

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-221-12
Relating to Exemptions Under Section 27156
of the Vehicle Code

AUTOMOTIVE CONTROLS CORPORATION
"HIGH FLOW TPI RUNNERS, SUPERRAM PLENUM RUNNER KIT, SUPERRAM
MANIFOLD BASE, AND HIGH FLOW BILLET THROTTLE BODY"

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 Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the High Flow TPI Runners (HFTPIR), SuperRam Plenum Runner Kit (SPRK), SuperRam Manifold Base (SMB), and High Flow Billet Throttle Body (HFBTB) manufactured by Automotive Controls Corporation of 175 Branford Road, Connecticut 06405, has been found not to reduce the effectiveness of required motor vehicle pollution control systems and, therefore, is exempt from the prohibitions in Vehicle Code Sections 27156 and 38391 for installation on the following Chevrolet and Pontiac vehicles equipped with a 5.0L or a 5.7L engine:

<u>Device</u>	<u>Part No.</u>	<u>Vehicle Applications</u>
HFTPIR	74195	1985-1988 Corvette, Camaro, and Firebird
	74199	1989-1992 Corvette, Camaro, and Firebird
SPRK	74196	1985-1992 Corvette, Camaro, and Firebird
SMB	74197	1985-1992 Corvette, Camaro, and Firebird
HFBTB	74190	1985-1988 Corvette, Camaro, and Firebird
	74191	1989-1992 Corvette, Camaro, and Firebird

This exemption shall not apply to any device, apparatus, or mechanism 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 installation instructions for the devices listed above will not recommend tuning the vehicle to specifications different from those submitted by the system manufacturer.

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

Marketing of the devices using identifications other than those shown in this Executive Order or marketing of the devices for applications other than those listed in the exemption application, and on this Executive Order, shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of the devices shall not be construed as exemption to sell, offer for sale, or advertise any component of each kit as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of the devices 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 AUTOMOTIVE CONTROLS CORPORATION'S HIGH FLOW TPI RUNNERS, SUPERRAM PLENUM RUNNER KIT, SUPERRAM MANIFOLD BASE AND HIGH FLOW BILLET THROTTLE BODY.

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 will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at El Monte, California, this 10th day of July, 1992.


R.B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

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This Executive Order is valid provided that installation instructions for the devices listed above will not recommend tuning the vehicle to specifications different from those submitted by the system manufacturer.

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Executed at El Monte, California, this 10th day of July, 1992.


R.B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF AUTOMOTIVE CONTROLS CORPORATION'S HIGH FLOW TPI RUNNERS,
SUPERRAM PLENUM RUNNER KIT, SUPERRAM MANIFOLD BASE, AND HIGH FLOW
BILLET THROTTLE BODY FOR EXEMPTION FROM THE PROHIBITIONS IN
VEHICLE CODE SECTION 27156 AND TITLE 13, SECTION 2222,
CALIFORNIA CODE OF REGULATIONS

July, 1992

EVALUATION OF AUTOMOTIVE CONTROLS CORPORATION'S HIGH FLOW TPI RUNNERS,
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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 mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Automotive Controls Corporation of 175 Branford Road, Connecticut 06405, has applied for an exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 for their High Flow TPI Runners, SuperRam Plenum Runner Kit, SuperRam Manifold Base, and High Flow Billet Throttle Body for installation on 1985-1992 model-year Chevrolet Corvette, Camaro, and Pontiac Firebird, powered by a 5.0L or a 5.7L engine. The applicant conducted back-to-back cold-start CVS-75 tests using a 1991 Chevrolet Camaro Z28 powered by a 5.7L engine.

Test results from an independent laboratory and confirmatory tests conducted by the Air Resources Board (ARB) showed that the installation of the Automotive Controls Corporation's devices would not reduce the effectiveness of the pollution control systems on the applicable vehicles. Based on the data submitted by the applicant, and the ARB's confirmatory testing, staff recommends that the exemption be granted as requested and that Executive Order D-221-12 be issued.

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EVALUATION OF AUTOMOTIVE CONTROLS CORPORATION'S HIGH FLOW TPI RUNNERS,
SUPERRAM PLENUM RUNNER KIT, SUPERRAM MANIFOLD BASE, AND HIGH FLOW
BILLET THROTTLE BODY FOR EXEMPTION FROM THE PROHIBITIONS IN
VEHICLE CODE SECTION 27156 AND TITLE 13, SECTION 2222,
CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

Automotive Controls Corporation of 175 North Branford Road,
Connecticut 06405, has applied for an exemption from the prohibitions in
Vehicle Code Sections 27156 and 38391 for their High Flow TPI Runners
(HFTPIR), SuperRam Plenum Runner Kit (SPRK), SuperRam Manifold Base (SMB),
and High Flow Billet Throttle Body (HFBTB) for installation on the following
Chevrolet and Pontiac vehicles equipped with a 5.0L or a 5.7L engine:

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I. CONCLUSION

Results from comparative emission tests conducted at Automotive
Testing Laboratories, Inc., East Liberty, Ohio 43319, and from ARB's
confirmatory testing showed that the emissions from the test vehicle did not
exceed the levels acceptable for exemption of add-on or modified parts under
California Vehicle Code Sections 27156 and 38391.

