SOLID WASTE COLLECTION VEHICLE REGULATION PROPOSED AMENDMENTS

January 24, 2019
Overview

- Background
- Objectives
- Proposed Amendments
  - Solid Waste Collection Vehicles (SWCV)
  - Single Engine Heavy Cranes
- Recommendations
Background

○ SWCV regulation
  • Applies to vehicles with 1960 to 2006 model year engines
  • Retrofit PM filters installed by December 31, 2010
  • Low-use exemption
  • No reporting required

○ Heavy Cranes
  • Currently subject to the Truck and Bus regulation
  • Heavy crane compliance option rescinded in 2018
  • Compliance challenges
Reasons for Proposed Amendments

- New law limits registration of diesel trucks if not complying with Truck and Bus regulation starting 2020
  - Need to be able to identify compliant SWCV’s to avoid unnecessary registration delays

- Lawsuit rescinded flexibilities in 2014 amendments to Truck and Bus regulation
  - Reinstate feasible compliance option for specialized cranes
  - Need for timely amendment to avoid enforcement challenges
Proposed Amendments: Solid Waste Collection Vehicles

- Clarify SWCV definition by truck body type
- Add new reporting requirement
  - For pre-2010 engines
  - Annual mileage for low-use exemption
- Other minor changes to improve consistency with existing regulations
Heavy Cranes

- CARB staff have worked closely with the heavy crane industry since 2012 to address issues specific to these vehicles.
- Heavy cranes are specialized equipment that differ greatly from most trucks.
- Heavy crane defined as greater than 54,000 pounds GVWR:
  - Operated by a licensed crane operator
  - Has a single on-road engine that is certified as power-operated equipment that can hoist, lower, and horizontally move a suspended load
  - Not designed to carry cargo
Heavy Cranes (continued)

- Currently subject to the Truck and Bus regulation
  - Extension for infeasible PM filter retrofit expired January 1, 2018
  - Phase-in of 2010 engines from 2018-2027 has been rescinded

- Need sufficient time to replace equipment
- Some heavy cranes have already been upgraded
- High replacement cost and limited ability to safely retrofit or replace engine
- Almost 700 heavy cranes in about 200 fleets
Heavy Cranes are Highly Specialized Equipment

- Built on specialized chassis and only available from a handful of manufacturers worldwide
- Longer lead times to purchase and take possession of crane
- Have strict Occupational Safety and Health Administration requirements that limit the ability to retrofit or repower
  - Not feasible to recertify most heavy cranes
  - PM filter extensions expired January 1, 2018
- Significantly higher costs than most trucks to purchase new
- More challenges in ability to purchase used cranes
- Limited ability to rent
Not Practical for Heavy Cranes to Meet Same Fleet Turnover Requirements as Other Trucks

- 683 heavy cranes in California
  - 25% upgraded to 2010 or newer engines
  - 30% with OEM and retrofit PM filters are still compliant, but now must be replaced from this year through 2022
  - 37% could not be retrofitted with a PM filter and are not compliant now

- Could disrupt California economy and not viable to immediately park this many heavy cranes
  - Direct impact on small business crane fleets
  - Would create ripple effects from delayed projects that need crane services

- Would not achieve the expected emissions reductions
Proposed Amendments: Heavy Cranes

- Phase-in 2010 or newer model year engines from 2019 to 2027
  - By 2018, at least 10 percent of the cranes in most fleets had 2010 or newer model year engines
  - Continue phase-in at 10 percent per year starting 2019

- Credit for heavy cranes equipped with retrofit or original equipment PM filter before January 1, 2018
  - Treated same as a 2010 or newer model year engine
  - Credit transferable upon sale

- Reporting required until all 2010 engines in the fleet
## Heavy Crane 2010 Engine Phase-In Schedule

<table>
<thead>
<tr>
<th>Compliance Deadline as of January 1</th>
<th>Owner of 1 Crane</th>
<th>Owner of 2 Cranes</th>
<th>Owner of 3 Cranes</th>
<th>Owner of &gt;= 4 Cranes</th>
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<tbody>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td>1</td>
<td>30%</td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td>40%</td>
</tr>
<tr>
<td>2022</td>
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<td></td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>2023</td>
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<td></td>
<td>1</td>
<td>60%</td>
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<td>70%</td>
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<tr>
<td>2025</td>
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<td></td>
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<td>80%</td>
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<td>2026</td>
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<td>90%</td>
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<tr>
<td>2027</td>
<td></td>
<td></td>
<td>1</td>
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Heavy Crane Optional Model Year Schedule

- Upgrade to 2010 engines by engine model year schedule
- Meets SB 1 “Useful Life” criteria

<table>
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<tr>
<th>Engine Year</th>
<th>Upgrade to 2010 Engine January 1</th>
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<tbody>
<tr>
<td>1998-2003</td>
<td>2019</td>
</tr>
<tr>
<td>2004-2006</td>
<td>2022</td>
</tr>
<tr>
<td>2007-2009</td>
<td>2025</td>
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</table>
Heavy Crane Exemptions

- Manufacturer Delay
  - Additional time if crane ordered at least 4 months prior to compliance deadline

- Low-Use
  - Operated less than 1,000 miles per year
  - No hour restrictions
Heavy Cranes: Reporting and Recordkeeping Requirements

- Reporting required for all heavy crane fleets
  - Vehicle and engine information
  - Annual mileage for low-use vehicles annually
  - Report in Truck Regulations Upload, Compliance and Reporting System (TRUCRS)

- Recordkeeping required to demonstrate compliance
  - Includes mileage documentation and proof of ownership
Economic Impacts

- Reduced compliance costs for heavy crane fleet owners compared to meeting existing Truck and Bus regulation
  - Spreads out compliance costs over several years

- Slight increase in administrative costs for owners of SWCVs due to new reporting requirements
  - Heavy cranes currently have reporting requirements

- Total savings ~ $59 million from 2019 to 2032
  - Compared to full compliance with existing requirements
Projected NOx Emissions (Statewide)

- **Existing 2011 Truck and Bus Assuming Full Compliance**
- **Proposed SWCV Amendments**

2018 Existing Conditions (CEQA Baseline)

Emissions and Air Quality

- Environmental Analysis
  - Continues trend of reducing diesel PM and NOx
  - No increase in emissions when compared to existing environmental conditions in 2018

- Air Quality Analysis
  - Shows projected emissions levels under the various scenarios from 2019 to 2032
  - Compared to 2011 Truck and Bus regulation, hypothetically assuming full compliance
    - Prior updates and inventory projections based on 2014 amendments being in effect
    - Immediate full compliance is not a feasible compliance path for heavy cranes
  - Proposed amendments achieves maximum feasible emissions reductions
    - Heavy cranes are less than 1% of trucks and emissions
    - Will not significantly impact ability to meet long-term SIP commitments
SIP Considerations

- Proposed amendments result in maximum feasible emission reductions in nonattainment areas.
- Achieves 0.2% and 0.4% fewer statewide PM2.5 and NOx emissions reduction, respectively, than expected from the 2011 Truck and Bus regulation in 2023.
- Will not compromise ability to meet SIP goals in 2023 and 2031.
Staff Recommendations

- Approve the proposed resolution which includes adoption of the Environmental Analysis and the proposed amendments
- Timely effective date needed
  - Avoid DMV registration delays for SWCVs
  - Heavy cranes need viable compliance options to minimize enforcement action