State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-452
Relating to Exemptions Under Section 27156
of the Vehicle Code

HOWELL ENGINE DEVELOPMENT, INC.
ELECTRONIC FUEL INJECTION CONVERSION KIT, MODEL NO. JP-1

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 39515 and Section 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the Electronic Fuel Injection Conversion Kit, Model No. JP-1, manufactured and marketed by Howell Engine Development, Inc., 6201 Industrial Way, Marine City, Michigan 48039 has been found not to reduce the effectiveness of the applicable vehicle pollution control system and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1972-91 American Motors/Chrysler Jeep vehicles equipped with the 4.2 liter engine.

The Electronic Fuel Injection Conversion Kit, Model No. JP-1 includes the following main components: Throttle Body Unit, Open Element Air Cleaner, Electronic Control Module, wiring harness, EPROM (CAL8 calibration), Cal-pack, MAP sensor, engine coolant sensor, heated oxygen sensor, electronic fuel pump, fuel filter, fuel pump relay, and vehicle speed sensor.

The installation of the kit requires the removal of the following components that are located within the engine compartment: Air cleaner assembly, carburetor/throttle body, fuel pump, electronic control module (ECM), oxygen sensor, air injection system (air tubes plugged), and other related vacuum valves and lines. Ignition timing is set at 6-8 degrees BTDC at 700 RPM idle. No changes are made to the stock carbon canister except for the vacuum line that was connected to the carburetor float bowl vent, it is plugged at the canister. The new heated oxygen sensor is installed in the stock location on vehicles currently equipped with an oxygen sensor. On vehicles which do not have an oxygen sensor, the sensor must be placed 3" down stream of the exhaust manifold flange.

This Executive Order is valid provided that the installation instructions for the fuel injection kit will not recommend tuning the vehicle to specifications different from those of Howell Engine Development.

Changes made to the design or operating conditions of the fuel injection kit, as exempt by the Air Resources Board, which adversely affect the performance of the vehicle's pollution control system shall invalidate this Executive Order.

Marketing of the fuel injection kit using any identification other than that shown in this Executive Order or marketing of the fuel injection kit for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of the fuel injection kit shall not be construed as exemption to sell, offer for sale, or advertise any component of the kit as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of the fuel injection kit may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on submitted emissions test data on a 1990 Jeep Wrangler. Test results showed that tailpipe emissions with the Electronic Fuel Injection Conversion Kit, Model No. JP-1 installed on the vehicle met the vehicle's applicable emission standard during a Cold Start CVS-75 Federal Test Procedure.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF HOWELL ENGINE DEVELOPMENT, INC.'S FUEL INJECTION KIT.

No claim of any kind, such as "Approved by the Air Resources Board", may be made with respect to the action taken herein in any advertising or other oral or written communication.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after a ten-day written notice of intention to revoke the order, in which period the holder of the order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request and the order may not be revoked until a determination after hearing that grounds for revocation exist.

Executed at El Monte, California, this 28th day of April 1997.

R. B. Summerfield, Chief
Mobile Source Operations Division