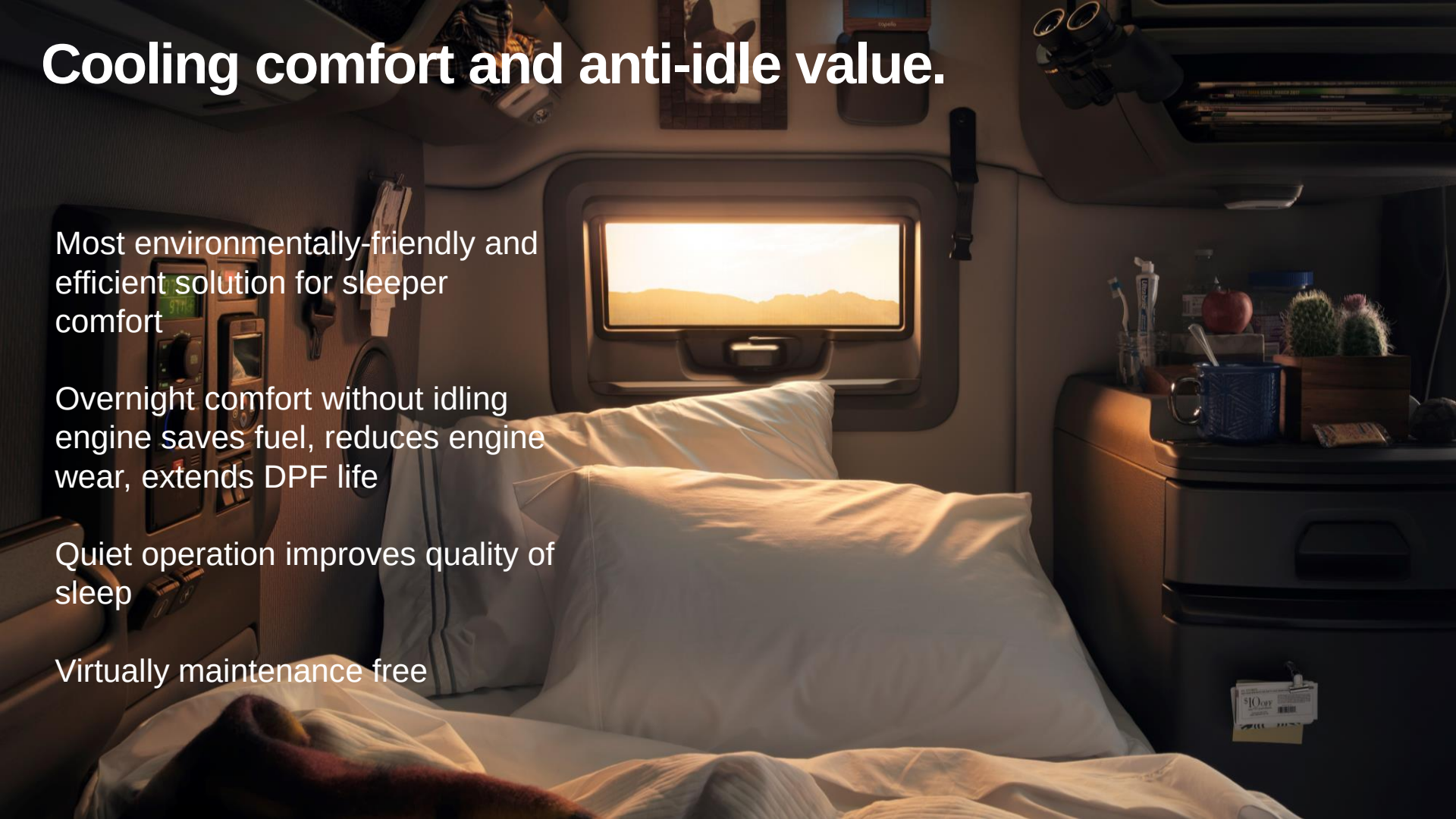
EFFICIENT SLEEPER COMFORT

Volvo’s Battery-powered Parking Cooler Option



Cooling comfort and anti-idle value.



Most environmentally-friendly and efficient solution for sleeper comfort

Overnight comfort without idling engine saves fuel, reduces engine wear, extends DPF life

Quiet operation improves quality of sleep

Virtually maintenance free

Power off, comfort on.

