California’s
Heavy-Duty Diesel Vehicle
Idling Regulations

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Drivers of diesel-fueled commercial vehicles:
- Gross Vehicle Weight Rating > 10,000 lbs
- Operating in California
- California-Based Vehicles

AND

Non-California-Based Vehicles
Idling Requirements

- 5 minute idling limit at any location
  (sleeper berth vehicles were exempt prior to January 1, 2008)

- 5 minute limit on the operation of diesel-fueled auxiliary power systems (APS) when operated within 100 ft of a residence
New Requirements
Effective January 1, 2008

- Sleeper trucks are no longer exempt
- Additional requirements for cab comfort devices used on trucks with 2007+ engines
- Automatic shutdown device for trucks with 2008+ CA-certified engines
- Optional NOx idling emission standard
Additional Requirements for Cab Comfort Devices Used on Trucks with 2007+ Engines

- **Diesel-fueled Auxiliary Power Systems (APS)**
  - must have a verified level 3 PM trap, or
  - must have exhaust routed to the vehicle’s PM control system

- **Fuel-Fired Heaters**: Must meet ULEV standards in LEV II program

- "Verified Clean APS" hood label required for Internal Combustion Engine APSs
New Requirements for 2008+ CA-Certified Engines

- Automatic engine shutdown system
  - GVWR >14,000 lbs
  - Shuts down engine after 5 minutes
  - Non-adjustable and tamper-resistant
  - Installed by engine manufacturer

- Shutdown system bypasses
  - Operating PTO device
  - Engine <60 degrees F
  - Catalyst regeneration
  - Service and maintenance
Optional NOx Idling Emission Standard

- If engine is certified to this standard:
  - Allowed to idle beyond 100 ft of a residence or school
  - Automatic shutdown system not required
- 30 grams/hour NOx
- “Certified Clean Idle” hood label required
Breakdown by Engine Model Year: 2006 and Older

- Subject to 5 minute idling limit
- APS Engine must be CA or Fed certified
- No additional APS PM emission control required.
- Fuel-fired heaters are not required to meet LEV II standards.
Breakdown by Engine Model Year: 2007+ Certified Engines

- Subject to 5 minute idling limit.
- APS engine must be CA or Fed certified.
- If operating a diesel-fueled APS in CA:
  - APS equipped with verified level 3 PM control
  - or exhaust routed to vehicle’s PM emission control system.
- If operating fuel-fired heaters in CA:
  - certified to LEV II standards.
- Label for internal combustion engine APS
Breakdown by Model Year:
2008+ CA-Certified Engines

- All previous requirements, plus
- Automatic engine shutdown system (GVWR>14,000 lbs)
  UNLESS
- Manufacturer certifies engine to optional NOx idling emission standard (Label Required)
When Is Idling Allowed?

- Stopped in traffic
- Operating power take-off devices
- Service and maintenance
- Queuing when beyond 100 feet of a school or residence.
- Stopped because of bad weather conditions or mechanical difficulty
- Beyond 100 ft of a residence if engine meets optional NOx idling emission standard
Alternative Technologies That Provide Cabin Comfort

- Diesel-Fueled APS
- Battery-Electric APS
- Vehicle-Battery-Powered Systems
- Fuel-Fired Heater
- Thermal Storage Device
- Electrified Parking Space
- Off-Board Power Infrastructure
## Payback Time With Fuel Savings

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Technology</th>
<th>Cost ($)</th>
<th>Payback (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermoking</td>
<td>Diesel APS (APS+PM trap)</td>
<td>8500 (10500)</td>
<td>1.7 (2.1)</td>
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<tr>
<td>Pony Pack</td>
<td>Diesel APS (APS+PM Trap)</td>
<td>7000 (9000)</td>
<td>1.4 (1.8)</td>
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<tr>
<td>Idling Solutions</td>
<td>Battery Electric</td>
<td>10000</td>
<td>1.6</td>
</tr>
<tr>
<td>Bergstrom (NITE System)</td>
<td>Battery Electric for AC + Fuel Fired Heater</td>
<td>4200</td>
<td>0.7</td>
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<tr>
<td>Webasto (BlueCool Truck + Air Top 2000)</td>
<td>Cold Storage for AC + Fuel Fired Heater</td>
<td>4600</td>
<td>0.7</td>
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<tr>
<td>Xantrex/Dometic</td>
<td>Inverter/charger + Electric AC and Heat</td>
<td>4000</td>
<td>0.6</td>
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</tbody>
</table>

Idle Hours/year = 2100; Fuel Use = 1 gal/hour; Fuel Cost: = $3.05/gal
# Emission Reductions

## 2010 Statewide Emission Reductions*

<table>
<thead>
<tr>
<th>Reductions (tons per day)</th>
<th>NOx</th>
<th>HC</th>
<th>PM</th>
<th>CO2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>46</td>
<td>4.2</td>
<td>0.42</td>
<td>1930</td>
</tr>
</tbody>
</table>

*Sleeper truck population = 75,000*
Big Benefits

- Reduce Smog Emissions
- Reduce Greenhouse Gas Emissions (CO2)
- Reduce Fuel Consumption and Foreign Oil Dependency
- And, Save Fleets Money!
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