

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-213-17
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-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the V-1, V-2, V-7, or V-9 Supercharger System with an A, E, F, S, T, R, SQ, YS, or SC Trim, manufactured and marketed by Vortech Engineering, Inc., 1650 Pacific Avenue, Channel Islands, CA 93033-9901 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 vehicles listed in Exhibit A of this Executive Order.

The Vortech Engineering, Inc.'s Supercharger System consists of the following components:

Chrysler Kit Components

Trucks equipped with a 5.2 or a 5.9L engine: Vortech Supercharger, injector block & map sensor, ignition retard boost controller, a fuel management unit, and an open element air cleaner.

Cherokee/Grand Cherokee equipped with a 5.2L: Vortech Supercharger, ignition retard boost controller, a fuel management unit, an in-line auxiliary fuel pump, and an open element air cleaner.

General Motors Kit Components

Vehicles equipped with a V6 or V8 engine: Vortech Supercharger, a fuel management unit, an in-line auxiliary fuel pump, ignition retard boost controller (for V6 models only), and an open element air cleaner.

Ford Kit Components

Trucks equipped with a 4.6, 5.4, or a 6.8L engine: A Vortech Supercharger, an in-line auxiliary fuel pump, a fuel management unit, and an open element air cleaner.

Trucks equipped with a 7.5L engine includes: A Vortech Supercharger, an in-line auxiliary fuel pump, a fuel management unit, and a ignition retard boost controller.

Mustangs equipped with a 4.6L engines: A Vortech Supercharger, an ECU chip for 1999 to 2001 models, a fuel management unit for 1996 to 1998 models, a fuel pump for 1996 to 1998, and 2001 models, new fuel injectors for 1999 to 2001 models, and an open element air cleaner.

This Executive Order is valid provided that the installation instructions for the supercharger will not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

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

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

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

Marketing of the supercharger using any identification other than that shown in this Executive Order or marketing of the supercharger 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 supercharger 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 is granted based on the following submitted emissions test data on two vehicles certified to the Low Emission Vehicle (LEV) emission standard using the worst case superchargers:

	1999 Dodge Durango, 5.9L V-2 S Trim Supercharger				2000 Ford F-150, 5.4L V-7 Supercharger			
	NMOG	CO	NOX	HCHO	NMOG	CO	NOX	HCHO
Standard	0.160	4.4	0.4	0.018	0.160	4.4	0.4	0.018
Device w/ dfs	0.119	2.1	0.1	0.001	0.097	1.4	0.3	0.001

Test results showed that tailpipe emissions with the Supercharger Kits installed on the vehicles met the applicable emission standards during Cold Start CVS-75 Federal Test Procedure. This Executive Order is also based on On Board Diagnostic II (OBD II) testing conducted on the same test vehicles. Test data showed that the Supercharger Kit when installed on the vehicles did not affect the vehicle's ability to perform its OBD II monitoring. Boost pressure was also measured during a wide-open-throttle acceleration conducted by the independent emissions test laboratory. Results were measured to be no greater than 7.5 psi on both vehicle applications.

This Executive Order is granted based on submitted emissions test data which showed that the Vortech Engineering, Inc.'s Supercharger System did not adversely affect tailpipe emissions during the Cold Start CVS-75 Federal Test Procedure. However, the ARB finds that reasonable grounds exist to believe that use of the Vortech Engineering, Inc. Supercharger Kit may adversely affect emissions of motor vehicles when operating under conditions outside the parameters of the previously prescribed test procedures. Accordingly, the ARB reserves the right to conduct additional emission tests, in the future, as such tests are developed, that will more adequately measure emissions from all cycle phases. If such test results demonstrate that the supercharger adversely affects emissions during off-cycle conditions (defined as those conditions which are beyond the parameters of the Cold-Start CVS-75 Federal Test Procedure), this Executive Order shall be effectively rescinded as of the date the test results are validated. Further, if such test results or other evidence provides the ARB with reason to suspect that the supercharger will affect the durability of the emission control systems, Vortech Engineering, Inc. shall be required to submit durability data to show that the durability of the vehicle emission 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 KIT.

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 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.

Executive Order D-213-16, dated August 1998, is superseded and of no further force and effect.

Executed at El Monte, California, this 16TH day of October 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

Exhibit A

Chrysler Corp.

Part Number	Model years	Vehicle type/model	Engine size (liters)	Crank pulley dia. (in.)	S/C pulley dia. (in.)
4CB218-060	1991-1993	Dodge Dakota	5.2	7.00 (Stock)	3.125
4CD218-030	1994/95	Dodge Dakota/Ram	5.2/5.9	7.00 (Stock)	3.125
4CD218-040	1996	Dodge Dakota	5.2 LEV cert.	7.00 (Stock)	3.125
4CD218-040	1996-2000	Dodge Ram/T-300	5.2 LEV cert.	7.00 (Stock)	3.125
4CD218-050	1996	Dodge Dakota	5.9 LEV cert.	7.00 (Stock)	3.125
4CD218-050	1996-2000	Dodge Ram/T-300	5.9 LEV cert.	7.00 (Stock)	3.125
4CE218-010*	1997-2000	Dodge Dakota/Durango	5.9 LEV cert.	7.00 (Stock)	3.125
4CE218-020	1997-2000	Dodge Dakota/Durango	5.2 LEV cert.	7.00 (Stock)	3.125
4CJ218-010	1993-1995	Cherokee	5.2	7.00 (Stock)	3.125
4CJ218-020	1996-2000	Jeep Cherokee	5.2 LEV cert.	7.00 (Stock)	3.125
4CJ218-030	1996-2000	Jeep Cherokee	5.9 LEV cert.	7.00 (Stock)	3.125

