ParkSmart Auxiliary HVAC System

"How It Works"

Before operating the ParkSmart HVAC unit, **the sleeper interior temperature should first be brought to the desired temperature with the engine running, and the bunk curtain open.**

The ParkSmart HVAC system is designed to maintain an established comfortable bunk temperature while the engine is off and **the bunk curtain is closed.**

The Cascadia ParkSmart auxiliary air conditioning, heating and ventilation system is designed to deliver conditioned air to maintain driver comfort while the vehicle is parked, as well as when the vehicle is driving down the road.

Operating Modes

ENGINE RUNNING: FULL PERFORMANCE.

With the engine running, the HVAC system operates up to it's max. Performance level, and draws its power from the alternator. It will shut off when the engine stops or the ParkSmart unit is switched off.

Parked Mode: Engine OFF / Ignition ON: Ventilation Only.

If the key is ON, and the engine is OFF, only the blower runs for ventilation, and the HVAC unit draws power from the aux. batteries. It shuts off when you turn the key to "OFF".

Parked Mode: Engine Off / Ignition OFF: (Press the "Park" button) for AC or heat.

On the sleeper HVAC control panel, turn the blower control to any setting from 1 to 8 and turn the temperature dial to the left or counterclockwise to the desired temperature range and press the parked button to operate the AC. Turning the dial clockwise will engage the auxiliary coolant heater for parked bunk heat.
This works with the key in "OFF" position or key "ON", engine "OFF".

Please remember to allow the system time to adjust it's self to the changing temperatures. There are conditions that will allow the ParkSmart unit to automatically switch from AC to heat or heat to AC.

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If the “Park” button is pressed, the unit operates in parked mode, and draws its power from the aux. batteries. It shuts off when you press the “Park” button again, turn the blower switch to speed “O”, start the engine or release the parking brakes.

Blower speed is manually selected. Speed 0 is off, and speed 8 is maximum speed.

When the ParkSmart unit starts, the evaporator blower and condenser fan operate for up to 30 seconds. If cooling is called for the unit will start the AC mode. The Evaporator blower, condenser fan continue to run and the AC compressor will also start. The compressor and condenser fan will operate at the speed needed to maintain sleeper temperature. If heating is called for, the unit switches over to heating mode.

In cooling mode, the ParkSmart unit operates the condenser fan continuous. Condenser fan speed varies based on blower speed, and outside air temperature. The system also turns the compressor on and off, and varies the compressor speed as necessary to maintain the sleeper temperature. If the sleeper temperature remains 3 or more degrees below set temperature for 30 seconds the system changes over to heating mode. In parked mode, the system limits the compressor speed (and therefore, power consumption) in order to maximize battery life. This limiting does not apply with the engine running.

In heating mode, the AC compressor and condenser fan are turned off. If the engine is not running, the ignition key is off, and the parking brake is engaged, the ParkSmart system enables the Espar fuel fired heater. This fuel fired heater will heat the trucks coolant and circulate it throughout the engine and ParkSmart heater core while the evaporator blower continuously circulates heated air through the heater core and into the trucks duct system. The ParkSmart system controls bunk temperature by moving the blend air door and allowing air to pass through or bypass the heater core. If the sleeper temperature is 3 degrees above set temperature for 30 seconds, the system changes over to cooling mode.

The unit has a built-in low voltage disconnect. In Parked mode, if the aux. battery voltage drops below 11.3-11.5 volts for 10 seconds, the unit will shut off. If batteries recover above this level, you can press the “Park” button again to restart the unit. If the aux. batteries are not being charged, the system will only run for a very short time in parked or “ignition on, engine off” mode.