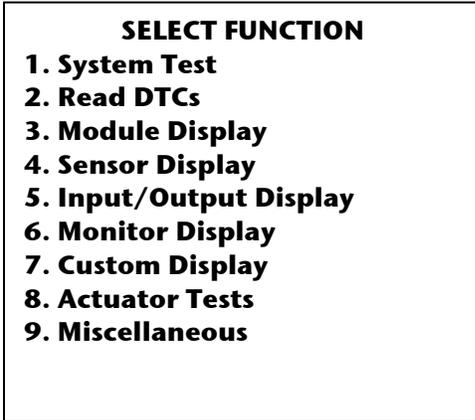
During the initial vehicle communications, and after the selection of a system, the DRB III® collects vehicle module information to build the base display or menus. Based on the module information received, the DRB III® may query for additional information concerning OBD II monitors. An example of this occurs when you enter the engine system. During initial communication, the DRB III® learns from the PCM if the controller is equipped with OBD II and shows this information in the module information screen. If the DRB III® determines the controller contains this program, the DRB III® asks a series of questions to set the monitor displays that will be available in the Select Function menu item **9. OBD II Monitors**. This prevents the DRB III® from displaying a monitor that is not available in that vehicle control module and potentially confusing the user during diagnostic sessions.

Another example occurs when the module information indicates that the vehicle is equipped with A/C, if you are questioned if the vehicle is equipped with A/C and user presses NO, then A/C related sensors or inputs/outputs would not be displayed.

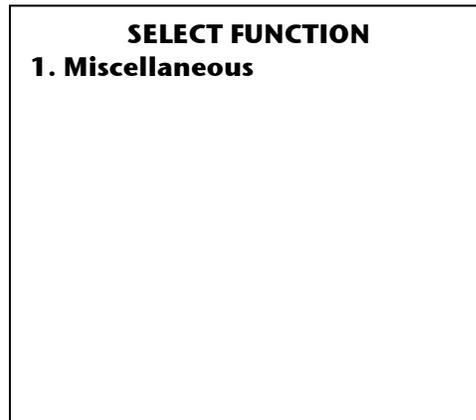
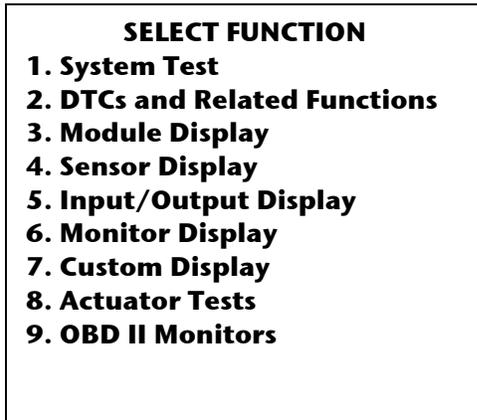
DRB III® Features & Menus

Chapter 6 SELECT FUNCTION – Menu Structure

Select Function screen for all service categories except engine:



Select Function screens for engine service category:



Select Function Menu Items

Available selections located under Select Function menu items such as System Test, Monitor Display, and Actuator Tests vary depending on each vehicle's control module. All Select Function menu items may not be available for all vehicle systems.

1. System Test

This function provides access to system tests for the vehicle system chosen from the Select System menu (engine, transmission, etc.). System test items vary depending on the vehicle year and system chosen. System tests are similar to an actuator test, but go farther by allowing user to infer proper operation of certain systems and sub-systems.

DRB III® Features & Menus

2. “DTCs and Related Functions” or “Read DTCs”

This function allows access to vehicle system Diagnostic Trouble Codes. Available options for DTCs vary depending on the vehicle system chosen.

3. Module Display

This function provides control module information for the vehicle system chosen from the Select System menu. This information should always be compared to the actual vehicle equipment to verify that the chosen vehicle system control module is correct.

4. Sensor Display

This function allows access to vehicle system sensor information. Available sensor information varies depending on the vehicle system chosen. Sensor Display goes beyond simple on/off and can display units, ranges, percentages and time.

5. Input/Output Display

This function provides a listing of inputs and outputs for the vehicle system chosen from the Select System menu. These are primarily states of OPEN/CLOSED or YES/NO. Available I/O information varies depending on the vehicle system chosen.

6. Monitor Display

This function provides a listing of available system monitors for the vehicle system chosen from the Select System menu. Monitor information provided is related to specific vehicle computer functions. The Monitor Display allows the user to view system information, which is derived from sensors, input/outputs, and J1850 Bus messages.

7. Custom Display

This function provides the capability to create, view, or change any programmed custom displays. Specific sensor and input/output items can be chosen from multiple modules and saved to a custom display for viewing. The Custom Display option can be helpful when trying to diagnose specific vehicle concerns. This also is the point of entry for Climate Control functions.

See Appendix F for more detail.

8. Actuator Tests

This function allows access to actuator tests submenus. Actuator tests provide the capability to activate vehicle system components to check electrical and mechanical operation. After they are started, the actuator tests continue from a few seconds to up to seven minutes. If you want to stop an Actuator Test before the time period has elapsed, use the F4 or MORE keys. The DRB III® queries user if the test should be stopped. User will be queried whether to continue the activation (YES/NO). Use YES to continue and NO to terminate. Actuator Tests will also be stopped if the DRB III® loses power, depending on application. User will be prompted when a particular Actuator Test requested is not available. Available actuator tests vary depending on vehicle equipment and the chosen vehicle subsystem. Most actuator tests are typically performed Key ON, Engine OFF but some require Key ON, Engine Running. If the required state needed for the actuator to run is not met, a correction screen will be provided

DRB III® Features & Menus

WARNING: When performing certain Actuator tests, the user is instructed to perform specific steps before running the test. Failure to follow all instructions displayed on the screen before performing an actuator test may result in personal injury or vehicle damage.

9. (or 1.) Miscellaneous

This function allows access to submenus that allow fault codes to be cleared, enable or disable certain vehicle systems, allow checks, adjustments and settings to be performed on various vehicle systems. Follow all instructions displayed on the screen when performing any vehicle system adjustments or changes. Submenu items vary depending on the vehicle system chosen.

9. OBD II Monitors

Note: When Engine is chosen from the Select System menu and the vehicle complies with OBD II or contains partial OBD II information, item number nine on the Select Function menu will be labeled “OBD II Monitors” and “Miscellaneous” becomes item 1 on page two of two (See above.).

If the connected vehicle complies with OBD II, refer to the following for a brief explanation of OBD II Monitors.

The OBD II Monitors function contains information to allow you to diagnose and verify the repair of DTCs that relate specifically to OBD II. Items listed under OBD II monitors on the DRB III® are the OBD II items that are available for that vehicle.

Available monitors include:

- All OBD II Monitor Status
- CARB Readiness Status
- Freeze Frame
- Task Manager

NOTE: It **IS** the PCM and **NOT** the DRB III® that runs a given monitor.

The monitor also contains:

- Pretest (contains the conditions that must be met in order for the monitor to run a diagnostic test) during the monitor test, the DRB III® beeps and the screen title changes from “Pretest” or enabling conditions to “In Progress”)
- Monitor (contains the current or prior status of the monitor) – Last Result displays the specific data of the monitor the last time the monitor was completed. (Some models have the last two results.)

DRB III® Features & Menus

Monitors displayed on the DRB III® are the actual monitors that are available on the vehicle. Some of the typical OBD II monitors that are available are listed as follows:

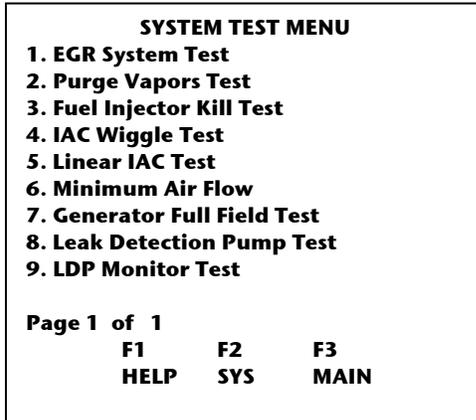
- Upstream O2S
- Downstream O2S
- EGR
- Fuel Lean and Rich
- Misfire

NOTE: When choices are made at the select function level and beyond, the service category that the highlight line item is displayed, the service category acronym will be shown in the lower right area of the screen (Example, PCM, TCM, ORC, and ABS). These are explained in the appendixes.

DRB III® Features & Menus

Chapter 7 Select Function – Engine

System Tests – Engine



Depending on year, engine and market, there may be multiple pages to display all available tests.

A sampling of the possible Systems Test for the Engine is being provided on the following pages. This does not include all possible tests.

EGR System Test

This menu option provides access to a screen that displays EGR status, MAP vacuum, IAC steps and engine RPM readings.

The EGR status value reflects the status of the exhaust gas recirculation solenoid. This status is expressed as normal, blocked or flowing. However, there is no “normal” EGR reading on a cold engine, at wide-open throttle or at curb idle. The MAP vacuum value displays intake manifold vacuum. The IAC steps indicate idle position. The engine RPM value displays the number of engine revolutions per minute.

- Selection of Condition 1 (NORM) shows user the normal EGR operation (PCM controlled).
- Selection of Condition 2 (BLOCK) disables normal EGR operation causing the valve to remain closed.
- Selection of Condition 3 (FLOW) causes the EGR valve to remain open. Each of these conditions should be reflected in MAP, IAC and RPM changes.
- Selection of Condition 4 (Variable) only on select vehicles.

Tip: Vehicles equipped with a backpressure transducer will need a slight increase of RPM above idle to view changes in the (NORM) state.

DRB III® Features & Menus

Purge Vapors Test

This menu option provides access to a screen that displays the purge solenoid status, O2 sensor voltage, short term adaptive, and engine RPM. This test determines the ability to flow vapor through the purge system. The purge solenoid status is expressed as normal, flowing, or off. The O2 voltage value is the oxygen sensor voltage input to the PCM. High Exhaust oxygen content, such as the result of a lean air/fuel misfire, causes oxygen sensor voltage to be low. Low exhaust oxygen content causes the oxygen sensor voltage to be high. The engine RPM value displays engine revolutions per minute.

- Selection of Condition 1 (NORM) allows the canister purge system to function normally.
- Selection of Condition 2 (FLOW] allows the vapors stored in the canister to enter the engine intake manifold. (If vapors are available, the Adaptives show negative change.)
- Selection of Condition 3 (BLOCK) closes the canister purge valve. If the canister is empty, opening or closing the purge valve has little or no effect. (If vapors are available, the Adaptives show positive change.)
- Selection of Condition 4 (VARIABLE) on select vehicles.

Tip: If the canister is saturated, opening the purge valve will cause the mixture to go rich and O2 sensor voltage to go HIGH. If the canister is empty, the system will flow air causing the mixture to go lean and the O2 sensor voltage to go LOW.

Fuel Injector Kill Test

This menu option provides access to the manual injector kill test functions. This test provides a submenu that allows individual injectors to be tested. The injector flow performance is observed by monitoring rpm as individual injectors are disabled.

Tip: Since this test is invoking commands between the DRB III® and the PCM, it is much more accurate than attempting this with an engine analyzer.

IAC Wiggle Test

This menu option provides access to an IAC function test that allows harness faults to be identified. This test causes the IAC motor to vary idle speed while the harness and connector are wiggled. Failure of the engine to vary speed indicates a possible bad connection or component.

The IAC Step readout corresponds to the Idle Air Control plunger position. The PCM pulses the IAC motor to control air bypass and increase and decrease engine speed. The operational value ranges from 0 to approximately 200 IAC steps. Zero (0) IAC steps indicate that the bypass is closed. Approximately 200 IAC steps indicate that the bypass is fully open. High values should result in higher idle speeds, while low values result in lower idle speeds. In the IAC Wiggle Test, if the IAC motor wires are open, the PCM continues to drive the IAC motor to the maximum or minimum number of steps to try and achieve the set values. When proper connections to the IAC motor are restored, it is necessary to reset the IAC values from the Miscellaneous menu.

DRB III® Features & Menus

Linear IAC Test

The Linear IAC motor is a complete assembly, unlike the typical IAC that moves a plunger in or out of a throttle body orifice. This test requires the L-IAC motor to be removed from the vehicle and inspected while running this test. Like many other systems tests, this test has 3 positions for the user to access. The position of the pintle is in proportion to the motor's current flow

- Selection of Condition 1, Fully Op, positions the pintle to the fully open position.
- Selection of Condition 2, Fully Cl, positions the pintle to the fully closed position.
- Selection of Condition 3, Variable, allows variable positions that are controlled using the UP or DOWN arrow keys.

Tip: Best used for vehicles that fail the set RPM actuator tests or vehicles experiencing a deceleration die out.

Minimum Air Flow

This menu option provides verification of throttle body minimum airflow. The Minimum Air Flow test is used to verify that the fixed minimum throttle body opening is correct. In order to control air admitted to the manifold, it is necessary to install a fixed orifice. In this test the IAC steps and fuel injector pulse width go to fixed values and engine RPM is used to verify a correct throttle opening.

Tip: With an engine with no mechanical or ignition problems, if it is incorrect, first attempt a throttle body cleaning and if too high, check/test for vacuum leaks.

Tip: Too small of a closed throttle opening can cause a Decel/Stall condition.

Generator Full Field Test

This menu option provides access for full fielding the Generator (alternator) field. The user is presented with a screen that gives status of the Alternator field, Voltage Sense, the Target Charging Voltage and Engine RPM.

- Selection of Condition 1, Normal, allows the charging system to function normally if possible.
- Selection of Condition 2, Full Field, provides a 100% duty cycle (full ON) every 2 seconds.
- Selection of Condition 3, OFF, provides a 0% duty cycle (full OFF).
- Selection of Condition 4, Override, occurs when voltage exceeds 15-15.5 v depending on PCM.

DRB III® Features & Menus

Leak Detection Pump Test

This menu choice for non-NGC PCM controllers will, after a series of cautions and tips, provide access to items associated with the LDP system. This is a 'forced' test. The user should refer to the appropriate service information for the recommended test procedure.

The display items include:

- Vent PSI
- RPM
- MAP Vacuum
- Leak Detection Pump switch
- Desired LDP solenoid state
- Purge solenoid flow

The (non-NGC) LDP test provides three conditions:

- Selection of Condition 1, Pump, allows user to pump (pressurize) the system
- Selection of Condition 2, Vent, provides user the ability to vent (remove pressure) the system
- Selection of Condition 3, Hold PSI, provides user the ability to hold (seal) the system

LDP Monitor Test

The LDP Monitor test allows the user access to the PCM-controlled Evaporative Leak Detect Monitor to verify Evaporative Emissions System repairs. Any failure detected during testing will be stored as a DTC or as a One-Trip Failure. This feature will allow the PCM to run the LDP monitor, even though the official enabling conditions have not been met. This test will force the LDP monitor to run regardless of temperature or fuel level.

This useful function can be used to verify a customer's complaint or to verify the technician's repair. While the monitor is running, the user can observe the results of the switch, pinched line and leak tests.

Note: The results of the forced monitor are not 100% accurate unless conducted while cold.

As the vehicle warms up, the evaporative pressure increases to the point where you may receive a false pass when in fact there is a leak. This is why the normal monitor can only be run on a cold start.

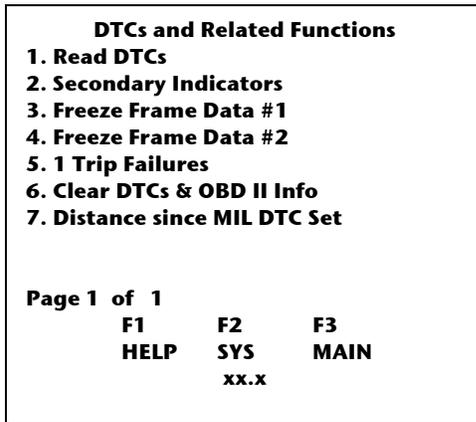
O2 Heater Test

The O2 Heater test allows the user access to a screen showing the available Oxygen sensors. The test varies slightly depending on the system and wiring. In essence, the O2 heaters are turned on and the user views the O2 sensor readings and observes the voltage changes.

For additional information on any of the OBDII-related functions, please consult the DaimlerChrysler Academy technical training course catalog. See Appendix K for contact information.

DRB III® Features & Menus

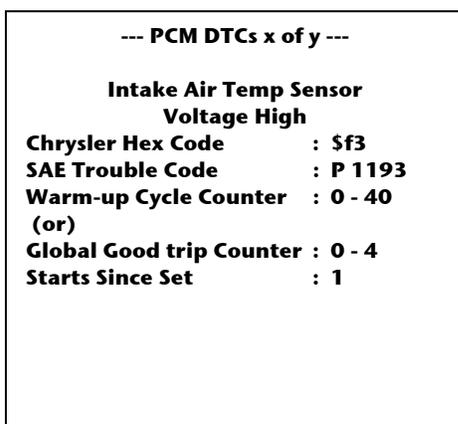
DTCs and Related Functions - Engine



Read DTCs (Diagnostic Trouble Codes)

These screens display fault messages that can be scrolled using the up and down arrow keys. DTCs can only be erased when the engine is in a non-running mode (except Bosch controllers). DTCs are stored on a last in, first out basis. Up to eight or sixteen DTCs can be displayed depending on the PCM. The first three DTCs incorporate a key counter. The key counter records the number of ignition cycles that have occurred since the condition was last seen by the PCM. If more fault messages exist, they can be revealed by using the up and down arrow keys. Change whole pages by use of the right and left arrow keys, or the MORE key. When faults are corrected, exit this screen with a Page Back command. When Page Back is selected, the Erase Faults option appears and all fault messages can be erased. After selection, a confirmation screen asks, "Are you sure you want to erase faults? Selecting YES at this point erases all faults. Selecting NO cancels the fault erasure option. The Faults Erased message confirms the fault clearing operation.

More than just DTC info can be displayed:



Global Good Trips occur after a DTC is set. After 3-4 (depends on which PCM) good trip counters are logged; the display will switch to Warm-up cycle counters. After 40 warm-up cycles the DTC will be erased.

DRB III® Features & Menus

Secondary Indicators

This information is “LIVE” information and it is not stored. User must be viewing the screen when the information “IS” occurring. Essentially, this is an immature DTC that has met most but not all criteria for a DTC; the missing element is usually time. This is very useful when looking for small duration intermittent problems.