Based on the test results, staff concludes that the installation of
the Automotive Control Corporation's devices shown above will not reduce the
effectiveness of the emission control systems of the applicable vehicles.

III. RECOMMENDATION

The staff recommends that the exemption be granted as requested and that Executive Order No. D-221-12 be issued, permitting the advertisement, sale and installation of the Automotive Controls Corporation's High Flow TPI Runners, SuperRam Plenum Runner Kit, SuperRam Manifold Base, and High Flow Billet Throttle Body, on vehicles shown above.

IV. DEVICE DESCRIPTION

The Automotive Controls Corporation's devices function identically to those on the production vehicles, except for the following modifications:

1. The High Flow TPI Runners have a larger diameter than the original equipment manufacturer (OEM) runners. The applicant claims that their design increases the air flow capability throughout the engine RPM range, resulting in an increase in horsepower and torque.
2. The SuperRam Plenum Runners have larger volume and shorter runners. This design improves the vehicle's volumetric efficiency and increases torque in the 4000-5800 RPM range.
3. The SuperRam Manifold Base has a larger diameter intake runners than the OEM counterpart. The larger diameter increases the intake airflow.
4. The High Flow Billet Throttle Body is identical to the OEM except for its larger throttle bores which allow for more air flow under wide open throttle condition.

The four devices can be installed separately; however, SuperRam Manifold Base, SuperRam Plenum Runner Kit, and High Flow Billet Throttle Body can be installed together on applicable vehicles.

The installation of the devices does not recommend the alteration of vehicle manufacturer's specifications on applicable vehicles.

V. DEVICE EVALUATION

The applicant has submitted test results conducted at Automotive Testing Laboratories, Inc., an independent test laboratory located in East Liberty, Ohio. Using the CVS-75 test procedure, the applicant conducted a baseline test on a 1991 Chevrolet Camaro Z28 powered by a 5.7L engine. The vehicle was then tested in modified configuration with individual devices. The applicant also conducted two more modified configuration tests consisting of devices which can be installed simultaneously. The ARB's confirmatory testing consisted of one CVS-75 in unmodified (baseline) configuration, followed by one CVS-75 with the SuperRam Manifold Base, SuperRam Plenum Runner Kit, and High Flow Billet Throttle Body installed, and one CVS-75 with only the High Flow TPI Runners installed. The test results are shown below.

CVS-75 Test Results
(Automotive Testing Laboratories, Inc.)

Test Configuration	Emissions (gm/mi)			Change (gm/mi)			% Change		
	HC	CO	NOx	HC	CO	NOx	HC	CO	NOx
Baseline	0.282	2.023	0.583	-	-	-	-	-	-
HFTPIR	0.273	1.885	0.501	-0.009	-0.138	-0.082	-3.2	-6.8	-14.1
SPRK	0.256	2.298	0.493	-0.026	+0.275	-0.090	-9.2	+13.6	-15.4
SMB	0.317	1.707	0.534	+0.035	-0.316	-0.049	+12.4	-15.6	-8.4
HFBTB	0.281	2.251	0.611	-0.001	+0.228	+0.028	-0.3	+11.3	+4.8
SPRK, SMB, HFBTB	0.274	1.792	0.532	-0.008	-0.231	-0.051	-2.8	-11.4	-8.7
HFTPIR, SMB, & HFBTB	0.286	1.340	0.491	+0.004	-0.683	-0.092	+1.4	-33.8	-15.8

CVS-75 Test Results
(Air Resources Board)

Baseline	0.285	1.531	0.562	-	-	-	-	-	-
HFTPIR	0.378	2.516	0.569	+0.093	+0.985	+0.007	+32.6	+64.3	+1.2
SPRK, SMB, HFBTB	0.266	1.420	0.595	-0.019	-0.111	+0.033	-6.7	-7.2	+5.9

The California Exemption Procedures for Add-on and Modified Parts allows emission increase of 0.1gm/mi or 10 percent for HC and NOx, and 1.0gm/mi or 15 percent for CO for add-on or modified part. Test results from the independent laboratory and the ARB show that all the emission increases are within the allowable limits specified in the exemption procedures.