

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-231-27

Relating to Exemptions Under Section 27156  
of the California Vehicle Code

Whipple Industries, Inc.  
Whipple Supercharger

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 Whipple Supercharger, manufactured and marketed by Whipple Industries, Inc., 3292 N. Weber, Fresno, California 93722, has been found not to reduce the effectiveness of the applicable vehicle pollution control systems and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for the Ford Motor Company vehicles listed in Exhibit A.

The Whipple Supercharger kit, part number WIK-4.6L-3V-IC and WIK-4.6L-3V, consists of the following main components: 2.3L Twin Screw Whipple supercharger using a 3.125 to 4.0 inch diameter pulley, intercooler, intake manifold, bypass valve, 160 degree thermostat to replace the stock thermostat, fuel pump, reflashed ECM, mass air flow sensor, a set of high flow injectors, and an open element air filter on 2005 model year Mustangs built after April 30, 2005 and 2006 model year Mustangs only. The stock air cleaner housing with the hydrocarbon adsorber on **2005 model year Mustangs built on or before April 30, 2005, and 2007 and 2008 model year Mustangs** is retained but modified with a new air cleaner housing bottom, a new high flow filter and an air cleaner housing lid modified to accept the mass air flow (MAF) extension. The breather hose may be replaced with an SAE30R9 rated hose. Boost is limited to a maximum of 13 psi. The stock crankshaft pulley and throttle body are retained during installation.

The Whipple Charger kit, for other Ford vehicles, consists of the following main components: Twin Screw Whipple supercharger, intake manifold, bypass valve, 160 degree thermostat to replace the stock thermostat, new air cleaner housing with a high-flow element, fuel pump, reflashed ECM, mass air flow sensor, and a set of high flow injectors. Some kits may include an intercooler. The breather hose may be replaced with an SAE30R9 rated hose.

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

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

Marketing of the Whipple Supercharger using any identification other than that shown in this Executive Order or marketing of the Whipple 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.

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

This Executive Order is granted based on submitted emission test data generated on a 2007 model year 4.6L Ford Mustang certified to the Low Emission Vehicle II Ultra Low Emission Vehicle (LEV II ULEV) emission standards and modified with the Whipple Supercharger Kit, part number WIK-4.6L-3V-IC using the 2.3L compressor and the 3.125 inch diameter supercharger pulley. Test results showed that emission levels, with Whipple Industries, Inc.'s Whipple Supercharger installed, met the applicable emission standards when tested using the Cold-Start CVS-75 Federal Test Procedure (FTP) and the Supplemental Federal Test Procedure (SFTP US06/SC03) test cycles. Boost pressure was measured at 13 psi. Examination of the OBD II system showed the Whipple Supercharger did not affect OBD II system operation. Results from emission testing conducted at the Roush Emissions Laboratory, Livonia, Michigan are listed below with deterioration factors applied.

2007 model year Ford Mustang	CVS-75 FTP			
	NMOG	CO	NOx	HCHO
Standards	0.040	1.7	0.05	0.008
Device Test	0.031	1.0	0.04	0.001
	US06/SC03			
	NMHC+NOx	CO		
Standards 4k	0.14/0.20	8.0/2.7		
Device	0.02/0.01	1.9/1.8		

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 WHIPPLE SUPERCHARGER.

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.

3.

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-231-25 issued October 27, 2006, is superseded and of no further force and effect.

Executed at El Monte, California, this 11<sup>th</sup> day of February 2008.