Electrically-powered AC operates while truck ignition switch is in OFF position

Can operate wherever vehicle is parked

TMC-approved, rated to keep sleeper at 23°C (74°F) for up to 10 hours*

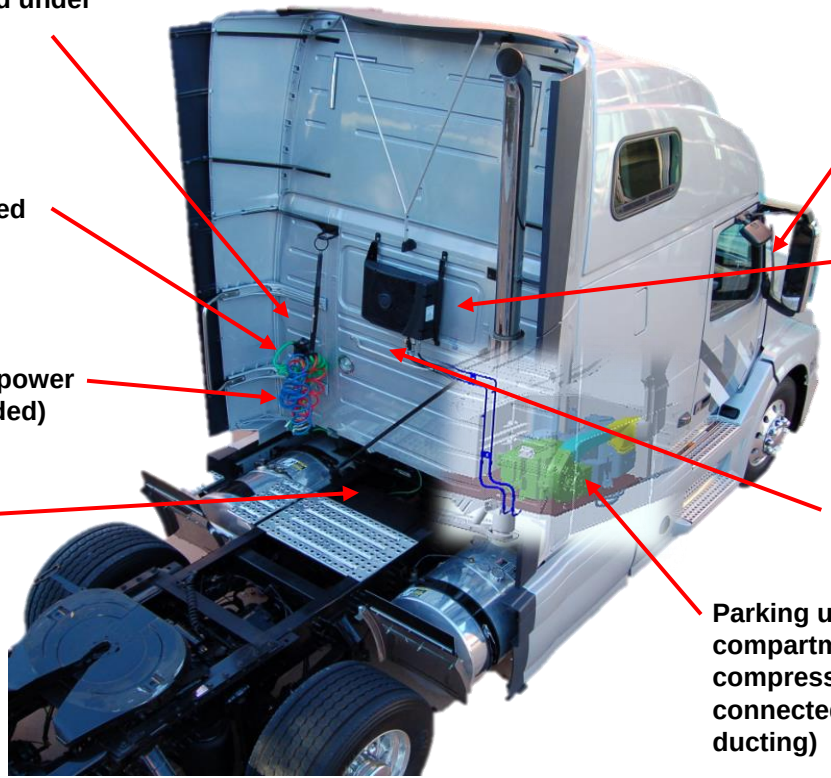
***TMC RP 432A Criteria**
Factory-installed curtains closed.
Initial sleeper temp 23°C (73°F) +/- 2°C (5°F).
34°C (100°F) ambient outside temp.
50% relative humidity.
600 W/m^2 solar load on vehicle roof.

Features



- Quiet operation
- Automatic temperature control
- 7,500 BTU/hour (2.2 kW)
- Start protection with smart battery management
- Integrates with optional Shore Power kit and inverter (additional run time and battery charging)
- Also controls diesel-powered parking heater (option); single thermostat control
- 3-year warranty
- CARB approved
- Exempt from FET

System components



Starting batteries: (4) 925CCA AGM batteries located under driver's door

320A Leece-Neville alternator with remote battery sense and high amperage cables

Luggage compartment 120V inverter/charger & diesel-powered parking heater (recommended)

Back-of-cab condenser

120V shore power (recommended)

In-frame auxiliary battery box with (4) 800CCA AGM (100-amp-hour) deep-cycle batteries and Bergstrom battery management

Control/display inside sleeper on rear wall

Parking unit in luggage compartment (evaporator, compressor, and blower connected to existing sleeper ducting)

System function
Internal unit (evaporator assembly)

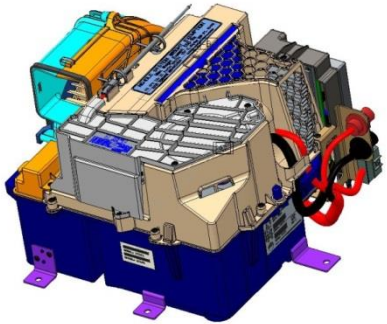
- Located under bunk, passenger side
  50.5 x 43.4 x 31.2 cm, 19 kg
  (19.9 x 17.1 x 12.3 in, 42 lbs)

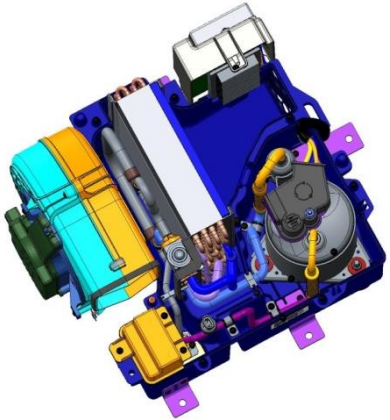
- Contents:
  - Evaporator
  - Blower (serviceable)
  - Compressor
  - Controllers (serviceable)
  - Thermostatic Expansion Valve (serviceable)

- Connected to sleeper ducting

- Brushless motors for extended life







System function
External unit (condenser assembly)

- Located on BOC
  52.6 x 14.5 x 35.8 cm, 8 kg
  (20.7 x 5.7 x 14.1 in, 18 lbs)

- Contents:
  - Condenser
  - Fan (serviceable)
  - Receiver drier (serviceable)

