State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-184-15

Relating to Exemptions under Section 27156
of the Vehicle Code

Maremont Exhaust Division of ArvinMeritor

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, Maremont Exhaust Division of ArvinMeritor (Maremont) of 2400 Maremont Parkway, Loudon, Tennessee 37774, has applied to the ARB for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market its new aftermarket catalytic converter for the following applications, except for vehicles equipped with on-board diagnostic II (OBD-II) systems (Title 13, CCR, Section 1968.1):

Converter Type	Series Number	Converter Use	Max. Eng. Size	Max. Veh. Test Wt.
TWC + OC	38730	TWC + OC	5.9L (360 CID)	7,000 lbs. (GVWR = 8760 lbs.)
TWC + OC	38720 (Carry-over)	TWC	7.4L (454 CID)	7,000 lbs. (GVWR = 8081 lbs.)
TWC + OC	38710 (Carry-over)	OC	7.5L (460 CID)	7,000 lbs. (GVWR = 8954 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-02-003, 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 by AlliedSignal Environmental Catalyst using its ARL-102 bench-aging cycle in lieu of the AMA driving cycle (Reference Appendix IV, Title 40, part 86, Code of Federal Regulations (June 28, 1977)).

WHEREAS, emissions tests conducted at Automotive Testing and Development Services, Inc. (ATDS), Ontario, California, using a 1989 Dodge B350 Van 5.9L, a 1994 Chevrolet Suburban 7.4L, and a 1979 Ford F150 Ranger 7.5L showed the following conversion efficiencies which meet the minimum requirements for new aftermarket catalytic converters:

Pollution Component	Min. Required Conv. Efficiency	Series 38730 – TWC + OC	Series 38720 – TWC	Series 38710 – OC
HC	70 %	83.7 %	77.9 %	86.7 %
CO	70	84.7	74.9	96.7
NOx	50/60 %	86.2	77.8	-

IT IS HEREBY RESOLVED that the above catalytic converter is exempt from the prohibitions in Vehicle Code Section 27156 for installation on the applicable 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 Executive 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 Maremont Exhaust Division, its principals, agents, employees, distributors, dealers, or other representatives must include the disclaimer that the Executive Order and the exemption it provides are 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. Maremont Exhaust Division'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.

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 16TH day of April 2002.

Allen Lyons, Chief
New Vehicle/Engine Programs Branch

EVALUATION SUMMARY

Manufacturer Name: Maremont Exhaust Division of ArvinMeritor

Name of Device: Series 38730 Three-way plus oxidation catalytic converter (TWC + OC).

Background:

Maremont Exhaust Division of ArvinMeritor (Maremont), 2400 Maremont Parkway, Loudon, Tennessee 37774, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for its series 38730 new aftermarket TWC + OC. Carry-over tests were also performed with the converter for three-way catalytic converter (TWC) and oxidation catalytic converter (OC) applications. The TWC + OC is also assigned the series numbers 38720 and 38710 for TWC and OC applications, respectively.

Recommendation:

Grant exemption to Maremont as requested, and issue Executive Order D-184-15.

Device Description:

Maremont's new aftermarket TWC + OC uses two oval-shaped ceramic monolith substrates. The substrates are coated with platinum and rhodium in the ratio of 5:1. The dimensions of the substrates are 5.70 inches for the major axis, 3.20 inches for the minor axis, and 3.00 inches in length. The substrates are contained in a shell constructed from 409-grade stainless steel. The substrates are wrapped with Unifrax XPE paper to prevent vibration and exhaust by-pass. The shell is sealed by seam weld. A piece of aluminized heat shield is spot-welded to the upper side of the converter to protect the 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 applications. It is sold with a warranty for 25,000 miles on the substrate, and five years or 50,000 miles on the container or shell, and the end pipes.

AlliedSignal Environmental Catalyst (ASEC) is the catalyst supplier for Maremont's catalytic converter.

Discussion/Basis for Exemption Recommendation:

Maremont submitted data on the series 38730 TWC + OC, 38720 TWC, and 38710 OC from testing conducted at Automotive Testing and Development Services (ATDS), Ontario, California. Two oval test catalysts were bench-aged by ASEC using its ARL-102 bench-aging cycle for a period of 90 hours. ASEC shipped the aged catalysts directly to ATDS for the emission testing. The emission tests were conducted using a 1989 Dodge B350 Van 5.9L for the TWC + OC application, a 1994 Chevrolet Suburban 7.4L for the TWC application, and a 1979 Ford F150 Ranger 7.5L for the OC application.

The evaluation of the series 38730, 38720, and 38710 catalytic converters is solely based on the bench-aging performed by ASEC and emission tests conducted at ATDS. The limits of application of the new catalytic converter are 5.9L/7,000 lbs. for the series 38730 TWC + OC, 7.4L/7,000 lbs. for series 38720 TWC, and 7.5L/7,000 lbs. for series 38710 OC. The corresponding maximum gross vehicle weight rating (GVWR) are 8760 lbs., 8081 lbs., and 8954 lbs. The test catalysts were labeled 315793-1 and 315793-2. Testing consisted of two cold-start CVS-75 tests with a simulator ("dummy" catalyst), followed by two cold-start CVS-75 tests for each of the two test catalysts. The overall conversion efficiencies of Maremont's series 38730, 38720, and 38710 are the average of the conversion efficiencies of the two catalysts for each application. The test results for the catalytic converter are shown below.

Automotive Testing and Development Services, Ontario, California

Conversion Efficiency (%)

TWC + OC

	Simulator	315793-1	315793-2	Average Conversion Efficiency
HC (g/mi)	2.450	0.390	0.406	83.7
CO (g/mi)	52.016	7.672	8.149	84.7
NOx (g/mi)	4.197	0.753	0.804	86.2

TWC

HC (g/mi)	2.002	0.420	0.464	77.9
CO (g/mi)	34.714	8.815	8.615	74.9
NOx (g/mil)	7.287	1.534	1.694	77.8

OC

HC (g/mi)	2.016	0.258	0.277	86.7
CO (g/mi)	85.891	2.352	3.348	96.7
NOx (g/mi)	3.334	2.216	2.048	-

The above test results meet the minimum requirements of the California regulations on new aftermarket catalytic converters. The Air Resources Board (ARB) did not conduct confirmatory tests on the new aftermarket catalytic converters.