

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-231-49

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-14-012;

IT IS ORDERED AND RESOLVED: That the installation of the Whipple Supercharger, manufactured and marketed by Whipple Industries, Inc., 3292 North 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 following Ford vehicles listed in Exhibit A.

The Whipple Supercharger kit for the Mustangs consists of the following main components: Twin Screw Whipple supercharger, intercooler, intake manifold, bypass valve, reflashed ECM, dual port or mono blade throttlebody, new fuel injectors, modified air cleaner lid with stock hydrocarbon adsorber heat staked in a stock location and orientation, new air cleaner bottom, and a new air intake tube from air cleaner to the throttle body. The breather hose may be replaced with an SAE30R9 rated hose. All supplied fuel hoses are either Avon's CADbar 9000 series or a stock factory replacement, and fuel and vapor line connectors supplied with the kit are OEM equivalent parts. Boost is limited to a maximum of 12 psi. The stock mass air flow sensor element, fuel pump, and radiator thermostat are retained during installation. The mass air flow sensor element is reinstalled in the air cleaner assembly which is the same location as stock.

The Whipple Supercharger kit for the trucks consists of the following main components: A 2.3L or a 2.9L twin screw supercharger, intercooler, open element air cleaner, air intake tubing, mass air flow sensor housing using stock mass air flow sensor element, intake manifold, bypass valve, high flow injectors, 75mm twin-blade throttle body or 132mm mono-blade throttle body, intercooler, and a reflashed ECM. Boost is limited to 10 pounds per square inch. Installation would not require any modification to the stock coolant thermostat. All supplied fuel hoses are either Avon's CADbar 9000 series or a stock factory replacement, and fuel and vapor line connectors supplied with the kit are OEM equivalent parts. Breather hoses may be replaced with an SAE30R9 rated hose.

Installation of the Whipple Supercharger Kit requires the removal of the stock air filter housing and all intake air tubing. If the stock air filter housing contains the vehicle's tune-up & emissions control decal, a replacement decal must be placed in a similar location.

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 previously submitted emissions and OBD II test data that was generated in support of prior Executive Orders. The test vehicles were a 2008 model year 5.4L Ford Mustang certified to the Low Emission Vehicle II Low Emission Vehicle emission standards, a 2012 model year 5.0L Ford Mustang certified to the Low Emission Vehicle II Ultra Low Emission Vehicle emission standards, 2011 model year 6.2L Ford F-150 certified to the Low Emission Vehicle II Ultra Low Emission Vehicle emission standards and on a 2015 model year Ford Mustang, certified to the Low Emission Vehicle III Ultra Low Emission Vehicle (LEV III ULEV) standards.

2015 Mustang

Useful Life FTP Emission Level (w/ df applied)	NMOG+NOx	CO	HCHO	
	0.095	0.8	0.003	Test 1
	0.085	0.8	0.003	Test 2
Standards	0.125	2.1	0.004	

Useful Life SFTP Emission Level (Composite w/ df)	NMHC+NOx	CO
	0.07	0.5
Standards	0.11(BIN)	4.2

Test results showed that the Whipple Supercharger when installed on the vehicle did not cause exhaust emissions to exceed the applicable emission standards during the Cold Start Federal Test Procedure and the Supplemental Federal Test Procedure. This Executive Order is also based on the On-Board Diagnostic II (OBD II) testing conducted on the same test vehicle. The Whipple Supercharger when installed on the test vehicle did not affect the vehicle's ability to perform its OBD II monitoring.

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

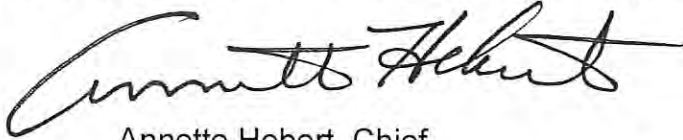
continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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.

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 day of January 2017.

A handwritten signature in black ink, appearing to read "Annette Hebert", with a stylized, flowing script.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

Exhibit A

YEARS	MAKE	WHIPPLE KIT #	ENGINE (LITER)	MAX BOOST PSI	COMPRESSOR SIZE	CRANK PULLEY SIZE	SC PULLEY
2005-2007	Ford GT	WK-2000 Series	5.4L	15	3.4L	Stock	3.500
2005-2007	Ford GT	WK-2000 Series	5.4L	15	3.4L	Stock	3.750
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.250
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.375
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.500
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.625
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.750
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	3.875
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.0L	Stock	4.000
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.5L	Stock	4.000
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.5L	Stock	4.250
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.5L	Stock	4.500
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.5L	Stock	4.750
2005-2007	Ford GT	WK-2000 Series	5.4L	15	4.5L	Stock	5.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	2.750
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	2.875
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.125
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.250
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.375
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.500
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	2.9L	Stock	3.625
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.125
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.250
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.375
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.500
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.625
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.750
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	3.875
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	3.4L	Stock	4.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.125
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.250
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.375
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.500
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.625
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.750
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	3.875
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.0L	Stock	4.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.5L	Stock	4.000
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.5L	Stock	4.250
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.5L	Stock	4.500
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.5L	Stock	4.750
2007-2012	Shelby GT500	WK-2000 Series	5.4L	22	4.5L	Stock	5.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	2.750
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	2.875
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.125
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.250

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2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.375
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.500
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	2.9L	Stock	3.625
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.125
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.250
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.375
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.500
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.625
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.750
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	3.875
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	3.4L	Stock	4.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.125
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.250
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.375
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.500
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.625
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.750
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	3.875
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.0L	Stock	4.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.5L	Stock	4.000
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.5L	Stock	4.250
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.5L	Stock	4.500
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.5L	Stock	4.750
2013-2014	Shelby GT500	WK-2000 Series	5.8L	22	4.5L	Stock	5.000
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.000
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.125
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.250
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.375
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.500
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.625
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.750
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.875
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	4.000
2012-2013	Ford Boss Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	4.125
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.000
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.125
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.250
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.3L	6.500	3.375
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.500
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.625
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.750
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	3.875
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	4.000
2011-2017	Ford Mustang	WK-2000 Series	5.0L	12	2.9L	6.500	4.125
2010-2017	F150	WK-2000 Series	5.0L	10	2.3L	6.555	3.250
2010-2017	F150	WK-2000 Series	5.0L	10	2.3L	6.555	3.375
2010-2017	F150	WK-2000 Series	5.0L	10	2.3L	6.555	3.500
2010-2017	F150	WK-2000 Series	5.0L	10	2.3L	6.555	3.625

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YEARS	MAKE	WHIPPLE KIT #	ENGINE (LITER)	MAX BOOST PSI	COMPRESSOR SIZE	CRANK PULLEY SIZE	SC PULLEY
2010-2017	F150	WK-2000 Series	5.0L	10	2.3L	6.555	3.750
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	3.500
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	3.625
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	3.750
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	3.875
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	4.000
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	4.125
2010-2017	F150	WK-2000 Series	5.0L	10	2.9L	6.555	4.250
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.000
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.125
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.250
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.500
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.625
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.750
2010-2015	Ford Raptor, F150, F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.875
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.000
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.125
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.250
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.500
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.625
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.750
2010-2017	F250, F350	WK-2000 Series	6.2L	10	2.9L	6.555	3.875