Static Heater Signal
A status of "ON" indicates that the heater module sees the "Stationary Heating Mode ON" signal after switching on the heater with the heater timer or the auxiliary heater switch. A status of "OFF" indicates that the "Stationary Heating Mode ON" signal is not present at the heater module.

Heater Booster Mode Signal
A status of "ON" indicates that the heater module sees the "Heater Booster Mode ON" signal after switching on the heater with the auxiliary heater switch. A status of "OFF" indicates that the "Heater Booster Mode ON" signal is not present at the heater module.

3.4 INSTRUMENT CLUSTER

The Instrument Cluster has easy-to-read instruments, is capable of CAN bus communication and provides a diagnostic function. The Instrument Cluster with analog speedometer, tachometer, fuel and coolant temperature gauges comes in two versions.

- Speedometer with outer miles-per-hour (mph) scale and inner kilometers-per-hour (km/h) scale. Coolant temperature is indicated in Fahrenheit (for US).
- Speedometer with outer kilometers-per-hour (km/h) scale and inner miles-per-hours (mph) scale. Coolant temperature is indicated in degrees Celsius (for Canada).

Below the speedometer, there is a LCD multifunction indicator in clear view of the driver. Warning and indicator lights (based on colored light emitting diodes) are located in the bottom of the instrument cluster with the exception of the turn signal indicator lights, ASR warning light and reserve fuel warning light. The warning lights for the seat belt usage and parking brake/brake fluid level are located in the line above the bottom line. The indicator that illuminates up when the parking brake is applied or the brake fluid level is low is different for U.S. and Canada.

When the key is turned to the 2nd position in the ignition, the function of the following indicator lights is checked automatically: High Beam ON, Preheating, airbag malfunction. In case of a broken LED of the airbag malfunction light, the seat belt usage warning light will flash for 6 seconds after the function check is finished. The Instrument Cluster is operated with the help of 4 buttons located below the multifunction indicator. The backlighting for the instrument cluster uses yellow LED's and can be adjusted electronically to daylight and darkness.

The instrument cluster includes a warning buzzer, which sounds (in addition to a warning light in some cases) when:

- The headlights are on with the ignition off and the door opened.
- The driver's seat belt is not fastened with the ignition on.
- The key is in the ignition and the door is open.
- Critical ASSYST information is displayed in the multifunction indicator.

3.5 POWER DOOR LOCKS/RKE

3.5.1 CENTRAL LOCKING

The Central Locking System locks all vehicle doors if any door is locked from the inside or mechanically locked with the key from the outside. However, unlocking any door, in that manner, will only unlock that particular door. The Master Door Lock Switch on the dash enables the operator to lock/unlock all doors. By pressing the top of the rocker type switch once, all doors will lock. Pressing the switch again will unlock all doors. Pressing the lower part of the switch once will lock all doors except the driver door. Pressing the lower part again will unlock all doors except the driver door. If the Central Locking System automatically unlocks after the vehicle was attempted to be locked, at least one door is not properly closed.

There are two LED indicators in the Master Door Lock Switch. The left indicator is for the driver door and the right indicator is for all passenger/cargo doors. These will indicate if a door is ajar or if the doors are locked. The door ajar switches are part of the door lock motor and are mounted in the door latch assembly.

Inside each door lock motor there is a command switch. The command switch is operated by the plunger and signals any change in the lock status, locked or unlocked. Each command switch is wired to the Central Timer Module (CTM) sometimes referred to as the Central Locking Module. If all doors are closed and are unlocked, and any door is locked by the key or the interior handle, thereby changing the command switch, all doors will be locked. If one of the door lock motors does not reach the end position after a locking command, it will be detected by the CTM (command switch not in "Locked" position) and the vehicle will be unlocked.

3.5.2 REMOTE KEYLESS ENTRY (RKE)

The SKREEM is a combination of the Remote Keyless Entry Module and the SKIM (Sentry Key Immobilizer Module). It is located behind the Instrument Cluster and has an antenna that goes up

the A-pillar. The SKREEM receives radio messages from the RKE transmitter (fob) and sends commands via the RKE Interface circuit to the CTM. If the vehicle is equipped with VTSS, the Security System Module will be connected in series between the SKREEM and the CTM.

