

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-488-19

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 California Vehicle Code for the General Motors Corporation vehicle applications listed in Exhibit A.

The Radix Intercooled Supercharger Kit includes the following main components: supercharger compressor and intake manifold plenum, larger fuel injectors, new drop-in air filter and intake 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 3.3" and 4.1." 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 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 previously 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

The test results show that the Radix Intercooled Supercharger Kit when installed on a representative vehicle will not likely 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 specific On-Board Diagnostic II (OBD II) testing conducted on the modified 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.

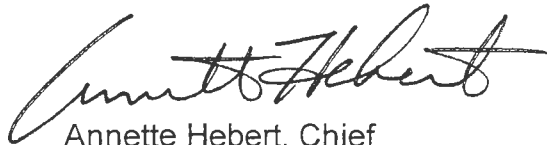
In addition, the Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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 10 day of February 2012.

A handwritten signature in black ink, appearing to read "Annette Hebert", with a stylized flourish at the end.

Annette Hebert, Chief
Mobile Source Operations Division

Exhibit A
(EO # D-488-19)

Year	Make	Model	Engine Size (L)	Kit Part Number	Pulley Size (in)	
2007 - 2012 LEV2/ULEV	GMC	Canyon 2wd	5.3	01-19-60-031-BL	3.8	
	GMC	Canyon 4wd		01-19-60-031-CH		
	GMC	Canyon Crew 2wd				
	GMC	Canyon Crew 4wd				
	Chevrolet	Colorado 2wd				
	Chevrolet	Colorado 4wd				
	Chevrolet	Colorado Crew 2wd				
	Chevrolet	Colorado Crew 4wd				
BL = Black CH = Chrome LTR = Low Temp Radiator for intercooler system (required change between SUV/Van and truck due to differences in the front end sheet metal and radiator mounting)						
2007 - 2012 LEV2/ULEV	GMC	C15 Sierra 2wd	4.8	01-19-59-995-BL	4.1	Truck Revised MPI fuel rail
	Chevrolet	C15 Silverado 2wd		01-19-59-995-CH		2011 - 2012 MPI injectors
	GMC	K15 Sierra 4wd			4.1	Truck Magnuson Fuel Rail
	Chevrolet	K15 Silverado 4wd		01-19-60-001-BL		2007 - 2010 MPI injectors
	GMC	C15 Sierra 2wd		01-19-60-001-CH		
	Chevrolet	C15 Silverado 2wd				
	GMC	K15 Sierra 4wd				
	Chevrolet	K15 Silverado 4wd				
2007 - 2012 LEV2/ULEV	Chevrolet	C1500 Tahoe 2wd	5.3	01-19-59-995-BL	3.7	Truck Revised MPI fuel rail
	GMC	C1500 Yukon 2wd		01-19-59-995-CH		2011 - 2012 MPI injectors
	Chevrolet	K1500 Tahoe 4wd		01-19-59-996-BL	3.7	SUV/Van Revised MPI fuel rail
	GMC	K1500 Yukon 4wd		01-19-59-996-CH		2011 - 2012 MPI injectors
	GMC	C15 Sierra 2wd				Requires Different LTR
	Chevrolet	C15 Silverado 2wd		01-19-60-001-BL	3.7	Truck Magnuson Fuel Rail
	GMC	K15 Sierra 4wd		01-19-60-001-CH		2007 - 2010 MPI injectors
	Chevrolet	K15 Silverado 4wd			3.7	SUV/Van Magnuson Fuel Rail
	GMC	C15 Sierra 2wd XFE		01-19-60-003-BL		2007 - 2010 MPI injectors
	Chevrolet	C15 Silverado 2wd XFE		01-19-60-003-CH		Requires Different LTR
	Chevrolet	G1500 Express 2wd Cargo				
	Chevrolet	G1500 Express 2wd Pass				
	Chevrolet	G1500 Express Conv 2wd Cargo				
	GMC	G1500 Savana 2wd Cargo				
	GMC	G1500 Savana 2wd Pass				
	GMC	G1500 Savana Conv 2wd Cargo				
	Chevrolet	H1500 Express AWD Cargo				
	Chevrolet	H1500 Express AWD Pass				
	Chevrolet	H1500 Express Conv AWD Cargo				
	GMC	H1500 Savana AWD Cargo				
	GMC	H1500 Savana AWD Pass				
	GMC	H1500 Savana Conv AWD Cargo				
	Chevrolet	C1500 Avalanche 2wd				
	Chevrolet	C1500 Suburban 2wd				
	GMC	C1500 Yukon XL 2wd				
	Chevrolet	C1500 Avalanche 4wd				
	Chevrolet	C1500 Suburban 4wd				
	GMC	C1500 Yukon XL 4wd				
	GMC	C15 Sierra 2wd				
	Chevrolet	C15 Silverado 2wd				
	GMC	K15 Sierra 4wd				
	Chevrolet	K15 Silverado 4wd				