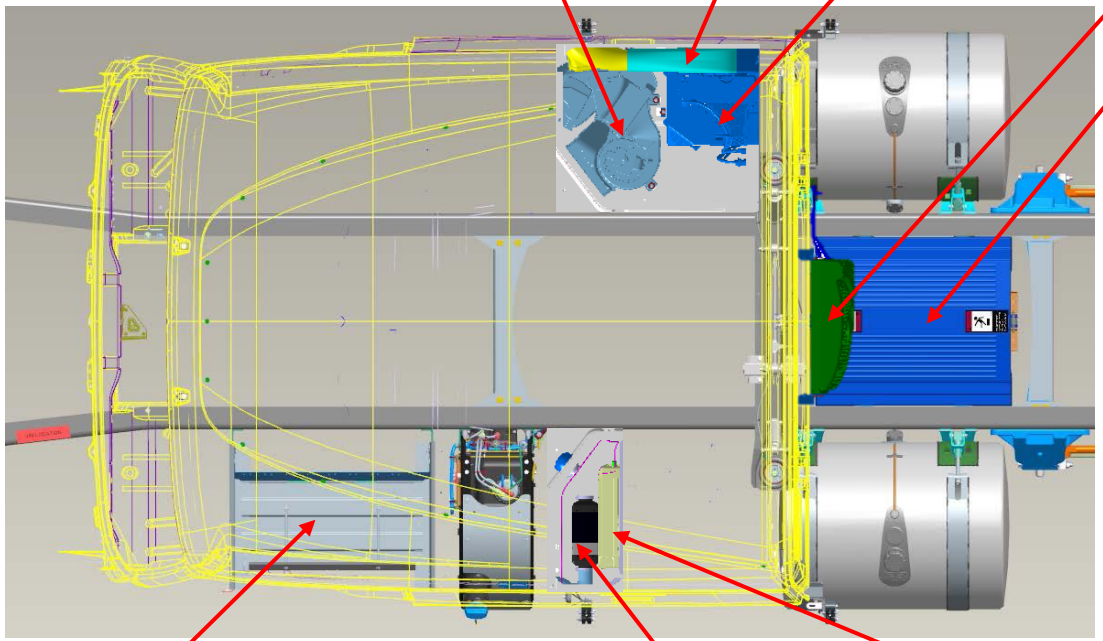
- Brushless motors for extended life



System function

Components layout

- Parking cooler is powered by both banks (8 batteries) until starting battery voltage level decreases to 12.4V.
- Battery isolator relay then disengages starting batteries to protect truck starting capacity.
- When starting batteries charged up to 13.2V, battery isolator relay re-engages starting batteries to alternator charging circuit.



System function
Battery management

- Auxiliary batteries
  - dedicated to parking cooler
  - 4 deep-cycle AGM batteries, 800 CCA and 100 Ah each
  - in-frame battery box



- Battery management system (BMS)
  - mounted in auxiliary battery box
  - monitors voltage and current in/out of aux batteries
  - monitors battery charge status and health status
  - Controls battery isolator relay to engage/disengage auxiliary batteries from starting batteries.



Operating the system
Starting the system

Push ON/OFF button. This screen is the temperature set point screen.

Display will show current mode/ temperature setting / battery level.

Initial default setting is blower speed 1/ AUTO- MODE /72 °F.



Note: when the control is idle for 5 seconds, the screen will return to this temperature set point screen.

Operating the system
Changing MODE

Press ENTER.

While mode is flashing, use up or down arrows to select AUTO / COOL / HEAT.

After 5 seconds selection will be set.



ENTER

Note: when the control is idle for 5 seconds, the screen will return to the temperature set point screen.

Operating the system
Changing blower speed

Press ENTER until display shows FAN and SPEED.

Press up or down arrows to select 1 – 2 – 3 speed.

After 5 seconds selection will be set.



ENTER

Note: when the control is idle for 5 seconds, the screen will return to the temperature set point screen.

Operating the system
Changing temperature set point

Whenever the temperature set point is displayed on the screen, push the up or down arrows to change.

Temperature range is from 60°F/ 16°C(coolest) to 85°F/29°C (warmest).

NOTE: Control will always default to 72°F when the unit is turned on.



Note: when the control is idle for 5 seconds, the screen will return to the temperature set point screen.

Operating the system

View system runtime hours

Press ENTER until “Hrs” shows on display. This displays the total runtime of the parking cooler.

To reset, press and hold ENTER for 7 seconds. Hours will be reset to zero.



ENTER

Note: when the control is idle for 5 seconds, the screen will return to the temperature set point screen.

Operating the system
Change temperature scale (°F to °C)

Press ENTER until temperature symbol only shows.

Push the up or down arrow to change.

After 5 seconds selection will be locked.



