

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-215-15
Relating to Exemptions Under Section 27156
of the Vehicle Code

EDELBROCK CORPORATION
HARLEY DAVIDSON CYLINDER HEADS AND INTAKE MANIFOLDS

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 Harley Davidson Cylinder Heads and Intake Manifolds manufactured by the Edelbrock Corporation of 2700 California Street, Torrance, California 90509-2936 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 1984 to 1995 Harley Davidson motorcycles equipped with a 1338 cc engine.

The Edelbrock Corporation's Harley Davidson Cylinder Heads and Intake Manifolds must be installed as a system. The cylinder heads are comprised of two aluminum alloy cylinder heads, part no. 1616 applicable to 1984 to 1991 model-year motorcycles and part no. 1615 applicable to 1992 to 1995 model-year motorcycles. The intake manifold, P/N 1660 must be used with the stock carburetor or P/N 1661 must be used with the Quick Silver or other legal aftermarket carburetors. This Executive Order is valid provided that the installation instructions for the cylinder heads and intake manifolds, will not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the cylinder heads and intake manifolds, 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 the cylinder heads and intake manifolds using any identification other than that shown in this Executive Order or marketing of the cylinder heads and intake manifolds 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 the cylinder heads and intake manifolds may have on any warranty either expressed or implied by the motorcycle 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 THE EDELBROCK CORPORATION'S CYLINDER HEADS AND INTAKE MANIFOLDS.

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.

Violation of any of the above conditions shall be grounds for revocation of this Executive 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 30th day of August, 1994.


R. B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF THE EDELBROCK CORPORATION'S HARLEY DAVIDSON CYLINDER HEADS AND
INTAKE MANIFOLDS FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION
27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

August 1994

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by

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

SUMMARY

The Edelbrock Corporation of 2700 California Street, Torrance, California 90509-2936, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Harley Davidson Cylinder Heads and Intake Manifolds. The Harley Davidson Cylinder Heads and Intake Manifolds are designed for installation on 1984 to 1995 Harley Davidson motorcycles equipped with a 1338 cc engine.

Based on an engineering evaluation that compared the stock configuration to Edelbrock's modified configuration, the staff concludes that the Harley Davidson Cylinder Heads and Intake Manifolds will not adversely affect exhaust emissions from Harley Davidson motorcycles for which an exemption is requested.

The staff recommends that the Edelbrock Corporation be granted an exemption as requested and that Executive Order D-215-15 be issued.

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I. INTRODUCTION

The Edelbrock Corporation of 2700 California Street, Torrance, California 90509-2936, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Harley Davidson Cylinder Heads and Intake Manifolds. The Harley Davidson Cylinder Heads and Intake Manifolds are designed for installation on 1984 to 1995 Harley Davidson equipped with a 1338 cc engine.

II. CONCLUSIONS

Based on an engineering evaluation that compared the stock configuration to Edelbrock's modified configuration, the staff concludes that the Harley Davidson Cylinder Heads and Intake Manifolds will not adversely affect exhaust emissions from Harley Davidson motorcycles for which an exemption is requested.

III. RECOMMENDATION

The staff recommends that the Edelbrock Corporation be granted an exemption for their Harley Davidson Cylinder Heads and Intake Manifolds for installation on 1984 to 1995 Harley Davidson motorcycles equipped with a 1338 cc engine. The staff also recommends that Executive Order D-215-15 be issued.

IV. CYLINDER HEADS AND INTAKE MANIFOLDS DESCRIPTION

The Harley Davidson Cylinder Heads and Intake Manifolds have been specifically designed for installation on 1984 to 1995 Harley Davidson motorcycles equipped with a 1338 cc engine. The cylinder heads and intake manifolds are sold as a kit and operate in conjunction with the original equipment manufacturer's (OEM) emissions control system already certified with the stock engine.

Edelbrock manufacturers both the cylinder heads and intake manifolds out of aluminum alloy which is similar to the stock version. The cylinder heads and intake manifolds, when compared to stock, is similar in all parameters except for the cylinder head's combustion chamber volume, stock is 82 cc and modified is 73 cc. Two cylinder heads are used on each Harley Davidson motorcycle, Edelbrock has assigned part no. 1616 for the pair of cylinder heads applicable to 1984 to 1991 motorcycles and part no. 1615 for the pair of cylinder heads applicable to 1992 to 1995 motorcycles. Two different part numbers are assigned to the intake manifold. Part number 1660 is designed to fit Harley Davidson's which use an OEM carburetor, and part number 1661 is designed to fit applications that use a legal aftermarket carburetor. No changes are made to the stock tune-up specifications, and the Edelbrock Corporation does not recommend the use of any special octane fuel when using their product.

V. DISCUSSION OF THE CYLINDER HEADS AND INTAKE MANIFOLDS

The Harley Davidson Cylinder Heads and Intake Manifolds have been designed and manufactured to be functionally identical to the OEM cylinder heads and intake manifold. Similarities that are shared are the intake port size and location of cylinder head, exhaust port size and location, intake and exhaust valve diameters, intake manifold port size, and intake runner length. The only difference is in the combustion chamber volume. The modified heads lower combustion chamber volume by 11 percent. This reduction in volume may affect the nitrogen oxides (NOx) emissions of the motorcycle; however, current regulations only require motorcycles to be certified according to their hydrocarbons (HC) and carbon monoxide (CO) values.

Based on similarities of critical design parameters between Edelbrock's cylinder heads and intakes to that of its stock configuration and that a

minimal reduction of 11 percent in combustion chamber volume could increase the NOx emissions, a pollutant that is not regulated on motorcycles, staff concludes that the installation of the Harley Davidson Cylinder Heads and Intake Manifolds will not have an adverse effect on HC & CO emissions of the affected motorcycles.

The Edelbrock Corporation submitted all of the required information and fulfilled the requirements for an exemption.