

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-488-9

Relating to Exemptions Under Section 27156  
of the Vehicle Code

Magnuson Products, Inc.  
Radix 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 Supercharger Kit manufactured and marketed by Magnuson Products, Inc. of 3172 Bunsen Avenue, Unit K, 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 2006 model year 4.8L, 5.3L, and 6.0L General Motors vehicles listed in Exhibit A.

The Radix Supercharger Kit includes the following main components: Eaton supercharger and intake manifold plenum, larger fuel injectors, air intake filter, air-to-water intercooler, and new fuel and ignition timing map calibrations. The stock fuel pump is replaced with a high-output pump and 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 specifications range between 3.2" to 3.7" depending on the engine displacement for which the kit is installed. All crankshaft pulleys are stock and maximum boost is limited to 7 psi.

This Executive Order shall not apply to any Radix 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 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 (ARB), 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 ARB.

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 previously submitted emissions test data from an independent laboratory on a 2004 model year General Motors Silverado 1500 2WD vehicle (Test Group 4GMXT06.0187) certified to the Super Ultra Low Emission Vehicle (SULEV) and Supplemental Federal Test Procedure (SFTP) standards:

Federal Test Procedure:

	<u>NMOG</u>	<u>CO</u>	<u>NOX</u>
Standards (g/mi)	0.125	3.4	0.14
Device (g/mi) with df's applied	0.101	2.5	0.06
Additive df's (50k)	0.007	0.2	0.02

SFTP (US06 Cycle):

	<u>NMHC+NOX</u>	<u>CO</u>
Standards (g/mi)	0.40	10.5
Device (g/mi)	0.05	7.2

SFTP (SC03 Alternative AC2 Cycle):

	<u>NMHC+NOX</u>	<u>CO</u>
Standards (g/mi)	0.31	3.5
Device (g/mi)	0.03	0.2

Test results showed that the Radix Supercharger Kit when installed on the vehicle did not cause exhaust emissions to exceed the applicable emission standards during the Cold Start CVS-75 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 Supercharger Kit when installed on the test vehicle did not affect the vehicle's ability to perform its OBD II monitoring.

In addition, the ARB 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 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 20<sup>th</sup> day of October 2005.



Allen Lyons, Chief  
Mobile Source Operations Division



# Exhibit A

(E.O.# D-488-9)



S/C SYSTEM P/N

S/C SYSTEM APPLICATION

01-12-60-003-SL	2004 ONLY JOE GIBBS PERFORMANCE SPEC RADIX FLEX FUEL (LOWER HEAT EXCHANGER)
01-12-60-003	2005-2006 JOE GIBBS PERFORMANCE SPEC RADIX FLEX FUEL (LOWER HEAT EXCHANGER)
01-12-60-004	2004-2006 JOE GIBBS PERFORMANCE SPEC RADIX PREMIUM (LOWER HEAT EXCHANGER)
01-12-60-005-SL	2004-2006 JOE GIBBS PERFORMANCE SPEC RADIX SPORT (UPPER HEAT EXCHANGER)
01-12-60-015	2004-2006 JOE GIBBS PERFORMANCE SPEC RADIX H <sub>2</sub>
01-12-60-001	1999-2003 RADIX TRUCK & SUV SILVER
01-12-60-002	1999-2003 RADIX TRUCK & SUV POLISH
01-12-60-006	2004-2006 RADIX TRUCK SILVER (ALL Silverado, ALL Sierra, Suburban 2500, Avalanche 2500, Yukon XL 2500)
01-12-60-007	2004-2006 RADIX TRUCK POLISH (ALL Silverado, ALL Sierra, Suburban 2500, Avalanche 2500, Yukon XL 2500)
01-12-60-008	2004-2006 RADIX SUV SILVER (Tahoe, Yukon, Escalade, Suburban 1500, Avalanche 1500, Yukon XL 1500)
01-12-60-009	2004-2006 RADIX SUV POLISH (Tahoe, Yukon, Escalade, Suburban 1500, Avalanche 1500, Yukon XL 1500)
01-12-60-011	2003 ONLY RADIX H <sub>2</sub> SILVER
01-12-60-012	2003 ONLY RADIX H <sub>2</sub> POLISH
01-12-60-013	2004-2006 RADIX H <sub>2</sub> SILVER
01-12-60-014	2004-2006 RADIX H <sub>2</sub> POLISH
01-12-60-016	2002-2004 FLEX FUEL RADIX SILVER (NO INJECTORS, NO FUEL PUMP, WITH REGULATED FUEL MANIFOLD & REGULATOR)
01-12-60-017	2002-2004 FLEX FUEL RADIX POLISH (NO INJECTORS, NO FUEL PUMP, WITH REGULATED FUEL MANIFOLD & REGULATOR)
01-12-60-019-SL	2004-2006 FLEX FUEL RADIX SILVER (WITH INJECTORS, NO FUEL PUMP, WITH NON-REGULATED FUEL MANIFOLD)
01-12-60-019-PO	2004-2006 FLEX FUEL RADIX POLISH (WITH INJECTORS, NO FUEL PUMP, WITH NON-REGULATED FUEL MANIFOLD)

