

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-264  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

Z-INDUSTRIES, INC.  
HIGH PERFORMANCE COMPUTER CHIPS

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

Pursuant to the authority vested in the undersigned by Sections 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 High Performance Computer Chips manufactured by Z-Industries, Inc. have been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, are exempt from the prohibitions of Section 27156 of the Vehicle Code for 1984-92 General Motors (GM) vehicles with 2.8 to 7.4 liter engines as listed in Exhibit A, which is attached hereto and incorporated herein.

This Executive Order is valid provided that installation instructions for the High Performance Computer Chips 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 device, as exempted by the ARB, 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.

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

This Executive Order is granted based on results from emissions tests conducted in accordance with Cold-Start CVS-75 Federal Test Procedure. However, the ARB finds that reasonable grounds exist to believe that use of the High Performance Computer Chips 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 High Performance Computer Chips adversely affect 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 published. However, if such test

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High Performance Computer Chips

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results or other evidence provides the ARB with reason to suspect that the High Performance Computer Chips will affect the durability of the emission control system, Z-Industries, 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 Z-INDUSTRIES' HIGH PERFORMANCE COMPUTER CHIPS.

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.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644, (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order may result in its rescission or submission to the Attorney General of California for such action as he deems advisable.

The Bureau of Automotive Repair will be notified by copy of this order.

Executed at El Monte, California, this 2nd day of July, 1992.

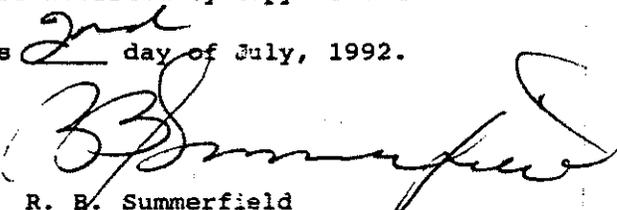
  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

Exhibit A

Z-INDUSTRIES, INC./PAXTON PRODUCTS, INC.

PARTS LIST

<u>Z-IND.</u> <u>PART NO.</u>	<u>PAXTON PROD.</u> <u>PART NO.</u>	<u>DESCRIPTION</u>
Z2020	5008000	90 Z-R1 MAN *
Z2001	5008001	91 Z-R1 MAN *
Z2002	5008002	92 ZR-1 MAN *
Z9000	5009000	84 CORVETTE AUTO
Z9012	5009012	85 CORVETTE AUTO
Z9024	5009024	86 CORVETTE AUTO *
Z9036	5009036	87 CORVETTE AUTO *
Z9040	5009040	88 CORVETTE AUTO *
Z9060	5009060	89 CORVETTE AUTO *
Z9072	5009072	90 CORVETTE AUTO *
Z9073	5009073	91 CORVETTE AUTO *
Z9074	5009074	92 CORVETTE AUTO *
Z9076	5009076	84 CORVETTE MAN
	5009088	85 CORVETTE MAN
	5009100	86 CORVETTE MAN *
Z9112	5009112	87 CORVETTE MAN *
Z9124	5009124	88 CORVETTE MAN *
Z9136	5009136	89 CORVETTE MAN *
Z9140	5009140	90 CORVETTE MAN *
Z9149	5009149	91 CORVETTE MAN *
Z9150	5009150	92 CORVETTE MAN *
Z9152	5009152	85 CAM/TA 305 TPI AUTO
Z9184	5009184	86 CAM/TA 305 TPI AUTO *
Z9196	5009196	87 CAM/TA 305 TPI AUTO *
Z9208	5009208	88 CAM/TA 305 TPI AUTO *
Z9220	5009220	89 CAM/TA 305 TPI AUTO *
Z9232	5009232	90 CAM/TA 305 TPI AUTO *
Z9233	5009233	91 CAM/TA 305 TPI AUTO *
Z9234	5009234	92 CAM/TA 305 TPI AUTO *
Z9197	5009197	87 CAM/TA 350 TPI AUTO *
Z9209	5009209	88 CAM/TA 350 TPI AUTO *
Z9221	5009221	89 CAM/TA 350 TPI AUTO *
Z9222	5009222	90 CAM/TA 350 TPI AUTO *
Z9223	5009223	91 CAM/TA 350 TPI AUTO *
Z9225	5009225	92 CAM/TA 350 TPI AUTO *
Z9236	5009236	88 CAM/TA 305 TBI AUTO
	5009240	89 CAM/TA 305 TBI AUTO
	5009241	90 CAM/TA 305 TBI AUTO
Z9242	5009242	91 CAM/TA 305 TBI AUTO
Z9243	5009243	92 CAM/TA 305 TBI AUTO

Z-INDUSTRIES, INC. / PAXTON PRODUCTS, INC.

