

Module Configuration - System Operation and Component Description



System Operation

Module Programming Menu

Module programming is listed under the Toolbox tab after starting an IDS session with a vehicle. The module programming menu is disabled when a manual vehicle session is created.

The Module Programming menu has 4 selections:

- PMI
- Module Reprogramming
- Programmable Parameters
- As-Built

These selections may not be present for all vehicles.

Programmable Module Installation (PMI)

PMI is a diagnostic scan tool process which configures settings in a new module. Data used for the PMI process is automatically downloaded from the original module and stored when a diagnostic scan tool session is started. If this data cannot be retrieved from the module being replaced, the diagnostic scan tool may prompt for As-Built data entry or display a list of parameter values that need to be manually selected. Some modules are reprogrammed during PMI when a strategy/calibration update is available.

It is important that the diagnostic scan tool identifies the vehicle and obtains configuration data prior to removing any modules. The new module must be able to communicate with the diagnostic scan tool in order to carry out PMI.

Module Reprogramming

Module reprogramming (also referred to as flashing) is a diagnostic scan tool process which updates the strategy/calibration in a module. During module programming, the IDS will read the current software levels within the module and compare this information with the IDS database. If there is an update, it will be displayed on the IDS screen.

Reprogramming a module with the same level of software does not improve module operation or repair a hardware failure. Module reprogramming is automatically carried out during PMI when a later strategy/calibration is available.

Limit module reprogramming to circumstances where a published TSB, GSB, SSM or FSA recommends doing so.

A module cannot communicate with other modules on the communication network while being reprogrammed. After the reprogramming process, clear any network communication Diagnostic Trouble Codes (DTCs) which may have been set in other modules.

Some modules are reprogrammed in coordination with other modules. Follow the IDS key cycling instructions carefully to avoid reprogramming errors, including failure of programming one or more of the modules.

Programmable Parameters

Programmable parameters are customer preference items that may be modified by the dealer via the diagnostic scan tool or in some cases, modified by the customer following a procedure listed in the Owner's Literature. While many configuration options may exist for a module, only a few of these options are programmable parameters.

Adaptive Learning and Calibration

Some modules require a separate learning procedure be carried out if replaced as part of a repair procedure. For adaptive learning and calibration instructions, refer to the specific module removal and installation procedures.

Vehicle Identification (VID) Block

Vehicle identification block commonly stores powertrain configuration items such as VIN , tire size, axle ratio, and whether or not the vehicle is equipped with cruise control. The vehicle identification block is programmed as part of the PMI , As-Built or Programmable Parameter routines. The vehicle identification block does not have its own programming procedure.

As-Built Data

As-Built data is a VIN -specific module configuration record. During vehicle build, the configuration from all modules is downloaded and stored in the As-Built database. As-Built data does not reflect customer preference items that have been changed from the default state. These items need to be changed using programmable parameters after the module is configured.

As-Built data is not the same as module configuration data.

It is not necessary to obtain As-Built data unless directed to do so by the diagnostic scan tool. This data is retrieved automatically from the PTS web site. If automatic data retrieval fails, the data can be entered into IDS manually.

Module Configuration and Parameter Chart

The chart describes specific module configuration information:

Module Name	Module Address	Programmable Module Installation (PMI) Available	Reprogram/Flash Capable	Requires Adaptive Learning or Calibration	Available Programmable Parameters
<u>ABS</u> module	760	Yes	Yes	Yaw rate sensor calibration	None
<u>BCM</u>	726	Yes	Yes	<ul style="list-style-type: none"> • <u>CEI</u> lock configuration • Private sub nodes configuration 	<ul style="list-style-type: none"> • <u>DRL</u> by autolamps configuration • Silent mode enable/disable • <u>DRL</u> with parklamps enable/disable (Canada only) • <u>LF</u> and <u>RE</u> low beam usage configuration • Power point maxtime configuration
<u>CCM</u>	764	Yes	Yes	Radar alignment	None
<u>GWM</u>	716	Yes	Yes	No	None
<u>IPC</u>	720	Yes	Yes	No	<ul style="list-style-type: none"> • <u>DRL</u> control function enable/disable • Welcome goodbye configuration enable/disable • Display unit selection function

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<u>IPMA</u>	706	Yes	Yes	Camera alignment	<ul style="list-style-type: none"> Module country configuration (Canada only) Module speed limit sign unit configuration (KPH/MPH) (Canada only)
<u>PAM</u> / Lane Departure Warning Sounder Module (LDWSM)	736	Yes	Yes	No	None
<u>PCM</u>	7E0	Yes	Yes	Neutral misfire monitor profile learning procedure	Vehicle speed limiting
<u>SCCM</u>	724	Yes	Yes	Private sub nodes configuration	None
<u>TCU</u>	754	Yes	Yes	No	None

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