Exhibit A
(EO # D-488-19)

Year	Make	Model	Engine Size (L)	Kit Part Number	Pulley Size (in)		
2007 - 2012 LEV2/ULEV	GMC	C1500 Yukon 2wd	6.2	01-19-60-007-BL	3.3	Truck	Factory Fuel Rail
	GMC	K1500 Yukon Denali AWD		01-19-60-007-CH		2007 - 2008	MPI injectors
	GMC	C15 Sierra 2wd		01-19-60-008-BL	3.3	SUV	Factory Fuel Rail
	GMC	C15 Sierra 4wd		01-19-60-008-CH		2007 - 2008	MPI injectors
	GMC	C15 Sierra AWD				Requires Different LTR	
	Cadillac	Escalade 2wd		01-19-60-015-BL	3.3	Truck	MPI Fuel Rails
	Cadillac	Escalade 4wd		01-19-60-015-CH		2009 - 2010	MPI injectors
	Chevrolet	C15 Silverado 2wd		01-19-60-016-BL	3.3	SUV	MPI Fuel Rails
	Chevrolet	K15 Silverado 4wd		01-19-60-016-CH		2009 - 2010	MPI injectors
	GMC	C1500 Yukon XL 2wd				Requires Different LTR	
	GMC	C1500 Yukon XL 4wd		01-19-60-018-BL	3.3	Truck	Revised MPI fuel rail
	Cadillac	Escalade ESV 2wd		01-19-60-018-CH		2011 - 2012	MPI injectors
	Cadillac	Escalade ESV 4wd		01-19-60-019-BL	3.3	SUV	Revised MPI fuel rail
	Cadillac	Escalade EXT AWD		01-19-60-019-CH		2011 - 2012	MPI injectors
	Chevrolet	C1500 Avalanche 2wd				Requires Different LTR	
	Chevrolet	C1500 Suburban 2wd					
	Chevrolet	C1500 Avalanche 4wd					
	Chevrolet	C1500 Suburban 4wd					
2007 - 2012 ULEV	Chevrolet	CK20 Silverado 2500HD	6.0	01-19-60-018-BL	3.4	Truck	Revised MPI fuel rail
	GMC	CK20 Sierra 2500HD		01-19-60-018-CH		2011 - 2012	MPI injectors
	Chevrolet	CK30 Silverado 3500HD		01-19-60-007-BL	3.4	Truck	Factory Fuel Rail
	GMC	CK30 Sierra 3500HD		01-19-60-007-CH		2007 - 2008	MPI injectors
	Chevrolet	CK31 Silverado 3500 Cab/Chassis		01-19-60-015-BL	3.4	Truck	MPI Fuel Rails
	GMC	CK31 Sierra 3500 Cab/Chassis		01-19-60-015-CH		2009 - 2010	MPI injectors
	Chevrolet	G30 Express Commercial Cutaway 3500					
	GMC	CK31 Savana Special Cutaway 3500					
	GMC	C25 Sierra 2wd					
	Chevrolet	C25 Silverado 2wd					
	GMC	K25 Sierra 4wd					
	Chevrolet	K25 Silverado 4wd					
	GMC	C35 Sierra 2wd					
	Chevrolet	C35 Silverado 2wd					
	GMC	K35 Sierra 4wd					
	Chevrolet	K35 Silverado 4wd					
	GMC	C35 Sierra 2wd					
	Chevrolet	C35 Silverado 2wd					
	GMC	K35 Sierra 4wd					
	Chevrolet	K35 Silverado 4wd					