

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-231-21

Relating to Exemptions Under Section 27156
of the Vehicle Code

WHIPPLE INDUSTRIES, INC.
WHIPPLECHARGER

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 WhippleCharger, manufactured and marketed by Whipple Industries, Inc., 3292 N. Weber Avenue, Fresno, California, 93722 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 the following vehicle applications, **excluding any General Motors vehicle certified to the Ultra Low Emission Vehicle (ULEV) emission standards and 2004 model-year Ford trucks with the following engine test groups: 4FMXTO5.4R17, 4FMXTO5.4R4P, 4FMXTO5.4RM6, and 4FMXTO4.62E6.**

General Motors/Hummer Trucks

<u>Year</u>	<u>Engine</u>	<u>Kit #s</u>	<u>Pulley Dia. Supercharger/Crankshaft</u>	<u>Compressor Size</u>
2001-2004	8.1L	WIK-L18-8.1LA	2.291"/6.25"	2.3L
2001-2004	8.1L	WIK-L18-8.1LB	2.750"/7.50"	2.3L
2001-2004	8.1L	WIK-L18-8.1LTA	2.750"/7.50"	2.3L
2001-2004	8.1L	WIK-L18-8.1LTB	2.875"/7.50"	2.3L
2001-2004	8.1L	WIK-L18-8.1LA-IC	2.083"/6.25"	2.3L
2001-2004	8.1L	WIK-L18-8.1LB-IC	2.500"/7.50"	2.3L
2001-2004	8.1L	WIK-L18-8.1LTA-IC	2.750"/7.50"	2.3L
2001-2004	8.1L	WIK-L18-8.1LTB-IC	2.875"/7.50"	2.3L

Ford/Mazda Trucks

<u>Year</u>	<u>Engine</u>	<u>Kit #s</u>	<u>Pulley Dia. Supercharger/Crankshaft</u>	<u>Compressor Size</u>
2002-2004	3.0L	WIK-3.0LA	2.750"/5.830"	1.2L
2002-2004	3.0L	WIK-3.0LB	2.875"/5.830"	1.2L
2002-2004	3.0L	WIK-3.0LC	3.000"/5.830"	1.2L
2002-2004	3.0L	WIK-3.0LD	3.125"/5.830"	1.2L
1996-2004	5.4L	WIK-5.4-2V-A	3.250/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-B	3.375/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-C	3.500/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-D	3.625/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-E	3.750/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-A-IC	3.250/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-B-IC	3.375/6.555	2.3L

Ford Trucks

<u>Year</u>	<u>Engine</u>	<u>Kit #s</u>	Pulley Dia.	<u>Compressor Size</u>
			<u>Supercharger/Crankshaft</u>	
1996-2004	5.4L	WIK-5.4-2V-C-IC	3.500/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-D-IC	3.625/6.555	2.3L
1996-2004	5.4L	WIK-5.4-2V-E-IC	3.750/6.555	2.3L
1996-2004	4.6L	WIK-5.4-2V-A	3.875/6.496	2.3L
1996-2004	4.6L	WIK-5.4-2V-B	4.000/6.496	2.3L
1996-2004	4.6L	WIK-5.4-2V-C	4.125/6.496	2.3L
1996-2004	4.6L	WIK-5.4-2V-A-IC	3.875/6.496	2.3L
1996-2004	4.6L	WIK-5.4-2V-B-IC	4.000/6.496	2.3L
1996-2004	4.6L	WIK-5.4-2V-C-IC	4.125/6.496	2.3L
2001-2004	6.8L	WIK-FT-6.8LA	3.485"/7.50"	2.3L
2001-2004	6.8L	WIK-FT-6.8LA-IC	3.485"/7.50"	2.3L

Chrysler PT-Cruiser

<u>Year</u>	<u>Engine</u>	<u>Kit #s</u>	Pulley Dia.	<u>Compressor Size</u>
			<u>Supercharger/Crankshaft</u>	
2001-2002	2.4L	WIK-PT-2.4	2.875"/6.30"	1.2L
2003*	2.4L	WIK-PT-2.4	2.875"/6.30"	1.2L
2001-2002	2.4L	WIK-PT-ULEV-2.4	3.000"/6.30"	1.2L

* non turbo models with manual transmission

The WhippleCharger consists of the following main components in all kits: Twin Screw Whipple supercharger, intake manifold, bypass valve, a low temperature thermostat to replace the stock thermostat, and a new air cleaner element for use in the stock air cleaner housing. Intercooler is included on selected kits and denoted as IC in the part number.

The General Motors kit also includes a reflashed ECM, a stand alone computer, and two extra injectors. Boost is limited to 8 psi.

For Ford, the 3.0L kit includes a reflashed ECM, a set of high flow injectors, a larger diameter mass airflow sensor and throttle body. Boost is limited to 11 psi. The 4.6/5.4L kit includes a reflashed ECM and set of high flow injectors. Boost is limited to 10 psi. The 6.8L kit includes a reflashed ECM, a stand alone computer, and two extra injectors. Boost is limited to 8 psi.

The PT-Cruiser kit includes a stand alone computer, and one extra injector. Boost is limited to 9.2 psi.

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. Whipple Industries, Inc. recommends that only premium fuel be used.

Changes made to the design or operating conditions of the WhippleCharger, 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 shall not apply to any Whipple Industries, Inc.'s WhippleCharger advertised, offered for sale, sold with, or installed on a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

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 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.

This Executive Order is granted based on emissions test data generated on the following test vehicles using the Cold-Start CVS-75 Federal Test Procedure (FTP) and the Supplemental Federal Test Procedure (SFTP US06/SCO3) test cycles: 2004 model-year Ford Ranger, 2001 and 2002 model-year Chrysler PT-Cruiser, 2001 model-year Ford Excursion, and 1999 model-year General Motors C1500 truck. Results are in grams per mile with deterioration factors added to CVS-75 FTP results. Emission levels of the modified vehicles met the applicable emission standards.

	2001 2.4L (LEV) Chrysler PT-Cruiser				2002 2.4L (ULEV) Chrysler PT-Cruiser			
	NMOG	CO	NOx	HCHO	NMOG	CO	NOx	HCHO
Standards	0.075	3.4	0.2	0.015	0.040	1.7	0.2	0.008
Device w/ dfs	0.042	0.9	0.1	0.001	0.035	1.3	0.1	0.000
	2001 6.8L (LEV) Ford Excursion				1999 5.3L (LEV) General Motors C1500			
	NMOG	CO	NOx	HCHO	NMOG	CO	NOx	HCHO
Standards	0.195	5.0	0.6	0.022	0.160	4.4	0.4	0.018
Device w/ dfs	0.118	1.5	0.2	0.002	0.105	1.3	0.4	0.002
	2004 3.0L (ULEV) Ford Ranger				US06/SCO3			
	NMOG	CO	NOx	HCHO	NMHC+NOx	CO		
Standards	0.100	3.4	0.2	0.015	0.25/0.27	10.5/3.5		
Device w/ dfs	0.070	0.8	0.04	0.001	0.04/0.003	0.89/0.03		

This Executive Order is also based on On-Board Diagnostic II (OBD II) tests conducted on the same test vehicles. Test data showed that the supercharger when installed on the vehicles did not affect the vehicle's ability to perform its OBD II monitoring.

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 WHIPPLE INDUSTRIES, INC.'S WHIPPLECHARGER.

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 has been made after the hearing that grounds for revocation exist.

Executed at El Monte, California, this 8TH day of March 2004.



Allen Lyons, Chief
Mobile Source Operations Division