PARTS LIST

<u>Z-IND.</u> <u>PART NO.</u>	<u>PAXTON PROD.</u> <u>PART NO.</u>	<u>DESCRIPTION</u>
Z9248	5009248	88 CAM/TA 305 TBI MAN
Z9252	5009252	89 CAM/TA 305 TBI MAN
Z9256	5009256	90 CAM/TA 305 TBI MAN
Z9257	5009257	91 CAM/TA 305 TBI MAN
Z9258	5009258	92 CAM/TA 305 TBI MAN
Z9268	5009268	87 CAM/TA 305 TPI MAN *
Z9280	5009280	88 CAM/TA 305 TPI MAN *
Z9292	5009292	89 CAM/TA 305 TPI MAN *
Z9296	5009296	90 CAM/TA 305 TPI MAN *
Z9297	5009297	91 CAM/TA 305 TPI MAN *
Z9298	5009298	92 CAM/TA 305 TPI MAN *
Z9316	5009316	85 CAM/TA 2.8 MPFI MAN
Z9328	5009328	86 CAM/TA 2.8 MPFI MAN
Z9340	5009340	87 CAM/TA 2.8 MPFI MAN
Z9352	5009352	88 CAM/TA 2.8 MPFI MAN
Z9364	5009364	89 CAM/TA 2.8 MPFI MAN
Z9365	5009365	90 CAM/TA 3.1 MPFI MAN *
Z9366	5009366	91 CAM/TA 3.1 MPFI MAN *
Z9367	5009367	92 CAM/TA 3.1/3.4 MPFI MAN *
Z9376	5009376	85 CAM/TA 2.8 MPFI AUTO
Z9388	5009388	86 CAM/TA 2.8 MPFI AUTO
Z9400	5009400	87 CAM/TA 2.8 MPFI AUTO
Z9412	5009412	88 CAM/TA 2.8 MPFI AUTO
Z9424	5009424	89 CAM/TA 2.8 MPFI AUTO
Z9436	5009436	90 CAM/TA 3.1 MPFI AUTO *
Z9437	5009437	91 CAM/TA 3.1 MPFI AUTO *
Z9438	5009438	92 CAM/TA 3.1/3.4 MPFI AUTO*
Z9452	5009452	86 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9456	5009456	87 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9460	5009460	88 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9461	5009461	89 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9462	5009462	90 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9463	5009463	91 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI AUTO
Z9464	5009464	86 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN
Z9468	5009468	87 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN
Z9472	5009472	88 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN
Z9473	5009473	89 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN
Z9474	5009474	90 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN
Z9475	5009475	91 S-10 & S-15 2.8 TRUCKS & BLAZERS TBI MAN

Z-INDUSTRIES, INC./PAXTON PRODUCTS, INC.

PARTS LIST

Z-IND. PART NO.	PAXTON PROD. PART NO.	DESCRIPTION
Z9480	5009480	88 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI AUTO
Z9484	5009484	89 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI AUTO
Z9488	5009488	90 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI AUTO
Z9489	5009489	91 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI AUTO
Z9490	5009490	92 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI AUTO
Z9481	5009481	88 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI MAN
Z9483	5009483	89 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI MAN
Z9492	5009492	90 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI MAN
Z9493	5009493	91 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI MAN
Z9494	5009494	92 S-10 & S-15 4.3 TRUCKS & BLAZERS TBI MAN
Z9496	5009496	88 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI
Z9500	5009500	89 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI AUTO
Z9504	5009504	90 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI AUTO
Z9505	5009505	91 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI AUTO
	5009506	92 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI AUTO
Z9508	5009508	88 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI MAN
Z9512	5009512	89 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI MAN
Z9516	5009516	90 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI MAN
Z9517	5009517	91 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI MAN
Z9518	5009518	92 CHEVY-GMC 4.3 FULL SIZE TRUCKS & BLAZERS TBI MAN
Z9520	5009520	87 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400
Z9524	5009524	88 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400
Z9528	5009528	89 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400
Z9532	5009532	90 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400
Z9533-BRD*	5009533	91 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400*
Z9533-ASZU, ASZX, ASZY, ATAC, AWBP, ATAD, AWBR, ASZT, AWBK, AWBL, AWBM, AWBN, AXXU, AXXW, AXXX		
Z9533-AXXY, AXYA, AXJX, AXJY, AXJZ, AXKA, AXKB, AXKJ		
Z9534-BRD*	5009534	92 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 400*
Z9534-AWLB, AWLC, AWLD, AWLF, AWLH, AWLJ, AWLK, AWTM, AWTN, AWTP, AWTR, AXHJ, AXHK, AWSY, AWSZ		
Z9534-AYUB, AYUC, AYPR, AYPS, AXRH, AXRJ, AXRK, AXRL, AYPT, AYPU, AWTT, AWTU, AWTW		
Z9536	5009536	87 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
Z9540	5009540	88 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
Z9544	5009544	89 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
Z9540	5009540	90 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
	5009544	91 CHEVY-GMC 305 TRUCKS, BLAZERS, VANS TBI AUTO 700R
	5009544	92 CHEVY-GMC 305 TRUCKS, BLAZERS, VANS TBI AUTO 700R

Z-INDUSTRIES, INC./PAXTON PRODUCTS, INC.