Ford Motor Company

Part Number	Model years	Vehicle type/model	Engine size (liters)	Crank pulley dia. (in.)	S/C pulley dia. (in.)
4FA218-010	1986-1993	Mustang Std. output	5	6	3.33
4FA218-030	1993	Mustang Cobra	5	6.88	3.33
4FA218-040	1986-1993	Mustang H.O.	5	6.88	3.33
4FA218-070	1986-1993	Mustang H.O. w/cooler	5	6.88	3.33
4FA218-080	1993	Mustang Cobra w/cooler	5	6.88	3.33
4FA218-200	1986-1993	Mustang S.H.O.	5	6.88	3.33
4FB218-040	1986-1997	Truck	7.5	6.5	2.875
4FC218-030	1987-1996	F-series truck/Bronco	5.8	6.5	2.875
4FC218-040	1993-1995	Lightning truck	5.8	6.5	2.875
4FD218-050	1991-1994	Explorer/Ranger	4	Stock	2.875
4FE218-070	1987-1996	F-series truck/Bronco	5	6.5	3.125
4FF218-010	1994-1998	Mustang V-6	3.8	7.38 (Stock)	3.33
4FF218-020	1999-2001	Mustang V-6	3.8	7.38 (Stock)	3.33
4FG218-010	1994/95	Mustang Std. output	5	6	3.33
4FG218-020	1994/95	Mustang H.O.	5	6.88	3.33
4FH218-010	1996-98	Mustang 2V	4.6	6.60 (Stock)	3.6
4FH218-050	1996-1998	Mustang 2V w/cooler	4.6	6.60 (Stock)	3.33
4FH218-060	1996-1998	Mustang 2V w/cooler	4.6	6.60 (Stock)	3.33
4FK218-010	1996-98	Mustang 4V	4.6	6.60 (Stock)	3.6
4FK218-050	1996-1998	Mustang 4V w/cooler	4.6	6.60 (Stock)	3.6
4FL218-010	1999	Mustang 2V	4.6	6.60 (Stock)	3.6
4FL218-020	2000-2001	Mustang 2V	4.6	6.60 (Stock)	3.6
4FL218-030	2000-2001	Mustang 2V w/cooler	4.6	6.60 (Stock)	3.33
4FL218-040	1999	Mustang 2V w/cooler	4.6	6.60 (Stock)	3.33
4FM218-010	1997-2001	F-series truck/Exped.	4.6 LEV cert.	6.7	3.6
4FM218-020**	1997-2001	F-ser. trk/Exped/Nav	5.4 LEV cert.	6.7	3.33
4FN218-010	1996-98	T-Bird/Lincoln VIII	4.6	6.60 (Stock)	3.6
4FR218-010	1999	Mustang 4V	4.6	6.60 (Stock)	3.6
4FR218-030	2001	Mustang 4V	4.6	6.60 (Stock)	3.6
4FS218-010***	1999-2001	Mercury Cougar/Ford Contour	2.5	6.3	3.33
4FT218-010	1999-2001	Super duty trk/SUV	5.4 LEV cert.	6.7	3.33
4FT218-020	1999-2001	Super duty trk/SUV	6.8 LEV cert.	6.7	3.47

General Motors

Part Number	Model years	Vehicle type/model	Engine size (liters)	Crank pulley dia. (in.)	S/C pulley dia. (in.)
4GB218-050	1990-1995	Trucks (TBI)	5.0/5.7	7.5	3.125
4GC218-090	1988-1993	Trucks (TBI)	7.4	7.5	2.875
4GG218-090	1994/95	Trucks (TBI)	7.4	7.5	2.875
4GD218-050	1996-1998	Mid-size truck/SUV	4.3	7.5 (Stock)	3.125
4GM218-050	1996-1998	Full-size truck/SUV	5.0/5.7	7.00 (Stock)	3.6
4GF218-060	1988-1992	F-body/Camaro/Fbird	5.0/5.7	7.5	3.48
4GH218-050	1993	F-body/Camaro/Fbird	5.0/5.7	6	3.33
4GH218-060	1994-1997	F-body/Camaro/Fbird	5.0/5.7	6	3.33
4GV218-060	1994-96	Impala SS	5.7	7	3.125
4GV218-078	1992/93	Corvette	5.7	7	3.125
4GV218-088	1994-96	Corvette	5.7	7	3.125

*Tested at GM Powertrain using V-2 SQ supercharger on LEV vehicle

**Tested at GM Powertrain using V-7 YS supercharger on LEV vehicle

***Uses V-9 F-trim supercharger

Note 1: Changing the last number of the part number from a '0' to an '8' denotes polished finish

Note 2: all of the above kits with an 'A' 'E', 'F', 'S', 'T', 'R', 'SQ', 'YS' or 'SC' suffix at the end of the standard part number will specify supercharger type