

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-235-3
Relating to Exemptions Under Section 27156
of the Vehicle Code

TUNED PORT INDUCTION SPECIALTIES, INC.
T.P.I.S. Z-28 KIT

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-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the T.P.I.S. Z-28 Kit manufactured by Tuned Port Induction Specialties, Inc. of 4255 County Road 10 East, Chaska, Minnesota 55318, 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 on the following vehicles:

<u>Vehicle Make</u>	<u>Vehicle Model</u>	<u>Vehicle Model Year</u>	<u>Trans</u>	<u>Engine Disp. (liters)</u>
Chev/Pontiac	Camaro/Firebird	1993/94	All	5.7
Chev/Pontiac	Camaro/Firebird	1995	Manual	5.7
GM	All B Bodies (Caprice type)	1994	All	5.7
Chevrolet	Corvette LT1	1992-94	All	5.7
Chevrolet	Corvette LT1	1995	Manual	5.7

This Executive Order is valid provided that installation and modifications are conducted by Tuned Port Induction Specialties, Inc. and that the recommended tuning specifications for the vehicle are not different than those of the vehicle manufacturer, except for the idle speed which has been raised by 150 RPM. Tuned Port Induction Specialties, Inc. must provide a supplemental tune-up label specifying the new idle speed.

T.P.I.S. Z-28 Kit includes a modified camshaft, 52 mm throttle body, intake manifold and cylinder heads machined to port match, 2.0" intake and 1.56" exhaust cylinder head valves, 16 gage coated mild steel headers, modified PROM to raise idle speed by 150 RPM, adjustable fuel pressure regulator, and an air foil located on top of the 52 mm throttle body.

Changes made to the design or operating conditions of the T.P.I.S. Z-28 Kit, as exempt by the ARB, which adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this T.P.I.S. Z-28 Kit using any identification other than that shown in this Executive Order or marketing of the T.P.I.S. Z-28 Kit for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the ARB.

This Executive Order does not constitute any opinion as to the effect that the use of this T.P.I.S. Z-28 Kit may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on Cold Start CVS-75 Federal Test Procedure emission test results. However, if the ARB finds that reasonable grounds exist to believe that use of the T.P.I.S. Z-28 Kit may adversely affect emissions of applicable motor vehicles when operating under conditions outside the parameters of the Cold Start CVS-75 Federal Test Procedure. 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 T.P.I.S. Z-28 Kit 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 validated. Further, if such test results or other evidence provides the ARB with reason to suspect that the T.P.I.S. Z-28 Kit will affect the durability of the emission control system, Tuned Port Induction Specialties, 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.

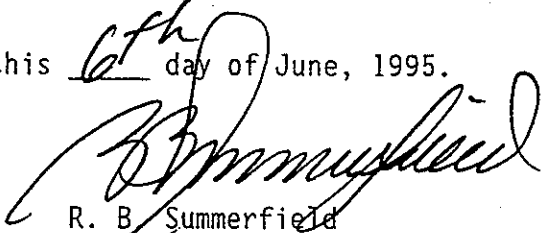
In addition to the foregoing, the ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF T.P.I.S. Z-28 KIT.

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 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 6th day of June, 1995.


R. B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF TUNED PORT INDUCTION SPECIALTIES, INC.
T.P.I.S. Z-28 KIT FOR EXEMPTION FROM THE PROHIBITIONS OF
VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

June 1995

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by

Mobile Source Division
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 mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Tuned Port Induction Specialties, Inc. of 4255 County Road 10 East, Chaska, Minnesota 55318, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their T.P.I.S. Z-28 Kit. The T.P.I.S. Z-28 Kit is designed for installation on the following vehicles:

<u>Vehicle Make</u>	<u>Vehicle Model</u>	<u>Vehicle Model Year</u>	<u>Trans</u>	<u>Engine Disp. (liters)</u>
Chev/Pontiac	Camaro/Firebird	1993/94	All	5.7
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Chevrolet	Corvette LT1	1995	Manual	5.7

Tuned Port Induction Specialties, Inc. submitted a completed application and other required information.