Tip: Wiggle connectors and harnesses while watching the secondary indicator screen and DRB III®, which will beep and flash the red LED, to help fix hard to find problems. Refer to appendix for setting up the DRB III® beep and LED feature.

Freeze Frame Data #1

Stores vehicle information at the time a DTC or a 1-Trip failure was detected.

Freeze Frame Description: Freeze Frame is a snapshot of engine operating conditions at the time a failure occurs. Freeze Frame data is stored for MIL-illuminating DTCs and 1-trip failures. When the second consecutive occurrence of the 1-trip failure is detected, the data stored in Freeze Frame is not overwritten; only its priority is updated. Only a fault of a higher priority can overwrite a fault in Freeze Frame 1.

Freeze Frame Data #2

Stores vehicle information at the time a DTC or a 1-Trip failure was detected.

Freeze Frame 1 vs. Freeze Frame 2: Freeze Frame 1 always contains the DTC responsible for the first MIL illumination, whether the MIL is currently illuminated for that particular fault or not. The only exception is if a higher priority fault has overwritten the information in Freeze Frame 1. Freeze Frame 1 can only be overwritten by a higher priority fault. If it is overwritten, the DTC is NOT moved to Freeze Frame 2, but is overwritten.

Freeze Frame 2 contains any subsequent DTCs. If a new DTC occurs, it overwrites the fault currently in Freeze Frame 2, unless the fault is a higher priority than the one in Freeze Frame 1. In this case, the new fault overwrites the fault in Freeze Frame 1.

NOTE: Some controllers have only one frame while others can have more than two frames of data. The intent of these additional frames of data is to store the condition of the vehicle at the time of the DTC event. This data may be helpful in trying to duplicate the failure conditions.

1 Trip Failures

This IS a ‘hard’ failure. The PCM has been programmed NOT to show the DTC or light the MIL, until a second consecutive occurrence of the same ‘hard’ failure occurs. If it does not happen on the next trip, the information is erased.

Clear DTCs & OBD II Info

This option clears DTCs and OBD II information including Freeze-Frames. User is cautioned NOT to erase this before completing and verifying the repair.

DRB III® Features & Menus

Distance since MIL DTC Set

Distance Since MIL DTC Set is a European OBD regulation, which has also been adopted for some U.S. model vehicles. Once a DTC is set and the MIL is illuminated, a counter begins to record mileage. When viewing the mileage on the DRB III®, notice that it is only updated at 0.6-mile intervals (interval subject to change). When the MIL is extinguished, the mileage counter no longer advances, but the recorded mileage remains in memory until the DTC is cleared (typically 40 warm-up cycles) or another DTC is set. When another DTC is set the counter restarts at zero and increases until the MIL is extinguished.

DRB III® Features & Menus

Module Display – Engine

This display shows specific information about the PCM. This information should always be compared to the actual vehicle equipment and under hood label to verify that the PCM is the correct controller for the application.

Powertrain Control Module Info
2001 RS/RG 3.8L V6 SFI
Module: Phase 6.2. Jul 18
Natural Asp, Unleaded Fuel
National Low Emissions (NLEV)
Automatic Trans, FW Drive
Chrysler Engine, SBEC3B
Two Fans, Variable Speed
PCM Part#: 04727403AI
Homologation ID:
CARB OBD II Vehicle

NOTE: It is beyond the scope of this book to provide the entire possible Sensor, Input/Output, Actuators and Monitors line items that are available.

Sensor Display – Engine

Choosing Sensor Display from the select function menu shows a list of sensors applicable to the particular system or controller being examined. Actual values such as voltage or percentage (%) are given.

Input/Output Display – Engine

The input/output readouts are similar to the sensor values except they are in states of ON/OFF or OPEN/CLOSED. The I/O screens can be scrolled with the up and down arrows.

Monitor Display – Engine

A monitor provides preset displays. These displays combine the sensors and inputs/outputs to give quick access to the information relating to the monitor's menu options. In essence, these are a series of custom displays that are pre-built to make the user's tasks easier.

Custom Display – Engine

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction. See Appendix F for building Custom Displays.

DRB III® Features & Menus

Actuator Tests – Engine

The Actuator menu provides access to several menu screens that list the actuators or control functions available. These allow the user to test that item or function and observe sensor values, output readouts, or I/O devices. Given tests can time out from a few seconds to up to seven minutes. When the test times out, it automatically stops. The tests may be stopped at any time by pressing the F4 key. Actuator tests are performed either with the engine running or with the engine non-running. The request is denied if the engine is in the wrong operational mode.

Additionally, the user should be aware that some actuators latch (stay on) during the test and others will toggle (on-off) depending on how it is supported in the PCM controller being tested.

There is also an ALL Solenoids/Relays command available. When used, the PCM will exercise all the solenoids and relays under its control.

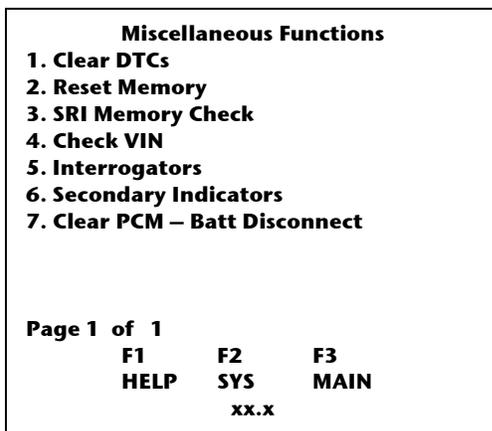
OBD II Monitors – Engine

OBD II Monitors provide access to a host of tests and information. The choices are routinely over 5 screens with 9 items per screen available. It is beyond the scope of this document to explain all the line items.

For additional information on any of the OBDII-related functions, please consult the DaimlerChrysler Academy technical training course catalog. See Appendix K for contact information.

Miscellaneous – Engine

This menu enables a user to perform a variety of operations, change calibration values, reset memories, etc. One or more pages of menus may appear depending on the system or vehicle being tested.



DRB III® Features & Menus

1. Clear DTCs

Clear DTCs provides the ability to clear Diagnostic Trouble Codes for that module.

2. Reset Memory

The reset memory menu provides the user the ability to selectively “reset” the various module learned or adaptive settings for a given feature or system. Additionally, the user can reset “All Values”. The reset memory function should be used after a repair has been performed. While the system would eventually adapt to the repair anyway, perform the reset and then drive the vehicle to help verify the repair.

3. SRI Memory Check

The Service Reminder Indicator Check is only a requirement for the vehicles that were certified with this feature. It is recommended that anytime a PCM be replaced that the technician set this to the current odometer reading on the vehicle.

4. Check VIN

The Check VIN feature will test the current VIN in the PCM memory. It will validate that it is a valid 17 digit North American Vehicle Identification Number. The user should compare the number displayed to the actual VIN on the vehicle being tested.

CAUTION: Some vehicles are equipped with the SKIM/SKREEM system (described elsewhere), user is cautioned that when dealing with a SKIM/SKREEM-equipped vehicle that the VIN, if needed to be programmed is done using the SKIM/SKREEM option.

5. Interrogators

The Module Interrogator is not for normal usage. The memory addresses are only known to Engineering. This feature is available, if and when, an engineer is looking for direct module access with the DRB III®.

6. Secondary Indicators

This information is “LIVE” information. The module does NOT store secondary indicators. User must be viewing the screen while the information “IS” occurring. Essentially, this is an immature DTC that has met most, but not all criteria for a DTC; the missing element is usually time. This is very useful when looking for small/short duration intermittent problems.

Tip: Wiggle connectors and harnesses while watching the secondary indicator screen and DRB III®, which will beep and flash the red LED, to help fix hard to find problems.

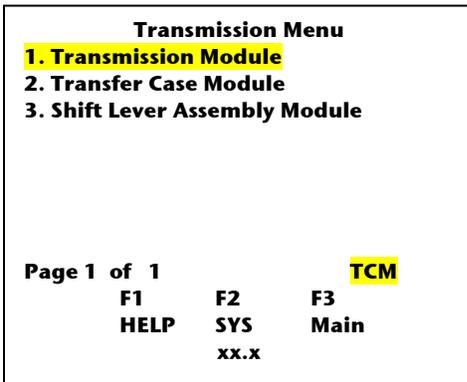
7. Clear PCM – Batt Disconnect

This is the electronic equivalent of disconnecting the vehicle’s battery. This will clear all PCM RAM (random access memory).

DRB III® Features & Menus

Chapter 8 Select Function – Transmission & T-Case

If a service category has more than one module available then an intermediate menu for that service category will be presented to the user to determine which module should be accessed.



Tip: If the user is not aware of whether a module can be on a specific vehicle a “No Response” from the module screen will appear asking the user to check for ignition ON and that the DLC connector is properly connected.

Alternately, if the module has a problem with power, grounds, internal issues, communication or wiring, the same message will appear.

Consequently, the DRB III® cannot guarantee that a specific module exists on any vehicle unless it can establish module communication.

On RWD vehicles equipped with a JTEC controller BUT without an EATX (TCM) controller, selecting Transmission module will access the JTEC (PCM). On those vehicles the PCM provides a limited set of transmission functions.

– Transmission Module

Automatic Transmission functions are contained in one of the following TCM modules:

- EATX
- Aisin-Warner (AW4)
- JTEC (PCM/TCM combined for some applications)
- NGC (PCM/TCM combined for some applications)
- W5J400 (used with some MB diesel engines)

DRB III® Features & Menus

System Test – TCM

There are a variety of system tests available depending on vehicle application.

- Shift Lever test, in which the user is instructed to place the shift lever in the available positions and press Enter to add the input to the test. Once completed the test will provide PASS or FAIL information.
- Clutch Test provides the user with the different gear applications.
- Elec PRNODL test provides the user with the current gear position.
- TRD Link or Torque Reduction Link queries the circuit between the PCM and TCM.
- Pump Test (45RFE only) – Ability to select 4 different pump pressures.
- Reverse Pump Test (45RFE only) – Maximum reverse pressure (about 220 psi)
- Duty Cycle Test (45RFE only) – Provides a 10% duty cycle (low DC = High psi)

DTCs and Related Functions – TCM

There are 3 items available for this transmission/transaxle function.

- Read DTCs. As with any module on this submenu, a DTC currently in memory will be displayed.
- 1 Trip Failures or Freeze Frame. As with all OBD II compliant modules, if any 1-Trip Failures are stored in memory they will be displayed.
- Clear DTCs. Allows user to immediately clear DTCs. Often this is used directly after testing the vehicle and or related wiring harness as a DTC can be set while performing diagnostics and unrelated testing or repairs.

DRB III® Features & Menus

Module Display – TCM

This screen is presented to the user as the Transmission service category is initialized. It provides detailed information such as part number of the current module/system.

Transmission Module Information	Transmission Control Module
Version: 22 EATX IIIB – 41TE Perm Non-Autostick Vehicle Model Year: 2001 Controller Model Year: 2001 2.4L Multi-Point Injection TCM PART# 05034031AA VIN: 3C8FY4BB41T279173 OBD II Vehicle	VIN # 1J4GN58A32A990771 DIA ID 000082 Part # : 0295459832 H/W Year 1 S/W Year 1

(Typical W5J400 shown)

Sensor Display – TCM

Choosing Sensor Display from the select function menu shows a list of sensors applicable to the particular system or controller being examined. Actual values such as voltage, percentage (%), RPM, and PSI are given.

Input/Output Display – TCM

The input/output readouts are similar to the sensor values except they are in state of ON/OFF, OPEN/CLOSED, and YES/NO. Some models will also display gear selection or state.

Monitor Display – TCM

A monitor provides preset displays. These displays combine the sensors and inputs/outputs to give quick access to the information relating to the monitor's menu options. In essence, these are a series of custom displays that are pre-built to make the user's tasks easier.

The Transmission monitors are:

- RPM
- Shift Lever Monitor
- CVI Monitor (CVI = Clutch Volume Index)
- Vehicle Speed Monitor
- EATX OBD II Task Manager (EATX = Electronic Automatic Transmission Controller)
- Not currently available for W5J400

DRB III® Features & Menus

Custom Display – TCM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuator Tests – TCM

The Actuator menu provides access to several menu screens that list the actuators or control functions available. These allow the user to test that item or function and observe sensor values, output readouts, or I/O devices. Given tests can time out from a few seconds to up to seven minutes. When the test times out, it automatically stops. The tests may be stopped at any time by pressing the F4 key.

The W5J400 uses a slightly different diagnostic logic. Its “Solenoid Test” mode will cycle ALL solenoids and store any DTCs found. If errors are detected, go to Read DTCs for more info.

Miscellaneous – TCM

- Trans Overhauled/Replaced – This test should only be used when the Trans has been overhauled or replaced AND the same EATX controller (TCM) is on the vehicle. Selecting this feature will do “Quick Learn”, which forces the TCM to relearn the CVI (Clutch Volume Index) values. Some years adds TCC break-in if required.
- EATX TCM has been changed – This feature should ONLY be used when the EATX controller (TCM) has been changed. Selecting this feature will do “Quick Learn”, which forces the TCM to reset the CVI (Clutch Volume Index) values and pinion factor.
- Pinion Factor – The pinion factor allows for setting the values used to determine vehicle speed and mileage. The values/choices shown vary depending on the original equipment tires available.
- TSB Entry – Some software features are available by way of Technical Service Bulletins. If user has located a bulletin, putting the applicable TSB number in will allow access/availability.
- Memory Monitor – This feature is reserved for Engineering for when they choose to query a specific memory location. It is not useable in a service environment.
- Battery Disconnect – This is the electronic equivalent of disconnecting the vehicle’s battery. This will clear all TCM RAM (random access memory).

DRB III® Features & Menus

- Quicklearn – This process provides the EATX controller to ‘learn’ the adaptive items on the transmission/transaxle.
- TCC Break-In – This process enables the break-in procedure for the TCC (torque Converter Clutch). User should use this as directed, as it is not needed for all vehicles.
- EATX DTC Event Data – This feature (the name may change) provides the user with additional information that is captured when a DTC event occurs. Depending on year and model, the ability to capture more than 1 bank of data may be available.
- Reset Adaptives – W5J400 only – resets adaptives to base values (non-learned).
- Store Adaptives – W5J400 only- stores the ‘learned values’ into the TCM
- Program VIN – W5J400 only – Allows programming of the VIN into the TCM

DRB III® Features & Menus

- Transfer Case Module

The Transfer Case Module is used with certain RWD vehicles equipped with 4-Wheel drive. Its DRB III® abbreviation is XCM. It is referenced in Service Information as Transfer Case Control Module or TCCM.

Select Function – Transfer Case Module (XCM)

System Test – XCM

NOT AVAILABLE

Read DTCs – XCM

DTCs are stored and displayed as active or stored. An active code is LIVE now. A Stored code was once active and is now stored. If the code is both active AND stored it is a hard fault and is “LIVE NOW”. If it is a stored code only, it was active once but is not currently active. This is usually diagnosed as an intermittent fault.

Module Display – XCM

The Module display is limited to the Part Number.

Sensors – XCM

NOT AVAILABLE

Input/Outputs – XCM

The input/outputs are similar to the sensor values except they are in states of ON/OFF or OPEN/CLOSED. The I/O screens like other screens can be scrolled with the up and down arrows.

Monitors – XCM

NOT AVAILABLE

Custom Display – XCM

NOT AVAILABLE

Actuators – XCM

The XCM module provides actuators for LEDs, Motors, and Shift Positions.

Miscellaneous – XCM

This allows for configuring the XCM module to the specific transfer case used on the vehicle.

DRB III® Features & Menus

- Shift Lever Assembly Module

The Shift Lever Assembly Module was introduced on the MY2002 WG, Jeep Grand Cherokee with the 2.7L TD. Mercedes Benz supplies the engine and automatic transmission (ID = W5J400). The Shift Lever Assembly Module has its own diagnostics.

Select Function – Shift Lever Assembly Module (SLA)

The following items are available:

System Test – SLA

NOT AVAILABLE

Read DTCs and Related Function – SLA

NOT AVAILABLE

Module Display – SLA

The module display usually will display:

- Part Number
- Software Version
- Body Style
- Model Year

Sensors – SLA

NOT AVAILABLE

Input/Outputs – SLA

The input/outputs are similar to the sensor values except they are displayed as states of either OPEN or CLOSED. There are 12 Hall Effect values available.

Monitors – SLA

NOT AVAILABLE

Custom Display – SLA

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – SLA

The actuator test displays a series of available LEDs being activated.

Miscellaneous – SLA

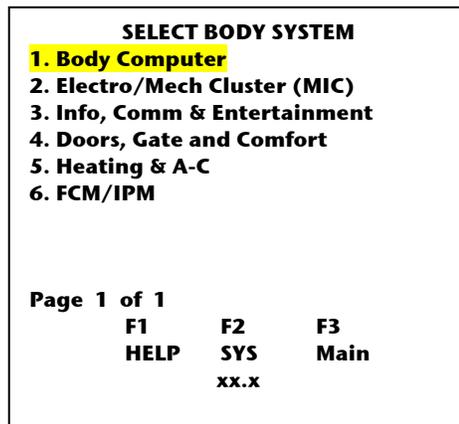
NOT AVAILABLE

DRB III® Features & Menus

Chapter 9 Select Function – Body Interior

If a service category has more than one module available an intermediate menu for that service category will be presented to determine which module should be accessed.

Due to the increasing number of modules, the previous “Body” menu has been changed to better support users by reducing the number of choices available from a given menu. The new menu is called “Body Interior” and uses the structure to better assist technicians in finding the modules needed to be diagnosed and tested.



Tip: If a selected module is not equipped for a given vehicle a “No Response” from the module screen will appear asking the user to check for ignition ON and that the DLC connector is properly connected.

Alternately, if the module has a problem with power, grounds, internal issues, communication or wiring, the same message will appear.

Consequently, the DRB III® cannot guarantee that a specific module exists on any vehicle unless it can establish module communication.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– **Body Computer (BCM)**

The Body Control Module is the primary control unit for vehicle interior features and usually handles Customer Preferences and Country Code specifics. In many RWD trucks the module that provides the BCM functions is called Central Timer Module or CTM. Only the “High-Line” Central Timer Module has bus communication capability.

