

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-195-6
Relating to Exemptions Under Section 27156
of the Vehicle Code

PAXTON PRODUCTS, INC.
SUPERCHARGER KIT MODEL NO. SN-89, PART NO. 2608789

Pursuant to the authority vested in the Air Resources by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the add-on supercharger kit model number SN-89, part number 2608789, manufactured by Paxton Products, Inc., of 929 Olympic Blvd., Santa Monica, California 90404, has been found not to reduce the effectiveness of required motor vehicle pollution control devices, and therefore is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1986-1991 model-year General Motors vehicles powered by 305 CID (5.0L) or 350 CID (5.7L) engines with either Tuned Port Fuel Injection or Throttle Body Fuel Injection.

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

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device 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 a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of the product as an individual device.

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

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 PAXTON PRODUCTS, INC. SUPERCHARGER KIT MODEL NO. SN-89, PART NO. 2608789.

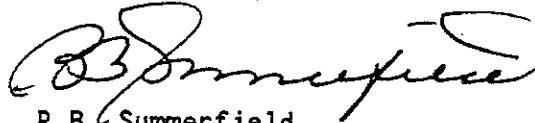
No claim of any kind, such as "Approved by the Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communications.

PAXTON PRODUCTS, INC.

EXECUTIVE ORDER D-195-6
(Page 2 of 2)

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after 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 after hearing that grounds for revocation exist.

Executed at El Monte, California, this 19th day of June, 1991.



R.B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF PAXTON PRODUCTS, INC.'S ADD-ON SUPERCHARGER KIT
MODEL NO. SN-89 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

June 1991

State of California
AIR RESOURCES BOARD

EVALUATION OF PAXTON PRODUCTS, INC.'S ADD-ON SUPERCHARGER KIT
MODEL NO. SN-89 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

by

Mobile Source Division
State of California
Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Paxton Products, Inc. (Paxton) of 929 Olympic Blvd., Santa Monica, California 90404, has applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their add-on supercharger kit model number SN-89, part number 2608789. The supercharger kit is intended for installation on 1986-1991 model-year General Motors vehicles powered by a 305 CID (5.0L) or 350 CID (5.7L) engines with either Tuned Port Fuel Injection or Throttle Body Fuel Injection.

Paxton has submitted data from tests conducted on a 1991 Chevrolet Caprice Classic powered by a 305 CID engine at Milton Roy Company. Based on these results, the staff concludes that Paxton's add-on supercharger kit will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

The staff recommends that Paxton be granted an exemption for their add-on supercharger kit model number SN-89, part number 2608789, for installation on 1986-1991 model-year General Motors vehicles powered by a 305 CID (5.0L) or 350 CID (5.7L) engines, and that Executive Order D-195-6 be issued.

TABLE OF CONTENTS

	Page Number
SUMMARY	i
CONTENTS	ii
I. INTRODUCTION	1
II. CONCLUSION	1
III. RECOMMENDATION	1
IV. SUPERCHARGER KIT DESCRIPTION	1
V. DISCUSSION OF THE SUPERCHARGER KIT	3

EVALUATION OF PAXTON PRODUCTS, INC.'S ADD-ON SUPERCHARGER KIT MODEL NO. SN-89, PART NO. 2608789 FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

Paxton Products, Inc. (Paxton), of 929 Olympic Blvd., Santa Monica, California 90404, has applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their add-on supercharger kit model number SN-89, part number 2608789. The supercharger kit is intended for installation on 1986-1991 General Motors vehicles powered by a 305 CID (5.0L) or 350 CID (5.7L) engines with either Tuned Port Fuel Injection or Throttle Body Fuel Injection.

II. CONCLUSIONS

Paxton has submitted data from tests conducted on a 1991 Chevrolet Caprice Classic powered by a 305 CID Throttle Body Injected engine at Milton Roy Company. Based on these results, the staff concludes that Paxton's add-on supercharger kit will not adversely affect exhaust emissions from the vehicles for which an exemption is requested.

III. RECOMMENDATION

The staff recommends that Paxton be granted an exemption for their add-on supercharger kit model number SN-89, part number 2608789, for installation on 1986-1991 model-year General Motors vehicles powered by a 305 CID (5.0L) or 350 CID (5.7L) engines with either Tuned Port Fuel Injection or Throttle Body Fuel Injection, and that Executive Order D-195-6 be issued.

IV. SUPERCHARGER KIT DESCRIPTION

The Paxton supercharger kit is specifically designed for installation

on 1986-1991 General Motor vehicles powered by 305 CID (5.0L) or 350 CID (5.7L) engines. The kit operates in conjunction with the original equipment manufacturer (OEM) computer controlled fuel injection systems and emission control systems already certified with the stock engine. The purpose of supercharging an engine is to increase the volumetric efficiency of an engine by forcing more air into the engine than it would consume in normal aspirated, non-supercharged condition. This is accomplished by the addition of a centrifugal blower, Paxton Model No. SN-89, that is belt driven at 1.5 times the speed of the engine. Intake air is delivered from the OEM air filtering system to the centrifugal blower. It is then compressed by the supercharger and routed to the throttle body of the electronic fuel injection system. Maximum positive manifold pressure or boost is limited to 5 psig by the blower scroll housing and the impeller design. No wastegate or other active boost limiting device is used.

To provide additional fuel to maintain the proper air/fuel ratio during boost conditions a fuel control unit is added. The fuel control unit when placed in series with the OEM fuel pressure regulator in the fuel return line will increase the fuel pressure and fuel delivery, under boost conditions. The unit is activated by a solenoid valve that is turned "on" and "off" via a pressure switch which is set at 0.95 psi. This pressure setting is based on the inlet manifold pressure. The fuel control unit has a set static pressure of 70 psi. Maximum static pressure of the OEM fuel pressure regulator is about 34 psi. The blower is self lubricated by a piston-type oil pump. The oil sump has a capacity of 12 fluid ounces and uses type "F" automatic transmission fluid. All OEM emission controls are left intact.

V. DISCUSSION OF THE SUPERCHARGER KIT

A 1991 Chevrolet Caprice Classic powered by a 305 CID engine with Throttle Body Fuel Injection was used for the evaluation of the supercharger kit. The dynamometer inertia weight and loading used during the testing were 4,250 lbs. and 8.1 hp, respectively.

Emission tests conducted by Milton Roy Company consisted of cold-start CVS-75 emission tests with the supercharger installed on the test vehicle. This test was used to compare vehicle exhaust emissions in the modified configuration with the applicable emission standards. The test results are shown below:

Table 1
Exhaust Emissions Test Results from
Milton Roy Company

<u>Test Mode</u>	<u>Exhaust Emissions (gm/mi)</u>		
	<u>HC</u>	<u>CO</u>	<u>NOx</u>
Device	0.287	3.338	0.275
Device	0.375	5.483	0.222
Standard	0.39	7.0	0.4

Test results submitted by Paxton show that Carbon Monoxide (CO), Oxides of Nitrogen (NOx), and Hydrocarbons (HC), exhaust emissions of the vehicle in the modified configuration is below the applicable emission standards. The test has shown the Paxton supercharger model number SN-89, part number 2608789, not to reduce the effectiveness of the emissions control systems of the vehicle.

Paxton has fulfilled the requirements for the exemption and, therefore, Executive Order D-195-6 should be issued.