PARTS LIST

Z-IND. ART NO.	PAXTON PROD. PART NO.	DESCRIPTION
9553	5009553	91 CHEVY-GMC 350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
9554	5009554	92 CHEVY-GMC 350 TRUCKS, BLAZERS, VANS TBI AUTO 700R
9552	5009552	87 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9556	5009556	88 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9560	5009560	89 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9564	5009564	90 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9565	5009565	91 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9566	5009566	92 CHEVY-GMC 305-350 TRUCKS, BLAZERS, VANS TBI MAN
9568	5009568	87 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO
9572	5009572	88 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO
9576	5009576	89 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO
9580	5009580	90 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO
9581-BRD*	5009581	91 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO/BROADCAST *
9581-ASZP, AWWH, AWAM, AWAN, AWAP, AWAR, AWAS, AWYN, AWAT, ASYX, ASYY, ASZA, ASZB, ASZC, AJN, AXJP, AXJR, AXJS, AXJT, AXKF, AXKH, AXJU, AXJW, AXKC, AXKD, ASZD, AWAU, AWBC, ASZF, AWAW, ASZH, AWAX, ASZJ, AWAY, ASZL, AWAZ, ASZL, AWAB, AWYP, ASZM, AWBB, ASZR		
9582	5009582	92 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI AUTO/BROADCAST *
9584	5009584	87 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9588	5009588	88 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9592	5009592	89 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9596	5009596	90 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9597	5009597	91 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9598-BRD*	5009598	92 CHEVY-GMC 454 TRUCKS, SUBURBAN TBI MAN
9598-AWUC, AWUD, AWUF, AWUH, AWUJ, AWUK, AWUL, AWUM, AWUN, AWUP, AWUR, AWUS, AWXF, AXRA, 9598-AXRB, AXRC, AXRD, AXRF		
9600	5009600	90 CHEVY 454 SS 1500 TBI AUTO
9601	5009601	91 CHEVY 454 SS 1500 TBI AUTO (BROADCAST CODE) *
9602	5009602	92 CHEVY 454 SS 1500 TBI AUTO (BROADCAST CODE) *
9604	5009604	86 BUICK GRAND NATIONAL/REGAL T-TYPE 3.8 TURBO AUTO
9608	5009608	87 BUICK GRAND NATIONAL/REGAL T-TYPE 3.8 TURBO AUTO
9612	5009612	87 BUICK GRAND NATIONAL GNX TURBO 3.8 AUTO
9624	5009624	89 PONTIAC TA TURBO 3.8 AUTO
9628	5009628	85 FIERO 2.8 MPFI MAN
9632	5009632	86 FIERO 2.8 MPFI MAN
9636	5009636	87 FIERO 2.8 MPFI MAN
9640	5009640	88 FIERO 2.8 MPFI MAN

Z-INDUSTRIES, INC./PAXTON PRODUCTS, INC.

PARTS LIST

<u>IND.</u>	<u>PAXTON PROD.</u>	<u>DESCRIPTION</u>
<u>PART NO.</u>	<u>PART NO.</u>	
1644	5009644	85 FIERO 2.8 MPFI AUTO
1648	5009648	86 FIERO 2.8 MPFI AUTO
1652	5009652	87 FIERO 2.8 MPFI AUTO
1656	5009656	88 FIERO 2.8 MPFI AUTO
1660	5009660	86 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1664	5009664	87 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1668	5009668	88 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1672	5009672	89 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1676	5009676	90 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1677	5009677	91 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO
1678	5009678	92 CHEVY-GMC ASTRO/SIERRA VAN 4.3 AUTO

State of California  
AIR RESOURCES BOARD

EVALUATION OF PAXTON PRODUCTS, INC. & Z-INDUSTRIES, INC. HIGH PERFORMANCE  
COMPUTER CHIPS FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE  
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF  
THE CALIFORNIA CODE OF REGULATIONS

July 1992

State of California  
AIR RESOURCES BOARD

EVALUATION OF PAXTON PRODUCTS, INC. & Z-INDUSTRIES, INC. HIGH PERFORMANCE  
COMPUTER CHIPS 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 91731-2990

(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. & Z-Industries, Inc. (Paxton/Z-Industries) have jointly applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their High Performance Computer Chips for installation on 1984 to 1992 model year General Motors vehicles listed in Appendix A. Paxton/Z-Industries has submitted a completed application and all the required information, as well as comparative exhaust emissions test data performed at Milton Roy Company which demonstrated that the High Performance Computer Chips do not have any adverse effect on the exhaust emissions of the affected vehicles.