Country code can also be located in modules other than the Body Control Module. Such is the case for DR, TJ, PL, and PT, which do not use a BCM/CTM.

Select Function – Body Control Module

Systems Test – BCM

System Tests, when available, may include but are not limited to: Actuator Mode Doors, CCD Bus Test, CCD Voltage Monitor, PCM Monitor, Primary and Secondary Fuel Tank Data, and on some older LH vehicles, a Speed Pro Steering test.

Read DTCs – BCM

This function allows access to Diagnostic Trouble Codes. Available options for DTCs vary depending on the vehicle system chosen and can include Active or Stored DTCs.

Module Display – BCM

The Module Display provides information about the BCM, which might include among others:

- Part Number
- Software (S/W) Part Number
- Country Code setting
- Software Version
- Vehicle and Model Year

Sensor Display – BCM

Choosing Sensor Display from the select function menu shows a list of sensors applicable to the BCM. Actual values such as voltage or percentage (%) are given and/or switch state and VTSS statuses. The sensor values may be scrolled using the up and down arrow keys or right and left arrow keys to see readings on other pages.

Input/Outputs Display – BCM

I/Os for BCM include but are not limited to: switches, lamps, ignition and relay states, bus message information and vehicle status.

DRB III® Features & Menus

Monitors – BCM

The BCM Monitor display may include, but are not limited to:

- Lighting Monitor
- Vehicle Status Monitor
- Wiper System Monitor
- Chime Monitor
- Lock Monitor
- VTSS Monitor
- Limp-In Monitor
- PCI Bus Info BCM
- PCI Engine Info BCM
- Remote Radio Switch Info
- CCD Bus Info BCM
- Fuel System Monitor

Custom Display – BCM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – BCM

The Actuators display will provide, if available, the ability to turn on a variety of indicator lamps, turn signals, and door locks.

Miscellaneous – BCM

The large variety of items to be found here can include:

- Reset Customer Preferences
- Reset Module
- Reset Learned Features
- Headlamp Delay
- DRL Enable (DRL = Daytime Running Lamps)
- Enable VTSS (VTSS = Vehicle Theft Security System)
- Change Country Code
- Program RKE (RKE = Remote Keyless Entry)
- Double Door Unlock
- Rolling Door Locks
- Auto Door Unlock
- Optical Horn Chirp
- Headlamp Delay Time
- Key Fob Test
- Initialize Learn Features
- Initialize VIN
- Headlamps on W/Wipers
- Fuel Gauge Update

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– **Electronic Mechanical Instrument Clusters (MIC)**

All clusters are electronic in today's DaimlerChrysler vehicles. The MIC is sometimes referred to as an EMIC or Electronic Cluster. When electronic, they have gauges, pointers, warning lamps and can even provide chime functions on some vehicles.

Select Function – Electronic/Mechanical Clusters

Systems Test – MIC

Which system tests are available depend on what the vehicle/module will support. Some common tests are: PCM Monitor, Calibration Points, and Self-Test.

Read DTCs – MIC

Available on modules that support it, the Read DTCs option allows the user to view and delete active and stored Diagnostic Trouble Codes. The option to clear DTCs is presented in the menu with the viewing options or after returning from viewing active or stored DTCs.

Module Display – MIC

Accessing module display can provide the user with part number, VIN, vehicle, Country Code, and transmission type depending on vehicle line.

Sensor Display – MIC

Generally, because all clusters are electronic, their information is bussed and viewable. If the data the user is looking for cannot be located under sensors, it will often be under monitors instead.

Input/Outputs Display – MIC

I/Os include but are not limited to: indicator states, lamp states, and odometer/trip states.

Monitors – MIC

Accessing MIC Monitors can provide information that comes over the bus similar to what previously would have been viewed under Sensors. As with any monitor, there will also be info from I/Os as well.

Custom Display – MIC

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

DRB III® Features & Menus

Actuators – MIC

Accessing actuators will usually provide the following but may not be limited to:

- Turn lamps or indicators on
- Turn segments on and off
- Actuate gauges

Miscellaneous – MIC

Miscellaneous may include the following common functions:

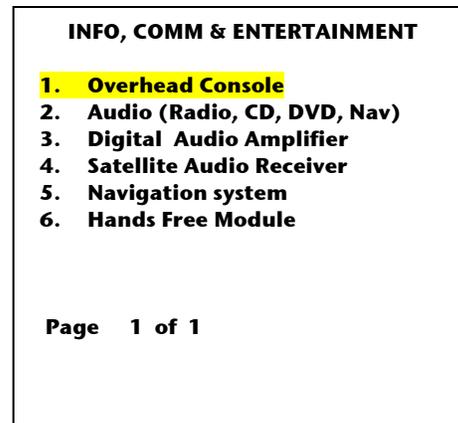
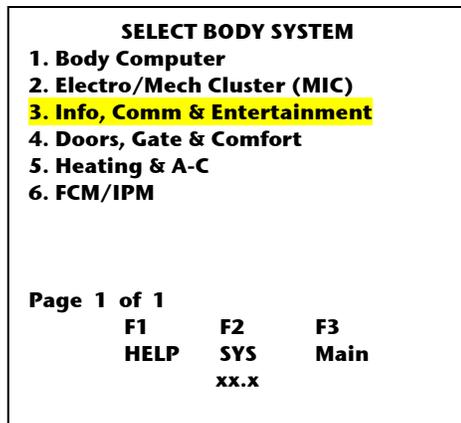
- Clear DTCs
- Initialize New Cluster
- Restore Cluster
- Calibrate Gauges
- Reset Module
- Seatbelt Reminder
- Change Country Code

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Info, Comm & Entertainment

If a service category has more than one module available then an intermediate menu for that service category will be presented to the user to determine which module should be accessed. Selecting Info, Comm & Entertainment will provide a six choice sub-menu.



Select Function – Overhead Consoles – Overhead Consoles (TRV, OTS, CMT, VIC)

Overhead Console is the generic name for a variety of different modules that are located in that space. The four main modules are:

- Traveler (TRV)
- OTIS - Overhead Traveler Information Systems (OTS)
- Compass Mini Trip (CMT)
- Vehicle Information Systems (VIC)

Systems Test – TRV, OTS, CMT, VIC

This function, when available, usually consists of an “Auto Self Test” of the module.

Read DTCs – TRV, OTS, CMT, VIC

This function allows access to vehicle system DTCs. Available options for DTCs vary depending on the vehicle system chosen.

Module Display – TRV, OTS, CMT, VIC

Module Display includes part number and the software or revision level of the module, and in some cases, vehicle body style and model year.

Sensor Display – TRV, OTS, CMT, VIC

Choosing Sensor Display from the select function menu, if available, shows a list of sensors applicable to the particular overhead console module being examined. Tire Pressure Monitor sensors may also be included. Actual values such as voltage or percentage (%) are given. The sensor values may be scrolled using the up and down arrow keys.

DRB III® Features & Menus

Input/Outputs Display – TRV, OTS, CMT, VIC

The input/outputs are similar to the sensor values except they show discrete states of ON/OFF or OPEN/CLOSED. Tire Pressure Monitor learned sensor IDs and statuses may be included, if applicable.

Monitors – TRV, OTS, CMT, VIC

Monitors, if available, generally are related to bus message monitoring.

Custom Display – TRV, OTS, CMT, VIC

This menu, if available, allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – TRV, OTS, CMT, VIC

When available, selections are usually limited to a Display test that checks the LED segments.

Miscellaneous – TRV, OTS, CMT, VIC

While most overhead consoles do not have any miscellaneous functions, but some may allow programming of fuel tank size as well as compass calibration.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– Audio Systems (Radio, CD, DVD, Nav) - AUD

Select Function – Audio Systems (Radio, CD, DVD, Nav)

Systems Test – AUD

If available, this selection includes a Tone Output Test.

Read DTCs – AUD

Read DTCs will provide active and stored DTCs if any are in memory and the option to clear them.

Module Display – AUD

Module Display can usually supply some or all of the following:

- Radio Type
- Sales Code
- Serial number
- Software Version
- Part Number
- VIN

Sensor Display – AUD

NOT AVAILABLE

Input/Outputs Display – AUD

NOT AVAILABLE

Monitors – AUD

NOT AVAILABLE

Custom Display – AUD

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – AUD

The module may have several actuators that correspond to buttons on the radio, such as tune up, tune down, VF display, etc.

Miscellaneous – AUD

When available, miscellaneous functions may include: Radio Clock Display (turn clock display on or off in the radio VF display), Automatic Loudness, Reset to Default Parameters.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– Digital Audio Amplifier DAA

Digital Audio Amplifiers were released for MY2002 for AN and DR trucks and later continued in the MY2007 CS. These module is somewhat unique in that DTCs are only set while running Systems Tests.

Select Function – Digital Audio Amplifier

NOTE: The radio must be ON before the user performs communication/testing with the Digital Audio Amplifier.

Systems Test – DAA

The systems tests include:

- Continuous Tone Test
- PCI Amplifier Test
- Input Test
- Speaker Output Test

Read DTCs – DAA

NOT AVAILABLE - Available under Systems

Module Display – DAA

Module Display provides MY, vehicle and part number information.

Sensor Display – DAA

NOT AVAILABLE

Input/Outputs Display – DAA

NOT AVAILABLE

Monitors – DAA

NOT AVAILABLE

Custom Display – DAA

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

DRB III® Features & Menus

Actuators – DAA

NOT AVAILABLE

Miscellaneous – DAA

Provides the ability to:

- Reset Amplifier
- Clear DTCs

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Satellite Audio Receiver

This module is capable of receiving audio signals from a subscription satellite radio service.

Select Function – Satellite Audio Receiver (SAR)

Systems Test – SAR

NOT AVAILABLE

Read DTCs – SAR

The Read DTCs option allows the user to view and delete active and stored Diagnostic Trouble Codes. The option to clear DTCs is presented when returning to the select function menu.

Module Display – SAR

Module Display displays the sales code of the radio, part number, software version, country code, subscription status, and serial number.

Sensor Display – SAR

NOT AVAILABLE

Input/Outputs Display – SAR

NOT AVAILABLE

Monitors – SAR

NOT AVAILABLE

Custom Display – SAR

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – SAR

Actuators for turning the tone on and off are provided, as well as the ability to isolate the right and left channels.

Miscellaneous – SAR

Miscellaneous functions include an option to reset the module to default parameters.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– Navigation systems

Select Function – Navigation Systems (NAV)

Systems Test – NAV

The navigation voice test provided allows the user to hear the programmed sound clips for the selected language.

Read DTCs – NAV

The Read DTCs option allows the user to view and delete active and stored Diagnostic Trouble Codes. The option to clear DTCs is presented when returning to the select function menu.

Module Display – NAV

Module Display provides model year, vehicle line, part number, and current software version.

Sensor Display – NAV

NOT AVAILABLE

Input/Outputs Display – NAV

NOT AVAILABLE

Monitors – NAV

NOT AVAILABLE

Custom Display – NAV

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – NAV

NOT AVAILABLE

Miscellaneous – NAV

When available, the module can be reset to default values.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– Hands Free Module

Select Function – Hands Free Module (HFM)

Systems Test – HFM

NOT AVAILABLE

Read DTCs – HFM

The Read DTCs option allows the user to view and delete active and stored Diagnostic Trouble Codes. The option to clear DTCs is presented when returning to the select function menu.

Module Display – HFM

Module Display provides part number, current software version, vehicle information, and country code.

Sensor Display – HFM

When available, the voltage available to the module is displayed.

Input/Outputs Display – HFM

When available, I/Os show the Mux Status.

Monitors – HFM

A status monitor is usually available, which shows the connection type and the status of roaming, voice mail, and messages.

Custom Display – HFM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – HFM

The selections provided allow the user to actuate a 200Hz tone and a 7KHz tone.

Miscellaneous – HFM

Miscellaneous functions will usually consist of an option to reset the module to defaults.

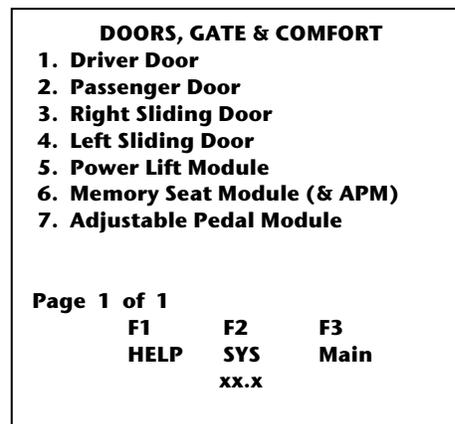
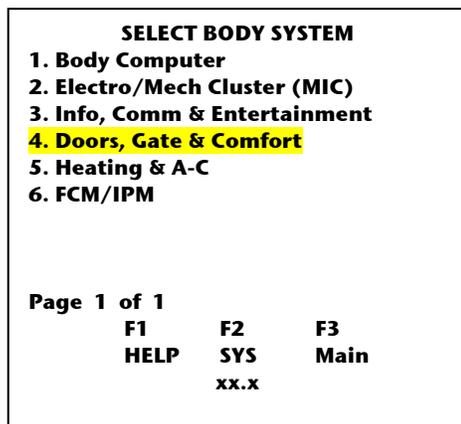
DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

DOORS, GATE, & COMFORT

Select Function – Doors, Gate & Comfort

If a service category has more than one module available then an intermediate menu for that service category will be presented to the user to determine which module should be accessed. Selecting Doors, Gate, and Comfort will provide a seven choice sub-menu.



BODY SYSTEMS MENU

– Driver Door Module (DDM)

Select Function – Driver Door Module

Door modules are used on the 1999-2004 WJ/WG Jeep Grand Cherokee (1996-98 ZJ), 2004-2006 CS and 2005 PT 27 (convertible). These distributed power system components provide power accessory functions for power windows, etc. The acronyms are: DDM for Driver Door Module and PDM for Passenger Door Module often collectively referred to as MUX.

Tip: The DDM contains the RKE feature for the WJ/WG (and older ZJ) vehicles.

Systems Test – DDM

When available, the user can test the power mirror actuators and circuits.

Read DTCs – DDM

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – DDM

Typically, the vehicle application, part number, and software version are displayed.

DRB III® Features & Menus

Sensor Display – DDM

Sensors may include voltage of the battery and any switches on the driver door, as well as current available to the motors.

Input/Outputs Display – DDM

The I/O screen shows the status of door switches and motors.

Monitors – DDM

When available, monitors may include a vehicle information monitor that shows the relevant equipment installed and configured on the vehicle.

Custom Display – DDM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – DDM

Depending on vehicle capability, a variety of door switches and indicator lamps can be tested.

Miscellaneous – DDM

Available functions may include some of the following:

- Initialize VIN
- Initialize Learned Features
- Reset Module
- Auto Door Locks
- Program RKE
- RKE Door Unlock Mode
- Initialize Module

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Passenger Door Module –Passenger Door Module

Door modules were first used on the 1999 WJ/WG Jeep Grand Cherokee. These distributed power system components provide power accessory functions for power windows, etc. The acronyms are: DDM for Driver Door Module and PDM for Passenger Door Module often collectively referred to as MUX.

Tip: The PDM contains the RKE feature for the WJ/WG (and older ZJ) vehicles.

Systems Test – PDM

When available, the user can test the power mirror actuators and circuits.

Read DTCs – PDM

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – PDM

Typically, the vehicle application, part number, and software version are displayed.

Sensor Display – PDM

Sensors may include voltage of the battery and any switches on the driver door, as well as current available to the motors.

Input/Outputs Display – PDM

The I/O screen shows the status of door switches and motors.

Monitors – PDM

When available, monitors may include a vehicle information monitor that shows the relevant equipment installed and configured on the vehicle.

Custom Display – PDM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – PDM

Depending on vehicle capability, a variety of door switches and indicator lamps can be tested.

DRB III® Features & Menus

Miscellaneous – PDM

Available functions may include some of the following:

- Initialize VIN
- Initialize Learned Features
- Reset Module
- Auto Door Locks
- Program RKE
- RKE Door Unlock Mode
- Initialize Module

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Right Sliding Door – Right Power Sliding Door Module or Passenger Sliding Door Module

The right power sliding door module was introduced starting with the MY2001 RS/RG minivans. Several ways to operate the door are available: Key fob, B-pillar switch, overhead console, and manually.

Systems Test – PSD

The systems tests are:

- Door Open Test
- Door Close Test
- Latch Cinch Test
- Latch Release Test
- Internal Relay Test

Read DTCs – PSD

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – PSD

The module display provides:

- Part number
- Software Version
- Application
- Model Year

Sensor Display – PSD

The sensor display is limited to the voltage input to the module.

Input/Outputs Display –

From the display the following I/Os are accessed:

- Child Lock Switch
- Full Open Switch
- Ratchet Switch
- Pawl Switch
- Hall Switch
- Lock Switch
- Handle Switch

Monitors – PSD

A monitor that shows bussed information about battery voltage is provided.

DRB III® Features & Menus

Custom Display – PSD

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – PSD

Accessing Actuators allows the user to test the following:

- Door Close Motor
- Door Open Motor
- Latch Cinch Motor
- Engage Latch Motor
- Latch Release Motor
- Engage Clutch Motor

Miscellaneous – PSD

Miscellaneous functions available include:

- Inhibit Monitor
- Reset Module

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Left Sliding Door – Left Power Sliding Door Module or Driver’s Sliding Door

The left power sliding door module was introduced starting with the MY2001 RS/RG minivans.

Several ways to operate the door are available: Key fob, B-pillar switch, overhead console and manually.

Systems Test – DSD

The systems tests are:

- Door Open Test
- Door Close Test
- Latch Cinch Test
- Latch Release Test
- Internal Relay Test

Read DTCs – DSD

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – DSD

The module display provides:

- Part number
- Software Version
- Application
- Model Year

Sensor Display – DSD

The sensor display is limited to the voltage input to the module.

Input/Outputs Display –

From the display the following I/Os are accessed:

- Child Lock Switch
- Full Open Switch
- Ratchet Switch
- Pawl Switch
- Hall Switch
- Lock Switch
- Handle Switch

Monitors – DSD

A monitor that shows bussed information about battery voltage is provided.

