

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-511-1
Relating to Exemptions under Section 27156
of the Vehicle Code

EMICO TECHNOLOGIES, INC.

"NON-OBD II THREE-WAY CATALYTIC CONVERTERS, SERIES 133000 AND 133200"

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 and its Executive Officer to exempt new aftermarket catalytic converters from the prohibitions of Vehicle Code Section 27156.

WHEREAS, Emico Technologies, Inc. (Emico) of 373 Tiffin Street, Barrie, Ontario, Canada L4N 9W6, has applied to the Air Resources Board for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market its new aftermarket three-way catalytic converters (TWC) listed on the table below for the application limits of 5.9L and 6875 lbs. equivalent test weight, except for vehicles equipped with an on-board diagnostic II (OBD-II) system:

Series	Shape	Total Length (inch)	Diameter (inch)	Minor Axis (inch)	Major Axis (inch)	Total Volume (in ³)	Substrates per can
133000	Round	3.00	3.66			31.52	1
133200	Oval	3.00		3.15	4.75	35.25	1

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 Air Resources Board finds that the above aftermarket catalytic converters comply with the California Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h). Emission performance of the catalytic converters was based on durability bench-aging by Umicore Autocat Canada Corporation using the Air Resources Board-modified RAT-A bench-aging cycle for 50 hours, 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 Siemens Automotive VDO laboratory, Auburn Hills, Michigan, using a 1994 5.9L Dodge Pickup 2500 showed the following conversion efficiencies which meet the minimum requirements for new aftermarket catalytic converters:

Siemens VDO Automotive Laboratory, Michigan			
Emission Results (g/mi) and Conversion Efficiency (%)			
Component	Simulator	133000	133200
HC	2.416	0.650	0.530
CO	26.0	7.4	6.2
NOx	4.83	0.47	0.30
Conversion Efficiency		73.1/71.5/90.2	78.1/76.2/93.8
Min. Required Efficiency		70/70/60	70/70/60

IT IS HEREBY RESOLVED that the above catalytic converters are exempt from the prohibitions in Vehicle Code Section 27156 for installation on the approved vehicle applications subject to the following conditions:

1. No changes are permitted to the catalytic converters as described in the application for exemption. Any changes to the catalytic converters or any of their components, and other factors addressed in this order must be evaluated and approved by the Air Resources Board prior to marketing in California.
2. Marketing of the catalytic converters using identifications other than those shown in the exemption application, and in this Executive Order, or marketing of the catalytic converters for applications other than the ones shown in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of these products shall not be construed as an exemption to sell, offer for sale, or advertise any components of the catalytic converters as individual devices.
3. Any oral or written references to this Executive Order or its content by Emico, 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 converters and is only a finding that the catalytic converters are exempt from the prohibitions of Vehicle Code Section 27156.
4. Emico installation instructions for the new catalytic converters 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 converters 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.

6. Emico and its vendors may not advertise the new aftermarket catalytic converters as "high or easy flow" catalytic converters or use any phrase that could make them appear to perform better than an OEM catalytic converter.
7. Emico and its vendors may not advertise the new aftermarket catalytic converters as "OBD II Compliant", "EPA OBD II", "OBD II 49-States" or "OBD II Exc. CA."
8. Emico, its associates, vendors, other businesses, and individuals may not sell or supply the substrates of the new aftermarket catalytic converters to a third party to be assembled in a different facility and marketed under this Executive Order.
9. Any marketing arrangement of the new aftermarket catalytic converters by a third party, which involves the use of packaging identification different from the ones described in this Executive Order, must be approved by the Air Resources Board prior to shipment.
10. Emico must submit the required quality audit and production quantity reports for its aftermarket catalytic converters on a semi-annual basis, covering the periods January 1 through June 30, and July 1 through December 31.

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 November 2007.


Annette Hebert, Chief
Mobile Source Operations Division

EVALUATION SUMMARY

Manufacturer Name: Emico Technologies, Inc.

Name of Device: Series 133000 and 133200 Non-OBD II Three-way Catalytic Converter (TWC).

Background:

Emico Technologies, Inc. (Emico) of 373 Tiffin Street, Barrie, Ontario, Canada L4N 9W6, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for its Series 133000 and 133200 new aftermarket TWCs. The new aftermarket catalytic converters are for installation on vehicles not equipped with On-Board Diagnostic II systems with application limits of 5.9L engine size and 6,875 pounds equivalent test weight (ETW).

Recommendation:

Grant exemption to Emico as requested, and issue Executive Order D-511-1.

Device Description:

Emico's new aftermarket TWCs are designed with single round and oval substrates respectively. The substrates, their shapes and dimensions are shown on the table below.

Series	Shape	Total Length (inch)	Diameter (inch)	Minor Axis (inch)	Major Axis (inch)	Total Volume (in ³)	Substrates per can
133000	Round	3.00	3.66			31.56	1
133200	Oval	3.00		3.15	4.75	35.25	1

The substrates are contained in shells constructed from 409-grade stainless steel. The substrates are wrapped with vermiculite insulation with metal shield, to prevent vibration and exhaust by-pass. The shells are sealed by stamping and tig-welding. A piece of aluminized heat shield is spot-welded to the upper side of the converters to protect the vehicle underbody from excessive heat. The catalytic converters will be sold as single units for universal application with installation instructions. Upon installation, the catalytic converters carry 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.

Umicore Autocat Canada Corporation (Umicore) is the catalyst supplier for Emico's Series 133000 and 133200 TWCs.

Discussion/Basis for Exemption Recommendation:

Emico submitted data on Series 133000 and 133200 TWCs from testing conducted at Siemens VDO Automotive Laboratory (Siemens), Auburn Hills, Michigan. One test catalytic converter of each series was bench-aged by Umicore using ARB-modified RAT-A bench-aging cycle for 50 hours. Umicore shipped the aged catalysts directly to Siemens for the emission testing. The emission tests were conducted using a 1994 5.9L Dodge Ram 2500 truck.

The evaluation of Series 133000 and 133200 TWCs is based on the bench-aging performed by Umicore and emission testing conducted at Siemens. The limits of application of Emico's Series 133000 and 133200 TWCs will be 5.9L/6,875 lbs. The test catalytic converters were labeled 133000 and 133200 respectively. Testing consisted of two cold-start CVS-75 Federal Test Procedures (FTP) tests with a simulator ("dummy" catalyst), followed by two cold-start CVS-75 FTP tests for each of the test catalytic converters. The test results and the

calculated conversion efficiencies for the new Series 133000 and 133200 TWCs are shown below:

Siemens VDO Automotive Laboratory, Michigan			
Emission Results (g/mi) and Conversion Efficiency (%)			
Component	Simulator	133000	133200
HC	2.416	0.650	0.530
CO	26.0	7.4	6.2
NOx	4.83	0.47	0.30
Conversion Efficiency		73.1/71.5/90.2	78.1/76.2/93.8
Min. Required Efficiency		70/70/60	70/70/60

The above test results meet the minimum requirements of the California regulations on new non-OBD II aftermarket catalytic converters. The Air Resources Board did not conduct confirmatory tests on the new aftermarket catalytic converters.