

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-216-7  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

J. BITTLE AMERICAN, INC.  
1.7 ROLLER ROCKER, PART NOS. 2341, 2343, 2321, AND 2331

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the 1.7 Roller Rocker, part nos. 2341, 2343, 2321, and 2331 manufactured by J. Bittle American, Inc. of 9630 Aero Dr., San Diego, California 92123, has been found not to reduce the effectiveness of the applicable vehicle pollution control system and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1992 and older Ford Motor Company vehicles with a 289 to 351 CID V-8 gasoline engine.

This Executive Order is valid provided that installation instructions for this 1.7 Roller Rocker will not recommend tuning the vehicle to specifications different from those submitted by J. Bittle American, Inc.

Changes made to the design or operating conditions of the Roller Rocker, as exempt by the Air Resources Board, which adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this Roller Rocker using any identification other than that shown in this Executive Order or marketing of this Roller Rocker for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

This Executive Order does not constitute any opinion as to the effect the use of this Roller Rocker may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF J. BITTLE AMERICAN'S 1.7 ROLLER ROCKER.

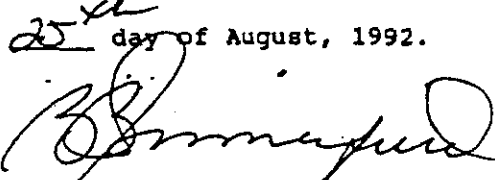
No claim of any kind, such as "Approved by the Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

J. BITTLE AMERICAN, INC.  
1.7 ROLLER ROCKER

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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 the order, in 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 after hearing that grounds for revocation exist.

Executed at El Monte, California, this 25<sup>th</sup> day of August, 1992.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

State of California  
AIR RESOURCES BOARD

EVALUATION OF J. BITTLE AMERICAN, INC. 1.7 ROLLER ROCKER  
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE  
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF  
THE CALIFORNIA CODE OF REGULATIONS

August 1992

State of California  
AIR RESOURCES BOARD

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THE CALIFORNIA CODE OF REGULATIONS

by

Mobile Source Division  
State of California  
Air Resources Board  
9528 Telstar Avenue  
El Monte, CA 91731

(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 the mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

J. Bittle American, Inc. (JBA) has applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their 1.7 Roller Rocker, part nos. 2341, 2343, 2321, and 2331 for installation on 1992 and older Ford Motor Company vehicles equipped with 289 to 351 CID V-8 gasoline engines. JBA has submitted a completed application and all the required information, as well as exhaust emissions test data performed at Crane Emissions Laboratory which demonstrated that the specified 1.7 Roller Rocker does not have any adverse effect on the exhaust emissions of the affected vehicles.

Based on the submitted information and results of the emission tests performed at Crane Emissions Laboratory, the staff concludes that the installation of JBA's 1.7 Roller Rocker will not adversely affect exhaust emissions on the specified vehicles.

The staff recommends J. Bittle American, Inc. be granted an exemption as requested and that Executive Order D-216-7 be issued.

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EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE  
WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

J. Bittle American, Inc. (JBA) of 9630 Aero Dr., San Diego, California 92123, has applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their 1.7 Roller Rocker, part nos. 2341, 2343, 2321, and 2331 for installation on 1992 and older Ford Motor Company vehicles. JBA has submitted a completed application and all the required information, as well as exhaust emissions test data performed at Crane Emissions Laboratory.

II. CONCLUSIONS

Based on the submitted information and results of the emission tests performed at Crane Emissions Laboratory, the staff concludes that the J. Bittle American, Inc. 1.7 Roller Rocker will not adversely affect exhaust emissions from vehicles for which the exemption is requested.

III. RECOMMENDATION

The staff recommends that J. Bittle American, Inc. be granted an exemption as requested and that Executive Order D-216-7 be issued.

IV. 1.7 ROLLER ROCKER DESCRIPTION

The JBA 1.7 Roller Rocker is designed to increase the rocker arm ratio of the small block Ford V-8 gasoline engines with 289 to 351 CID engine sizes from a 1.6:1 to 1.7:1. The 1.7 Roller Rocker operates in conjunction with the original equipment manufacturer's (OEM) emission control systems already certified with the stock engines. The purpose of using the modified 1.7 Roller Rocker is to increase the overall engine performance by modifying the valve characteristics.

V. DISCUSSION OF THE 1.7 ROLLER ROCKER

JBA submitted emission testing conducted at Crane Emissions Laboratory. A 1991 Ford Mustang powered by a 302 CID engine was used as the test vehicle for the 1.7 Roller Rocker. The dynamometer inertia weight and loading used during the testing were 3625 lbs. and 7.7 hp, respectively.

Emissions testing consisted of one cold-start CVS-75 Federal Test Procedure in the modified configurations evaluated against the vehicle's emission standards. The test results are shown in Table 1.

Table 1

CVS-75 TEST RESULTS  
(Crane Emissions Laboratory)

Test Mode	Exhaust Emissions (gm/mi)		
	HC	CO	NOx
Standard	0.41	3.4	1.0
1.7 Roller Rocker	0.19	1.95	0.41
Difference	-0.22	-1.45	-0.59

The CVS-75 emissions test results at Crane Emissions Laboratory indicate that HC, CO and NOx emissions of the 1.7 Roller Rocker are below the emission standards for that vehicle. The test results do demonstrate that the installation of the 1.7 Roller Rocker for all 1992 and older Ford Motor Company vehicles powered by a 289 to 351 CID V-8 gasoline engines will



not adversely affect the exhaust emissions. Results were not confirmed by the ARB; however, the test results are consistent with previous testing conducted on similar rocker arms with increased ratio of 1.7.

JBA has submitted all the required information and fulfilled the requirements for an exemption. The test results and engineering evaluation confirmed that JBA 1.7 Roller Rocker, part nos. 2341, 2343, 2321, and 2331 meet the requirements for the exemption.