DRB III® Features & Menus

Custom Display – DSD

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – DSD

Accessing Actuators allows the user to test the following:

- Door Close Motor
- Door Open Motor
- Latch Cinch Motor
- Engage Latch Motor
- Latch Release Motor
- Engage Clutch Motor

Miscellaneous – DSD

Miscellaneous functions available include:

- Inhibit Monitor
- Reset Module

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Power Lift Module – Power Liftgate Module

The Rear Power Liftgate was introduced starting with the MY2001 RS/RG minivans. The system allows for various switches to open and close the liftgate (i.e. key fob or overhead console).

Systems Test – PLM

The systems tests are:

- Door Open Test
- Door Close Test
- Latch Cinch Test
- Latch Release Test
- Internal Relay Test

Read DTCs – PLM

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – PLM

The module display provides:

- Part Number
- Software Version
- Vehicle Application
- Serial Number

Sensor Display – PLM

The sensor display is limited to the voltage input to the module.

Input/Outputs Display – PLM

From this display the following I/Os are accessed:

- Ratchet Switch
- Pawl Switch
- Hall Switch
- Full Open Switch
- Tape Switch

Monitors – PLM

A monitor that shows bussed information about battery voltage is provided.

DRB III® Features & Menus

Custom Display – PLM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – PLM

Accessing Actuators allows the user to test the following:

- Chime Output
- Disengage Motor
- Engage Motor
- Door Open Motor
- Door Close Motor
- Latch Cinch Motor
- Latch Release Motor

Miscellaneous – PLM

Miscellaneous functions available include:

- Inhibit Monitor
- Reset Module
- Verify Module Calibration

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Memory Seat Module (& APM) – Memory Heated Seats & Mirrors Module (MHSMM)

This system provides a combination of features that revolve around the ability to remember customer preferences for the seat and side mirror positions. If equipped with seat heaters, the module will also monitor and control this feature. Recently, the functionality of the Adjustable Pedal Module has been incorporated into the newer Memory Seat Modules. If the vehicle is equipped with APM, but the separate APM menu selection acts as though the module is non-responsive, APM may be integrated with the Memory Seat Module and is then accessed through this menu.

Systems Test – MSM

NOT AVAILABLE

Read DTCs – MSM

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – MSM

Typically, the body type, model year, part number, and software version will be shown.

Sensor Display – MSM

The display shows the various position sensors, usually with the values displayed in volts.

Input/Outputs Display – MSM

In I/Os, user will find switch status for the various inputs with the typical responses being Open/Closed or Buckled/Unbuckled, etc.

Monitors – MSM

Depending on the vehicle, the following may be available:

- Memory Messages on the Bus
- BCM Switch Status Monitor
- Message to BCM Monitor
- PRNDL Monitor
- Lumbar Monitor
- Horizontal Monitor
- Recliner Monitor
- Riser Monitor

Custom Display – MSM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

DRB III® Features & Menus

Actuators – MSM

In actuators, the user will be able to operate the various motors for the seats and on some models the power mirrors.

Miscellaneous – MSM

Depending on the vehicle, some or all of the following functions may be available:

- Switch Test – Tests the various input switches.
- Enable Glide Control – Provides an easier entry and exit from the vehicle by moving the seat forward or rearward for the driver.
- Learn Seat Limits – Once learned, these software limits will prevent the motors from stalling at the ends of the limits. This is easier on the track mechanisms over the life of the vehicle.
- Reset Guard Bands – Functionally identical to Learn Seat Limits.
- Reset Module – Restores the default parameters of the module.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Adjustable Pedal Module – Adjustable Pedal Module (APM)

These were introduced in MY2002 on RS and WJ. This module allows users to move the pedal assembly to a position forward or rearward.

Systems Test – APM

NOT AVAILABLE

Read DTCs – APM

This selection provides the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – APM

This screen may provide part number, software and hardware version, model year, and model type, depending which module the user is accessing.

Sensor Display – APM

The sole sensor provides the voltage reading that specifies the current position of the assembly.

Input/Outputs Display – APM

The input/output screen provides the forward and rearward switch position along with a reverse input.

Monitors – APM

The monitor for the APM provides input from the vehicle and the reason for the system lock-up if applicable at the time.

Custom Display – APM

NOT AVAILABLE

Actuators – APM

Actuators are limited to moving the pedal forward or rearward.

Miscellaneous – APM

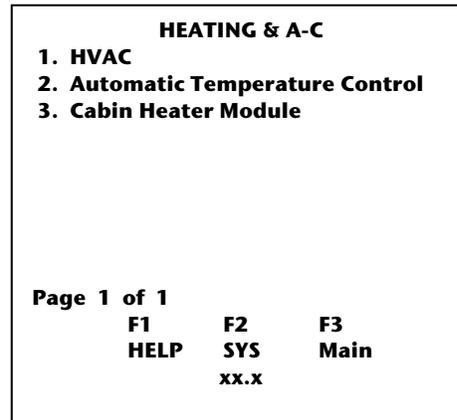
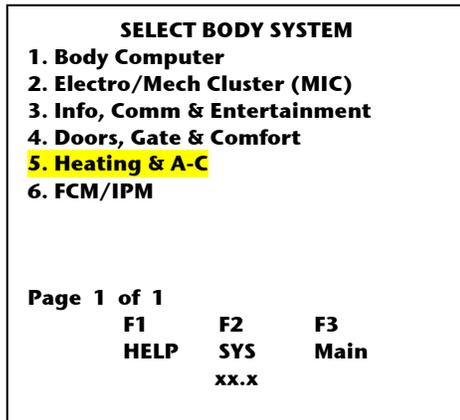
If available, the user can disable in-plant mode for the module.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

Select Function – Heating & A-C

Selecting Heating & A-C will provide a three choice sub-menu.



BODY INTERIOR SYSTEMS MENU

Select Function – HVAC

– HVAC (HVA)

Electric actuators have replaced vacuum motors/actuators. Because the actuators are electronic, logic has been added to control both the position and performance of these actuators. The HVA service category covers vehicles with a manual A/C system that use electronic controls. Because they are not full-blown ATC systems, they are sometimes referred to as Manual Temp Control or MTC systems.

Systems Test – HVA

HVA systems tests may include

- Calibration Test
- Cooldown Test
- Actuator Circuit Test (2002)
- PCM Monitor
- Reset Rear Blend Switch Span
- HVAC Door Recalibration

Read DTCs – HVA

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – HVA

Module display may show software version, vehicle application, and module type.

Sensor Display – HVA

Available sensors may include ignition voltage, evaporator temperature, blower voltage, and the position and span of blend and mode doors.

DRB III® Features & Menus

Input/Outputs Display – HVA

I/Os often include:

- Switch states
- Actuator positions (Defrost, Panel, etc.)

Monitors – HVA

The monitor usually shows HVAC Bus messages.

Custom Display – HVA

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – HVA

Available actuators usually allow the user to move mode actuators (motors) to various positions i.e. defrost, panel, etc. and turn on the A/C compressor.

Miscellaneous – HVA

Miscellaneous functions may include Reset HVAC Module and/or Enable Ambient Temp Sensor.

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– **Automatic Temperature Control (ATC)**

ATC systems on today's vehicles require minimal input from the operator to maintain the selected climate setting. The distinguishing feature of ATC is that with a single input the vehicle will alter A/C, blower speed and even air distribution.

Select Function – Automatic Temperature Control

Systems Test – ATC

System tests may include:

- PCM on the Bus
- ATC AC Cooldown
- Targets
- Counts
- PCM Monitor
- Program Number
- In Jeep Temp Degrees
- ATC Fan Speed
- Solar Sensor Output

Read DTCs – ATC

When available, this selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – ATC

ATC module display usually shows software version and body type.

Sensor Display – ATC

ATC sensors may include all the switches from the various control heads, temperature sensors, and/or evaporator temperature voltage.

Input/Outputs Display – ATC

ATC I/Os will often show switch states and current actuator position states.

Monitors – ATC

ATC monitors usually provide info that is bussed primarily from the PCM, but may include other modules.

Custom Display – ATC

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

DRB III® Features & Menus

Actuators – ATC

Actuators usually provide but may not be limited to the ability to move mode and blend actuator motors. More actuators are available when a vehicle has a dual-zone system.

Miscellaneous – ATC

Depending on the ATC module, some of the following may be available:

- Program Head (99 WJ/WG)
- Reset Module or ATC Head
- Self Test
- Clear DTCs

DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

– CABIN HEATER MODULE (CHM)

The Cabin Heater Module was introduced on the RG Minivans on vehicles equipped with Diesel engines as a supplemental heater. These are sold in International markets.

Select Function – Cabin Heater Module

Systems Test – CHM

The available system tests are:

- Field Mode
- Dosing Pump Prime

Read DTCs – CHM

The read DTCs will provide the DTC and a counter read.

Module Display – CHM

The module display will provide Part Number and build dates for hardware and software.

Sensor Display – CHM

The following 5 items are available:

- Water Temperature
- Operation Volts
- Air Fan
- Combustion Sensor
- Low Voltage Threshold

Input/Outputs Display – CHM

The available I/Os are:

- Combustion Fan
- Flame Detected
- Main Switch
- Vehicle Fan
- Dosing Pump
- Glow Element
- Selector Switch
- Moore State
- Error Lockout
- Heater
- Supplemental Heater

Monitors – CHM

NOT AVAILABLE

Custom Display – CHM

NOT AVAILABLE

Actuators – CHM

The actuator display provides the following:

- Combustion Fan
- Glow Element
- Dosing Pump

Miscellaneous – CHM

NOT AVAILABLE

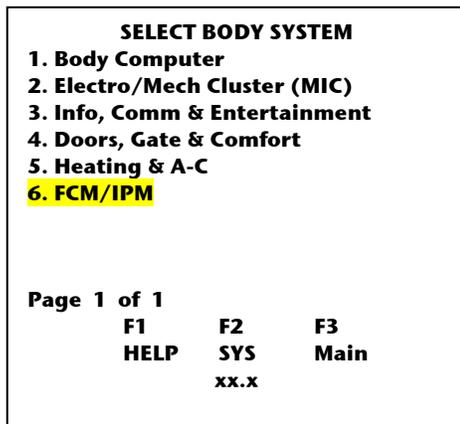
DRB III® Features & Menus

BODY INTERIOR SYSTEMS MENU

FCM/IPM – Front Control Module a.k.a. Integrated Power Module or IPM

The Front Control Module was introduced on the RS/RG minivans. Later they were used on the CS Pacifica and the DR truck family.

On the vehicles it is used on, it replaces the traditional power distribution center. Additionally, items that were previously a Body Control Module function are now directly controlled from under the hood.



Select Function – FCM/IPM

Selecting FCM/IPM will start the DRB III® into an Auto-ID function and provide the usual Function Menu items.

Systems Test – FCM/IPM

NOT AVAILABLE

Read DTCs – FCM/IPM

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – FCM/IPM

This screen normally shows the year and body style of the vehicle, hardware part number, software version, and EEPROM version.

Sensor Display – FCM/IPM

Sensors may include an ambient temperature sensor, battery voltage, flash programming voltage, washer fluid level switch, and stop lamp input voltage.

Input/Outputs Display – FCM/IPM

I/Os may include any switches and relays controlled from the steering wheel, as well as the backup switch, brake level switch, headlights, stop and park lamps, IOD, and the rear defrost switch.

DRB III® Features & Menus

Monitors – FCM/IPM

A warning monitor is available for the FCM/IPM.

Custom Display – FCM/IPM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – FCM/IPM

The FCM will allow actuation of its controlled relays. This can include the following:

- High and Low Beams
- Front and Rear Washer motors
- Fog Lamps
- Parking Lamps
- Horn Relay
- Hi/Low Wiper relay
- Headlamp Wash relay (Bux)

Miscellaneous – FCM/IPM

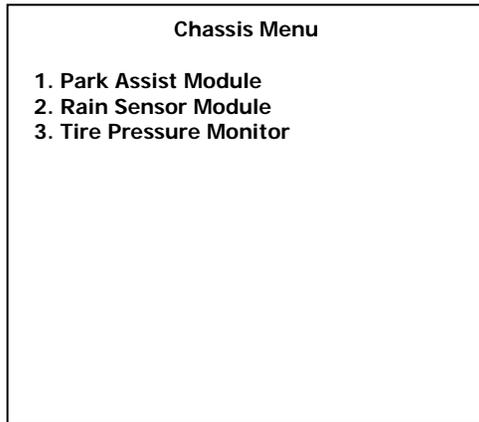
The available screens might include:

- Change Audio Equalizer Curve
- RG Headlamp Washer Disable (Bux)
- Change Country Code
- Enable Daytime Running Lamps (DRL)
- DRL Beam Select

DRB III® Features & Menus

Chapter 10 Select Function – Chassis & Body Exterior

In the Chassis and Body Exterior menu, the user will first have to make a choice of modules listed.



Users are cautioned that the DRB III® reads the Sensor, I/O and Monitor's memory location, i.e. the raw data, and provides a conversion (volts, on, pressed, off, etc.) for the screen display.

Select Function – Park Assist Module – Park Assist Module (PAM)

The Park Assist Module was introduced on the 2005 RS/RG minivans along with the 2004.5 CS Pacifica.

Systems Test – PAM

The PAM module has a self test function that can be run from this category.

Read DTCs – PAM

This selection will provide the user with the ability to read stored and active PAM DTCs, and the option to erase after viewing.

Module Display – PAM

This screen shows the part number, software version, and type of the module, as well as the body style and model year of the vehicle.

Sensor Display – PAM

Sensors show voltage available, distance calculated by each sensor, and vehicle speed.

Input/Outputs Display – PAM

I/Os available include thresholds, obstacle detection, selected transmission gear, parking brake, and the status of the display, park assist system, radio mute function, and sensors.

DRB III® Features & Menus

Monitors – PAM

The sole monitor shows voltage, vehicle speed, and messages present on the bus.

Custom Display – PAM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – PAM

NOT AVAILABLE

Miscellaneous – PAM

The only miscellaneous function available allows the user to reset the module.

DRB III® Features & Menus

Chassis and Body Exterior

– Rain Sensor Module

The Rain Sensor Module was introduced on the 2002 WJ/WG Jeep Grand Cherokees.

Select Function – Rain Sensor Module

Systems Test – RSM

NOT AVAILABLE

Read DTCs – RSM

This function allows access to rain sensor module DTCs.

Module Display – RSM

This screen provides the part number, software version and model year information.

Sensor Display – RSM

NOT AVAILABLE

Input/Outputs Display – RSM

NOT AVAILABLE

Monitors – RSM

NOT AVAILABLE

Custom Display – RSM

While this screen does not state that it is not available, since there are no Sensors, Inputs, or outputs available to view within the module, the user would be able to set up a monitor from modules other than the Rain Sensor module.

Actuators – RSM

NOT AVAILABLE

Miscellaneous – RSM

NOT AVAILABLE

DRB III® Features & Menus

Select Function – Chassis & Body Exterior

- Tire Pressure Monitor

Select Function – Tire Pressure Monitor (TPM)

Only certain Prowler and Viper vehicles can access the Tire Pressure Monitor through this menu selection.

Tip: In other vehicle lines, Tire Pressure Monitor functions are often accessed through the Overhead Console or SKIM/SKREEM.

System Test – Chassis – TPM

NOT AVAILABLE

Read DTCs – Chassis – TPM

The read DTCs allows access to the system DTCs. These generally will show transmitter faults and/or the receiver (module) fault.

Module Display – Chassis – TPM

The module display screen provides identification, software versions and date produced.

Sensor Display – Chassis – TPM

The sensor display information will identify the position of the 4 sensors, if registered. Thresholds will also be shown.

Input/Output Display – Chassis – TPM

NOT AVAILABLE

Monitor Display – Chassis – TPM

NOT AVAILABLE

Custom Display – Chassis – TPM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuator Tests – Chassis – TPM

NOT AVAILABLE

Miscellaneous – Chassis – TPM

Under miscellaneous, the user will be able to program (link) the individual tire pressure sensors to the vehicle's receiver, program the individual sensors, and view a system monitor that shows all TPM data.

DRB III® Features & Menus

Chapter 11 Select Function – Anti-lock Brakes

Anti-Lock Brakes systems are available on most recent vehicles. Traction control may also be available on some models. ABS modules often use the term CAB (Controller, Anti-Lock Brake) when referring to the controller. On certain RWD vehicles, the setting of the Pinion Factor is done via the CAB, as opposed to the transmission controller.

Anti-Lock Brakes

Select Function – Anti-Lock Brakes (ABS)

System Test – ABS

Usually there are no system tests for ABS Brake systems. If available, this selection is limited to a hydraulic valve test.

Read DTCs – ABS

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – ABS

The module display screen provides identification, capabilities, vendor software version, and/or date produced.

Sensor Display – ABS

Sensor reads usually include critical voltages, such as reference, pump and ignition as well as the wheel speed sensors.

Input/Output Display – ABS

Items displayed are Brake switch position, traction control, and ABS lamp state.

Monitor Display – ABS

NOT AVAILABLE

Custom Display – ABS

This menu, if available, allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuator Tests – ABS

The Actuators menu provides access to several menu screens that list actuators or control functions. Selection of an item enables a user to test that item or function. A given test will time out from after a few seconds to up to seven minutes and allows observation of sensor values, output readouts, or I/O devices. When the test times out, it automatically stops. The

DRB III® Features & Menus

tests may be stopped at any time by pressing the F4 key. In ABS systems, actuators usually are for the motor, the main relay, and the various valves in the hydraulic control unit.

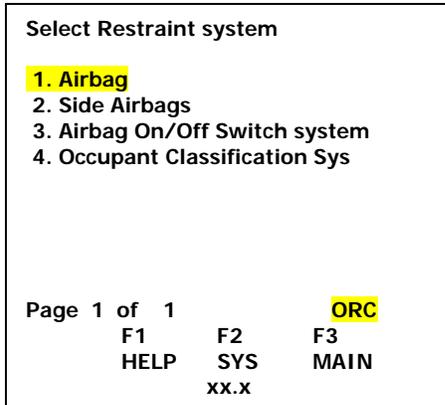
Miscellaneous – ABS

The following items are available under Miscellaneous:

- Bleed Brakes
- Set Pinion Factor (certain RWD vehicles)
- Module Replacement

DRB III® Features & Menus

Chapter 12 Select Function – Passive Restraints – Passive Restraints (ORC)



Users are cautioned that the DRB III® reads the Sensor, I/O and Monitor's memory location, i.e. the raw data, and provides a conversion (volts, on, pressed, off, etc.) for the screen display.

