Appendix D

CARB Correspondence Concerning Experimental Permit

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Air Resources Board

Robert F. Sawyer, Ph.D., Chair
9480 Telstar Avenue, Suite 4
El Monte, California 91731 www.arb.ca.gov

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

This is in response to your request for instructions on how to obtain an experimental permit under the provisions of Health and Safety Code Section 43014.

To apply for an experimental permit, you must submit the following:

1. A brief description of your proposed modification. This description shall include:

   A. The purpose of the modification.
   B. Its basic theory of operation and functional characteristics.

2. A defined test program for obtaining pertinent data on driveability, fuel economy, and emission effects as applicable.

3. A statement indicating which, if any, emission control components are removed or modified.

4. The make, model, year, and license number or vehicle identification number (VIN) of the vehicle(s) you plan to modify. If you are modifying a heavy-duty vehicle, please include the engine serial number.

5. A statement indicating the disposition of the modified vehicle(s) at the end of the test program.

Please forward all correspondence to:

Annette Hebert, Chief
Mobile Source Operations Division
California Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731

If you have any questions, please contact Ms. Rose Castro, Manager, Aftermarket Parts Section, at (626) 575-6848.

Sincerely,

Jackie Lourenco, Chief
New Vehicle/Engine Programs Branch

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: http://www.arb.ca.gov.

California Environmental Protection Agency

California Vehicle Code 27156 Exemption Guidelines for Aftermarket H_2 Systems

California Vehicle Code 27156 anti-tampering exemption is obtained from the Air Resources Board (ARB) through an application process. The exemption procedures for on-road vehicle applications are contained in the "Procedures for Exemption of Add-On and Modified Parts" (Procedures). The process is divided into two phases: the application phase and the testing phase. During the application phase, there will be an exchange of information between the manufacturer and the ARB on the aftermarket system and its applicability. Once the ARB evaluates the system and its vehicle/engine application, the ARB will select the appropriate test vehicle(s)/engine(s) and lay out the test plan. During the testing phase, the manufacturer will arrange with an independent test laboratory to carry out the ARB test plan. At the completion of testing, the ARB will review the data and deny or issue an exemption. For exemption, the manufacturer will need to demonstrate emissions, durability, and On-Board Diagnostic II (OBD II) System compliance. The general guidelines for obtaining an exemption are outlined below:

Application

- Complete and submit the general criteria parts application in the Procedures.

  Include with application:
  1. System and system application[a]
  2. Detailed description of system[b]
  3. Fuel[c]
  4. Installation instructions and adjustment instructions
  5. System label
  6. New tune-up/vacuum hose routing label
  7. Existing emissions, durability, and OBD II System test data[d]
  8. CA Smog Check[e]
  9. Safety information[f]
  10. Manufacturer warranty (if any)

  a System: ICE to H_2-ICE; hybrid ICE-electric to hybrid H_2-ICE-electric; engine modification; engine change; or other
  System application: year, make, and model of vehicle/engine to be converted; base engine platform and new platform (for engine change)

  b Operating principles; parts added; parts removed; parts modified; fueling/spark calibration; and OBD II System

  c H_2, H_2-CNG mixture, or other; method of mixing (i.e. on-board, at fueling station, or other). Has the ARB Stationary Source Division evaluated the fuel blend?

  d What vehicle/engine was tested (i.e. year, make, and model); what types of tests were performed? Is the tested system identical to production system?

  e Can the converted vehicle be tested under the Smog Check Program?

  f Does the H_2/H_2-CNG tank meet handling and storage safety standards established by USDOT, NHTSA, CHP, etc.?

Testing

- Once the application phase is complete, commence testing following the ARB test plan.

    1. Emissions – test and compare emissions against new vehicle/engine emission standards
    2. Durability – provide test data and/or information showing system, component, and emissions durability
    3. OBD II System – provide engineering evaluation and test data showing functional OBD II System. OBD II System will be evaluated by the ARB Advanced Engineering Section

Mail all correspondences to:

California Air Resources Board
9480 Telstar Avenue, Suite 4
El Monte, CA 91731
Attn: Aftermarket Parts Section

California Environmental Protection Agency
AIR RESOURCES BOARD
9480 Telstar Ave., Suite 4
El Monte, CA 91731-2988

Form A

State of California
AIR RESOURCES BOARD

Vehicle Code Sections 27156 and 38391 Exemption Application for General Criteria Parts

1. Name of Applicant

   Address

   Phone (___)

2. Name of Device Manufacturer*

   Address

   Phone (___)

3. Name of Authorized Representative**

   Address

   Phone (___)

4. Test procedure (check one)

   The test procedure to be used is:

   _____Cold Start CVS-75 Federal Test Procedure

   _____Cold 505

   _____Hot Start CVS-75 (applicable to some diesel-powered vehicles)

5. Evaluation Criteria (check one)

   This application is for certification to:

   _____Emission Standards

   _____Typical Baseline Emission Levels

* If different from name of applicant. Device as used herein is defined to mean add-on or modified part.

** An authorized representative may be required to prove that he/she is authorized to act on behalf of an

applicant or manufacturer.

6. Device Name (s)

7. Briefly describe the purpose of the device

8. Briefly describe the operation of the device

9. List vehicle names, model year, engine displacements and systems that are compatible with the device, and for which exemption is requested. Specify the correct device model for each vehicle.

10. The following information is required for the Air Resources Board (ARB) to complete an evaluation. Please place a check mark next to the items that are **enclosed** with the application and provide an explanation for items that are not checked.

    (a)____ A detailed description of the device including operating principles, cross-sectional drawing, electrical schematics, and other such material to assist the staff in understanding its operation.

    (b)____Copies of all advertising material to be used in selling devices including a sample or facsimile of the packaging label. (Optional)

    (c) ____A copy of the installation and adjustment instructions and drawings that will be included with the device.

    (d)____A facsimile or prototype of the identification plate or label to be attached permanently to or imprinted on or near each device offered for sale. The plate or label should be placed such that it is visible after the device is installed, and should contain:

        i) the manufacturers name

        ii) the device name and model number

        iii) the Air Resources Board exemption number identified as ARB E.O. No. D-XXX.

    (e)____A facsimile or prototype engine compartment plate or label located adjacent to, but not covering, the vehicle manufacturers Vehicle Emission Control Information (tune-up) label. This plate or label is only required if a change is recommended to vehicle manufacturers tune-up parameters. In addition to the recommended tune-up parameter changes, the plate or label must contain the same information as the device label.

    (f)____ A list of the companies or persons that will manufacture the device under license.

11. The ARB may require one or more devices for testing. Do you agree to provide the device(s) free of costs?____yes____no. The device(s) will be returned only if return is requested at the time the device(s) are submitted.

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Emission Statements

I affirm that to the best of my knowledge this device shall not cause the emission into the ambient air of any noxious or toxic matter that is not emitted in the operation of such motor vehicle without such device.

I understand that an exemption, if granted, does not constitute a certification, accreditation, approval, or any other type of endorsement by the Air Resources Board of any claims concerning alleged benefits of a device. I further understand that no claims of any kind concerning anti-pollution benefits may be made for an exempted device.

Signature of Authorized Representative:

Date: