Module Configuration

Special Tool(s)

 ST2834-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool

Principles of Operation

Configurable modules accommodate a variety of vehicle options, eliminating the need for many unique modules for one vehicle line. These modules must be configured when replaced as part of a repair procedure. Configurable modules should not be exchanged between vehicles since the settings are unique to each vehicle. Failure to configure a new module may result in incorrect operation and/or DTCs setting.

The following are the 3 different methods of configuration:

- Programmable Module Installation (PMI)
- Module reprogramming ("flashing")
- Programmable parameters

Some modules do not support all 3 methods.

Definition of Terms

The following are definitions of configuration terms:

Programmable Module Installation (PMI)

PMI is a 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 scan tool session is started. If this data cannot be retrieved from the module being replaced, the 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. To carry out PMI , refer to Programmable Module Installation (PMI) in this section.

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

Module Reprogramming

Module reprogramming (also referred to as "flashing") is a scan tool process which updates the strategy/calibration in a module. Reprogramming a module with the same level of software will not improve module operation or repair a hardware failure. Module reprogramming is automatically carried out during PMI when a later strategy/calibration is available.

NOTE: *Module reprogramming should be limited to circumstances where a published TSB procedure recommends doing so.*

NOTE: *A module cannot communicate with other modules on the communication network while being reprogrammed. Clear any network communication DTCs which may have been set in other modules during the reprogramming process.*

Programmable Parameters

Programmable parameters are customer preference items that may be modified by the dealer via the scan tool or in some cases modified by the customer following a procedure listed in the vehicle 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

Some PCMs contain a memory area called a Vehicle Identification (VID) block. The PCM VID block commonly stores powertrain configuration items such as Vehicle Identification Number (VIN) , tire size, axle ratio, and whether or not the vehicle is equipped with speed control.

Module Address

A unique module address is assigned to each module on the network for identification.

Module Configuration and Parameter Chart

NOTE: *As-Built data is not available for this vehicle. Programmable parameters will need to be configured if the original module is not available.*

Module	Requires PMI	Reprogram/ Flash Capable	Requires Adaptive Learning or Calibration	Available Programmable Parameters
3-channel ABS module	Yes	Yes	No	• Wheel base
4-channel ABS module	Yes	Yes	No	• Engine displacement • Tire size (revolutions per mile)
Instrument Cluster (IC)	Yes	Yes	No	• Belt-minder® • Engine hour meter reset • Outside air temperature
PCM	Yes	Yes	• Adaptive airflow • Idle speed • Refueling event • Fuel trim	• Speed control • Axle ratio • Tire size

Inspection and Verification

This section provides step-by-step module configuration procedures. Carry out the procedure listed in the chart below for the module setting the DTC. Refer to the Diagnostic Trouble Code (DTC) Chart in Section 419-10 for DTCs not listed below.

DTC Chart

DTC	Description	Source	Action
B2477	Module Configuration Failure	• ABS module • IC	CONFIGURE the module by entering available programmable parameters. REFER to Module Configuration and Parameter Chart in this section.
B2900	VIN Mismatch	ABS module	CONFIGURE the module by entering available programmable parameters. REFER to Module Configuration and Parameter Chart in this section.
P0602	Powertrain Control Module Programming Error	PCM	CARRY OUT PMI . REFER to Programmable Module Installation (PMI) in this section.
P0605	Internal Control Module Read Only Memory (ROM) Error	PCM	CARRY OUT PMI . REFER to Programmable Module Installation (PMI) in this section.
P1639	Vehicle ID Block Corrupted, Not Programmed	PCM	CARRY OUT PMI . REFER to Programmable Module Installation (PMI) in this section.
U0300	Internal Control Module Software Incompatibility	PCM	CARRY OUT PMI . REFER to Programmable Module Installation (PMI) in this section.
U0301	Software Incompatibility with Engine/Powertrain Control Module	PCM	CARRY OUT PMI . REFER to Programmable Module Installation (PMI) in this section.
U2050	No Application Present	ABS module	CONFIGURE the module by entering available programmable parameters. REFER to Module Configuration and Parameter Chart in this section.
U2051	One or More Calibration Files Missing/Corrupt	ABS module	CONFIGURE the module by entering available programmable parameters. REFER to Module Configuration and Parameter Chart in this section.