- Airbag

User is cautioned that Airbag systems have had many names over the years. Some of the different names get confused with system names. To this end, ORC, ACM and AECM are terms for modules. SRS is the acronym for Supplemental Restraint System. Later the OCS or Occupant Classification System was added. These systems provide different responses to different sized people who are occupying the front passenger seat.

NOTE: DaimlerChrysler recommends that children are always transported in the rear seats when available.

Select Function – Airbag – (ORC)

System Test – ORC

The system test, either a PCM or BCM Monitor, states whether the PCM/BCM "is" or "is not" active on the BUS.

Read DTCs – ORC

This selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

DRB III® Features & Menus

Module Display – ORC

Module display may show the following:

- Part Number
- Software Version
- Vendor
- Configuration Information
- Lamp drive type

Sensor Display – ORC

Sensor can be displayed on some modules but not on others. If the module supports this function they will be displayed.

Input/Output Display – ORC

The input/output readouts are similar to the sensor values except they are in states of ON/OFF or OPEN/CLOSED. The I/O screens can be scrolled with the up and down arrows.

Monitor Display – ORC

The Airbag monitors show items that are related to the Airbag warning lamp status.

Custom Display – ORC

This menu, if available, allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuator Tests – ORC

NOT AVAILABLE

Miscellaneous – ORC

When available, one or more of functions will be displayed:

- Configure for AOSIM (adding an Airbag On/Off Switch system)
- Configure a new module from parts
- Erasing DTCs
- Configure for side airbags

DRB III® Features & Menus

- Side Airbags

Select Function – Side Airbags (RSA or LSA)

Side airbag systems are available on certain vehicles. Often, side airbags are optional equipment. Usually, they are described as left or right side airbags. Their acronyms are LSIACM and RSIACM. R and L are used to identify either right or left side. SIACM is short for Side Impact Airbag Control Module.

Later systems can incorporate the side sensing from the ORC module and do not need separate side modules.

Tip: If you get no response try querying the ORC instead.

Additionally, side airbags can deploy from either the seat or as a curtain from the roofline.

Systems Test – RSA or LSA

NOT AVAILABLE

Read DTCs – RSA or LSA

This function allows access to vehicle system DTCs. Available options for DTCs vary depending on the vehicle system chosen.

Module Display – RSA or LSA

The info on this screen relates to the part number, system vendor, which side of the vehicle, software version, and model year and vehicle line.

Sensor Display – RSA or LSA

NOT AVAILABLE

Input/Outputs Display – RSA or LSA

NOT AVAILABLE

Monitors – RSA or LSA

Monitors, if available, will use preset displays for information about this module, the airbag communication and airbag lamp status.

Custom Display – RSA or LSA

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

See Appendix F for building Custom Displays.

Actuators – RSA or LSA

NOT AVAILABLE

Miscellaneous – RSA or LSA

NOT AVAILABLE

DRB III® Features & Menus

- Airbag On/Off Switch Indicator (AOSI)

Select Function – Airbag On/Off Switch System (SRM)

The Airbag On/Off Switch Indicator system, when available, provides owners the ability to turn on and off the airbag system. While not inclusive, refer to SB 08-025-01 for additional information.

Systems Test – SRM

NOT AVAILABLE

Read DTCs – SRM

This function allows access to vehicle system DTCs. Available options for DTCs vary depending on the vehicle system chosen.

Module Display – SRM

The info on this screen shows the part number, software version, system vendor, and On/Off switch status.

Sensor Display – SRM

Sensor readings relate to status of whether the airbag is enabled or disabled, and voltage available to the module.

Input/Outputs Display – SRM

NOT AVAILABLE

Monitors – SRM

Monitors, if available, will preset displays for information about this module, the airbag communication and airbag lamp status.

Custom Display – SRM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

Building a Custom Display is the same for any service category or module.

Actuators – SRM

NOT AVAILABLE

Miscellaneous – SRM

NOT AVAILABLE

DRB III® Features & Menus

- Occupant Classification System (OCS/OCM)

The Occupant Classification System Module automatically enables or disables the passenger airbag, depending on the amount of weight sensed in the passenger seat. This provides a safer environment for children and prevents the airbag from deploying if there are packages in the front seat. The OCM was introduced in the 2004 KJ and continued in the 2005 RS.

Systems Test – OCM

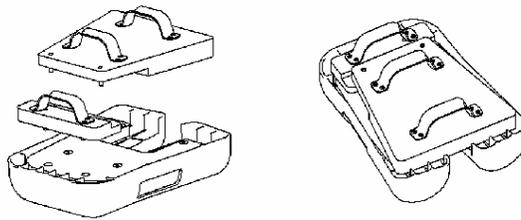
The following Systems Tests may be available, depending on OCM module:

VIN Verification

Clear VIN Mismatch

PCM Monitor

Verify OCS – This test uses multiple piece Special Tool 9077, pictured below, to provide validation of operational settings and to recalibrate when the system has been serviced or repaired.



Read DTCs – OCM

This function allows the user to read and clear OCM DTCs. Available options for DTCs vary depending on the vehicle system chosen.

Module Display – OCM

The info on this screen relates to the part number, software version, system vendor, and On/Off switch status.

Sensor Display – OCM

Sensor readings relate to voltage available to lamps and the weight sensing bladder below the passenger seat.

Input/Outputs Display – OCM

Input/Outputs, when available, are limited to the state of the OCM.

Monitors – OCM

Monitors, if available, will present displays for information about this module, the airbag communication and airbag lamp status.

DRB III® Features & Menus

Custom Display – OCM

This menu allows users to view or set up their own monitor screen with only the sensors or I/O devices they choose. These custom displays are retained in the memory of the DRB III® until the user changes them. The custom displays are not erased when the DRB III® is powered down. This capability may be useful when trying to diagnose a particular malfunction.

Building a Custom Display is the same for any service category or module.

Actuators – OCM

NOT AVAILABLE

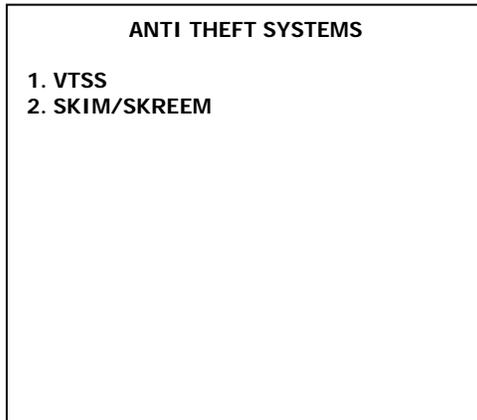
Miscellaneous – OCM

When available, miscellaneous functions include an option to reset the module

.

DRB III® Features & Menus

Chapter 13 Select Function – Anti-Theft



These systems are not available for all vehicles. Some additional variations are needed to provide support for International market requirements. Often this feature is part of another module except for SR, PL, PT, and XJ. AB may have a standalone VTSS module that does not support communicate with DRB III® later VTSS became part of the CTM.

System Test – VTS

System tests, when available, will include a PCM Monitor or Door Input Test.

Read DTCs – VTS

When available, this selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – VTS

Module display will provide software version, whether it is controlled by another module, such as the Body Control Module, and country code, in some cases.

Sensor Display – VTS

Accessing the sensor display will usually provide the user with voltages available to the ignition, various switches used to monitor the system, and/or the switches that disarm the system.

Input/Output Display – VTS

Accessing the I/O display provides a listing of the I/Os that can trip the alarm system, including the ignition status. Additionally, some outputs are shown, such as horn and high beam relays.

Monitor Display – VTS

NOT AVAILABLE

Custom Display – VTS

NOT AVAILABLE

DRB III® Features & Menus

Actuator Tests – VTS

Actuators may include relays that control the following: Headlamps, parking lamps, horn, and VTSS status indicators.

Miscellaneous – VTS

Miscellaneous may include:

- Alarm Monitor
- Change Mode
- Reset Status
- Program RKE
- Set Options
- Check VTSS mode
- Configure

DRB III® Features & Menus

SKIM/SKREEM

– SKIM, The module from the Sentry Key Immobilizer System (SKIS)

The control module is called SKIM. The Sentry Key Immobilizer System is a sophisticated anti-theft system that has variations for different types of controllers as well as changes for different markets using Country Codes. Non-integrated, it uses a separate Key and fob.

– Also SKREEM – The module from the Sentry Key Remote Electronic Entry System

Essentially a newer more sophisticated version of SKIM, SKREEM integrates the Key fob as part of the key. Note: Some SKREEM modules will support Tire Pressure Monitoring as both use an RF schema.

CAUTION: It is beyond the scope of this publication to provide the depth of variations of these systems. Depending on procedure, the technician may have only one (1) try to enter the PIN correctly.

Please refer to the January 2000, No. 1, “Vehicle Security Systems Update” Reference Book, from the DaimlerChrysler Training Academy’s Master Technician Training Series. It is available from their Tech Authority distribution/catalog.

See Appendix K for details.

Select Function SKIM/SKREEM (SKM)

System Test – SKM

When available, system tests may include a Trigger ECU Test and/or a Sensor Test. If TPM functions are combined with the SKM module, Tire Pressures, Pressure Sensor IDs, and Tire Pressure Placard Values may be listed as well.

Read DTCs – SKM

When available, this selection will provide the user with the ability to read stored and active DTCs, and the option to erase after viewing.

Module Display – SKM

Accessing this menu allows access to the version and part number on the SKIM module.

Sensor Display – SKM

NOT AVAILABLE

Input/Output Display – SKM

The following I/Os may be displayed:

- Keys Programmed (A number between 0 and 8 depending on vehicle)
- IGN. STATUS (On or OFF)
- SKIM Present on BUS (YES or NO)
- Key Status (OK or NOT OK)

DRB III® Features & Menus

Monitor Display – SKM

The SKIM Info Monitor provides the following status:

- Key Status (Valid or Invalid)
- SKIM Warning (OFF or ON)
- SKIS Failure (No or YES)

Custom Display – SKM

NOT AVAILABLE

Actuator Tests – SKM

Usually, there is only a single actuator test for SKIS: a function that turns the SKIS indicator lamp ON.

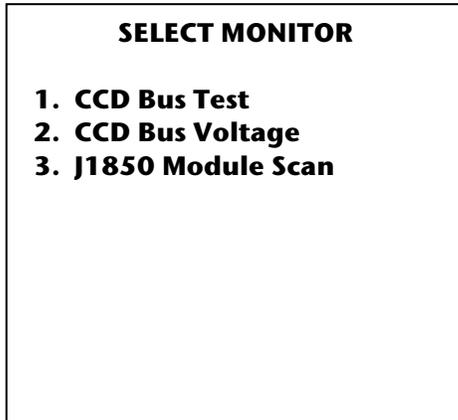
Miscellaneous – SKM

There are 5 miscellaneous functions available:

- PCM Replace - This function is to be used when a PCM (Gasoline Engine Controller) has been replaced. The Engine will start and stall until this function is performed.
- ECM Replace - This function is to be used when an ECM (Diesel Engine Controller) has been replaced. The Engine will start and stall until this function is performed.
- SKIM Replaced
- Program Ignitions Key(s)
- Erase ALL Current Ign. Keys
- Manual SKIM Functions – Opens a sub menu with the following functions:
 - View PCM VIN
 - View SKIM VIN
 - View SKIM Country Code
 - Reset SKIM module
 - SKIM Key Tester – to access the tester, it must be attached BEFORE attempting access from this menu

DRB III® Features & Menus

Chapter 14 – System Monitors



Unlike the other Select Function Menu items, Monitors are used for helping determine the vehicle communication (Bus Architecture). Two of the menu choices are for the CCD (Chrysler Collision Detection) Bus, the last is for the J1850 BUS also known as PCI Bus.

Select Function – 1. CCD Bus Test

Invoking this test on CCD equipped vehicle, provides the ability to perform a complete bus test and providing up to 12 'hard' faults on these bus systems

Select Function – 2. CCD Bus Voltage

Invoking this test of CCD equipped vehicle provides the current BUS+ and BUS- voltages. Normal voltages generally are in the range of 2.50 volts \pm 0.25 volts.

Select Function – 3. J1850 Module Scan

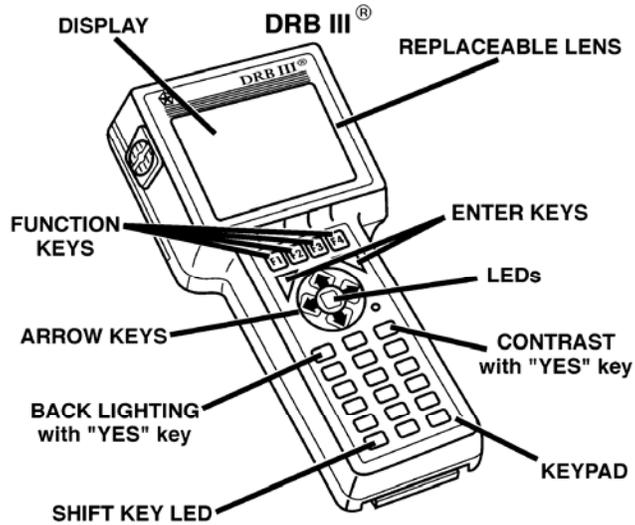
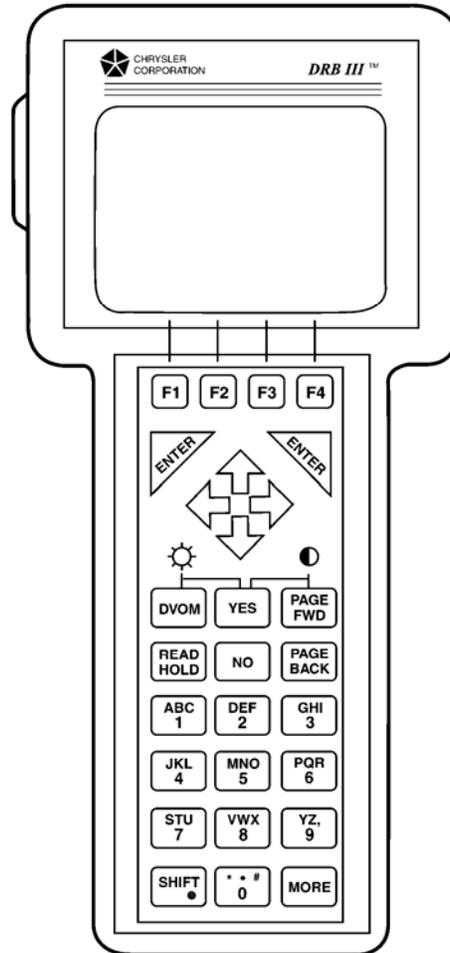
Invoking this test has the DRB III® query all modules that are actively communicating using PCI/J1850 on the BUS. Multiple pages may be constructed to display all modules.

NOTE:

The DRB III® does NOT and will NOT support CAN communication vehicles. Please use the StarSCAN®/StarMOBILE™ scantools for these applications.

DRB III® Features & Menus

Chapter 15 Appendix A – General Information



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DRB III® Features & Menus

Function Keys

Function keys are selected by pressing the key that aligns with an icon or word that appears at the bottom of the LCD display screen.

- F1**-Help – access to HELP - limited context, press F1 again to exit help
- F2**-Sys – returns user to the System Menu
- F3** Main – returns user to the Main Menu
- F4** Stop – stops current actuator test and certain automated system tests

Note: Function Keys can have different functions from above depending on which application is running.

Enter

Press either of two ENTER keys to activate a highlighted selection or function. Right and Left keys are provided for easy operation. When performing system tests, ENTER is used to continue with that test. The DRB III® will prompt you to press ENTER to continue with other programs.

Tip: To speed up the refresh rate of the DRB III® when viewing sensors, inputs/outputs, or monitors, scroll to highlight the desired item and press ENTER. Since only the item chosen is determined by the **Reverse Highlighted** or **shaded entry area** will be shown. Sensor and Input/Output state changes that might not have been seen when all items were displayed will now be shown. The other items will return when the ENTER key is pressed again or the user Pages Back.

Up-Down Arrows

Use the Up or Down arrow to scroll through items on a screen one at a time. Pressing the Up or Down arrow moves the **Reverse Highlighted bar** up or down. The Up or Down arrow keys are also used to adjust screen contrast.

Right-Left Arrows

Pressing either the Right or Left arrow moves the **Reverse Highlighted bar** right or left. Pressing the Right or Left arrow changes screens within a given menu or list of readouts. It also advances a numbered screen display to the next screen when the message “Page x of y” appears.

More

Pressing the MORE key advances the numbered screens the same as the Right and Left arrow keys.

Page Back

Pressing the PAGE BACK key returns the DRB III® to the previous menu (prior to the one currently displayed). PAGE BACK is also used to exit from any of the functions contained under the Miscellaneous Menu.

Page Fwd

This key is usually used only with TechCONNECT/TechTOOLS applications (during a Flash re-programming procedure). Additionally it is used for as part of the contrast setting.

DRB III® Features & Menus

Yes-No

Press either key in response to selections or questions asked by the DRB III®.

DVOM

Press this key to activate the DVOM function. Press DVOM again to deactivate the DVOM (return to normal). Though the DRB III® uses the acronym for digital volt-ohmmeter (DVOM), this is actually a digital multimeter (DMM) that includes amps. Refer to the DVOM/DMM instructions elsewhere for multimeter use.

Read/Hold

Press this key to “freeze” a display or readout at a particular time. Press this key again to return to the live display or readout. This is also very useful when using PEP Module Tools.

Red and Green LEDs

This display in the center of the cursor arrows indicates a yes/no, good/bad condition in response to a condition or code. Green indicates a PASS condition (go on testing); red indicates a NO-PASS condition. Additionally the Red LED will come on for an instant when a fault code matures in the system/module applicable to the menu being viewed.

