

DAIMLER

Next Generation Dual HVAC System

Daimler Trucks



Dual HVAC System Overview

- Available since April 2018, the Dual Battery Powered HVAC replaced the ParkSmart system
- 8 AGM batteries are required (4 starting and 4 auxiliary)
- Available on all sleeper sizes for all bunk styles, including driver's loft
- Over the road cooling is provided by the engine driven compressor and the radiator mounted condenser
 - When parked (engine off), cooling is provided by the in unit electric compressor and backwall mounted condenser

Better performance



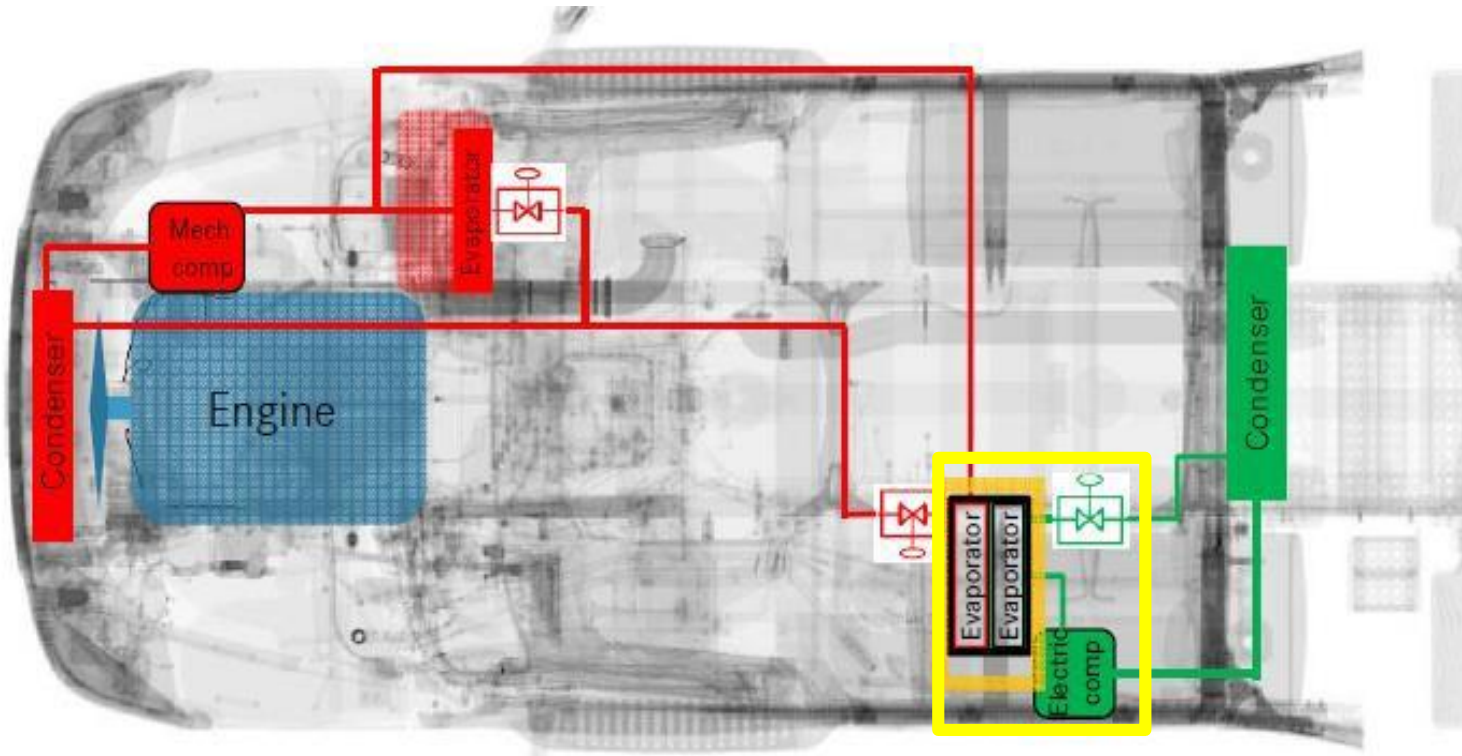
More Reliable



Easier Serviceability

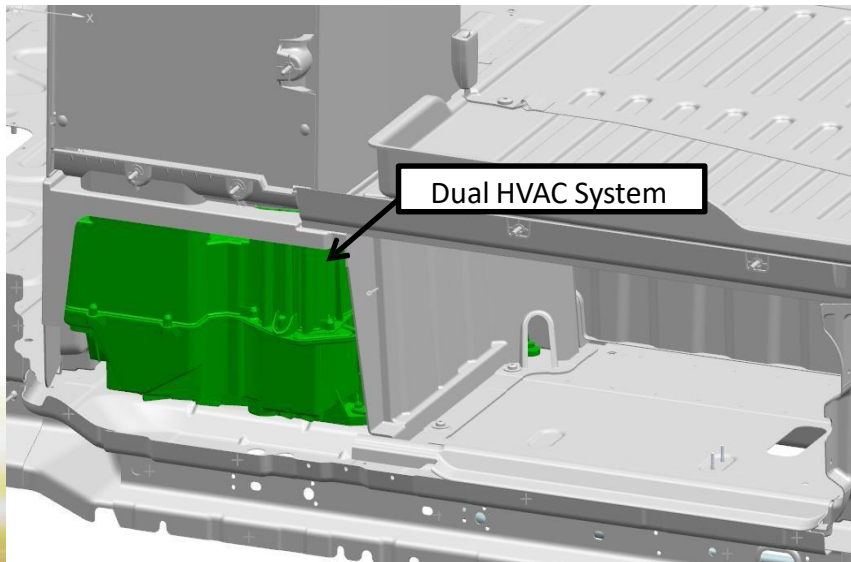
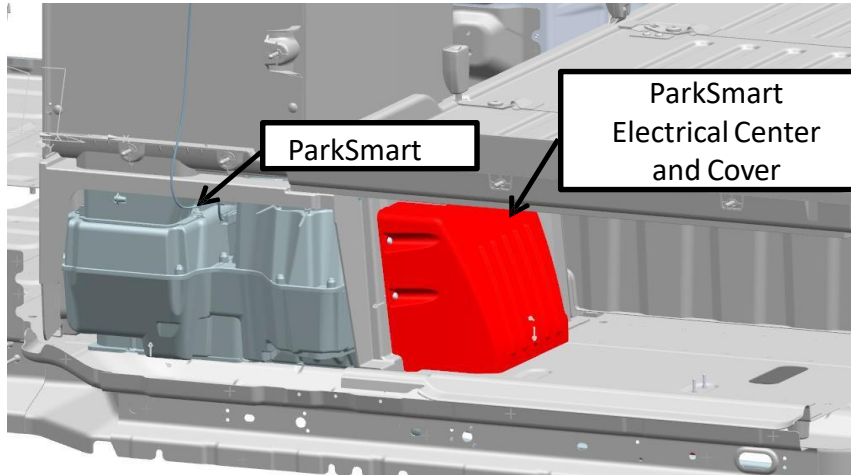


