State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-182-29

Relating to Exemptions under Section 27156
of the Vehicle Code

Walker Manufacturing Company

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 converters from the prohibitions of Vehicle Code Section 27156.

WHEREAS, Walker Manufacturing Company (Walker), a Tenneco Automotive Division, of 2701 N. Dettman Road, Jackson, Michigan 49201, has applied to the ARB for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market their series 99200 new aftermarket three-way plus oxidation catalytic converter (TWC + OC) for the following applications, except for vehicles equipped with an On-Board Diagnostic II (OBD-II) system (Title 13, CCR, Section 1968.1):

Converter Type	Series Number	Converter Use	Max. Eng. Size	Max. Veh. Test Wt.
TWC + OC	99200	TWC + OC, TWC	5.9L (360 CID)	6,000 lbs. (GVWR = 7,500 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 conducted by Johnson Matthey Catalyst Systems Division using the ARB-modified RAT-A bench-aging procedures in lieu of the 25,000-mile 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 (ATDS) laboratory, Ontario, California, using a 1989 5.9L Dodge Ram Van, and a 1995 5.9L Dodge Pickup 2500 showed the following conversion efficiencies which meet the minimum requirements for new aftermarket catalytic converters:

Pollution Component	TWC + OC	TWC
HC: Min. Requirement	70%	70
Walker's series 99200	74.0	80.6
CO: Min. Requirement	70	70
Walker's series 99200	77.5	80.5
NOx: Min. Requirement	50	60
Walker's series 99200	66.0	80.6

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 Walker Manufacturing Company, 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. Walker Manufacturing Company'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 11TH day of September 2002.

Allen Lyons, Chief
Mobile Source Operations Division

EVALUATION SUMMARY

Manufacturer Name: Walker Manufacturing Company

Name of Device: Series 99200 Three-way plus oxidation catalytic converter (TWC + OC).

Background:

Walker Manufacturing Company (Walker), a Tenneco Automotive Division, of 2701 N. Dettman Road, Jackson, Michigan 49201, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for its series 99200 new aftermarket TWC + OC. The new aftermarket catalytic converter is for installation on vehicles with up to maximum limits of 5.9L engine size and 6,000 pounds equivalent test weight (ETW) except for vehicles equipped with On-Board Diagnostic II (OBD II) system.

Recommendation:

Grant exemption to Walker as requested, and issue Executive Order D-182-29.

Device Description:

Walker's new aftermarket TWC + OC is designed to use two oval ceramic monolith substrates. The front and rear substrates are both coated with platinum and rhodium in the ratio of 2:1. The dimensions of the front and rear substrates are 4.15 inches for the major axis, 3.15 inches for the minor axis, and 2.0 inches in length. The combined volume of the front and rear substrates is 51.0 cubic inches. The substrates are contained in a shell constructed from 409-draw quality stainless steel. The substrates are wrapped with an intumescent mat paper, to prevent vibration and exhaust by-pass. The shell is sealed by seam weld, and a piece of aluminized heat shield is spot-welded to the upper side of the catalytic converter to protect the vehicle underbody from excessive heat. The catalytic converter 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 substrates, and five years or 50,000 miles on the container or shell, and the end pipes.

Johnson Matthey Catalytic Systems Division, based in Wayne, Pennsylvania, is the catalyst supplier for Walker's series 99200 TWC + OC.

Discussion/Basis for Exemption Recommendation:

Walker submitted data on the series 99200 TWC + OC from testing conducted at Automotive Testing and Development Services (ATDS) laboratory, Ontario, California. The catalyst bench aging was conducted by Johnson Matthey, using the ARB-modified RAT-A bench aging procedures. Emission tests were conducted on a 1989 Dodge Ram Van 5.9L for the TWC + OC application, and on a 1995 Dodge Pickup 2500 5.9L for the TWC application.

The evaluation of the new aftermarket catalytic converter is solely based on the bench aging conducted by Johnson Matthey and the emission tests conducted at the ATDS. The limits of application for Walker's series 99200 TWC + OC will be 5.9L/6,000 lbs., with the corresponding maximum gross vehicle weight rating (GVWR) of 7,500 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 test catalysts. The average of the two test results for each test catalyst was used to calculate the conversion efficiency. The test catalysts were labeled 1A and 2A. The overall conversion efficiency for the catalyst model is the average conversion efficiency of the two test catalysts. The test results for the series 99200 catalyst are shown below:

Automotive Testing and Development Services, Ontario, California

	Simulator Average	Catalyst 1A Average	Catalyst 2A Average	Conv. Eff. Average
			TWC + OC	
HC (g/mi)	3.162	0.768	0.876	74.0%
CO (g/mi)	43.034	7.224	12.087	77.5%
NOx (g/mi)	2.921	0.974	1.011	66.0%
			TWC	
HC (g/mi)	2.210	0.425	0.431	80.6%
CO (g/mi)	23.239	4.374	4.688	80.5%
NOx (g/mi)	4.173	0.704	0.914	80.6.%

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.