YEAR	ENGINE	PULLEY DIA	PULLEY P/N	ADD EARLY MODEL KIT?? 31-12-00-007 **	TUNER P/N
99-00	4.8L-LR4 (VIN#8=V)	3.7	58-90-06-037	YES	88-85-53-001
	5.3L-LM7 (VIN#8=T)	3.4	58-90-06-039	YES	88-85-53-001
	HIGH COMPRESSION 6.0L-LQ9 (VIN#8=N)	3.3	58-90-06-033	YES	88-85-53-001
	6.0L-LQ4 (VIN#8=U)	3.2	58-90-06-032	YES	88-85-53-001
01-02	4.8L-LR4 (VIN#8=V)	3.7	58-90-06-037	YES	88-85-53-004
	5.3L-LM7 (VIN#8=T)	3.4	58-90-06-039	YES	88-85-53-004
	FLEX FUEL 5.3L-L59 (VIN#8=Z)	3.4	58-90-06-039	YES	88-85-53-004
	HIGH COMPRESSION 6.0L-LQ9 (VIN#8=N)	3.3	58-90-06-033	YES	88-85-53-004
	6.0L-LQ4 (VIN#8=U)	3.2	58-90-06-032	YES	88-85-53-004
2003	4.8L-LR4 (VIN#8=V)	3.7	58-90-06-037	NO	88-85-53-004
	5.3L-LM7 (VIN#8=T)	3.4	58-90-06-039	NO	88-85-53-004
	FLEX FUEL 5.3L-L59 (VIN#8=Z)	3.4	58-90-06-039	NO	88-85-53-004
	HIGH COMPRESSION 6.0L-LQ9 (VIN#8=N)	3.3	58-90-06-033	NO	88-85-53-004
	6.0L-LQ4 (VIN#8=U)	3.2	58-90-06-032	NO	88-85-53-004
04-06	4.8L-LR4 (VIN#8=V)	3.7	58-90-06-037	NO	88-85-53-007
	HIGH COMPRESSION 5.3L-L33 (VIN#8=B)	3.7	58-90-06-037	NO	88-85-53-007
	5.3L-LM7 (VIN#8=T)	3.4	58-90-06-039	NO	88-85-53-007
	FLEX FUEL 5.3L-L59 (VIN#8=Z)	3.4	58-90-06-039	NO	88-85-53-007
	HIGH COMPRESSION 6.0L-LQ9 (VIN#8=N)	3.3	58-90-06-033	NO	88-85-53-007
	6.0L-LQ4 (VIN#8=U)	3.2	58-90-06-032	NO	88-85-53-007
GIBBS RADIX	4.8L-LR4 (VIN#8=V)	3.9	57-90-06-039	NO	88-85-53-004
	5.3L-LM7 (VIN#8=T)	3.6	57-90-06-036	NO	88-85-53-004
	FLEX FUEL 5.3L-L59 (VIN#8=Z)	3.6	57-90-06-036	NO	88-85-53-004
	6.0L-LQ4 (VIN#8=U)	3.3	57-90-06-033	NO	88-85-53-004

YEAR	MODEL	INSTRUCTIONS P/N
1999-2002	All GM Trucks and SUV's	89-89-60-001
2003-2006	Silverado, Suburban 2500, Avalanche 2500, Sierra, Yukon XL 2500	89-89-60-002
2003-2006	Avalanche 1500, Tahoe, Suburban 1500, Yukon, Yukon XL 1500	89-89-60-003
2003-2006	Escalade, Escalade ESV, Escalade EXT	89-89-60-004
2003-2006	Hummer H2	89-89-60-005
2004-2006	All Gibbs Radix	89-89-60-006
2004-2006	Gibbs H2	89-89-60-007

\*FLEX FUEL VEHICLES HAVE VIN#8=Z (5.3L - L59)

\*\*EARLY MODEL KIT INCLUDES:

EGR ADAPTER & HARDWARE  
 TPS & IDLE AIR WIRE EXTENSION HARDWARE  
 BRACKET FOR CABLE ACTUATED THROTTLE  
 PAIR OF STEAM COVER "BLOCKS"