Dual HVAC System Features



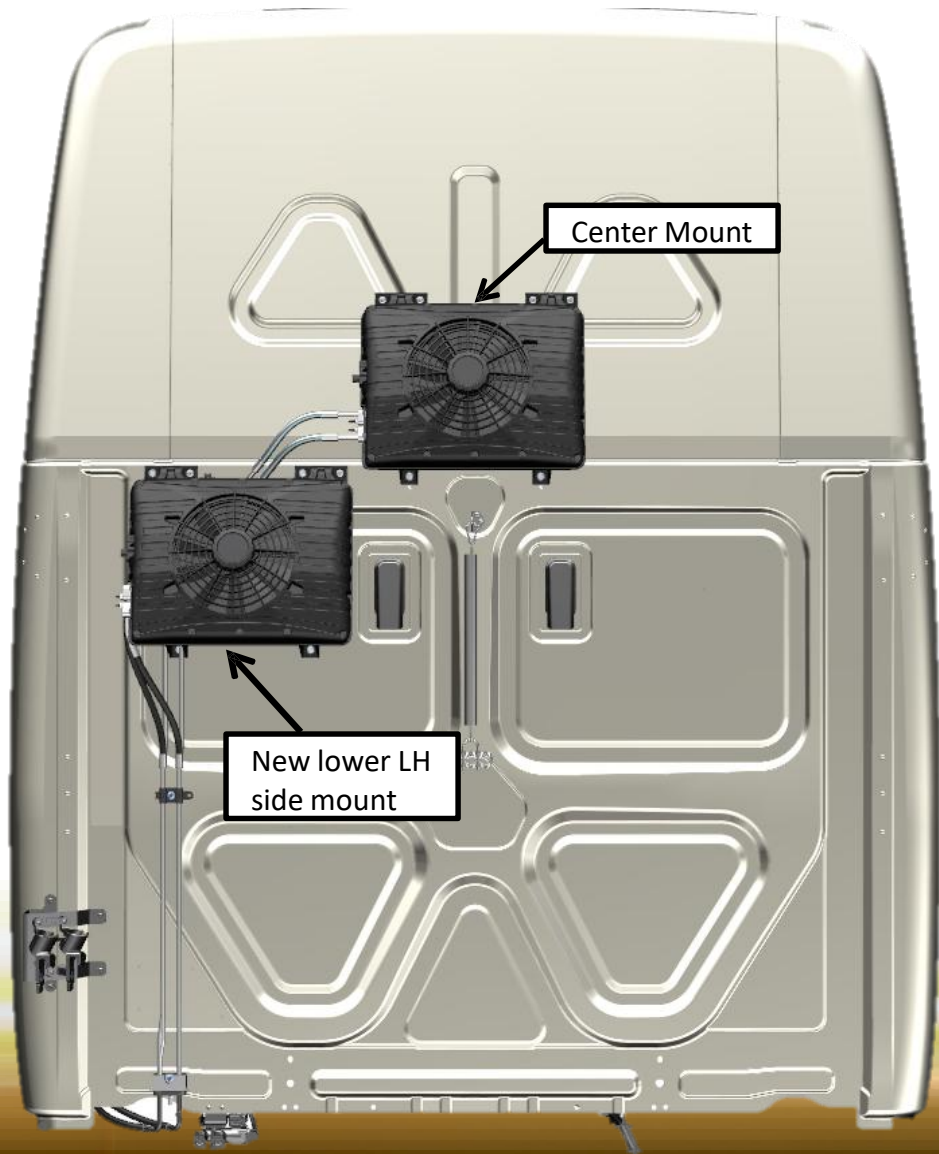
- The new Dual HVAC system features two evaporators
- Both evaporators and heater core are labeled and serviceable w/out taking out the cabinet
- The dual evaporator system allows the engine to cool the truck while running over the road or optimize idle
- Using the engine will improve life of the electrical system
- The electrically driven compressor is the only main component that requires removing the cabinet to service

