

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-338-64  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

Harley-Davidson Motor Company  
Street Performance Tuner

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 Section 39515 and Section 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the installation of the Street Performance Tuner, marketed and manufactured by the Harley-Davidson Motor Company, 3700 W. Junéau Avenue, Milwaukee, Wisconsin 53208 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 2007 to 2011 model year Harley-Davidson motorcycles equipped with a 1584cc, 1690cc, or 1800cc engine and a three-way catalysts with dual oxygen sensors, and all 2007 to 2011 model year Harley-Davidson Sportster motorcycles.

The Street Performance Tuner must be used with one of the following Harley-Davidson new motorcycle upgrade option packages:

| <u>Upgrade Option</u>                       | <u>Engine Displacement (cubic centimeters)</u> |
|---------------------------------------------|------------------------------------------------|
| Air Cleaner                                 | 1584, 1690, 1800, (Sportster 883 and 1200)     |
| Cylinder and Pistons                        | 1690                                           |
| Cylinder, Pistons, Camshaft                 | 1690                                           |
| Cylinder, Pistons, Camshaft, Cylinder Heads | 1800                                           |

The Harley-Davidson Street Performance Tuner is a hand held programmer designed to reprogram the FLASH memory chip located in the motorcycle's ECU module. The programmer is designed to download OEM calibration related to hardware upgrades. Emission-related data files cannot be modified by the end user.

The final configuration of the Street Performance Tuner with upgrade options are the same as the new motorcycles certified under Executive Order A-005-0165, engine family BHDXC01.2CEA, and A-005-0169, engine family BHDXC01.80AED. The Street Performance Tuner is designed for single motorcycle applications, cannot be installed on any other Harley Davidson motorcycle after initial use. User data files are based on the vehicle identification number located in the stock ECU module and end user cannot program ECU with calibration not intended for that motorcycle.

This Executive Order is granted based on Harley-Davidson's new motorcycle certification information and submitted emission test data with the Street Performance Tuner installed which showed compliance with emission standards.

This Executive Order is valid provided that the installation instructions for the Street Performance Tuner will not recommend tuning the motorcycle to specifications different from those of the Harley-Davidson Motor Company.

Changes made to the design or operating conditions of the Street Performance Tuner, as exempt by the Air Resources Board, which adversely affect the performance of the motorcycle's pollution control system shall invalidate this Executive Order.

Marketing of the Street Performance Tuner using any identification other than that shown in this Executive Order or marketing of the Street Performance Tuner 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 Street Performance Tuner may have on any warranty either expressed or implied by the Harley-Davidson Motor Company.

In addition to the foregoing, the Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF HARLEY-DAVIDSON MOTOR COMPANY'S STREET PERFORMANCE TUNER.

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 order. The order may be revoked only after a 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 is made after the hearing that grounds for revocation exist.

Executed at El Monte, California, this 25<sup>th</sup> day of February 2011.

  
Annette Hebert, Chief  
Mobile Source Operations Division

## EVALUATION SUMMARY

Manufacturer Name: Harley-Davidson Motor Company

Name of Device: Street Performance Tuner

Background:

The Harley-Davidson Motor Company, 3700 W. Juneau Avenue, Milwaukee, Wisconsin 53208, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for the Street Performance Tuner designed for 2007 to 2011 model year Harley-Davidson motorcycles equipped with a 1584cc, 1690cc, or 1800cc engine and a three-way catalysts with dual oxygen sensors, and all 2007 to 2011 model year Harley-Davidson Sportster motorcycles.

Recommendation:

Grant exemption to Harley-Davidson as requested, and issue Executive Order D-338-64.

Device Description:

The Harley-Davidson Street Performance Tuner is a hand held programmer designed to reprogram the FLASH memory chip located in the motorcycle's ECU module. The programmer is designed to download OEM calibration to match any OEM hardware upgrades installed after the vehicle has been sold to its ultimate purchaser. The Street Performance Tuner is designed for single motorcycle applications, and cannot be installed on any other Harley Davidson motorcycle after initial use. The end user can only access data files that are available for a specific vehicle identification number, as determined by the stock ECU module and the end user cannot program the ECU with calibrations not intended for that motorcycle. Emission-related data files cannot be modified by the end user. The final configuration of the Street Performance Tuner with upgrade options are the same as the new motorcycles certified under Executive Order A-005-0165, engine family BHDXC01.2CEA, and A-005-0169, engine family BHDXC01.80AED.

Discussion/Basis for the Recommendation:

The Street Performance Tuner used in conjunction with Harley-Davidson's hardware upgrade packages would be equivalent to Harley-Davidson's new vehicle certified configurations and therefore, should be compliant with applicable motorcycle emission standards. However, staff expressed concern that end users may download data files to upgrade the calibration even though no hardware upgrade options have been installed. The Street Performance Tuner's design limits the available data files/calibration that the owner can download to his/her motorcycle. In addition, to address this concern, Harley-Davidson submitted emission test data generated on two 2010 model year Touring motorcycles with the worst case calibration installed but with no hardware modifications in order to simulate downloading of incorrect calibrations. Emissions testing consisted of two Cold-Start CVS-75 Federal Test Procedure (FTP) test cycles. Results from emissions testing conducted at Harley-Davidson's own emissions laboratory are shown below (in grams per kilometer).

**2010 1584cc Touring**

|                                         | CVS-75 FTP |      |
|-----------------------------------------|------------|------|
|                                         | HC+NOx     | CO   |
| Standards                               | 0.50       | 12.0 |
| 1800cc Calibration Average 2 Tests w/df | 0.13       | 2.4  |

**2010 1800cc Touring**

|                                         | CVS-75 FTP |      |
|-----------------------------------------|------------|------|
|                                         | HC+NOx     | CO   |
| Standards                               | 0.50       | 12.0 |
| 1584cc Calibration Average 2 Tests w/df | 0.31       | 3.3  |

The emission test results in the modified configuration were below the applicable certification emission standards. Therefore, no adverse effect in emissions is expected even if customers download incorrect calibrations to their motorcycles.

Harley-Davidson's Street Performance Tuner meets the criteria for exempting general criteria parts for those motorcycles listed in the Executive Order.