Based on results of emissions testing, the staff concludes that Tuned Port Induction Specialties, Inc.'s T.P.I.S. Z-28 Kit will not adversely affect the exhaust emissions on those applicable vehicles for which an exemption is requested.

The staff recommends that Tuned Port Induction Specialties, Inc. be granted an exemption as requested and that Executive Order D-235-3 be issued.

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I. INTRODUCTION

Tuned Port Induction Specialties, Inc. of 4255 County Road 10 East, Chaska, Minnesota 55318, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their T.P.I.S. Z-28 Kit. The T.P.I.S. Z-28 Kit is designed for installation on the following vehicles:

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Tuned Port Induction Specialties, Inc. submitted a completed application and other required information.

II. CONCLUSIONS

Based on results of emissions testing, the staff concludes that Tuned Port Induction Specialties, Inc.'s T.P.I.S. Z-28 Kit will not adversely affect the exhaust emissions on those applicable vehicles for which an exemption is requested.

III. RECOMMENDATION

The staff recommends that Tuned Port Induction Specialties, Inc. be granted an exemption for their T.P.I.S. Z-28 Kit for installation on applicable 1992 to 1995 General Motors vehicles. The staff also recommends that Executive Order D-235-3 be issued.

IV. T.P.I.S. Z-28 KIT DESCRIPTION

Tuned Port Induction Specialties, Inc.'s T.P.I.S. Z-28 Kit has been specifically designed for installation on the following General Motors vehicles equipped with a 5.7L engine:

<u>Vehicle Make</u>	<u>Vehicle Model</u>	<u>Vehicle Model Year</u>	<u>Trans</u>	<u>Engine Disp. (liters)</u>
Chev/Pontiac	Camaro/Firebird	1993/94	All	5.7
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The modified engine operates in conjunction with the original equipment manufacturer's (OEM) computer controlled fuel injection system and emission control system already certified with the stock engine.

Tuned Port Induction Specialties, Inc.'s T.P.I.S. Z-28 Kit modifies the engine using new and reworked components. The kit includes a modified camshaft, throttle body, intake manifold, cylinder heads, headers, modified PROM, adjustable fuel pressure regulator, and an air foil.

The new camshaft, when compared to OEM, is altered in lift by 7.1 percent on the intake lobe and by 13 percent on the exhaust lobe. Intake and exhaust duration is altered by less than 1 percent. The stock throttle body (48 mm) is replaced by a 52 mm throttle body. Stock cylinder heads are machined at both exhaust and intake ports to allow for better port matching with the exhaust headers and intake manifold and the valves are replaced by oversized intake and exhaust valves (2.0" intake and 1.56" exhaust). The stock exhaust manifold is replaced by a 16 gage coated mild steel header. On vehicles with a removable PROM, the idle is increased by 150 RPM. An adjustable fuel pressure regulator and air foil installed on top of the 52 mm throttle body is also included.

V. DISCUSSION OF T.P.I.S. Z-28 KIT

Tuned Port Induction Specialties, Inc. has requested that the T.P.I.S. Z-28 Kit be exempted for applicable 1992 to 1995 General Motors vehicles. A 1994 5.7L Camaro equipped with the T.P.I.S. Z-28 Kit was used as the test vehicle. Tuned Port Induction Specialties, Inc. performed testing at

Automotive Testing Laboratories, Inc. in New Carlisle, Indiana, to be compared against the vehicle's emission standards.

The results of the exhaust emissions test performed at Automotive Testing Laboratories, Inc. are shown below.

CVS-75 TEST RESULTS

	<u>NMHC</u>	<u>CO</u>	<u>NOx</u>
Device with DFs Applied	0.23	1.5	0.4
Standard	0.39	7.0	0.4

The CVS-75 emissions test results at Automotive Testing Laboratories, Inc. indicate that the NMHC , CO and NOx emissions of the vehicle, with the T.P.I.S. Z-28 Kit installed, are at or below the emission standards set for that engine family. The Air Resources Board did not conduct confirmatory testing to validate the emission test results submitted by Tuned Port Induction Specialties, Inc.

Tuned Port Induction Specialties, Inc. has submitted all the required information and has fulfilled the requirements for an exemption. Test results show that the T.P.I.S. Z-28 Kit meets the requirements for an exemption.