

# ParkSmart Parked HVAC System

## Overview:

-The ParkSmart Parked HVAC system is a comfort system design to provide heating and cooling to the occupant of the lower bunk when the truck is parked. It also functions as the bunk HVAC system when the engine is running. This is an integrated system that includes a high output alternator, eight batteries, extra cab insulation, data bus integration, electric air conditioner and fuel operated coolant heater.

The bunk control head includes a “Park” button in the center of the temperature knob which will initiate the Parked HVAC operation when the truck is parked. When the system is not in the Parked mode, the controls operate in the same way as the regular auxiliary HVAC.

In Parked operation the system will run on battery power until it is shut off. The system is turned off by turning the blower knob to off, having the unit low voltage disconnect shut itself off or starting the engine. As long as the engine is off the Parked HVAC can be initiated. Ignition key position does not matter, the key can be in any position or not inserted. The vehicle must have a high enough voltage that the main HVAC control has not been dropped by the cab progressive low voltage disconnect in order to start. Once started it will continue to run even if the Cab LVD drops loads. The Park brake must be engaged in order to for the fuel operated heater to run (and should be engaged during all parked operation).

The system senses the bunk temperature and adjusts its output automatically to hold the requested set point. The temperature knob on the control includes an economy band which should maximize the available run time from the vehicle batteries. Setting the temperature at the left end of the economy band will control the bunk to approximately 72F. Pre-conditioning the vehicle to a comfortable temperature prior to running the Parked HVAC is always recommended.

The air conditioner and coolant heater both have start up and shut down sequences and may delay operation on start up or continue to run for a short period when shut off.

# ParkSmart with Optimized Idle (689-085)

## Overview:

-The ParkSmart System combined with DCC Optimized Idle System is configured to have the ParkSmart system provides bunk comfort at all times the two systems are used together. This system is setup with all eight vehicle batteries wired together. When in Optimized Idle mode it is not necessary to press the park button to activate the ParkSmart system. The ParkSmart runs during optimized idle provided the blower control knob is set to any position other than “O” (the LED indicator light has no function during optimized idle). The Optimized Idle will run the engine as required to maintain battery voltage and engine temperature but not for cab heating and cooling. Sleeper heating and cooling is controlled solely by the ParkSmart HVAC system, the main HVAC does not operate when in Optimized Idle.

During Opt Idle operation, the blower must be turned on for the Parked HVAC to run.  
The blower must be turned off to stop the Parked HVAC during Opt Idle.

During Opt Idle operation the Park button and indicator light do not function.



Optimized Idle is initiated by following the OI instruction label on the dash. The engine may need to be warmed up before OI will initiate. During the optimized idle start up sequence the power relays to the main HVAC will be cycled a few times, causing the fans to turn on an off, this is normal. The key will be in the “on” position during optimized idle. If the Optimized Idle faults to “off” during a run (such as an air leak causing it to fault out due to low pressure) the ParkSmart will continue to run until shut off by ParkSmart system low voltage disconnect protection.



When the Optimized Idle is not used, the ParkSmart system may be used in the regular operating mode and provide parked comfort by pressing the Park button to start.

## ParkSmart without Optimized Idle (689-060)

Overview:

-The ParkSmart System on trucks that do not have optimized idle is configured differently but operates the same way except no optimized idle mode is available. The truck will have eight batteries but there are 4 for starting and 4 more dedicated to Parked HVAC. They are tied together through a battery separator that acts to join or isolate them as needed to preserve a starting charge in the main batteries.