CALIFORNIA
AIR RESOURCES BOARD

Proposed Procedures for the Exemption of Add-On and Modified Part(s) for On-Road Vehicles/Engines

July 23, 2020

California's Motor Vehicle Emission Control Program

- Since the late 1960's, CARB has adopted and implemented emission standards for vehicles and engines
- Manufacturers have designed and equipped their engines with necessary emission controls to meet these standards

CARB

Vehicle Code 27156

- Prohibits modifications that may impact the performance of a required pollution control device
- Modifications reviewed/approved by CARB are “exempt” from the prohibition
- Maximum base penalty for a Vehicle Code 27156 violation is $37,500

Importance of CARB's Aftermarket (Add-On & Modified) Parts Program

- The car culture is imbedded in the California lifestyle – Innovative manufacturers design and produce legal modifications for California enthusiasts
- A CARB EO is typically recognized by the US EPA, making that product legal for sale in all 50 states
- Over 200 exemption applications are submitted to CARB annually
- CARB's webpage is used by Smog Check Stations to verify legality of parts

✓ CARB EO Accepted Nationwide

CARB

What Are Add-On And Modified Parts?

- Any component or device that is not part of the engine as certified by the OEM
- Does not include functionally identical aftermarket replacement parts

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Simple Add-On And Modified Parts

Throttle Body

V8 Cylinder Head

Intercooler

Air Intake

Complex Add-On And Modified Parts

Supercharger Kit

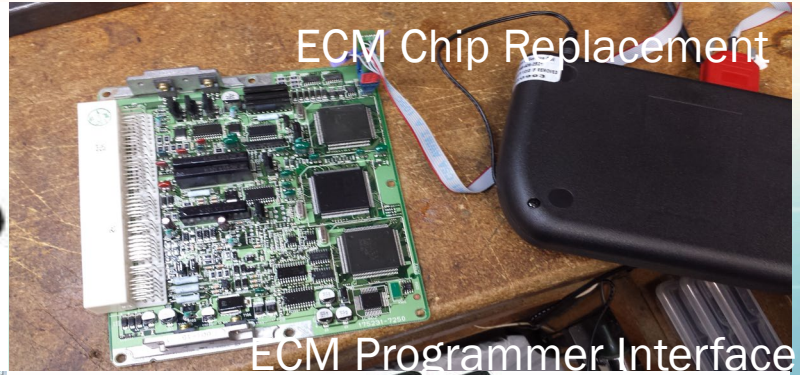
Turbocharger Kit

V8 Engine Displacement Increase Kit

Camshaft

Advanced Add-On And Modified Parts

In-Line Sensor Modification



ECM Chip Replacement

ECM Programmer Interface

Programming of ECM Parameters

CARB's Evaluation of Modified Parts

- November 1972, CARB granted its first Modified Part EO Exemption
- About 4700 EOs have been granted to date

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-1
Relating to Exemptions under Section 27156
of the Vehicle Code

"EQUALIZER MOD 4-8"

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39023 of the Health and Safety Code;

IT IS ORDERED AND RESOLVED: That the installation of "Equalizer Mod 4-8" as an add-on device manufactured by the Contignitron has been found to not reduce the effectiveness of required emission control devices in vehicles and therefore is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1966-1970 model-year vehicles.

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Vehicles And Engines Have Changed

- Many changes in the design of new vehicles and engines since the year 1990
- Current procedures need updating to improve processing of exemption applications with newer technology

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Outreach

- Two public workshops in El Monte
- Eight stakeholder meetings to discuss specific topics
- 2018 and 2019 SEMA Show seminars presenting and discussing fundamentals of new procedures

Staff Proposal

Goals

- Increase the clarity of the exemption requirements
- Provide for a more streamlined application and review process
- Update the requirements to address newer and more advanced current technologies

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Clarity

- Simple and clear EO application requirements
- Better describe the CARB review criteria
  - overall emissions impacts consideration
  - emission control system impacts
    - durability
    - reduction in effectiveness
- Better inform manufacturers on:
  - required testing based on device type
  - test vehicle or engine selection
  - testing process

Streamlining

- Add-On/Modified part device type specific application requirements
- Focused vehicle/engine coverage will improve efficiency of application creation and review processes
- Standardized laboratory testing data template
- Faster review pathways for less complicated parts/requests to allow product to market quicker

Updates For Newer Technology

- Tuners and supercharger kits are popular add-on and modified parts that did not exist when current procedures were written
- These parts are complex and may impact emissions, emission controls, and OBD.
- More detailed technical descriptions and testing is needed to demonstrate impacts.

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Staff Proposal – CARB Audit Testing

- Select and procure off-the-shelf exempted devices
- Verify compliance using the prescribed testing protocols and procedures
- Evaluate performance under other real world driving conditions
- Exemptions can be revoked based on failing audit results

Cost/Emissions Impacts

- New Procedures Are Expected To Provide Efficiencies, Potentially Reducing Costs
  - Less time to complete an application for submission
  - CARB staff will spend less time with aftermarket part manufacturers regarding missing information or the packaging format of submitted application(s)
- Add-On and Modified Parts exemption process protects the emission benefits of our new vehicle/engine standards

Industry Requests/CARB Response

- Can manufacturers submit multiple applications and have them covered by one issued exemption Executive Order?
  - CARB Response: Yes, the proposed procedures will allow for this type of request
- Can test vehicle data generated for a given application be used to support other applications?
  - CARB Response: Yes, the procedures would allow manufacturers to request the carry over of test data to support similar applications.
- Establish “Worst Case” Emissions Test Vehicle/Engines
  - CARB Response: Staff will work with industry to establish worst case vehicles/engines on an annual basis

CARB

Staff Recommendation

- Adopt the proposed resolution and staff's proposed amendments to the regulations and the incorporated Procedures for the Exemption of Add-On and Modified Part(s) for On-Road Vehicles/Engines
- Direct staff to further develop 15 day changes