Dual HVAC Service Improvements



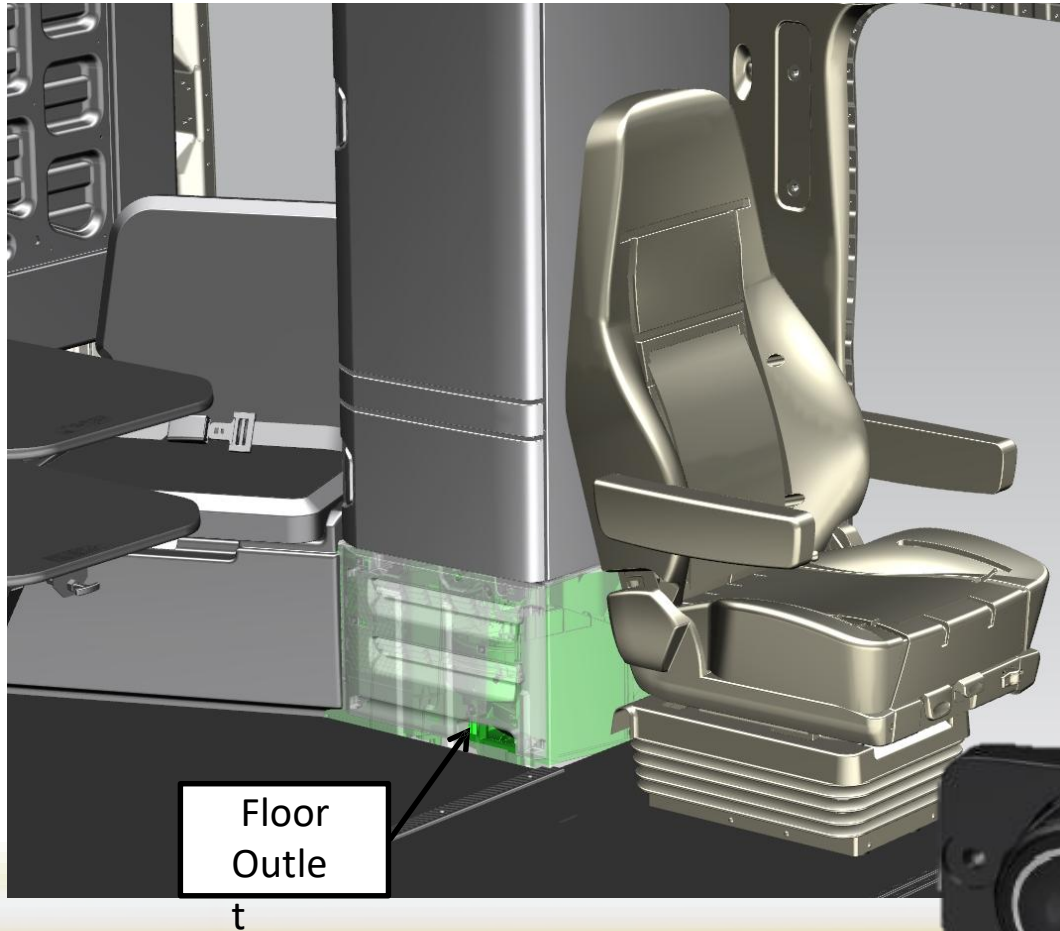
- The electrical center has been replaced with a solid state electrical center that is integrated into the unit
- The system no longer requires additional space in the baggage compartment
- An integrated solid state electrical center will be more reliable than the previous generation that used fuses, circuit breakers, and relays
- The electrical and engine powered compressors run at a lower amperage, (35amps vs 45amps electrical and 16amps vs 57amps engine powered)
- Lower use of amps leads to longer life of the compressor

Backwall Condenser Position



- A new mount position is available on the lower left side for the backwall condenser
 - Center backwall condenser mount is also available
- The new mount position allows the trailer gap to be closed in further
- The lower left side blocks LH load locks, LH hose hangers, slide bar hose hangers, and LH CB antennas
 - LH backwall grab handles are allowed

