

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-488-13

Relating to Exemptions Under Section 27156
of the Vehicle Code

Magnuson Products, Inc.
Radix Intercooled Supercharger Kit

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-02-003;

IT IS ORDERED AND RESOLVED: That the installation of the Radix Intercooled Supercharger Kit manufactured and marketed by Magnuson Products, Inc. of 1990 Knoll Drive, Ventura, CA 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 Vehicle Code for the 1999 through 2009 General Motors trucks listed in Exhibit A.

The Radix Intercooled Supercharger Kit includes the following main components: supercharger compressor and intake manifold plenum, larger fuel injectors, fuel pump voltage booster, new air intake filter and tube assembly, air-to-water intercooler, and new fuel and timing map calibrations. The throttle body is moved to the supercharger inlet. All other emission-related components are in the stock location relative to the throttle body. The supercharger pulley diameters vary between 3.6" and 3.7." All crankshaft pulleys are stock and maximum boost is limited to 7 psi.

This Executive Order shall not apply to any Radix Intercooled Supercharger Kit 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 Radix Intercooled Supercharger Kit 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 devices, 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 these devices 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 these devices may have on any warranty either expressed or implied by the vehicle manufacturer.

This exemption is issued based on submitted emissions test data from an independent laboratory on a 2007 model year General Motors C15 Sierra 2WD truck (Test Group 7GMXT06.0383) certified to the Low Emission Vehicle II Ultra Low Emission Vehicle (LEV II ULEV) and Supplemental Federal Test Procedure (SFTP) standards:

Federal Test Procedure:

	<u>NMOG</u>	<u>CO</u>	<u>NOx</u>
Standards (g/mi)	0.070	2.1	0.04
Device (g/mi) with df's applied	0.066	1.1	0.02
Additive df's (50k)	0.018	0.1	0.01

SFTP (US06 Cycle):

	<u>NMHC+NOX</u>	<u>CO</u>
Standards (g/mi)	0.4	10.5
Device (g/mi)	0.1	0.3

SFTP (SC03 Alternative AC2 Cycle):

	<u>NMHC+NOX</u>	<u>CO</u>
Standards (g/mi)	0.31	3.5
Device (g/mi)	0.02	0.9

Test results showed that the Radix Intercooled Supercharger Kit when installed on the vehicle did not cause exhaust emissions to exceed the applicable emission standards during the Cold Start Federal Test Procedure or SFTP cycles. This Executive Order is also based on the On-Board Diagnostic II (OBD II) testing conducted on the same test vehicle. The Radix Intercooled Supercharger Kit 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 RADIX INTERCOOLED SUPERCHARGER KIT.

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 3 day of June 2008.



Annette Hebert, Chief
Mobile Source Operations Division

EXHIBIT A

(E.O.# D-488-13)

MODEL YEAR	MAKE	MODEL	ENGINE SIZE (LITER)	KIT PART NUMBER	PULLEY SIZE (IN.)
2007-2008	HUMMER	H2 4WD	6.2	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2008	HUMMER	H2 SUT 4WD	6.2	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	HUMMER	H3 4WD	5.3	01-12-60-109-SL 01-12-60-109-PO	3.6
2007-2009	CADILLAC	ESCALADE EXT AWD, ESCALADE 2WD, ESCALADE ESV 2WD, ESCALADE ESV AWD	6.2	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	CHEVROLET	K1500 TAHOE 4WD, C1500 TAHOE 2WD, C15 SILVERADO 2WD, K1500 SILVERADO 4WD,	6.2	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6

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MODEL YEAR	MAKE	MODEL	ENGINE SIZE (LITER)	KIT PART NUMBER	PULLEY SIZE (IN.)
2007-2009	CHEVROLET	C15 SILVERADO 2WD, C25 SILVERADO 2WD, C35 SILVERADO 2WD, K15 SILVERADO 4WD, K25 SILVERADO 4WD, K35 SILVERADO 4WD, C1500 TAHOE 2WD, K1500 TAHOE 4WD, C1500 AVALANCHE 2WD, K1500 AVALANCHE 4WD, C1500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, C2500 SUBURBAN 2WD, K1500 SUBURBAN 4WD, K2500 SUBURBAN 4WD	6.0	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2008	CHEVROLET	G15/25 VAN 2WD CONV, G1500/2500 EXPRESS 2WD, G1500/2500 VAN 2WD, G3500 EXPRESS 2WD, G3500 VAN 2WD CARGO CONV, G15/25 SAVANA 2WD CARGO CONV, G3500 SAVANA 2WD CARGO	6.0	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	CHEVROLET	C15 SILVERADO 2WD	5.3	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	CHEVROLET	K15 SILVERADO 4WD	5.3	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6

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MODEL YEAR	MAKE	MODEL	ENGINE SIZE (LITER)	KIT PART NUMBER	PULLEY SIZE (IN.)
2007-2009	CHEVROLET	C15 SILVERADO 2WD, K15 SILVERADO 4WD	4.8	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	GMC	K1500 YUKON DENALI AWD, 1500 YUKON 4WD, C15 SIERRA 2WD, K15 SIERRA 4WD, K15 SIERRA AWD, C1500 YUKON XL 2WD, K1500 YUKON XL AWD	6.2	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	GMC	C15 SIERRA 2WD, C25 SIERRA 2WD, C35 SIERRA 2WD, K15 SIERRA 4WD, K15 SIERRA AWD, K25 HD SIERRA 4WD, K35 SIERRA 4WD, K1500 YUKON DENALI AWD, K1500 YUKON XL AWD, C1500 YUKON 2WD, C1500 YUKON XL 2WD, C1500 YUKON XL 4WD, G3500 VAN 2WD, G1500/2500 SAVANA CARGO 2WD, G3500 SAVANA 2WD PASSENGER, G1500/2500 SAVANA PASSENGER 2WD, G3500 SAVANA 2WD CARGO CONV	6.0	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	GMC	C1500 YUKON 2WD, K1500 YUKON 4WD	5.3	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.7

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MODEL YEAR	MAKE	MODEL	ENGINE SIZE (LITER)	KIT PART NUMBER	PULLEY SIZE (IN.)
2007-2009	GMC	C1500 YUKON XL 2WD, K1500 YUKON XL 4WD, C15 SIERRA 2WD, K15 SIERRA 4WD	5.3	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.6
2007-2009	GMC	C1500 YUKON 2WD, K15 SIERRA 4WD	4.8	01-12-60-041-SL 01-12-60-041-PO 01-22-60-007-SL 01-22-60-007-PO 01-12-60-042-SL 01-12-60-042-PO 01-19-60-007-SL 01-19-60-007-PO	3.7