

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-494
Relating to Exemptions Under Section 27156
of the Vehicle Code

LAPOINTE EXHAUST SYSTEM EQUIPMENT
"THREE-WAY CATALYTIC CONVERTER SERIES LP20000"

WHEREAS, Vehicle Code Sections 27156 and 38391, and Title 13, California Code of Regulations (hereafter "CCR") Section 2222(h), authorize the California Air Resources Board (ARB) and its Executive Officer to exempt new aftermarket catalytic converter from the prohibitions of Vehicle Code Section 27156.

WHEREAS, LaPointe Exhaust System Equipment (LaPointe) of 3155 Blvd. Losch #1 St-Hubert, Quebec, Canada J3Y 3V6, has applied to the ARB for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market their new aftermarket series LP20000 three-way catalytic converter (TWC) for the following application, except for vehicles equipped with an on-board diagnostic II (OBD-II) system:

<u>Type</u>	<u>Use</u>	<u>Series No.</u>	<u>Max. Eng. Size</u>	<u>Max. Test Veh. Wt.</u>
TWC	TWC	LP20000	5.9L (360 CID)	6,000 lbs.
TWC	OC	LP20000	5.9L (360 CID)	6,000 lbs.

WHEREAS, pursuant to the authority vested in the Executive Officer by Health and Safety Code Section 39515 and in the Chief, Mobile Source Operations Division by Health and Safety Code Section 39516 and Executive Order G-45-9, the ARB finds that the above aftermarket catalytic converter complies with the California Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h). Emission performance of the catalytic converter was based on durability bench-aging of the catalyst using AlliedSignal Environmental Catalyst (ASEC) ARL-102 for 53 hours which was accepted for the above vehicle application to be equivalent to 25,000 miles durability mileage accumulation using AMA driving cycle (Reference Appendix IV, Title 40, part 86, Code of Federal Regulations (June 28, 1977)).

Whereas, emissions tests conducted at Automotive Development Services, Inc. (ATDS), Ontario, California, showed the following conversion efficiencies which meet the minimum requirements for new aftermarket catalytic converters:

<u>Pollution Component</u>	<u>Catalyst Application Type</u>
	<u>TWC</u>
HC: Min. Requirement	70%
LaPointe's series LP20000	84.4
CO: Min. Requirement	70
LaPointe's series LP20000	78.4
NOx: Min. Requirement	60
LaPointe's series LP20000	77.6

The oxidation catalytic converter (OC) application is included on the basis of the TWC emission tests and other tests conducted on the test catalysts.

IT IS HEREBY RESOLVED that the above catalytic converter is exempt from the prohibitions in Vehicle Code Section 27156 for installation on the approved application vehicles subject to the following conditions:

1. No changes are permitted to the catalytic converter as described in the application for exemption. Any changes to the catalytic converter or any of its components, and other factors addressed in this order must be evaluated and approved by the ARB prior to marketing in California.
2. Marketing of the catalytic converter using identifications other than those shown in the exemption application, and in this Executive Order, or marketing of the catalytic converter for application other than the ones shown in this Executive Order shall be prohibited unless prior approval is obtained from the ARB. Exemption of this product shall not be construed as an exemption to sell, offer for sale, or advertise any components of the catalytic converter as individual devices.
3. Any oral or written references to this Executive Order or its content by LaPointe Exhaust System Equipment, its principals, agents, employees, distributors, dealers, or other representatives must include the disclaimer that the Executive Order or the exemption it provides is not an endorsement or approval of any emission reduction claims for the catalytic converter and is only a finding that the catalytic converter is exempt from the prohibitions of Vehicle Code Section 27156.
4. LaPointe Exhaust System Equipment's installation instructions for the new catalytic converter must conform to requirements in Paragraphs I and IX of California Evaluation Procedures for New Aftermarket Non-Original Equipment Catalytic Converters.
5. Upon installation, the catalytic converter must carry a manufacturer's warranty for 25,000 miles on the substrates and 50,000 miles or five years on the shell and end pipes.

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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 it, during 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 is made, after the hearing, that grounds for revocation exist.

Executed at El Monte, California, this 6th day of January 2000.

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 LAPOINTE EXHAUST SYSTEM EQUIPMENT'S SERIES LP20000
NEW AFTERMARKET THREE-WAY CATALYTIC CONVERTER FOR
EXEMPTION FROM THE PROHIBITIONS IN VEHICLE CODE
SECTION 27156, AND TITLE 13, CALIFORNIA CODE OF
REGULATIONS SECTION 2222(h)

January 2000

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

LaPointe Exhaust System Equipment (LaPointe) of 3155 Blvd, Losch #1 St-Hubert, Quebec, Canada J3Y 3V6 has applied for an exemption of their series LP20000 new aftermarket three-way catalytic converter (TWC) from the prohibitions in Vehicle Code Sections 27156, in accordance with California regulations on new aftermarket catalytic converters. The two test catalysts were aged using AlliedSignal Environmental Catalyst's (ASEC's) ARL-102 bench-aging cycle for 53 hours, which is accepted by the Air Resources Board (ARB) as an alternative to the required 25,000-mile road aging. The substrates are of ceramic monolith type. The front and rear substrates both contain palladium and rhodium in 5:1 ratio. The emission tests were conducted on a 1994 Dodge Ram Pickup Truck powered by a 5.9L gasoline engine. The new catalytic converter may be installed on TWC, and oxidation catalytic converter (OC) vehicles powered by a gasoline engine of 5.9L or less, and having an equivalent test weight of 6,000 lbs. or less, which corresponds to a maximum gross vehicle weight rating (GVWR) of 7,400 lbs.