Alphanumeric Keys

Pressing a number key selects and activates a selection from a menu, the same as moving the highlight bar up or down with the arrow keys. After a selection is highlighted, press ENTER to activate the selection. Press the number keys to enter data. Number keys can be used in the Service Reminder Indicator (SRI) mileage check.

Shift Key LED

This LED will come on when modules are being queried or cached. In essence, when the DRB III® is busy with a given module’s information it signifies that the DRB III® is working and not locked up since the process time is partially dependent on bus speed, etc.

Screen Display

The DRB III® has a high resolution LCD screen that displays graphics, such as bar graphs and engine analyzer scope-type displays that are typically shown when using PEP module functions. The display has a “super twist” LCD for improved viewing at an angle and in high sunlight.

Backlight

The LCD screen has a backlight for use in low-light situations. This feature is activated for 15 minutes each time the DRB III® is powered up. The backlight “times out” after 15 minutes if no keypad keys are pressed. To reactivate or deactivate the backlight, press the DVOM and YES keys at the same time. The backlight should be deactivated when it is not needed to extend its life. A “light” symbol with connecting lines to both the DVOM and YES keys is shown on the keypad to remind you which keys are used to activate and deactivate the backlight.

DRB III® Features & Menus

Auto Screen Contrast

A temperature sensor located in the PEP module is used to automatically adjust screen contrast to compensate for unit temperature. Only minor changes are necessary to fit user preference.

If you need to adjust screen contrast, press the PAGE FWD key and the YES key at the same time. A “half-moon” symbol with connecting lines to both the PAGE FWD and YES keys is shown on the DRB III® keypad to remind you which keys are used to manually adjust screen contrast. The screen message instructs you to use the Left or Right arrow to change contrast. Press both YES & PAGE FWD keys to exit.

End of Appendix A

DRB III® Features & Menus

Chapter 16 Appendix B – DRB Utilities

DRB Utilities Menu	
1.	Change User Options
2.	Self Test
3.	DRBIII Cable Usage Help
4.	How to use DRB III

Change User Options

Selecting this option presents the user with a sub-menu.

The current status will be **Reverse Highlighted**. Use the UP or DOWN arrow to select the option you want to change. Then use the LEFT or RIGHT arrow to toggle the ON/OFF status. To change either the current date or time settings, use the number keys.

Change User Options Menu		
1. Echo on PC	OFF	ON
2. Display Units	US	METRIC
3. Key LED	OFF	ON
4. Key Beep	OFF	ON
5. Key Repeat	OFF	ON
6. Date	MM DD YYYY	
7. Time	HR MN SC	

1. Echo on PC – In almost all instances this should be set to **OFF**. When set to ON it can significantly decrease the normal screen update. Echo on PC should only be turned ON by the Training Group and then only for demonstrations requiring its usage.

Tip: Having this turned ON will cause repeatable lockups when attempting the Memory Self Test.

2. Display Units – User sets according to market or preference, basically US or Metric units.

3. Key LED – Set to either ON or OFF (green LED flashes when keypad is pressed). Feature is usually set to ON when working in noisy environments to provide visual feedback that a keypad choice registered.

DRB III® Features & Menus

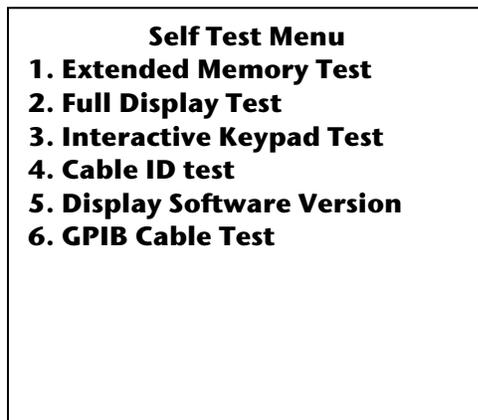
4. Key Beep – Set to either ON or OFF (beeper sounds when keypad is pressed). Feature is usually set to ON when working in noisy environments to provide audio feedback that a keypad choice registered.

5. Key Repeat – Turning this option ON allows multiple keypad presses without having to let up on the keypad. ON is the usual convenience setting.

6. Date – If selected, user will be required to enter the date. Enter the numbers using the following sequence, MM = month i.e. 01, 11, DD = date i.e. 01, 10, 27; YYYY is the current year i.e. 2006. While having the date correct is ideal, having an incorrect date will not effect DRB III® operation.

7. Time – If selected, user will be required to enter the time. The date format is 24-hour format, i.e. 06 is 6 a.m. where 18 is 6 p.m. Minutes are added as 2-digit number between 00 and 59, i.e. 05, 12, 55. Seconds are added in the same manner as minutes. While seconds are required for entry, they are not displayed so using 00 for seconds is recommended.

Self Test



1. Extended Memory Test – This provides a series of tests that checks memory chip condition. If problems are found, first check if the “**Echo on PC**” user preference is “**ON**”. It will cause a repeatable lock-up during this test. Echo on PC should always be turned OFF before performing this test. If a problem still persists, the user should attempt to re-load the current DRB III® software. If this does not correct, it will require shipping unit to SPX for repair. Use the DRB III® repair form in the last appendix to properly identify your concern to the repair facility.

2. Full Display Test – This set of tests shows whether all the pixels used in the display are functional. This series of tests checks horizontal, vertical and all pixel displays. Any gaps in the display will require service from SPX.

DRB III® Features & Menus

3. Interactive Keypad Test – This provides user the ability to test for keypad problems. Press the PAGE BACK key, then the YES key to exit this test. Keypad repair requires shipping the unit to SPX for repair.

4. Cable ID Test – The cable ID test is used to provide a quick-test that the resistor that is located in all DRB III® cables can be ‘read’ by the DRB III® Scan Tool. Since certain systems require a specific cable for access, this id is usually a “behind the screens” operation and provides as well as denies access without the proper cable being ‘in-use’. Cables that are intermittent or have connector attachment problems need to be replaced with a NEW cable.

5. Display Software Version – This will display a detailed software version of the code listed at the bottom of most DRB III® display screens. Additional information about copyright information, software and database release date and time stamps, current boot ROM version and the current cable in use is displayed.

6. GPIB Cable Test – This test is not supported. The GPIB cable is used to connect a DRB III® to the TECHCONNECT or PC client.

DRB III® Cable Usage Help

This choice provides a brief overview of the most current vehicle cables that are used with the DRB III®. Additional information is available from the DRB III® Operation, Hardware, and Accessories Reference Guide CH6050 (510325) and the self-study course described elsewhere.

How to use DRB III®

Due to memory space limitations, there is NO context sensitive help available. The user is directed to the DaimlerChrysler Academy’s self-study web-based course that includes the DRB III®. The course number is 0011108. Available in the first quarter 2007, the course title is: “Introduction to TechCONNECT and SCANTools”.

Additional information is available from the DRB III® Operation, Hardware, and Accessories Reference Guide CH6050 (510325).

End of Appendix B

DRB III® Features & Menus

Chapter 17 Appendix C – Digital Multimeter Functions includes Accessories

While the keypad describes this as a Digital Volt Ohm Meter (DVOM), the DRB III® actually is a Digital Multimeter (DMM). Pressing the DVOM key following a selection from the Main Menu or Select System menu accesses this feature. Two displays are offered on the DVOM menu to correspond to the two pairs of ports either Set 1 or Set 2. Either channel may be used. A probe error message may be displayed for certain selections if the test leads are improperly attached.

The DVOM uses an analog-to-digital converter, which operates at 7.5 conversions/sec. It measures DC volts, AC volts (RMS), ohms, current (amps), temperature (by ohms) and frequency (Hertz). The unit is voltage protected up to +/- 550 volts DC (meter only indicates +/- 500 volts). AC voltage is averaged (RMS), not peak-to-peak.

Tip: Since the PEP Module Utilities Lab Scope picks up all the signal data and displays this data in a waveform it's best to use the Lab Scope when diagnosing intermittent readings. By contrast, the DVOM samples signals several times per second and then averages the data. Intermittent readings will be missed if they did not occur when the multimeter sampled the signal or the intermittent readings may be averaged out of the data.

DVOM/DMM – Set-up Procedure

Pressing the DVOM key activates the digital multimeter functions. Pressing it again will deactivate. The feature has two channels available. The active function is **Reverse Highlighted**. The user selects channels using the Left or Right arrow key. The screen shots will be on channel 2 for illustration purposes. The same items are available for channel 1.

Tip: Make sure the probes are fully inserted to prevent probe errors

To select a function, use the PAGE FWD or PAGE BACK keys to switch between Voltage, Ohms, Current, Frequency, or Disabled. If other choices are available, they can be accessed using the UP and DOWN arrow keys.

CHANNEL 2	CHANNEL 1
FUNCTION XXXXXXXX	FUNCTION XXXXXXXX
Reading	Reading

The choices for functions are:

- Disabled
- Voltage
- Ohms
- Current
- Frequency

DRB III® Features & Menus

Ohmmeter Setup

CHANNEL 2	CHANNEL 1
FUNCTION Ohms	FUNCTION Disabled
x.xx Ohms	

Use the ENTER key to change function to Ohms.
Note polarity of leads when inserting
Or channel 2 set ports.

Ohms

Measure resistance with test probes supplied with the kit. Insert the component to be measured between test leads. Be sure object being tested is not connected to voltage (example: remove a fuse from the fuse block before testing it). A clicking noise emitted from the DRB III® is normal and indicates switching of the auto-ranging function.

Tip:

- Ohms cannot be measured if voltage is present.
- Ohm can only be measured in a non-powered circuit.

Caution: The DRB III® will be damaged if voltage is present while measuring ohms.

The probe colors indicate DC polarity for use in testing diodes.
The ohmmeter is capable of measuring resistance up to 1.12 megohms.

Ammeter (Current) Setup

CHANNEL 2	CHANNEL 1
FUNCTION Current	FUNCTION Disabled
RANGE : XXXXXXXX	
x.xx Amps	

Use the ENTER key to change ranges.
Ranges available are:

- 2 Amp Shunt (Low Current)
- 10 Amp Shunt (Mid Current)
- 2-2k Amp Clamp (High Current Clamp)

DRB III® Features & Menus

Low Current Shunt

The Low Current Shunt (CH7040) provides either a 0-2 or a 0-10 amp range. It connects to either the Set 1 or Set 2 port on the DRB III® using its own connector.

Observe the correct polarity when connecting the Low Current Shunt or the DRB III® polarity reading (+) or (-) may be incorrect. The shunt represents a 1-ohm resistance in a circuit when the 2-amp range is selected. The shunt represents a 0.1-ohm resistance in a circuit when the 10-amp range is selected. Fuses on the back of the unit protect it against overloads. Three and ten amp automotive style fuses are used with their respective circuits. An ammeter is always connected in series to a device so that electricity can flow through the ammeter. In this case, however, electricity is flowing through the shunt

- Low Current (0-2 Amps)

Plug the Low Current Shunt into the DRB III® connectors (Set One or Set Two). Then, plug the test leads into the shunt. Plug the red test lead (+) into the "2A" plug. The black test lead (-) goes to negative (common).

If you are not sure how much Current is flowing through the device, first try the High Current setup, the Mid Current setup, then finally the Low Current setup, if indicated, by flow being less than 2 amps.

- Mid Current (0-10 Amps)

Plug the Low Current Shunt into the DRB III® connectors (Set One or Set Two). Then, plug the test leads into the shunt. Plug the red test lead (+) into the "10A" plug. The black test lead (-) goes to the negative (common).

If you are not sure how much current is flowing through the device, first try the High Current setup, then the Mid Current setup, if indicated, by flow being less than 10 amps.

Note: Low Current and Mid Current are not available at the same time. However, the user can select High Current and either Low Current or Mid Current incorrectly since the DRB III® cannot 'know' what the user has plugged into it.

High Current Clamp

Measure high current with the high current clamp (CH7045). This is an inductive "clamp" that is placed around a wire carrying a high current. The clamp can be connected to the Set 1 or Set 2 ports on the DRB III®. Observe indicated polarity of leads. The high current clamp senses the magnetic field formed by current flowing in a wire. Therefore, it must be positioned over the wire, some distance from devices, which radiate magnetism, such as the alternator. Operate the vehicle device and read the current flowing in the wire. A thumb knob potentiometer allows the meter to be set to zero (0) to improve accuracy. The clamp contains a 9-volt alkaline battery. An LED on the clamp face indicates the condition of the replaceable 9-volt alkaline battery, which is accessed from the rear of the high current clamp by removing a screw.

DRB III® Features & Menus

Items to Note:

- High current has two ranges: 0-200 amps and 0-200o amps (0-0.2 & 0-2k).
- Resolution is in 10 amp increments.
- Out of range is indicated by displaying the maximum reading in the available range.
- For current of 10 amps or less, use the low current shunt, as high current clamp accuracy below 10 amps is marginal, at best.

Temperature Measurement

CHANNEL 2	CHANNEL 1
FUNCTION Temperature	FUNCTION Disabled
UNIT : Fahrenheit	
x.xx F	

Use the ENTER key to change function to Temperature.
Note polarity of leads when inserting into channel 1 or channel 2 set ports.

Connect the temperature probe (CH7050) to the Set 1 or Set 2 ports (user selected) allows for temperature measurement. Place the probe in or against the object being measured to obtain a valid reading.

Two temperature probes may be used simultaneously (connected to both the Set 1 and Set 2 ports), but only one (1) probe is included in the kit.

The probe accuracy is +/- 0.12% over a range of - 58°- 1100° F (-50° to +600° C).
The probe will allow gentle bending to about a six-inch radius.

The element is a Resistive Temperature Detector (RTD) at the very tip of the probe. It may be used in three ways:

- Immersed in a liquid
- Surrounded by a vapor (air)
- Contact with a surface (at the flattened tip)

Cautions:

- Tip will be damaged or other mechanical shock may occur by dropping the probe.
- The probe is flexible and can be bent; however if it is bent too many times, the signal wires within the probe will break. Do not straighten the probe if it can be used in its current shape.

DRB III® Features & Menus

Frequency

CHANNEL 2	CHANNEL 1
FUNCTION Freq Meas	FUNCTION Disabled
00000HZ 000%	

CHANNEL 2	CHANNEL 1
FUNCTION Freq Gen	FUNCTION Disabled
FREQUENCY :	
00000HZ 000%	

Frequency Measurement

The DRB III® is only capable of measuring DC frequencies (not AC).

Frequency Generation (Not functional)

The DRB III® was designed to generate a DC square wave signal. This signal can range from 1 Hertz to 100,000 Hertz at 1 percent Duty Cycle to 100 percent Duty Cycle.

Its accuracy is calibrated at 72° F and up to 90 percent relative humidity. This feature was later deemed not required and support has been disabled.

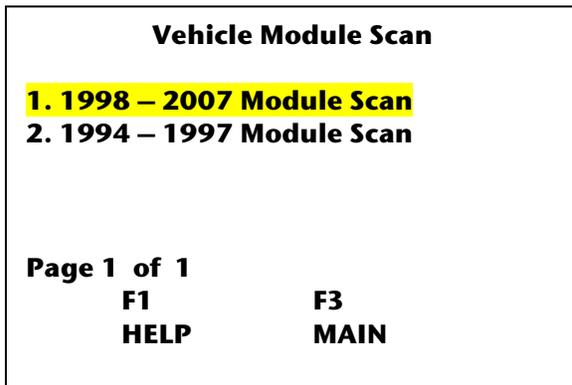
Dual Display Feature

Following a given selection for each channel, pressing the DVOM key restores the screen to the previous display, with the DVOM readouts displayed where normally the Function icons reside, at the bottom of the screen. This is useful when double-checking the reading on the DRB III® to the actual voltage reading at a sensor or input/out device. Pressing the DVOM key a second time cancels the function entirely.

End of Appendix C

DRB III® Features & Menus

Chapter 18 Appendix D – Vehicle Module Scan

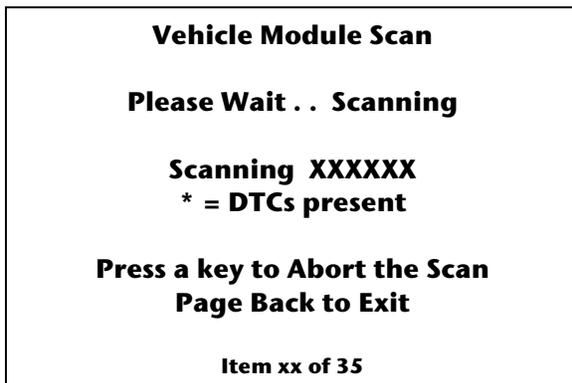


The user will be presented 2 choices.

1. 1998 – 2007 Module Scan – Requires the CH7000 or the longer CH7001 vehicle cable because all vehicles since 1996 use the OBDII standard connector. Secondly, it accesses software that is currently on-board the DRB III®. [1, 3, 1]

2. 1994 – 1997 Module Scan – Requires SuperCard2 (CH8361) and the CH7020 cable. This is a legacy application. [1, 3, 2 Launch Legacy, 4]

Screens shown are typical.

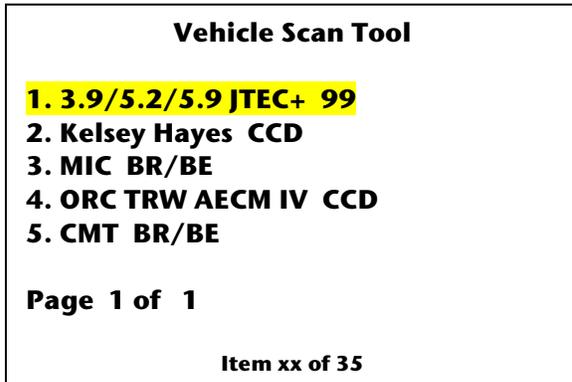


While this screen is displayed, the DRB III® Scan Tool is querying from a list of 35 different modules and looks for a potential response from each module. No vehicle has all modules.

NOTE: The fact that Module Scan did not report a module as being present DOES NOT mean the vehicle is not equipped with that module/system. If the module has a power, ground or a communication problem internally or externally it will not be listed since it did not report during the query.

DRB III® Features & Menus

Once completed, the screen will be updated automatically.



Scrolling to a module and pressing <Enter> will send the user to that module/system's menu entry point.