Annette Hebert, Chief  
Mobile Source Operations Division

## Exhibit A

YEARS	MAKE	WHIPPLE KIT #	ENGINE (LITER)	MAX BOOST PSI	COMPRESSOR SIZE	CRANK PULLEY SIZE	SC PULLEY
1996-2004	Ford Mustang	WIK-4.6-2V	4.6L	10	2.3L	6.555	4.000
1996-2004	Ford Mustang	WIK-4.6-2V	4.6L	10	2.3L	6.555	4.250
1996-2004	Ford Mustang	WIK-4.6-2V-IC	4.6L	10	2.3L	6.555	3.250
1996-2004	Ford Mustang	WIK-4.6-2V-IC	4.6L	10	2.3L	6.555	3.500
1996-2004	Ford Mustang	WIK-4.6-2V-IC	4.6L	10	2.3L	6.555	3.625
1996-2004	Ford Mustang	WIK-4.6-2V-IC	4.6L	10	2.3L	6.555	3.750
1996-2004	Ford Mustang	WIK-4.6-2V-IC	4.6L	10	2.3L	6.555	3.875
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V-IC	5.4L	10	2.3L	6.555	3.375
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V-IC	5.4L	10	2.3L	6.555	3.500
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V-IC	5.4L	10	2.3L	6.555	3.625
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V-IC	5.4L	10	2.3L	6.555	3.750
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V	5.4L	10	2.3L	6.555	3.875
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V	5.4L	10	2.3L	6.555	4.000
1996-2004	Ford F150/F250/F350/Expedition	WIK-5.4-2V	5.4L	10	2.3L	6.555	4.125
1998-2001	Ford Mustang Cobra	WIK-4.6-4V-IC	4.6L	10	2.3L	6.555	3.000
1998-2001	Ford Mustang Cobra	WIK-4.6-4V-IC	4.6L	10	2.3L	6.555	3.125
1998-2001	Ford Mustang Cobra	WIK-4.6-4V-IC	4.6L	10	2.3L	6.555	3.250
1998-2001	Ford Mustang Cobra	WIK-4.6-4V-IC	4.6L	10	2.3L	6.555	3.385
1998-2006	Ford F250/F350	WIK-6.8L	6.8L	10	2.3L	7.500	3.485
1998-2006	Ford F250/F350	WIK-6.8L-IC	6.8L	10	2.3L	7.500	3.250
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V23	5.4L	15	2.3L	7.500	2.750
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V23	5.4L	15	2.3L	7.500	3.000
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V23	5.4L	15	2.3L	7.500	3.250
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V33	5.4L	15	3.3L	7.500	4.500
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V33	5.4L	15	3.3L	7.500	4.750
1999-2004	Ford Lightning/Harley Truck	WIK-5.4L-2V33	5.4L	15	3.3L	7.500	5.000
2002-2004	Ford Cobra	WIK-4.6L-4V23	4.6L	15	2.3L	7.500	3.250
2002-2004	Ford Cobra	WIK-4.6L-4V23	4.6L	15	2.3L	7.500	3.500
2002-2004	Ford Cobra	WIK-4.6L-4V33	4.6L	15	3.3L	7.500	4.250
2002-2004	Ford Cobra	WIK-4.6L-4V33	4.6L	15	3.3L	7.500	4.500
2002-2004	Ford Cobra	WIK-4.6L-4V33	4.6L	15	3.3L	7.500	4.750
2002-2004	Ford Cobra	WIK-4.6L-4V33	4.6L	15	3.3L	7.500	5.000
2002-2006	Ford Ranger/Mazda B-Series	WIK-3.0L	3.0L	11	1.2L	5.830	2.750
2002-2006	Ford Ranger/Mazda B-Series	WIK-3.0L	3.0L	11	1.2L	5.830	2.875
2002-2006	Ford Ranger/Mazda B-Series	WIK-3.0L	3.0L	11	1.2L	5.830	3.000
2002-2006	Ford Ranger/Mazda B-Series	WIK-3.0L	3.0L	11	1.2L	5.830	3.125
2004-2008	Ford F150/F250/F350/Expedition	WIK-5.4L-3V-IC	5.4L	10	2.3L	6.500	3.250
2004-2008	Ford F150/F250/F350/Expedition	WIK-5.4L-3V-IC	5.4L	10	2.3L	6.500	3.385
2004-2008	Ford F150/F250/F350/Expedition	WIK-5.4L-3V-IC	5.4L	10	2.3L	6.500	3.500
2004-2008	Ford F150/F250/F350/Expedition	WIK-5.4L-3V	5.4L	10	2.3L	6.500	3.385
2004-2008	Ford F150/F250/F350/Expedition	WIK-5.4L-3V	5.4L	10	2.3L	6.500	3.500
2005-2008	Ford F250/F350	WIK-6.8L-3V-IC	6.8L	10	2.3L	6.500	3.000
2005-2008	Ford F250/F350	WIK-6.8L-3V-IC	6.8L	10	2.3L	6.500	3.125
2005-2008	Ford F250/F350	WIK-6.8L-3V-IC	6.8L	10	2.3L	6.500	3.250
2005-2008	Ford F250/F350	WIK-6.8L-3V	6.8L	10	2.3L	6.500	3.125
2005-2008	Ford F250/F350	WIK-6.8L-3V	6.8L	10	2.3L	6.500	3.250
2005-2008	Ford F250/F350	WIK-6.8L-3V	6.8L	10	2.3L	6.500	3.385
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	4.250
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	4.125
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	4.000
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.875
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.750
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.625
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.500
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.375
2005-2008	Ford Mustang*	WIK-4.6L-3V	4.6L	13	2.3L	6.500	3.250
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.125
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.250
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.385
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.500
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.625
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.750
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	3.875
2005-2008	Ford Mustang*	WIK-4.6L-3V-IC	4.6L	13	2.3L	6.500	4.000

\* The stock air cleaner housing is retained on 2005 model year built on or before April 30, 2005, 2007 and 2008 model year Mustangs.

IC = INTERCOOLED