State of California AIR RESOURCES BOARD

EXECUTIVE ORDER D-488-42

Relating to Exemptions Under Section 27156 of the Vehicle Code

Magnuson Products, Inc. Toyota 3.4L and 4.5L Supercharger Kits

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-14-012;

IT IS ORDERED AND RESOLVED: That installation of the Toyota 3.4L and 4.5L Supercharger Kits manufactured and marketed by Magnuson Products, Inc. of 1990 Knoll Drive, Ventura, California 93003 has been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the California Vehicle Code for the following Toyota applications with a 3.4L or 4.5L displacement gasoline engine:

| Part No. | Application |
|-----------------|------------------------------------|
| 01-62-34-003-BL | 1996 to 2002 3.4L 4 Runner |
| | 1995 to 1998 3.4L T-100 and Tundra |
| | 1995 to 2004 3.4L Tacoma |
| 02-90-45-003-SL | 1992 to 1997 4.5L Truck |
| | 1995 to 1997 4.5L Truck |

The 4.5L Supercharger Kit consists of the following main components: Eaton MP90 supercharger, a 3.2 inch diameter supercharger pulley and a 7.7 inch crankshaft pulley, by-pass valve, and all the necessary hardware needed for installation. The stock ECU calibration, airflow sensor, air cleaner housing and thermostat are retained. Modifications to the stock engine configuration include the relocation of the throttle-body to the back of the supercharger, new intake air tubing from stock air cleaner housing to the throttle-body and from the supercharger plenum chamber to the stock intake manifold. The supercharger and plenum chamber are located on the passenger side of the engine block. No emission related components are modified except for a PCV hose which is relocated to the vacuum port on the throttle-body adaptor at the back of the supercharger. No changes are made to the stock ignition system. Boost is limited to a maximum of 6.5 pounds per square inch. All supplied fuel hoses are Avon's CADbar 9000 series, and fuel and vapor line connectors supplied with the kit are OEM – equivalent parts. Breather hoses may be replaced with an SAE30R9 rated hose.

The 3.4L Supercharger Kit includes the following main components: Eaton MP62 supercharger with integrated intake manifold, a 2.37 inch diameter supercharger pulley, by-pass valve, all the necessary hardware needed for installation, and an EGR kit for applications with EGR. The stock air filter housing, crankshaft pulley, ECU calibration, and intake air tubing are retained. All other emission related components including the throttle-body are transferred to the new intake manifold in a stock functional location. No changes are made to the stock ignition system. Boost is limited to a maximum of 7.0 pounds per square inch. All supplied fuel hoses are Avon's CADbar 9000 series, and fuel and vapor line connectors supplied with the kit are OEM – equivalent parts. Breather hoses may be replaced with an SAE30R9 rated hose.

This Executive Order shall not apply to any Toyota 3.4L and 4.5L Supercharger Kits advertised, offered for sale, sold with, or installed on a new motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order is valid provided that the installation instructions for the Toyota 3.4L and 4.5L Supercharger Kits will not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the device, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using any identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

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

This exemption is issued based on submitted emissions test data, from the SEMA Garage, Diamond Bar, California, on a 2004 model year 3.4L Toyota Tacoma, certified to the LEV I LEV emission standards, and tested using the Cold-Start CVS-75 Federal Test Procedure (FTP) test cycle and the Supplemental Federal Test Procedure (SFTP US06/SC03) test cycles.

| | CV | | | | |
|-------------------|-----------|-----|---------|-------|--|
| | NMOG | CO | NOx | НСНО | |
| Standards, UL | 0.130 | 5.5 | 0.5 | 0.023 | |
| Device Test w/df, | 0.092 | 0.6 | 0.1 | 0.001 | |
| | | | | | |
| | US06/SC03 | | | | |
| e. | NMHC+NOx | | CO | | |
| Standards 4k | 0.25/0.14 | 1 | 0.5/8.0 | | |
| Device | 0.08/0.05 | C | .5/0.1 | | |

Test results showed that the Toyota 3.4L and 4.5L Supercharger Kits, when installed on the vehicle did not cause exhaust emissions to exceed the applicable emission standards during the FTP and SFTP. This Executive Order is also based on the On-Board Diagnostic II (OBD II) testing conducted on the same test vehicle. Toyota 3.4L and 4.5L Supercharger Kits when installed on the test vehicle did not affect the vehicle's ability to perform its OBD II monitoring.

In addition, the Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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 THE TOYOTA 3.4L AND 4.5L SUPERCHARGER KITS.

No claims 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 is made after the hearing that grounds for revocation exist.

Executed at El Monte, California, this $\underline{\mathcal{PTY}}$ day of December 2016.

Emissions Compliance, Automotive Regulations and Science Division

