



NOTE: For a complete illustration of the adaptive cruise control indicators and graphic displays, refer to the Owner's Literature.

Cruise Control Operation The adaptive cruise control system functions much like a standard cruise control system. The adaptive cruise control system automatically adjusts the vehicle speed to maintain a set distance gap from the front of the vehicle and the vehicle in the same path of travel. When the adaptive cruise control system is on and is following a vehicle or a vehicle enters the same driving lane, a follow vehicle graphic is displayed in the message center. The adaptive cruise control system does not function if the vehicle speed is below 20 km/h (12 mph). As the vehicle slows down during automatic braking, the adaptive cruise control system discontinues braking at 20 km/h (12 mph). At that speed, an audible alarm sounds and the automatic braking from the ABS module is released. The driver must take over the vehicle braking control. The cruise control deactivator switch (which is integral to the BPP (brake pedal position) switch) is an additional safety feature. When the brake pedal is pressed, an electrical signal is sent from the BPP switch to the PCM deactivating the cruise control system. Under increased brake pedal effort, the cruise control system deactivator switch opens and removes the ground signal from the PCM input circuit, releasing the throttle and immediately deactivating the system. The CCM monitors the yaw rate signal from the ABS module and compares it to the wheel speed and steering wheel angle signals. If the ABS module determines the yaw rate is invalid, the CCM disables the adaptive cruise control. The message center displays the message COLLISION WARNING MALFUNCTION and/or ADAPTIVE CRUISE MALFUNCTION. The CCM monitors the environment in front of the vehicle while active. If the radar beam is obstructed by a buildup of snow, ice, rain or other debris, or the vehicle is driven in a desert environment with no other traffic for extended periods of time, the sensor will trigger an ADAPTIVE CRUISE NOT AVAILABLE SENSOR BLOCKED SEE MANUAL message and will disable the adaptive cruise control. The adaptive cruise control will resume once the obstruction is cleared and the radar is able to detect targets, or upon a key cycle. If aftermarket equipment, such as a snow plow, is installed on the front of the vehicle, obstructing the radar, the adaptive cruise control may function erratically. The adaptive cruise control will need to be disengaged using the menu option, and the operator will only have non-adaptive cruise control functionality. The ABS module estimates brake temperature by monitoring applied brake pressure over a period of time and sends a message to the CCM when the estimated temperature is above a given threshold. An alarm sounds and the adaptive cruise control system is deactivated until the estimated brake temperature returns to cooler operating conditions. This condition can happen in a hilly or mountainous driving terrain. **Cruise Control Indicator** The adaptive cruise control indicator located in the IPC illuminates in gray and the previous gap setting and SET graphic is displayed indicating the system is in standby mode. This notifies the driver the system is ready and the vehicle can be accelerated to the desired speed. When the vehicle reaches the desired speed and the SET+ is pressed, the adaptive cruise control indicator illuminates in green.

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System Operation

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Network Input Messages - ABS Module

Broadcast Message	Originating Module	Message Purpose
Adaptive cruise control brake deceleration request	CCM	Used for cruise control automatic braking.
Brake pedal applied	PCM	Used for brake switch input.
Vehicle lateral acceleration	RCM	Deactivates cruise control when requested.
Vehicle longitudinal acceleration		

Network Input Messages - CCM

Broadcast Message	Originating Module	Message Purpose
Accelerator pedal position	PCM	Used for accelerator pedal status.
Brake pedal applied	PCM	Used for brake switch input.
Cruise control override	PCM	Driver overriding cruise control with accelerator pedal.
Ignition status	BCM	Used for ignition switch position input.
Stability control event in progress	ABS module	Deactivates cruise control when requested.
Traction control event in progress		
Vehicle yaw rate		
Vehicle lateral acceleration	RCM	Deactivates cruise control when requested.
Vehicle longitudinal acceleration		
Vehicle configuration data	BCM	Used for comparison checking adaptive cruise control configuration.

Network Input Messages - IPC

Broadcast Message	Originating Module	Message Purpose
Adaptive cruise control gap distance display	CCM	Data used to generate message center display indicating adaptive cruise control gap setting.
Cruise control mode	PCM	Toggles between speed control and adaptive cruise control.
Cruise control override	PCM	Driver overriding cruise control with accelerator pedal.
Cruise control status	PCM	Data used for speed control indicator status.