Driver Usage and Performance

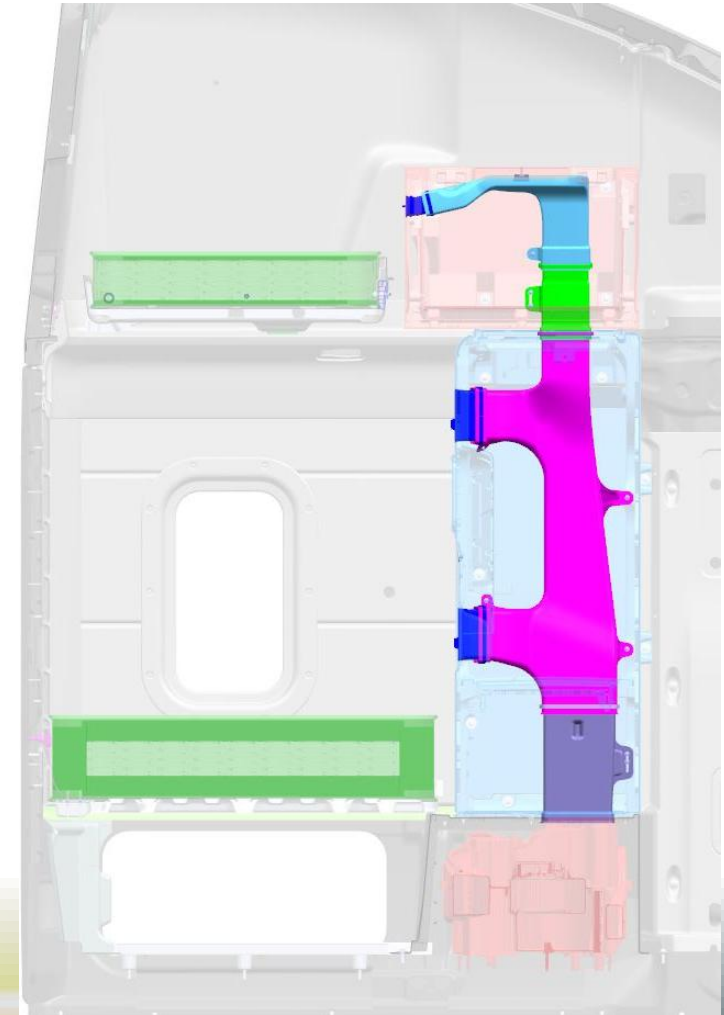


- To the driver, the new dual HVAC system operates similarly to ParkSmart
- The driver will use the blower speed switch and the “park” button
- The cabin will need to be conditioned over the road to allow the bunk to become cooler/warmer as required before operating the system electrically
- The new system has a floor outlet for increased comfort
- In over the road mode, the dual HVAC system has increased airflow from 200cfm to 250cfm



Cooling and Heating Run Times

- Cooling –
 - The system is designed to run approximately 10 hours when the ambient is 100°F in night time operation and maintain the interior temperature at 72°F without running the engine
- Heating –
 - Unlimited heating provided for approximately 34 hours before the engine will start to recharge the batteries
- The interior must be pre-conditioned to the desired temperature before shutting down the engine



Upper Bunk HVAC Ducting

How to Set Up Optimized Idle

To operate Optimized Idle –

- Make sure the hood is latched and the transmission is in neutral, then set the parking brake
- With the ignition in the ON position, access the “Quick Access Menu” on the steering wheel and select “OptimizedIdle” and press OK
- If interior Comfort Mode is needed, select ON by pressing the right arrow and OK
 - *Note: The sleeper NC fan speed switch must be in the ON position before starting the truck for interior Comfort Mode
- If interior Comfort Mode is NOT needed, select OFF by pressing the right arrow and OK
- For more information, see Section 11 in the Cascadia Driver’s Manual



ADDITIONAL INSTRUCTIONS

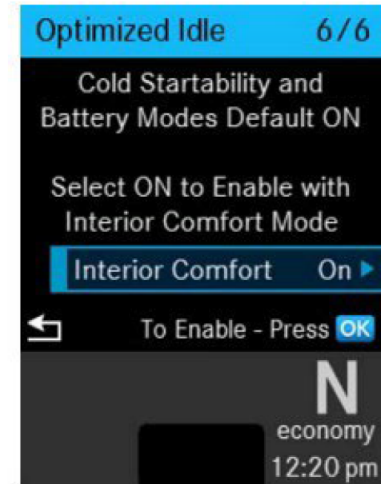
When Optimized Idle (01) is armed from the instrument cluster, the sleeper HVAC controller switches to Thermostat Mode. In Thermostat Mode, the sleeper HVAC behaves similar to a home heating/cooling thermostat. Rather than selecting desired outlet temperature, the driver selects Desired Cabin Temperature with the sleeper HVAC controller temperature knob. In Thermostat Mode, the temperature knob positions allow the driver to select a desired cabin temperature between 60°F and 80°F.

(Recommended Set Point is 70 Degrees in the middle of Cold & Hot)

What is Comfort Mode?

The following parameters regarding the set point and comfort zone:

- If the bunk area reaches more than 10°F (5.5°C) above the set point the Dual HVAC system immediately requests the engine to start for bunk **cooling**.
- Bunk area temperature 5 to 10°F (2.8 to 5.5°C) above the set point for over twenty minutes will cause the Dual HVAC system to request the engine to start for bunk **cooling**.
- When the sleeper area drops to more than 10°F (5.5 °C) below the set point, the comfort zone is exceeded and the Dual HVAC system immediately requests the engine to start for bunk **heating**.
- Bunk area temperatures 5 to 10°F (2.8 to 5.5°C) below the set point for over twenty minutes will cause the Dual HVAC system to request the engine to start for bunk **heating**.



Additional Dual HVAC Training

- Cascadia Battery Powered HVAC System Video on the DASH
 - <https://www.dtnadash.com/document-library/assets/3561>
- Bergstrom Idling Reduction Savings Calculator
 - <https://us.bergstrominc.com/nite-calculate-savings/>

THANK YOU

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