

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-369-3
Relating to Exemptions Under Section 27156
of the Vehicle Code

TRICK FLOW SPECIALTIES
TRICK FLOW EFI INTAKE MANIFOLD

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-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the Trick Flow EFI Intake Manifold, manufactured and marketed by Trick Flow Specialties, 565 Kennedy Road, Akron, Ohio 44305 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 for 1986 through 1995 Ford 5.0L Thunderbirds and Mustangs.

This Executive Order shall not apply to any Trick Flow Specialties Trick Flow EFI Intake Manifold advertised, offered for sale, or sold with or installed on, a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order is valid provided that the installation instructions for the Trick Flow EFI Intake Manifold will not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the Trick Flow EFI Intake Manifold, as exempt by the Air Resources Board, which adversely affect the performance of the vehicle's pollution control system shall invalidate this Executive Order.

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

This Executive Order does not constitute any opinion as to the effect the use of the Trick Flow EFI Intake Manifold may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on the following submitted emissions test data on a 1995 Ford Mustang equipped with a 5.0L engine. Testing consisted of comparative Cold Start CVS 75 Federal Test Procedures. The following test results, in grams per mile, showed that the difference between the modified and baseline emissions results were within the allowable limits as specified under the "Procedures for Exemption of Add-On and Modified Parts:

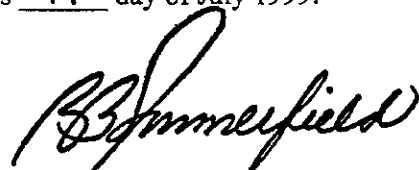
	NMHC	CO	NOX
Average Baseline	0.07	0.9	0.4
Average Device	0.10	1.1	0.4
Difference	+0.03	+0.2	0.0

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 TRICK FLOW SPECIALTIES' EFI INTAKE MANIFOLD.

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 after hearing that grounds for revocation exist.

Executed at El Monte, California, this 19th day of July 1999.

A handwritten signature in black ink, appearing to read "R. B. Summerfield", is written over the printed name.

R. B. Summerfield, Chief
Mobile Source Operations Division

State of California
AIR RESOURCES BOARD

EVALUATION OF TRICK FLOW SPECIALTIES EFI INTAKE MANIFOLD
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

July 1999

by

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

SUMMARY

Trick Flow Specialties of 565 Kennedy Road, Akron, Ohio 44305 has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Trick Flow EFI Intake Manifold designed for 1986 through 1995 Ford 5.0L Thunderbirds and Mustangs.

Based on submitted emissions test data, the staff concludes that the Trick Flow EFI Intake Manifold will not adversely affect exhaust emissions from the vehicles for which the exemption is requested.

The staff recommends that Trick Flow Specialties be granted an exemption as requested and that Executive Order D-369-3 be issued.

TABLE OF CONTENTS

	Page Number
SUMMARY	i
CONTENTS	ii
I. INTRODUCTION	1
II. CONCLUSION	1
III. RECOMMENDATION	1
IV. EFI INTAKE MANIFOLD DESCRIPTION	1
V. DISCUSSION OF THE EFI INTAKE MANIFOLD	2

EVALUATION OF TRICK FLOW SPECIALTIES EFI INTAKE MANIFOLD
FOR AN EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

Trick Flow Specialties of 565 Kennedy Road, Akron, Ohio 44305 has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Trick Flow EFI Intake Manifold designed for 1986 through 1995 Ford 5.0L Thunderbirds and Mustangs.

II. CONCLUSIONS

Based on submitted emissions test data, the staff concludes that Trick Flow Specialties's Trick Flow EFI Intake Manifold will not adversely affect exhaust emissions from the vehicles for which the exemption is requested.

III. RECOMMENDATION

The staff recommends that Trick Flow Specialties be granted an exemption for their Trick Flow EFI Intake Manifold for installation on those applicable vehicles specified above. The staff also recommends that Executive Order D-369-3 be issued.

IV. EFI INTAKE MANIFOLD DESCRIPTION

The Trick Flow EFI Intake Manifold is designed for installation on 1986 through 1995 Ford 5.0L Thunderbirds and Mustangs. The purpose of the device is to increase the vehicle's performance and power output by allowing more air to flow into of the engine's combustion chamber with less restrictions.

The original intake manifold is a one piece manifold with variable port and chamber diameters. The manufacturer claims that the EFI Intake Manifold is designed to provide superior low-end torque and excellent mid range power by manufacturing the EFI Intake Manifold with specially designed runner length and cross sectional tapers. The manufacturer claims that this prevents the front cylinders from being starved of air. All other characteristics of the OEM manifold are similar including the mounting of the intake manifold to the cylinders heads. The EFI Intake Manifold operates in conjunction with the OEM emission control systems already certified with the stock engine. The Trick Flow EFI Intake Manifold does not defeat any emission control devices required by the manufacturer nor does it alter or circumvent the vehicle's tune-up specifications.

V. DISCUSSION OF THE EFI INTAKE MANIFOLD

A 1995 Ford Mustang with a 5.0 liter engine was used for the evaluation of the EFI Intake Manifold. The dynamometer inertia weight and loading were 3875 lbs. and 9.1 hp. respectively. Emissions testing was conducted by Automotive Testing Laboratories, Inc. (ATI).

Emissions testing conducted by ATI consisted of two Cold-Start CVS-75 Federal Test Procedure in the baseline configuration and two Cold-Start CVS-75 Federal Test Procedure in the modified (Trick Flow EFI Intake Manifold installed) configuration. The Air Resources Board did not perform tests to confirm the test results submitted by the applicant. A summary of the test results is shown below:

Exhaust Emissions Test Results
On a 1995 5.0L Ford Mustang

	NMHC	CO	NOX
Average Baseline	0.07	0.9	0.4
Average Device	0.10	1.1	0.4
Difference	+0.03	+0.2	0.0

Emission test results submitted were within the allowable test-to-test variability of 0.1 grams per mile or 10 percent of baseline for hydrocarbons and oxides of nitrogen and 1.0 grams per mile or 15 percent of baseline for carbon monoxide. The staff concludes that the installation of Trick Flow Specialties's Trick Flow EFI Intake Manifold will not have an adverse effect on exhaust emissions of the affected vehicles.

Trick Flow Specialties has submitted all the required information and fulfilled the requirements for an exemption.