Aftermarket Catalytic Converter Regulation

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What is a Catalytic Converter?

- Catalytic converters reduce emissions formed in the engine during fuel combustion prior to their exhaust out the tailpipe.

- Catalytic converters contain a combination of precious metals that convert/reduce the amount of harmful pollution being emitted through the vehicle’s exhaust system.

- As catalytic converters age, contaminants may build up on the catalyst surfaces that make it less efficient.
Replacement Options …

… for Catalytic Converter Failures

• Three Options
  – Original Equipment Manufacturer (OEM)
  – Still functional replacement from another vehicle (used)
  – One manufactured by a third party (Aftermarket)
Options

Two types of Certified Catalytic Converters

• Federal (USEPA)

• California Air Resources Board (CARB)
Federal Aftermarket Converter

- Converter performance based on a reduction efficiency of 70/70/30% for the pollutants HC/CO/NOx
- Converter manufactures certify to EPA that their converters meet the requirements
- Performance warranty of 25,000 miles
CARB Aftermarket Converter Program

- Converter must allow vehicle to meet its original certification level (e.g. TLEV, LEV, ULEV, etc.)

- Must be OBD II compatible, if it is an OBD equipped vehicle – check engine light must stay out

- Does not allow used converters
• CARB reviews test results from independent labs to certify converters.

• CARB executive orders are issued to specific engine families

• CARB audits/tests converters to ensure they meet the standards

• Warranty of 50,000 miles covers converter, parts, and labor
Need for an Updated Program

• Federal program not updated since 1986
  – Does not consider technological advances occurring over the years

• The Ozone Transport Commission (OTC) made a push for an update of the federal program
  – June 2009 – OTC statement calling for EPA to update the federal policy
  – OTC 2011 study found that federal program is failing to adequately reduce emissions
    • EPA should update federal program or OTC should pursue its own program
An Updated Program (continued)

- OTC has continued to push …
  - April 2011 OTC provided EPA recommendation for an updated federal program that mimics California’s.
  - June 2014 OTC took an action announcing that the aftermarket catalyst model program/rule was complete and ready to be implemented by member states.
  - June 2014 OTC reaffirmed its position on updated federal policy with a strong letter to EPA urging action.

- Rule will move Maryland forward, but it will also continue to push for a federal program.
  - This one simply makes the most sense as a federal rule.

- Two OTC states (NY, ME) have already adopted this program.
  - Other OTC states also moving forward.
OTC Model Program/Rule

- Very large potential regional NOx emission reductions
  - Somewhere between 30 and 40 tons per day of reductions (in OTC)
    - Compared to other options … this is a large number

- Based on the California Aftermarket Converter Program

- Requires the sale and installation of aftermarket converters meeting CARB standards

- Optional language to allow used converters if they are compatible with and installed on OBD II vehicles
Industry Support for OTC Effort

– OTC has worked for over 3 years with manufacturers of aftermarket converters

– OTC has industry support for their efforts on the model rule and for pushing EPA to update the federal aftermarket converter program

– One concern from the manufacturers …
  • Much better if done through a federal rule
Why is a CARB Approved Converter…

… a better option?

<table>
<thead>
<tr>
<th></th>
<th>Federal Converter</th>
<th>CARB Converter</th>
<th>Is CARB Better</th>
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</thead>
<tbody>
<tr>
<td>Converter Efficiency</td>
<td>70/70/30% (HC/CO/NOx)</td>
<td>97/83/96 % (HC/CO/NOx)</td>
<td>Yes</td>
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<tr>
<td>Warranty (conversion efficiency)</td>
<td>25,000 miles</td>
<td>50,000 miles</td>
<td>Yes</td>
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<tr>
<td>Designed to be compatible with an OBD II Vehicle</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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– Protection to consumers is another important reason to move ahead
Questions