ENTER

Note: when the control is idle for 5 seconds, the screen will return to the temperature set point screen.

Operating the system
Service mode

Push the ON/OFF and ENTER button simultaneously.

Display will show service indicator and a code 00 unless a fault has occurred.

If there is an active fault the display will show it as 01, 02, or 03.
Use up and down arrows to scroll through the Fault Codes.
(1) Evaporator sensor open or shorted high
(2) Evaporator sensor shorted low
(3) High pressure switch open or shorted high



Operating the system
Service mode (continued)

Press the ENTER button to proceed through the available service screens:
1. SV = Starting batteries Voltage
2. AV = Auxiliary batteries Voltage
3. AA = Unit Amperage draw

Pressing ENTER arrow after viewing service screen will return you to the fault code screen.

Pressing the ON/OFF button will return you to the Temperature Display screen.



Operating the system
Check filter

A “Check Filter” screen will notify you that the parking cooler filter must be cleaned or changed.

To reset filter: at screen 1 press and hold enter button for 3 seconds.



Availability



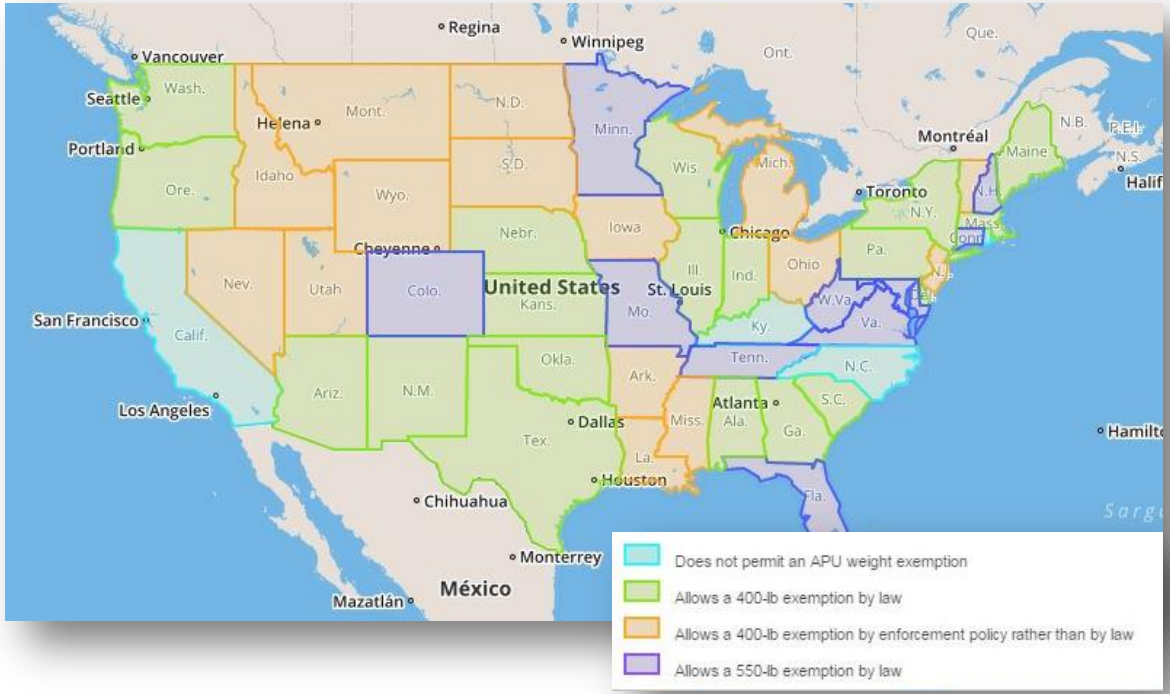
- VNR 640
- VNL 680
- VNL 740
- VNL 760
- VNL 860

Weight exemptions (US only)

- Exemption varies by state:
  181 – 249 kg (400 – 550 lbs.)
- Certified weight, including batteries:
  256 kg (565 lbs.)



State Recognition of Auxiliary Power Weight Exemption to GVW: 23 CFR 658.17(n)



Tips for maximum efficiency

1. Keep curtain closed between cab and the sleeper .
2. To enhance cooling efficiency during the day, place solar reflectors or curtains over windshield and all windows to block sunlight.
3. Volvo Parking Cooler is designed to maintain a comfortable temperature inside the sleeper without the engine running. It will not cool a hot sleeper that has been sitting in the sun without the factory A/C running. To assist the system in cooling down the sleeper, start the engine and run the factory A/C system until desired temperature is reached. Then use the Volvo Parking Cooler to maintain a comfortable setting.

Technical questions?

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- Larry Landreth — Southeast Region
- Vic Gontero — Northeast Region
- Robert Gardiner — Southwest Region

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- Yolanda Moline — Northeast and Southwest USA Region and Canada

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