PCM/ECM/SKREEM PROGRAMMING

PCM/ECM/Skreem Programming

NOTE: Before replacing the Powertrain Control Module (PCM) or Engine Control Module (ECM), be certain to check the related component/circuit integrity for failures not detected due to a double fault in the circuit. Most PCM/ECM driver/control circuit failures are caused by internal component failures (such as relays and solenoids) and shorted circuits (such as pull-ups, drivers, and switched circuits). These failures are difficult to detect when a double fault has occurred and only one DTC has been set.

When a Powertrain Control Module (PCM) for a gasoline engine, or an Engine Control Module (ECM) for a diesel engine and the Sentry Key REmote Entry Module (SKREEM) on vehicles equipped with the Sentry Key Immobilizer System (SKIS) are replaced at the same time, perform the following steps in order:

1. Program the new PCM/ECM.
2. Program the new SKREEM (also sometimes referred to as the Wireless Control Module or WCM).
3. Replace all ignition keys and program them into the new SKREEM/WCM.

PROGRAMMING THE PCM/ECM/SKREEM

The SKIS Secret Key is an ID code that is unique to each SKREEM/WCM. This code is programmed and stored in the SKREEM/WCM, the PCM/ECM, the GateWay module (on SRT10 vehicles with a hybrid bus only) and each ignition key transponder chip. When the PCM/ECM or SKREEM/WCM is replaced, it is necessary to program the Secret Key into the new modules using a diagnostic scan tool. Follow the programming steps outlined in the diagnostic scan tool for PCM Replaced, ECM Replaced, WCM Replaced, or GateWay Replaced under Miscellaneous Functions for the WCM/Wireless Control Module menu item as appropriate.

NOTE:

- Be certain to enter the correct country code for the SKREEM/WCM. If the incorrect country code is programmed into the SKREEM, it cannot be changed and the SKREEM must be replaced.
- If the PCM/ECM and the SKREEM/WCM are replaced at the same time, all vehicle ignition keys will need to be replaced and the new keys programmed into the new SKREEM/WCM.
- Programming the PCM/ECM or SKREEM is done using a diagnostic scan tool and a PIN to enter secure access mode. If three attempts are made to enter secure access mode using an incorrect PIN, secure access mode will be locked out for **one hour**. To exit this lockout mode, turn the ignition to the RUN position for **one hour** then enter the correct PIN. (Ensure all accessories are turned OFF. Also monitor the battery state and connect a battery charger if necessary).

PROGRAMMING IGNITION KEYS TO THE SKREEM

Each ignition key transponder also has a unique ID code that is assigned at the time the key is manufactured. When a key is programmed into the SKREEM/WCM, the transponder ID code is learned by the module and the transponder acquires the unique Secret Key ID code from the SKREEM/WCM. To program ignition keys into the SKREEM/WCM, follow the programming steps outlined in the diagnostic scan tool for Program Ignition Keys or Key FOBs under Miscellaneous Functions for the WCM/Wireless Control Module menu item.

NOTE: A maximum of eight keys can be learned to each SKREEM. Once a key is learned to a SKREEM, that key has

acquired the Secret Key for that SKREEM and cannot be transferred to any other SKREEM or vehicle. If ignition key programming is unsuccessful, the scan tool will display one of the following error messages:

- **Programming Not Attempted** - The scan tool attempts to read the programmed key status and there are no keys programmed into SKREEM memory.
- **Programming Key Failed (Possible Used Key From Wrong Vehicle)** - SKREEM is unable to program an ignition key transponder due to one of the following:
  - The ignition key transponder is ineffective.
  - The ignition key transponder is or has been already programmed to another vehicle.

- **8 Keys Already Learned, Programming Not Done** - The SKREEM transponder ID memory is full.
- **Learned Key In Ignition** - The ID for the ignition key transponder currently in the ignition lock cylinder is already programmed into SKREEM memory.