Tip: The feature of "tagging" modules containing DTCs with an (*) asterisk is done but once. If the user erases a given module's DTCs and returns to Module Scan the * will still exist.

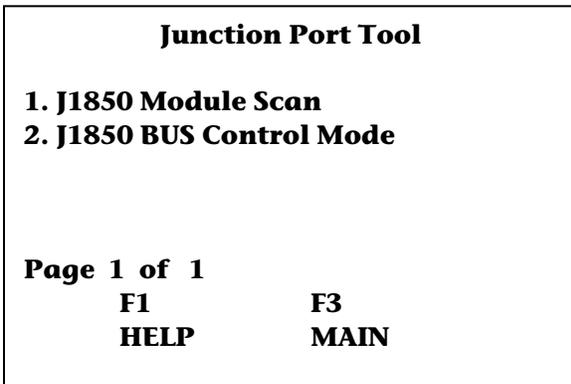
End of Appendix D

DRB III® Features & Menus

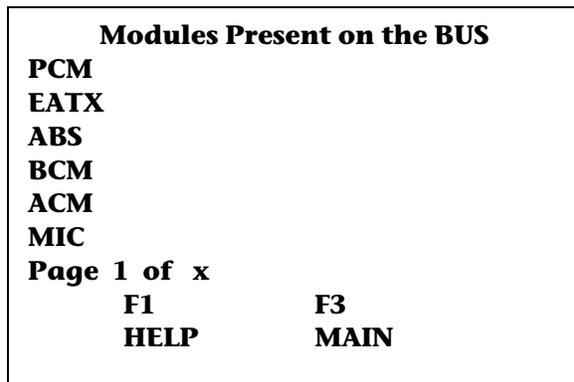
Chapter 19 Appendix E – Junction Port Tool

The Junction Port Tool was an essential tool (part of kit 8587) used in conjunction with the DRB III®. It has 16 internal relays that are in a Normally Open (NO) state. The default tool mode is the circuits are OPEN; they can only be closed using the DRB III®. The user will have to insert the proper cable in the vehicle being tested. Then connect that cable to the Junction Port Tool, then the tool to the DRB III®. The user will have to decide which pins to connect back into the vehicle's communication, the PCI/J1850 (BUS) system. This is done using the DRB III®.

Most junction ports were removed as a running change during 2002 or for MY 2003 from the vehicle. The following information is applicable ONLY if the vehicle is equipped with a junction port.



1. J1850 Module Scan, the DRB III® will query all modules that are actively communicating using PCI/J1850 on the BUS. During this test, the DRB III® will turn ON (close) ALL the relays in the JP Tool, **IF** the JP Tool is connected. The tool does not have to be connected to run this function, however. Multiple pages may be constructed to display all modules.



DRB III® Features & Menus

2. **J1850 BUS Control Mode**, the user will be presented with an explanation of the purpose of the Junction Port tool.

Junction Port Tool

Module Scan Mode

This mode is used to query the BUS and to identify any modules that are actively communicating on the BUS

Press <Enter> to continue

**F1 F3
HELP MAIN**

Additionally, the proper cable must be inserted in series to the vehicle. Currently, use either the ten or sixteen way connector.

Junction Port Tool Bus Control Mode

This mode is used to select which pin of the Junction Port Tool to connect back into the BUS. Once a pin is selected, the DRB III will query the selected pin and identify any modules that are actively communicating on the selected pin

Press <Enter> to continue

User must identify the junction port cable being used to the DRB III®.

Vehicle Selection

- 1. WJ 99-01 (10 Way)**
- 2. RS/KJ/DR and 02 WJ (16 Way)**
- 3. AN/DN 01 and up (16 Way)**

Page 1 of 1

DRB III® Features & Menus

Bus Control Mode

Use the keyboard to Enter the number of the Junction Port Tool pin to isolate from the BUS. The available pins are 1-4 and 6-16. Please refer to the pinout card for this vehicle to insure selection of proper pin

Pin # XX
Press <enter> to Continue

The next screens vary depending on what modules responded when that leg of the bus circuit was connected back into the vehicle system.

The information will be the list of modules that responded.

Reference Tables for connector pin-outs

Applications are subject to additions and deletions and are believed accurate (Fall 2003).

Grand Cherokee Junction Pin-out – 10 Way Connector

(Covers the 1999 – 2001 WJ)

PIN #	Call-Out
1	PCM, TCM, PDM, SKIM, CD-Changer
2	ABS, DDM, EVIC, MHSM
3	AZC
4	Radio
5	ACM
6	MIC
7	- Open -
8	BCM
9	PCI Feed to Data Link Connector (DLC)
10	- Open -
Notes	Pins 11 – 16 on the JP tool are NOT USED when the 10-way cable is in operation.

DRB III® Features & Menus

Grand Cherokee Junction Pin-out– 16 Way Connector

(Starts with the 2002 WJ)

PIN #	Call-Out
1	PCM, ECM, TCM, PDM, SKIM, CD
2	AZC
3	Radio
4	ACM
5	MIC
6	BCM
7	PCI feed to Data Link Connector
8	ABS, DDM, EVIC, MHSM, APM, ITM, Rain Sensor
9	- Open -
10	- Open -
11	Shift Lever Assembly (A580) used with 2.7L turbo-diesel – on WG models
12	- Open -
13	- Open -
14	- Open -
15	- Open -
16	- Open -
Notes:	

Minivan Junction Port Pin-out – 16 Way Connector

(Starts with the 2001 RS)

PIN #	Call-Out
1	PCM, SKIM
2	HVAC (Climate Control)
3	Radio
4	ORC
5	MIC (Cluster)
6	BCM
7	PCI feed to Data Link Connector
8	Overhead Console
9	IPM
10	DAB, (Dr. Side Airbag) LSIACM
11	Memory Seat Mirror
12	PWR Door LT/RT, PWR Liftgate
13	PAB (Pass. Side Airbag), RSIACM
14	- Open -
15	- Open -
16	Airbag On/Off Switch System (SRIM) -if equipped
Notes:	

DRB III® Features & Menus

AN/DN Truck Junction Port Pin-out – 16 Way Connector

(Starts with the 2001 AN /AN84 /DN trucks ONLY)

PIN #	Call-Out
1	MIC
2	TCCM (a.k.a. 4x4 Module or XCM)
3	CTM (Central Timer Module like a mini BCM)
4	Overhead Console
5	PCI feed to Data Link Connector
6	PCM
7	TCM
8	CAB (ABS/RWAL Module)
9	- Open -
10	- Open -
11	AMP, if equipped
12	Radio
13	(AN) HVAC
14	(DN) HVAC
15	ACM
16	SKIM
Notes:	

DR Truck Junction Port Pin-out – 16 Way Connector

(Starts with the 2002 DR trucks ONLY)

PIN #	Call-Out
1	PCM
2	HVAC
3	Radio
4	ACM
5	MIC
6	FCM
7	PCI feed to Data Link Connector
8	TCCM
9	Overhead Console
10	CAB (ABS, RWAL)
11	TCM
12	SKIM
13	LSIACM, RSIACM (Side Airbags)
14	AMP
15	- Open -
16	- Open
Notes:	

DRB III® Features & Menus

KJ Jeep Liberty Junction Port Pin-out – 16 Way Connector

(Starts with the 2002 Jeep Liberty ONLY)

PIN #	Call-Out
1	PCM, SKIM
2	TCM, CAB
3	Overhead Console, Radio, LSIACM, RSIACM
4	ACM
5	MIC
6	BCM
7	PCI feed to Data Link Connector
8	- Open -
9	- Open -
10	- Open -
11	- Open -
12	- Open -
13	- Open -
14	- Open -
15	- Open -
16	- Open
Notes:	

End of Appendix E

DRB III® Features & Menus

Chapter 20 Appendix F – Building Custom Displays

The DRB III® menu structure provides the user the ability to build “Custom Displays” or monitors. A monitor allows the combining of sensors with input/outputs to better allow a user to produce a screen showing the elements that he/she has chosen. Additionally, DRB III® allows combining of sensors and I/Os from different controllers. This is the basis of Climate Control described elsewhere.

Generally, custom displays will not be erased during a DRB III® update. However, there is always the rare possibility that the files will be erased accidentally by another user or when a DRB III® repair is needed, etc.

Custom Display is available at the Select Function level menu.

Its item number is **7. Custom Display**.

Since a custom display menu choice is available under any service category, all custom displays will be available from any other service category from the select function level.

Select # 7 Custom Display from any Select Function menu that is supported.

If there are NO previously saved Custom Displays the message below will be displayed.

**No Files were found
You will need to create
one by using the edit
function.**

Press any key to Continue

PRESS a key to continue.

Custom Display File List

- 1. Climate Control**
- 2. Custom Display 1**
- 3. New Custom Display**
- 4. File system Info**

Page 1 of 1 **TCM**

F1 F2
HELP LIST
 xx.x

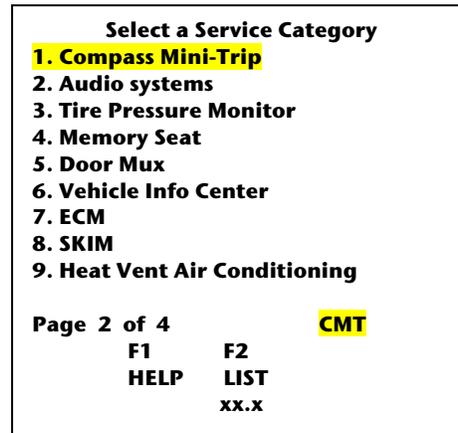
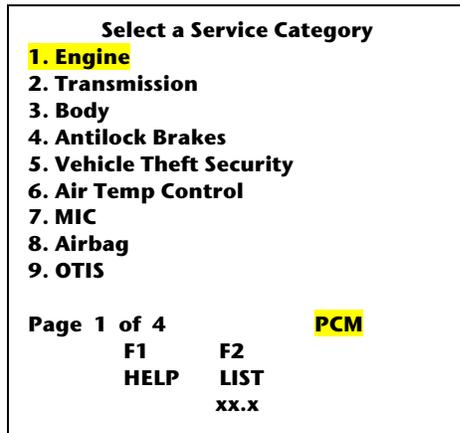
(Typical Screen shown)

DRB III® Features & Menus

Creating a NEW Custom Display

Select the option to create a New Custom Display.

The next screen will show the support modules (currently 35 - Summer 2001).



(2 of 4 possible screens shown)

Building custom displays allows the user to build a monitor of their own choosing, rather than one of the pre-built monitors. There are four important items to note.

1. As seen in monitors, Custom Display allows sensors and Input/Outputs to be viewed side-by-side.
2. The user determines the order based on the entry of each selection. It is recommended that the user review what information is needed AND the display order prior to building a custom display.
3. Custom Display allows items from more than single module to be added, unlike the pre-built monitor displays.
4. Custom Displays have been developed to work across ALL vehicle lines, so Sensors or I/Os in that list may not qualify on the current (attached) vehicle, but still may be selected.

DRB III® Features & Menus

As an example, build a custom display using the following:

Select - 1. **Engine** Service Category on page 1 of 4.

Select - 1. **Sensors**.

The Select a Sensor pages will be displayed. They can be navigated using left and right arrows. Select either the number in front of the item or scroll to the item and press ENTER.

From the first page select the line item 2 MAP VACUUM.

After making a selection, notice the work “**working**” flashes to the left side of the top line.

Use the **F2 LIST** Function key to review selection.

Press **PAGE BACK** - to return to the Select a Sensor page.

Press **PAGE BACK** - returns user to Select a Data Element Type menu

Press **PAGE BACK** - returns user to Select a Service Category menu

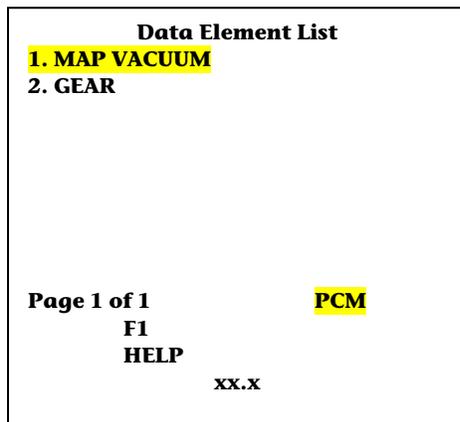
Select - the **2. Transmission** Service Category on page 1 of 4.

Select - **2. Inputs/Outputs**

Select - **5. Gear** on page 3 of 7

Use the **F2 LIST** Function key to review selection.

Your screen should look similar to this:



If you wanted to add more items, you could return and continue. Remember that to change service categories you must go back to the module level and drill back down through sensors and/or I/Os.

Tip: To determine which module (Service Category) is associated with a given Data Element or Item, scroll to **Reverse Highlight** the entry in question. The Service Category will be displayed in the lower right hand corner (PCM, TCM, etc.).

DRB III® Features & Menus

When complete,

Press **PAGE BACK** - to return to the Select an Input/Outputs page

Press **PAGE BACK** - returns user to Select a Data Element Type menu

Press **PAGE BACK** - returns user to Select a Service Category menu

Press **PAGE BACK** - provides a new Save? Screen

Save?

**Do you want to save the custom
Display you just created?**

(Yes/No)

F1 F2
HELP LIST

xx.x

At this point, you are asked if you want to save this custom display.

If you select NO, all changes for that session will be deleted.

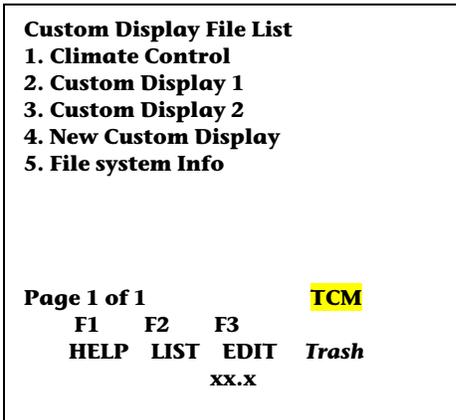
If you select YES, will save the custom display into a file, it can be accessed it at any time from any custom display main screen.

Each saved Custom Display will be given the next higher number. If, for example, there was 1 custom display previously this display will be numbered Custom Display 2.

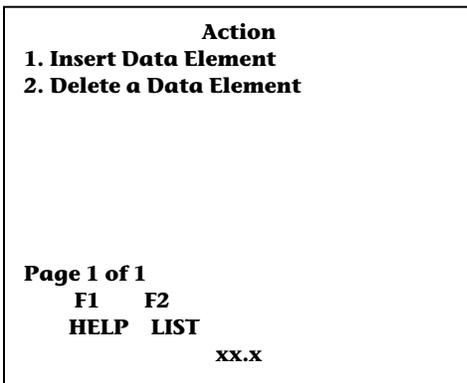
DRB III® Features & Menus

Edit a Custom Display

To EDIT any of your custom displays, first ENTER that display, then PAGE BACK.
Two additional ICONS will be available.



Press - F3 EDIT, The next screen will show:



Select to insert or delete Data Elements.

If user selects Insert, repeat the previous described process.

If user selects Delete, the Select Item to Delete screen will be built with all the items in that custom display, select either the number in front of the item to be deleted or scroll to the item and press ENTER.

The item(s) are deleted. You will NOT be asked if you want to save the changes.

End of Appendix F

DRB III® Features & Menus

Chapter 21 Appendix G – Climate Control

On “legacy” menus, the menu item **Climate Control** was available. It is still available on SuperCard 1 and SuperCard2 (CH8000 & CH8361). It is no longer directly available from a Select System Menu on the current menu structure.

A new Climate Control implementation was used for all DRB III® releases 50.0 and above. The custom display enhancement of being able to build data element (Sensors & I/Os) templates from multiple modules (Service Categories) will provide the structure for a “Global Build” template for Climate Control. Once you have connected to the vehicle using Standalone Menu entry, proceed into a Service category (PCM, TCM, etc.). From within the Service Category, choose #7. CUSTOM DISPLAY.

If a custom display template has previously been saved on the user’s DRB III®, the next screen will be “Custom Display File List”.

If there are NO previously saved Custom Displays the message below will be displayed.

**No Files were found
You will need to create
one by using the edit
function.**

Press any key to Continue

PRESS a key to continue.

From the Custom Display File List, Choose: **1. CLIMATE CONTROL.**

The Global Build list of approximately 30 items will be pruned to match the vehicle being tested.

The next screen(s) will identify the Data Elements NOT applicable to this vehicle.

The CLIMATE CONTROL Screen will be built with the available elements.

Data Elements Not on this vehicle

A list of data elements NOT applicable is shown. May be more than one page for a manual A/C system.

Press any key to Continue

Climate Control

DES LOW SPEED FAN : OFF
ACT LOW SPEED FAN : CONTROL HI
DES HIGH SPEED FAN : OFF
ACT HIGH SPEED FAN : CONTROL HI
DES AC CLUTCH RELAY : OFF
ACT AC CLUTCH RELAY : CONTROL HI
ENG COOLANT TEMP DEG : +197.6 ° F

Item 1 of 7 **PCM**

F1 F2
HELP LIST
xx.x

End of Appendix G

DRB III® Features & Menus

Chapter 22 Appendix H – Acronyms and Body Code Information

To determine which module (Service Category) is associated with a given Data Element or Item, scroll to **Reverse Highlight** the entry in question. The Service Category will be displayed in the lower right hand corner (PCM, TCM, etc.).