Confirmation of the RKE Lock/Unlock state is accomplished via the turn signals. When the vehicle is locked via RKE the turn signals will flash three times. When it is unlocked via RKE, the turn signals will flash one time. If the vehicle has been unlocked via RKE and no door is opened within 40 seconds, the entire vehicle will be locked again automatically.

If a transmitter (fob) is operated more than 255 times in succession beyond the range of the receiver (SKREEM), the RKE portion of the key will become inoperative. In order to put it back in synchronization it will be necessary to have ALL the other transmitters that are used with this vehicle available and follow the following procedure:

1. Cycle the ignition on and off 2 times within 6 seconds (leave in off position).
2. Press the lock or unlock button of the disabled transmitter within 3 seconds of turning the ignition off.
3. Press any button (lock or unlock) 3 more times within 6 seconds.
4. Wait 10 seconds.
5. Press any button of ALL other transmitters belonging to this vehicle at least once within the next 20 seconds.

For problems related to the Immobilizer function of the SKREEM, see Service Information.

3.5.3 AUTO DOOR LOCKS

Whenever the engine is started, the CTM receives a message to lock all doors except the drivers door. This is accomplished through the D+ Relay. The D+ Relay is controlled by the Instrument Cluster which receives a command from the ECM that the engine is running. This relay supplies power to the CTM (for auto locking), the daytime running lamps and the rear window defogger.

3.5.4 ACCIDENT RESPONSE

The CTM is hardwired to the Airbag Control Module through the Enhanced Accident Report Driver circuit. Anytime the vehicle airbags are deployed, the CTM will unlock all doors and a "Crash" DTC will be stored in memory. The door locks will be inoperative until that code is cleared. If the vehicle is severly jarred, but not enough to deploy the airbags, it is possible that the DTC could be set and therefore the door locks would be inoperable. Whenever the door locks are not operational, use the DRBIII and check DTC's . If the code "ACM has unlocked the doors" appears, use the DRBIII and erase it.

3.6 VEHICLE THEFT SECURITY SYSTEM (VTSS)

The Security System Module (SSM) is located under the driver's seat. The SSM communicates with the DRBIII over the K-line. If equipped the Vehicle Theft Security System will monitor the following:

- door jamb switches
- hood ajar switch
- ignition switch
- interior of the vehicle for movement
- longitudinal and transverse movement of the vehicle
- rear defogger grids for glass breakage
- trailer connector

To arm the system the hood and all of the doors must be closed when the vehicle is locked with the RKE transmitter or with the use of the key in the driver door. If the key is used, it must be held in the lock position for 2 seconds. When the system is first activated, the hazard lamps will flash 3 times. Also with the system armed, the Towing/Intrusion Sensor On/Off Switch indicator will flash to indicate an armed system. To disarm the system use the RKE or the driver door lock cylinder. Unlocking and opening one of the other doors with the system armed will trip the vehicle theft security system.

Interior monitoring is done by the use of an Intrusion Sensor located in the front headliner and with one or two sensors in the ceiling of the cargo area depending on how the vehicle is equipped. Monitoring of the interior of the vehicle will begin after the system has been armed for 30 seconds. The on/off switch located on the instrument panel can be used to turn off this feature with the ignition switch in either the Locked/Off or ACC position. The vehicle tow-monitoring feature can also be switched off using this switch. Re-locking the vehicle a second time will reactivate these features.

If a trailer is connected to the vehicle when the system is armed, the SSM will sense a resistance change on the turn signal circuits if the trailer harness becomes disconnected and will trip the alarm.

Tripping the vehicle theft security system will cause the hazard lamps to flash and the siren to sound at 30-second intervals. The siren is equipped with it's own self-contained battery. In the event the vehicle's battery power is disconnected the siren will continue to sound on it's own.