

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-176-38

Relating to Exemptions Under Section 27156  
of the California Vehicle Code

Dinan Engineering, Inc.  
M-Car Stoker Engine

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-14-012;

IT IS ORDERED AND RESOLVED: That the installation of the M-Car Stoker Engine, manufactured and marketed by Dinan Engineering, Inc. of 865 Jarvis Drive, Morgan Hill, California 95037, has been found not to reduce the effectiveness of the applicable vehicle pollution control systems and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for the following vehicle applications: 2008 to 2013 model year BMW M3 vehicles equipped with a V8 4.0L engine and 2006 to 2010 model year BMW M5 and M6 vehicles equipped with a V10 5.0L engine.

The M-Car Stoker Engine is an engine upgrade package designed to increase the displacement of the stock engine. The M-Car Stoker Engine includes the following new engine components: Crankshaft, connecting rods, pistons, piston rings, and an ECU program. M5 and M6 models also get a larger diameter air flow meter. All other components of the engine are stock. The new ECU program is uploaded through the OBD II port. There are no user adjustments. Maximum rear wheel horsepower gain is 50 for M5 and M6 and 40 for M3.

This Executive Order is valid provided that the installation instructions for the M-Car Stoker Engine will not recommend tuning the vehicle to specifications different from those of Dinan Engineering.

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

Marketing of the M-Car Stoker Engine using any identification other than that shown in this Executive Order or marketing of the M-Car Stoker Engine 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 M-Car Stoker Engine may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on previously submitted emission test data generated on one test vehicle modified with the M-Car Stoker Engine. Test results showed that emission levels, with the modification installed, met the applicable emission standards when tested using the Cold-Start CVS-75 Federal Test Procedure (FTP) test cycle and the Supplemental Federal Test Procedure (SFTP) test cycle. Examination of the OBD II system showed that the M-Car Stoker Engine did not affect OBD II system operation. Results from emissions testing conducted at Automotive Testing and Development Services, Inc., located in Ontario, California, are shown below (in grams per mile).

2006 BMW M5	CVS-75 FTP				SFTP US06	
	NMOG	CO	NOx	HCHO	NMHC+NOx	CO
Standards*, 50K	0.075	3.4	0.05	0.015	0.14	8.0
Device Test w/df	0.033	0.2	0.04	0.001	0.13	0.8

\*LEV II LEV CVS-75 FTP emissions standards.

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 THE M-CAR STOKER ENGINE.

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 17<sup>th</sup> day of October 2014.

  
FOR Annette Hebert, Chief  
Emissions Compliance, Automotive Regulations and Science Division