

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-213-19
Relating to Exemptions Under Section 27156
Of the Vehicle Code

Vortech Engineering Inc.
Supercharger System

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 Supercharger System manufactured and marketed by Vortech Engineering Inc., 1650 Pacific Avenue, Channel Islands, CA 93033, 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 those General Motors vehicles listed in Exhibit A of this Executive Order.

The Supercharger System includes a supercharger, brackets for mounting, and ducting to route air into the intake manifold. The system also includes, as applicable, an auxiliary fuel pump, replacement fuel injectors, a fuel management unit, reprogramming of the vehicle computer, a manifold air pressure sensor bleed assembly, and an intercooler assembly. The supercharger and crankshaft pulley diameters are listed in Exhibit A of this Executive Order. The supercharger produces a maximum of 8.0 psi of boost pressure at maximum engine speed.

This Executive Order is valid provided that the installation instructions for the Supercharger System will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

This Executive Order shall not apply to any Vortech Engineering Inc. Supercharger System advertised, offered for sale, sold with, or installed on a motor vehicle prior to or concurrent with the transfer to an ultimate purchaser.

Changes made to the design or operating conditions of the Supercharger System, as exempted 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 Supercharger System using any identification other than that shown in this Executive Order or marketing of the Supercharger System 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 system 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 Vortech Engineering Inc. Supercharger System may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on emission test data generated on a 2002 Chevrolet Corvette passenger car certified to the Low-Emission Vehicle (LEV) emission standards. Emission levels of the vehicle with the Supercharger System installed met the applicable emission standards during the Cold Start CVS-75 Federal Test Procedure and the Supplemental Federal Test Procedure (SC03 and US06). Results are in grams per mile with deterioration factors added to CVS-75 test results:

	SFTP (SC03) (grams/mile)		SFTP (US06) (grams/mile)		FTP (grams/mile)			
	NMHC+NOx	CO	NMHC+NOx	CO	NMOG*	CO	NOx	HCHO*
Standard	0.20	2.7	0.14	8.0	0.075	3.4	0.2	0.015
Test Results	0.037	0.342	0.093	0.329	0.031	0.95	0.06	0.001

Vortech Engineering Inc. also demonstrated that the Supercharger System did not affect the ability of the vehicle's OBDII system to monitor various emissions related functions. Boost pressure was measured during a wide-open-throttle acceleration conducted by the independent emissions test laboratory. Results were measured to be no greater than 8.0 psi.

If test results or other evidence provides the ARB with reason to suspect that the Supercharger System will affect the durability of the emission control system, Vortech Engineering Inc. shall be required to submit durability data to show that the durability of the vehicle emissions control system is not, in fact, affected and/or that the add-on or modified part demonstrates adequate durability.

In addition to the foregoing, 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 VORTECH ENGINEERING INC.'S SUPERCHARGER SYSTEM.

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 of 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 21ST day of November 2002.



Allen Lyons, Chief
Mobile Source Operations Division

Exhibit A

<u>Part Number</u>	<u>Model years</u>	<u>Vehicle type/model</u>	<u>S/C</u>		
			<u>Engine size (liters)</u>	<u>Crank pulley dia. (in.)</u>	<u>pulley dia. (in.)</u>
4GD218-050	1999-2003	Mini/mid-size truck/SUV	4.3	7.5 (Stock)	3.125
4GM218-050	1999-2002	Mid-size truck/SUV	5.0/5.7	7.0 (Stock)	3.6
4GL218-010	2000-2003	Mid-size truck/SUV LS1	4.8/5.3/6.0	7.54 (Stock)	3.33
4GL218-030	1999	Mid-size truck/SUV LS1	4.8/5.3/6.0	7.54 (Stock)	3.33
4GL218-100	1999-2003	Mid-size truck/SUV LS1 w/charge cooler	4.8/5.3/6.0	7.54 (Stock)	3.33
4GK218-010	1998-2002	F-body LS1, std.	5.7	8	3.7
4GK218-060	1998-2000	F-body LS1, w/charge cooler	5.7	8	3.125
4GK218-080	2001-2002	F-body LS1, w/charge cooler	5.7	8	3.125
4GR218-010	1997-2003	C5 Corvette LS1/LS6 w/charge cooler	5.7	7.36 (Stock)	3.6
4GR218-020	1997-2003	C5 Corvette LS1/LS6 w/charge cooler	5.7	7.36 (Stock)	3.6
4GR218-030	1997-2003	C5 Corvette LS1/LS6 w/charge cooler	5.7	7.36 (Stock)	3.6
4GR218-040	1997-2003	C5 Corvette LS1/LS6 w/charge cooler	5.7	7.36 (Stock)	3.6