

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-523-1
Relating to Exemptions under Section 27156
of the Vehicle Code

Equipo Industrial Automotriz S.A. de C.V.
"Series 70500, 70600, and 70700 New Aftermarket Catalytic Converters"

WHEREAS, Vehicle Code Sections 27156 and 38391, and Section 2222(h), Title 13, California Code of Regulations, 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, Equipo Industrial Automotriz S.A. de C.V. (Equipo) of Calle 5 No. 187, Col. Pantitlán, México 08100 D.F., has applied to the Air Resources Board for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market its Series 70500 and 70600 aftermarket three-way catalytic converters (TWC), and Series 70700 aftermarket three-way plus oxidation catalytic converters (TWC + OC) for the following applications, except for vehicles equipped with an on-board diagnostic II (OBD-II) system (Title 13, CCR, Sections 1968.1 & 1968.2):

Series No.	Type	Shape	Use	Engine Size	Test Weight
70500	TWC	Oval	TWC	5.9L (360 CID)	6000 lbs.
70600	TWC	Round	TWC		
70700	TWC + OC	Wide-Oval	TWC		
70700	TWC + OC	Wide-Oval	TWC + OC		

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 USA, Inc. using ARB-modified RAT A bench aging procedures 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 ADO Automotive Corporation, Auburn, Michigan, using a 1990 5.9L Dodge Ram Van, and a 1994 5.9L Dodge Pickup 2500 showed the following conversion efficiencies which meet the minimum requirements for new aftermarket catalytic converters:

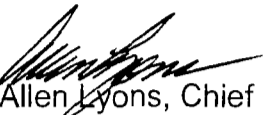
Siemens ADO Automotive Corporation, Auburn Hills, Michigan						
	TWC			TWC + OC		
	HC	CO	NOx	HC	CO	NOx
Minimum Efficiency	70 %	70%	60%	70%	70%	50%
Series 70500	84.6	85.0	75.2	NA	NA	NA
Series 70600	78.6	80.8	66.8	NA	NA	NA
Series 70700	82.1	82.8	69.7	83.8	82.5	59.9

IT IS HEREBY RESOLVED that the above catalytic converters are 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 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 application 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 Equipo Industrial Automotriz S.A. de C.V., 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. Equipo's 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. Equipo Industrial Automotriz S.A. de C.V. 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.

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 20th day of June 2005.


Allen Lyons, Chief
Mobile Source Operations Division

EVALUATION SUMMARY

Manufacturer Name: Equipo Industrial Automotriz S.A. de C.V.

Name of Device: Series 70500, 70600, and 70700 new aftermarket catalytic converters.

Background:

Equipo Industrial Automotriz S.A. de C.V. (Equipo) of Calle 5 No. 187, Col. Pantitlán, México 08100 D.F., has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for its Series 70500, 70600, and 70700 new aftermarket catalytic converters. The new aftermarket catalytic converters are for installation on vehicles not equipped with on-board diagnostic II systems (non-OBD II), with the application limits of 5.9L engine size and 6,000 pounds equivalent test weight (ETW) as shown below.

Series No.	Type	Shape	Use	Engine Size	Test Weight
70500	TWC	Oval	TWC	5.9L (360 CID)	6000 lbs.
70600	TWC	Round	TWC		
70700	TWC + OC	Wide-Oval	TWC		
70700	TWC + OC	Wide-Oval	TWC + OC		

Recommendation:

Grant exemption to Equipo as requested, and issue Executive Order D-523-1.

Device Description:

Equipo's Series 70500, 70600, and 70700 new aftermarket catalytic converters are designed in standard oval, round, and wide-oval substrates, respectively. Single monolith substrate is used in the standard oval and round configurations, while two monolith substrates are used in the wide-oval configuration. All substrates are coated with palladium and rhodium. The dimensions of the substrates are shown below.

Dimension	Standard Oval (inches)	Round (inches)	Wide Oval (inches)
Major Axis	4.75		5.7
Minor Axis	3.15		3.2
Diameter		3.66	
Length	3.00	3.00	2.0 (2)
Volume (in ³)	38.1	31.5	61.0

The substrates are contained in a shell constructed from 409-grade stainless steel, and are wrapped with Unifrax XPE-NV mat to prevent vibration and exhaust by-pass. The shell is sealed by metal stamping and tig-welding. 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 catalytic converters may be sold as units with installation instructions or may be used in customized direct fit exhaust applications. They are 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.

Umicore Autocat USA, Inc. (Umicore) is the catalyst supplier for Equipo's Series 70500, 70600, and 70700 aftermarket catalytic converters.

Discussion/Basis for Exemption Recommendation:

Equipo submitted data on the new three-way catalytic converters (TWCs) and three-way plus oxidation catalytic converter (TWC + OC) from testing conducted at Siemens VDO Automotive Corporation (Siemens) of Auburn Hills, Michigan. Two test catalysts for each of the three configurations (oval, round, and wide-oval) were bench-aged by Umicore using ARB-modified RAT A bench-aging cycle for 50 hours. Umicore shipped the aged catalysts directly to Siemens for emission testing. The emission tests were conducted using a 1990 5.9L Dodge Ram Van for the TWC + OC application, and a 1994 5.9L Dodge Ram 2500 Truck for the TWC application.

The evaluation of the new catalytic converters is based on the bench-aging performed by Umicore and emission tests conducted at Siemens. The limits of application of Equipo's Series 70500 and 70600 TWC, and 70700 TWC + OC will be 5.9L/6,000 lbs. 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 six test catalysts. The conversion efficiencies were separately calculated for each configuration. The conversion efficiencies for the Series 70500, 70600, and 70700 catalysts are shown below:

Siemens ADO Automotive Corporation, Auburn Hills, Michigan						
	TWC			TWC + OC		
	HC	CO	NOx	HC	CO	NOx
Minimum Efficiency	70 %	70%	60%	70%	70%	50%
Series 70500	84.6	85.0	75.2	NA	NA	NA
Series 70600	78.6	80.8	66.8	NA	NA	NA
Series 70700	82.1	82.8	69.7	83.8	82.5	59.9

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 converter.