Service Category (3-digit) Codes:

ABS	Antilock Brakes System (module is CAB, Controller, Anti-lock Brake)
APM	Adjustable Pedal Module
ATC	Air Temp Control (a.k.a. Automatic Temperature Control and/or AZC Automatic Zone Control)
AUD	Audio Systems
BCM	Body or Body Control Module
BEM	Battery Energy Management (EPIC - electric minivan)
CHM	Cabin Heater Module
CLM	Climate or Climate Control Module
CMT	*Compass Mini-Trip*
CTM	Central Timer Module
DAA	Digital Audio Amplifier
DSD	Driver Sliding Door
ECM	Engine Control Module (usually translates to a Diesel controller)
EHV	Electric Heating and Ventilation (EPIC - electric minivan)
FCM	Front Control Module
HVA	Heat Vent Air Conditioning
J79	J1979 Protocol
LSA	Left Side Airbag
MIC	Electronic Mechanical Instrument Cluster
MSM	Memory Seat
MUX	Door Mux (Multiplex)
OCS	Occupant Classification System
OBD	OBD II Monitor Group for separate monitor display
ORC	Air Bag system - Occupant Restraint Controller
OSM	Overland Suspension System Module
OTS	*Overhead Traveler Information System*
PAM	Park Assist Module
PCA	Powertrain Controller (EPIC - electric minivan)
PCM	Engine Control Module (a.k.a. SBEC, JTEC, NGC, etc.)
PHS	Power Steering (EPIC - electric minivan)
PLM	Power Liftgate Module
PSD	Passenger Sliding Door
RSA	Right Side Airbag
RSM	Rain Sensor Module
SBT	Serial Bus Traveller
SKM	Sentry Key Immobilizer System or SKIM or SKREEM module
SLA	Shift Lever Sensor Module
SPS	Speed Pro Steering
SRM	SRIM (Airbag ON/OFF switch system)
STS	Special Tests
TCM	Transmission Control Module (EATX)
TDR	Transmission Data Recorder
TPM	Tire Pressure Monitor

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TRV	*Traveller*
VIC	*Vehicle Info Center*
VTS	Vehicle Theft Security
XCM	Transfer Case Module
(*) NOTE:	Part of Overhead Console

Acronyms

As with any OEM, there are many specialized terms, names and acronyms used. Most, but not all, are explained in this document. Refer to the specific diagnostic/service manual or training publication to learn about incomplete or missing explanations.

ABS	Antilock Brake System
ACM	Airbag Control Module
ACEM	Airbag Electronic Control Module
AOSIM	Airbag On/Off Switch Indicator Module (formerly SRIM)
APM	Adjustable Pedal Module
ATC	Automatic Temperature Control
AZC	Automatic Zone Control
AUD	Audio Systems
BCM	Body Control Module
BUX	Built-Up Export
CAB	Controller, Antilock Brakes
CCD	Chrysler Collision Detection
CHM	Cabin Heater Module
CMTC	Compass Mini-Trip
CTM	Central Timer Module
DAA	Digital Audio Amplifier
DDM	Drivers Door Module (aka Mux)
DJP	Diagnostic Junction Port
DLC	Data Link Connector
DMM	Digital Multimeter
DTC	Diagnostic Trouble Code(s)
DVOM	Digital Volt Ohm Meter
DRL	Daytime Running Lights
DSD	Driver Sliding Door
EATX	Electronic Automatic Trans Control Module
ECM	Engine Control Module (usually a Diesel controller)
EVIC	Electronic Vehicle Information Center
FCM	Front Control Module
HVAC	Heater Ventilation Air Conditioning
I/O	Input/Output
IPM	Integrated Power Module
JTEC	Jeep/Truck Engine Controller (see PCM)
LSA	Left Side Airbag
MDS1	Mopar Diagnostic System 1st Gen (no longer supported)
MDS2	Mopar Diagnostic System 2nd Gen (no longer supported)
TechCONNECT & TechTOOLS	TechCONNECT is the current dealership system, a component of DealerCONNECT. AfterMarket access is through TechAuthority on-line.

TechTOOLS is available from TechCONNECT or TechAuthority

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MIC	Electronic Mechanical Instrument Cluster
MIL	Malfunction Indicator Lamp
MSM	Memory Seat Module
MSMM	Memory Seat and Mirror Module
MUX	Door Mux (either driver or passenger)
NGC	Next Generation Controller (see PCM)
ORC	Air Bag system - Occupant Restraint Controller
OSSM	Overland Suspension System Module
OTIS	Overhead Traveler Information System
PCI	Programmable Communication Interface (aka J1850) Bus
PCM	Powertrain Control Module (SBEC, JTEC, NGC)
PDM	Passenger Door Module (aka Mux)
PLM	Power Liftgate Module
PSD	Passenger Sliding Door
RSA	Right Side Airbag
RSM	Rain Sensor Module
SBT	Serial Bus Traveller
SBEC	Single Board Engine Controller (see PCM)
SCTM	Seatbelt Control Timer Module
SIACM	Side Impact Airbag Control Module
SKIM	Sentry Key Immobilizer Module
SKIS	Sentry Key Immobilizer System
SKREEM	Sentry Key REmote Entry Module
SLA	Shift Lever Sensor Module
SPS	Speed Pro Steering
SSAC	Supplemental Side Air Curtains
TCM	Transmission Control Module
TCCM	Transfer Case Control Module
TPM	Tire Pressure Monitor
TRV	Traveller
VIC	Vehicle Info Center
VSS	Vehicle Speed Signal (formerly vehicle speed sensor)
VTSS	Vehicle Theft Security System
XCM	Transfer Case Module

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DRB III® supported Vehicle Body Decode Table

Cars

JA	Stratus / Cirrus / Breeze (4-dr. sedan)	1995 – 2000
JX	Chrysler Sebring Convertible	1996 – 2000
JR	Sebring Convertible & 4-dr. sedan / Stratus 4-dr. sedan	2001 – 2006
LH	LHS / 300M / Concorde / Intrepid (renewed 1998)	1993 – 2004
PL	Neon (renewed 2000)	1995 – 2004
PT	PT Cruiser	2001 – 2005
PR	Prowler	1997 – 2002
SR	Dodge Viper -Sport Roadster (Coupe 1996-2002)	1992 – 2002
ZB	Dodge Viper - Convertible	2003 – 2006
ZH	Chrysler Crossfire	2004 – 2006
		2007 RoW (non-NAFTA)

Minivans

NS	Caravan / Voyager / Town & Country	1996 – 2000
RS	Caravan / Voyager / Town & Country	2001 – 2007

Trucks

AB	Ram Van/Wagon	1971 – 2003
AN	Dakota (redone for 1997)	1987 – 2004
BR	Ram Pickup 1500/2500/3500 2-dr. (dualie also)	1994 – 2002
BE	Ram Pickup Club Cab and Quad cab	1998 – 2002
DN	Durango	1998 – 2002
DR	Ram Pick-up	2002 – 2005
VA	Dodge NAFTA Sprinter	2003 – 2006

JEEP™

KJ	Liberty	2002 – 2005
XJ	Cherokee / Wagoneer	1984 – 2001
TJ	Wrangler	1997 – 2006
WJ	Grand Cherokee	1999 – 2004
ZJ	Grand Cherokee	1993 – 1998

International (BUX)

Chrysler sells many models globally, but a few have their own designation codes

GS	Chrysler Voyager	1996 – 2000
RG	Chrysler Voyager	2001 – 2007
ZG	Jeep Grand Cherokee	1995 – 1998
WG	Jeep Grand Cherokee	1999 – 2004
PG	PT Cruiser (was built in Graz, Austria, now Mexico)	2002 – 2003

DaimlerChrysler & Mitsubishi (MMC)

FJ	Eagle Talon F24S (2-dr. coupes)	1995 – 1998
FJ	Dodge Avenger / Chrysler Sebring FJ22 (2-dr. coupes)	1995 – 2000
ST22	Dodge Stratus / Chrysler Sebring ST22 (2-dr. coupes)	2001 – 2005

End of appendix H.

DRB III® Features & Menus

Chapter 23 Appendix I - Concerns, Cautions and Tips

Concerns:

(Also available on MDS Bulletin MDS00009)

Electrical Contact Cleaner

Some electrical contact cleaners have been known to corrode, or melt the plastic cover of the DRB III®. User is responsible for damage to the DRB III®. NOTE: SPX only uses alcohol when cleaning a DRB III® for repair. To check your cleaner, please spray a small area on the back of the DRB III® to see if your cleaner will melt the case of the DRB III®. Once user is satisfied that a given cleaner is non-destructive continue. When using the electrical contact cleaner on the DRB III® VEHICLE connector, please DO NOT spray the cleaner directly into the connector. After checking its compatibility, spray the cleaner onto a small brush, and then use the brush to clean the connectors on the DRB III® cable.

DRB III® Connector

If you are having problems with the DRB III® cable making or keeping, a good connection to the DRB III® itself, please look at the connector 'ears' on the DRB III®. In some cases, we have seen that the 'ears' are worn, and no longer make a tight connection. If this occurs, you will need to send the DRB III® back to SPX for repair. The repair form is located in Appendix J.

Cautions:

Memory Cards

Removing by pulling any PCMCIA supplemental memory card out of its socket while the application is running is NOT recommended. At a minimum, this will cause an exception to occur!

Do not drop these cards or place near magnetic field sources (motor winding, magnet, etc.) The data is stored magnetically and may be lost.

Cooling Fan

The cooling fan should run continuously when the DRB III® is powered up. Periodically, snap the fan cover off and check the filter (CH6060). Clean or replace as necessary. Do NOT block the cooling fan; failure to allow full airflow may cause your DRB III® to overheat.

DRB III® Operating Current Draw

Do not leave the DRB III® connected to an inactive vehicle for any length of time. The DRB III® draws 0.9 amp or 1.5 amps, if the backlight display is ON. If the DRB III® is connected to an inactive vehicle for too long, it may run down the vehicle battery.

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DRB III® Cables

There are a variety of DRB III® cables available. Please consider cables to be wear items. Often many intermittent problems that are reported can be traced to cable problems. For this reason it is recommended that a spare cable always be available to help you resolve these types of problems in your own place of business.

Destroy old cables to prevent problems after you purchase new cables.

Cable information is available in the DRB III® Hardware, Operation, and Accessories Reference Guide P/N 510325 available from PSE under P/N CH6050, for their function and part number. Additionally some additional information follows:

DRB III® Cable Released For Flash Reprogramming

CH7000A – 8 ft. Cable, DRB III® to OBDII (J1962) DLC Connector

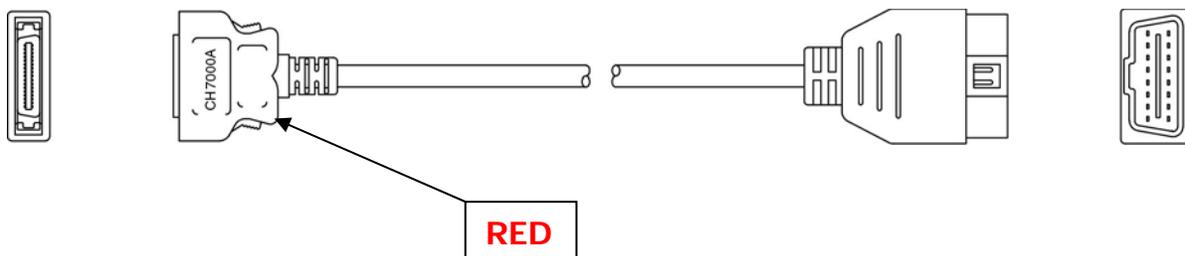
This is an Essential Service Tool!

CH7000A is a new essential tool that is required for ALL flash reprogramming operations that previously used the CH7000 cable.

Easily identified, this new cable uses a **RED** connector, which plugs into the DRB III®.

The cable modification enhances the DRB III® communication capabilities when dealing with the flash requirements of certain controllers/ECUs affected in part by the recent changes in DLC connector configurations.

The new cable is required for ALL flash reprogramming events, and can be used wherever the previous CH7000/7001 cables were used. To place additional cable orders for all your DRB III®s, call 1-800-223-5623.



NOTE: Consider all cables wear items. Always inspect for worn, damaged cables, connectors that are damaged or do not lock securely, and all mating connections including checking for corrosion on the pins. REPLACE ALL suspect cables. Do not use worn or damaged cables when performing flash reprogramming events.

Failure to use the new cable or to use a damaged cable often results in failed flash reprogramming events.

While not recommended for flash reprogramming usage, if you require a longer cable, there is also a new 12-foot cable released under p/n CH7001A.

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All orders placed for CH7000/CH7001 supersede to part numbers CH7000A/CH7001A.

Cable End Repair Kits

- DRB III® kit OT CH7000A-1 to repair cable connection at scantool end to vehicle connector.
- DRB III® kit OT CH7035B-1 to repair GPIB cable connection to DRB III®

Tips:

Software programs may contain errors that are not apparent until certain conditions are present to cause the error. When a problem in this software is found, document it as completely as possible so the error can be replicated. A few additional items that the user can perform when this occurs are:

- Lock-ups

- The current screen 'freezes' and user cannot continue. 2 choices:

Warm Boot

- Simultaneously press the MORE and NO keys. This will reset the software and return user to MAIN MENU. Also works with memory cards.

Cold Boot

- Simultaneously press the MORE and YES keys. A screen will be provided warning the operator that this will also remove items stored in memory. Press Cancel to Escape or press F4 to continue. Pressing F4 will re-boot the operating software, clear memories, and return user to MAIN MENU. Also works with memory cards.

- Exceptions

- Can be reported on the Exception Form in this manual.

End of Appendix I

DRB III® Features & Menus

Chapter 24 Appendix J – Forms

DRB III® Repair Authorization

DRB III® REPAIR AUTHORIZATION

Please complete this form, and return it along with your product when sending equipment to SPX for repair.

Product Information

Item to be repaired **DRB III®** S/N _____

Describe Symptoms: (Please use an additional sheet of paper if required)

Has the unit been repaired previously by SPX? YES ____ NO ____ Date of Repair _____

Customer Information

Dealer/ Distributor/
Registered Owner
Or Business Name: _____

Address: _____

City, State & Country: _____

ZIP Code: _____

Phone Number: _____
(Include Country Code)

Contact Name: _____

Email: _____

FAX: _____

PAYMENT INFORMATION

THIS INFORMATION IS REQUIRED TO BEGIN NON-WARRANTY REPAIR

PO # _____
Visa ____ MC ____ Discover ____ Card No. _____ Exp. Date ____ / ____

Name as it appears on credit card _____

Shipping Information

Please package your product securely and ship to SPX at the following address:

SPX Corporation
Electronic Service Center
2300 Park Drive
Owatonna, MN 55060-4925

Date Shipped: _____ **Mode of Shipment, UPS, Red** ____ **Other** _____

USA/Canada - Phone **1-800-344-4013**, All Others - Phone **1-507-455-4369**

Email at eservice@servicesolutions.spx.com – Fax 1-507-455-4410

DRB III® Features & Menus

DRB III® Data Error Reporting Form

DRB III® Data Error Reporting Form

Use this form to report a suspected data error (Sensor, I/O, Monitor, etc.) when using the DRB III® at Release 58.0 or above.

Accessing the DRB III® Transaction Tracing Information

1. Using the UP or DOWN Arrow keys, highlight the Line Item in question.
2. Press the ENTER to isolate the Line Item highlighted in Step 1.
3. Press the PAGE FWD to access the Transaction Tracing Information.
4. Fill out the complete form below with the appropriate information.

Provide the DRB III® Version Code # (58.0, etc.) _____

Do **NOT** use this form for SuperCard1, SuperCard2, ST22, Sprinter or Crossfire Card problems.

Vehicle Information

Model Year of Vehicle	
Body Style of Vehicle	
VIN (Last 9 digits)	
Service Category (Engine, Trans., etc...)	

Line Item Name (Write In)

Line Item State (Write In)

Is this a Monitor Item? Yes	No
If Yes, Provide the Monitor Name	

Transaction

Result/Value (Write In)

Raw Data	
DEID	
Status	
Rank	

Reported By

Name	
Job Title	
Phone Number	
FAX Number	
Best Time to Contact	

Comments:

FAX to: 800-825-1980

DRB III® Features & Menus

DRB III® - Exception Report Form

DRB III® Exception Occurred Reporting Form

Use this form to report an exception occurred when using the DRB III®.

Vehicle Information

Model Year of Vehicle	
Body Style of Vehicle	
VIN (Last 9 digits)	
Service Category (Engine, Trans., etc...)	

Provide the DRB III® Version Code # (58.0, etc.) _____

Reported By

Name	
Job Title	
Phone Number	
FAX Number	
Best Time to Contact	

Exception Occurred:

The following exception occurred while:	
EXCEPTION OCCURRED	
Bus Error	:
Status Register	:
Program Counter	:
Format	:
Faulted Address	:
Data Buffer	:
Current Instruction	:
Trans. Count Reg.	:
Spec Status Reg.	:

FAX to: 800-825-1980

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Chapter 25 Appendix K – Other Sources for Information

Equipment Sources

PentaStar Service Equipment

PSE is part of the DaimlerChrysler Group. This is the dealership entry point for purchasing the DRB III®, StarSCAN®/StarMOBILE™ and accessories for these tools.

<http://www.pse.daimlerchrysler.com>

1.800.223.5623

1.800.734.4334 (Fax)

Miller/SPX Special Tools

Miller Special Tools is DaimlerChrysler's partner in the distribution and repair of DRB III®, StarSCAN®/StarMOBILE™, and related accessories. This is the aftermarket entry point for purchasing the DRB III®, StarSCAN®/StarMOBILE™ and accessories for these tools. A copy of the end user license agreement is also available from their URL.

<http://www.miller.spx.com>

1.800.801.5420

1.800.578.7375 (Fax)

OTC

OTC is also part of SPX. The electronic repairs to DRB III® and StarSCAN®/StarMOBILE™ are done at their facility in Owatonna, MN.

<http://www.otctools.com>

eservice@servicesolutions.spx.com

1.800.533.6127

1.800.283.8665 (Fax)

Sources for Training and Publications

DaimlerChrysler Academy

The DCA Training Delivery group provides training and training materials. Dealers can access the course info via DealerCONNECT using the training tab. Others can find out about the course materials through the Tech Authority portal.

Tech Authority

This is the distribution arm of DaimlerChrysler Training Academy. Accessing this website will provide information on all the courseware and publications available from Tech Authority.

<http://www.techauthority.daimlerchrysler.com> or call 1.800.890.4038

DDS

Dyment Distribution Services Ltd. provides distribution services for various DC publications. 1.800.890.4038

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Other Sources of Information

EPA

Environmental Protection Agency – The government enforcement arm that administers the U. S Clean Air Act. [See <http://www.epa.gov>]

CARB

California Air Resources Board – A similar government enforcement that regulates vehicles in and for the State of California. [See <http://www.arb.ca.gov/homepage.htm>]

SAE

Society of Automotive Engineers [See <http://www.sae.org>]

End of Appendix K