Based on the submitted information and the results of the emissions tests performed at Milton Roy Company, the staff concludes that the installation of Paxton/Z-Industries' High Performance Computer Chips will not adversely affect exhaust emissions on the specified vehicles.

The staff recommends that Paxton Products, Inc. & Z-Industries, Inc. be granted an exemption as requested.

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EVALUATION OF PAXTON PRODUCTS, INC. & Z-INDUSTRIES, INC. HIGH PERFORMANCE COMPUTER CHIPS 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. of 929 Olympic Blvd., Santa Monica, CA 90404 & Z-Industries, Inc. of 18032-C Lemon Dr., Yorba Linda, CA 92686, have jointly applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their High Performance Computer Chips for installation on 1984 to 1992 model year General Motors vehicles listed in Appendix A. Paxton/Z-Industries has submitted a completed application and all the required information, as well as exhaust emissions test data performed at Milton Roy Company on a 1991 7.4 liter Chevrolet full size truck.

II. CONCLUSION

Based on the submitted information and the results from comparative exhaust emissions test performed at Milton Roy Company, the staff concludes that Paxton/Z-Industries' High Performance Computer Chips will not adversely affect exhaust emissions from vehicles for which the exemption is requested.

III. RECOMMENDATION

The staff recommends that Paxton Products, Inc. & Z-Industries, Inc. be granted an exemption as requested.

IV. HIGH PERFORMANCE COMPUTER CHIPS DESCRIPTION

Many computer controlled vehicles are equipped with an electronic control unit (ECU) which is programmed using a Programmable Read Only Memory (PROM) computer chip. Signals detected by the vehicle's sensors are fed directly into the ECU where they are analyzed and compared to the operational data programmed inside the PROM. The PROM sends out

appropriate adjustments in the engine operation in response to any changing conditions. For example, a PROM will adjust timing and fuel delivery when a vehicle is subjected to additional load. Thus, by modifying data in the PROM, spark timing and fuel delivery can be adjusted.

Paxton/Z-Industries High Performance Computer Chips modify the ignition advances and fuel curves of the original equipment manufacturer's (OEM) PROM under full throttle operation. Therefore, the performance chip monitors and modifies the vehicle operation under open-loop modes. Paxton/Z-Industries claims these modifications translate to an increase in torque and horsepower. No modifications have been conducted on the High Performance Computer Chips that would affect throttle response and driveability, under closed-loop conditions (normal day-to-day driving). The manufacturer claims that modifications under full-throttle operation offer enhanced performance and acceleration. Paxton/Z-Industries does not recommend the use of any particular fuel to obtain optimum performance or avoid knocking which may be caused by advanced or retarded timing. Installation instructions, included with the chip, is shown in Appendix B.

#### V. DISCUSSION OF THE HIGH PERFORMANCE COMPUTER CHIPS

A 1991 Chevrolet C2500 full size truck with the 7.4 liter (454 CID) V-8 gasoline engine, was selected as the test vehicle to evaluate the effect of the High Performance Computer Chips on tailpipe emissions. This vehicle (7.4 liter Chevrolet C2500) was chosen by staff as the worst case vehicle because it has the largest engine within the range of vehicle application. The test program consisted of one FTP CVS-75 (cold start) test in the baseline configuration and then another FTP CVS-75 test in the modified configuration. The results of the exhaust emissions test performed at Milton Roy Company are shown in Table 1.

Table 1

Exhaust Emissions Test Results from  
Milton Roy Company  
On The Chevrolet C2500  
Exhaust Emissions (gm/mi)

<u>Test Mode</u>	<u>HC</u>	<u>CO</u>	<u>NOx</u>
Baseline	0.590	9.445	4.169
Device	0.577	9.055	4.300
Difference	-0.013	-0.390	+0.131

The differences between the device emission test results and baseline emission test results submitted by the applicant were within the allowed limits of 0.1 gm/mile or 10 percent of baseline HC, 1.0 gm/mile or 15 percent of baseline CO and .1 gm/mile or 10 percent of baseline NOx as specified in the "Procedures for Exemption of Add-On and Modified Parts." Based on the test results, the staff concludes that the installation of the Paxton/Z-Industries High Performance Computer Chips on the applicable vehicles will not adversely affect the exhaust emissions.

Paxton/Z-Industries submitted all the required information and fulfilled the requirements for an exemption.