

# Proposed Revisions to Stationary Compression Ignition Engine ATCM

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## Public Workshops

Sacramento  
April 27, 2005



Fresno  
May 4, 2005



California Environmental Protection Agency  
Air Resources Board

## Background

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- ATCM adopted February 26, 2004
- New engine requirements took effect January 1, 2005
- Emergency Amendments
  - Adopted March 17, 2005
  - Effective April 4, 2005
  - Expire August 3, 2005



## Ag Pump Engines Meeting 0.15 PM Not Available in All Size Ranges

- >50 to 99 hp - very limited availability
- 100 to <175 hp - not available in all sizes by all manufacturers
- $\geq 175$  hp
  - fully available
  - already meet 0.15 g/bhp-hr PM



## Pump Engines Available in the 50-99 HP Range

| Mfc.                        | A    | B    | C   | D   | E   |      |
|-----------------------------|------|------|-----|-----|-----|------|
| 50-69                       | 2    | 0    | 0   | *   | 0   |      |
| 70-89                       | 0    | 0    | 0   | 0   | 1   |      |
| 90-99                       | 1    | 2    | *   | 0   | 1   |      |
| Total                       | 3/14 | 2/20 | 0/5 | 0/4 | 2/9 | 7/52 |
| Complying/<br>Non complying |      |      |     |     |     |      |

\* no engines in the hp range

## Pump Engines Available in the 100-174 HP Range

| Mfc.                         | A           | B            | C          | D          | E          |              |
|------------------------------|-------------|--------------|------------|------------|------------|--------------|
| <b>HP Range</b>              |             |              |            |            |            |              |
| 100-120                      | 0           | 3            | *          | 0          | 0          |              |
| 121-140                      | 1           | 7            | 0          | 0          | 0          |              |
| 141-160                      | 1           | 7            | *          | 0          | 1          |              |
| 161-174                      | 4           | 14           | 0          | 1          | 0          |              |
| <b>Total</b>                 | <b>6/20</b> | <b>31/37</b> | <b>0/2</b> | <b>1/7</b> | <b>1/4</b> | <b>39/70</b> |
| Complying/<br>Non complying  |             |              |            |            |            |              |
| * no engines in the hp range |             |              |            |            |            |              |

## Emergency Action (Effective April 4 - August 2, 2005)

For new >50 to <175 hp stationary CI agricultural pump engines:

- Removed 0.15 g/bhp-hr PM standard
- Replaced 0.15 g/bhp-hr PM standard with requirement to comply with New Off-Road Engine Certification PM Standards.

**Current Tier 2 Standards:**

- 0.30 g/bhp-hr for engines >50 to 99 hp
- 0.22 g/bhp-hr for engines 100 to <175 hp

## Why Amend the ATCM?

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- Limited engine availability expected to continue
- Reduced voluntary engine replacement likely
  - Engines are selected to meet specific pumping needs
  - Additional cost for larger engine and associated equipment
  - Operational considerations
- Delayed diesel PM emissions and exposure reduction

## Key Proposed Revisions to ATCM

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- For new stationary agricultural pump engines >50 to <175 hp , aligns ATCM with New Off-Road Engine Certification Standards

| PM Emission Requirements |            |      |
|--------------------------|------------|------|
|                          | (g/bhp-hr) |      |
| HP                       | 2005-2011  | 2012 |
| >50-99                   | 0.30       | 0.02 |
| 100-<175                 | 0.22       | 0.01 |

## Other Proposed Revisions to the ATCM

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- Clarify “Initial Start-up Testing” definition
- Clarify the sale of new diesel CI engines less than or equal to 50 bhp
- Clarify Compliance with Emission Limits Section (D)1. and 2.
- Clarify Section 4(D)(E), Notification of Non-Compliance
- Clarify Section (f) and (g) compliance
- Clarify Section (h)(1) & (2), Emissions Data

## Environmental and Health Impact

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- No increase in diesel PM emissions or health risk
- Potential for reduced diesel PM emissions and health risk



## **Cost Impact**

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- **No increase in cost**
- **Potential cost relief for some farmers**
- **Allows dealers/distributors to sell Tier 2-certified engines currently in stock**

## **Emergency Standby Engines**

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- **Concerns were expressed about availability at March 17, 2005 meeting**
- **Staff are not currently proposing amendments for this source category**

## Status and Comment Submittal

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- **45-day comment period**  
**April 8, 2005-May 26, 2005**
- **ISOR and Board Hearing notice:**  
<http://www.arb.ca.gov/regact/statde05/statde05.htm>
- **Written comment submittal:**
  - Clerk of the Board  
Air Resources Board  
1001 I Street, 23rd Floor  
Sacramento, California 95814, or
  - [statde05@listerv.arb.ca.gov](mailto:statde05@listerv.arb.ca.gov)

## Next Steps

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- **Board Hearing May 26, 2005**
- **Up to 30-day OAL review of Final Statement of Reasons ~June/July 2005**
- **Immediate effective date at conclusion of OAL review ~July/August 2005**

## For Further Information

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- **Website:**  
<http://www.arb.ca.gov/diesel/ag/ag.htm>
- **List Serve:**  
<http://www.arb.ca.gov/diesel/ag/inuseag.htm>
- **Contacts:** Tony Andreoni (916) 324-6021 or [tandreon@arb.ca.gov](mailto:tandreon@arb.ca.gov), or, Barbara Cook (916) 327-1507 or [bcook@arb.ca.gov](mailto:bcook@arb.ca.gov)