Emissions data submitted by the applicant show that the catalytic converter meets the requirements of Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h) for the stated application. Based on the above, the staff recommends that the exemption be granted as requested and that Executive Order D-494 be issued.

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EVALUATION OF LAPOINTE EXHAUST SYSTEM EQUIPMENT'S SERIES LP20000
NEW AFTERMARKET THREE-WAY CATALYTIC CONVERTER FOR
EXEMPTION FROM THE PROHIBITIONS IN VEHICLE CODE
SECTION 27156, AND TITLE 13, CALIFORNIA CODE OF
REGULATIONS SECTION 2222(h)

I. INTRODUCTION

LaPointe Exhaust System Equipment (LaPointe) of 3155 Blvd. Losch #1 St-Hubert, Quebec, Canada J3Y 3V6, has applied for an exemption from the prohibitions in Vehicle Code Section 27156 for their new series LP20000 aftermarket three-way catalytic converter (TWC) in accordance with California regulations on new aftermarket catalytic converters. AlliedSignal Environmental Catalyst (ASEC) manufactured the ceramic monolith substrate of the new catalyst. The new aftermarket catalytic converter is intended for the following vehicle applications:

<u>Converter Type</u>	<u>Converter Use</u>	<u>PN/Series</u>	<u>Max. Eng.Size</u>	<u>Max.Veh.Test Wt.</u>
TWC	TWC	LP20000	5.9L	6,000 lbs.
TWC	OC	LP20000	5.9L	6,000 lbs.

The gross vehicle weight rating that was calculated from the ballasted test vehicle is 7,400 lbs. LaPointe intends to market the new TWC as a replacement for catalytic converters on applicable vehicles whose manufacturer's warranty has expired and the need for replacement of the original equipment manufacturer (OEM) catalytic converter has been established and documented, except those vehicles equipped with On-Board Diagnostic II (OBD-II) system.

II. CONCLUSION

The applicant has submitted all the required information. Based on the applicant's submitted exhaust emissions test data, the staff concludes that the new

aftermarket catalyst meets the criteria set forth in Vehicle Code Section 27156, and Title 13, California Code of Regulations, Section 2222(h) for the stated application.

III. RECOMMENDATION

Staff recommends that the exemption be granted as requested and that Executive Order No. D-494 be issued, permitting the advertisement, sale, and installation of the new aftermarket catalyst on applicable vehicles.

IV. DEVICE DESCRIPTION

LaPointe's new aftermarket TWC is designed to use two oval ceramic monolith substrates. The front and rear substrates are both coated with palladium and rhodium. The dimensions of each substrate are 4.75 inches for the major axis, 3.15 inches for the minor axis, and 2.0 inches for the length. The combined volume of the substrates is 53.0 cubic inches. The substrates are wrapped with Unifrax Corporation XPE Expanding Mat, to prevent vibration and exhaust by-pass, and then contained in a 409 stainless steel shell. The shell is sealed by seam weld. Galvanized G90 steel heat shield is spot-welded to the upper side of the converter to protect vehicle underbody from excessive heat. The catalyst may be sold as a unit with installation instructions or may be used in customized direct fit exhaust. It is also sold with a warranty for 25,000 miles on the substrates, and five years or 50,000 miles on the container or shell, and the end pipes.

V. DEVICE EVALUATION

LaPointe submitted data from testing conducted by Automotive Testing and Development Services, Inc. (ATDS) laboratory, Ontario, California. The test catalysts were aged by ASEC using their bench-aging cycle ARL-102 for 53 hours. The bench-aging procedure has been previously accepted by the ARB as an alternative to road mileage

accumulation for 25,000 miles. Emissions tests were conducted on a 1994 Dodge Ram Pickup Truck with a curb weight of 4,600 lbs. and powered by a 5.9L gasoline engine. It was equipped with a single three-way catalytic converter (TWC). The test vehicle required ballasting to obtain the desired equivalent test weight of 6,000 lbs., which corresponds to a maximum gross vehicle weight of 7,400 lbs. The limits of application of the series LP20000 TWC will be 5.9L/6,000 pounds. The test catalysts were labeled as numbers 7353 and 7354. Testing consisted of two cold-start CVS-75 with a simulator ("dummy" catalyst), followed by two cold-start CVS-75 for each of the test catalysts. The average of the two test results for each test catalyst was used to calculate the conversion efficiency. The overall conversion efficiency for the catalyst model is the average conversion efficiency of the two test catalysts. The test results for the catalyst are shown below:

Automotive Testing and Development Services, Inc. (ATDS), Ontario, California

<u>TWC</u>			
	<u>Simulator</u>	<u>Catalyst 7353</u>	<u>Catalyst 7354</u>
	<u>Average</u>	<u>Average</u>	<u>Average</u>
HC (g/mi)	2.390	0.374	0.369
CO (g/mi)	26.551	5.406	6.052
NOx (g/mi)	5.920	1.229	1.425
			84.4%
			78.4%
			77.6%

The above test results meet the minimum requirements of the California regulations on new aftermarket catalytic converters. Due to time constraints, the ARB did not conduct confirmatory testing on the catalyst.