

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-176-30

Relating to Exemptions Under Section 27156  
of the California Vehicle Code

Dinan Engineering, Inc.  
Performance Camshafts

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 Performance Camshafts, manufactured and marketed by Dinan Engineering, Inc. (865 Jarvis Drive, Morgan Hill, CA 95037) 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 the vehicles described in Exhibit A.

The Performance Camshafts feature changes in lift and duration for increased power at high RPM. The differences in lift and duration between the stock camshafts and the Performance Camshafts are shown in Exhibit A. The Performance Camshafts are manufactured using the same material as the stock camshafts.

This Executive Order is valid provided that the installation instructions for the Performance Camshafts will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

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

This Executive Order shall not apply to any Performance Camshafts advertised, offered for sale, sold with, or installed on a new motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

Marketing of the Performance Camshafts using any identification other than that shown in this Executive Order or marketing of the Performance Camshafts 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 Performance Camshafts may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on submitted emissions test data generated on a 2004 model-year BMW Z4 3.0i equipped with a 3.0L engine (4BMXV03.0M5R test group), certified to the Ultra Low Emission Vehicle (ULEV) emission standards with the Performance Camshafts installed. Testing consisted of a Cold-Start CVS-75 Federal Test Procedure (FTP) test cycle, a Supplemental Federal Test Procedure (SFTP) US06 test cycle, and an On-Board Diagnostic II (OBD II) test. Test data showed that the Performance Camshafts did not affect the vehicle's ability to perform OBD II monitoring. The results shown in the table below are in grams per mile with the CVS-75 FTP results multiplied by BMW's deterioration factors. Emission levels of the modified vehicle met the applicable emission standards.

	CVS-75 FTP				SFTP US06	
	NMOG	CO	NOx	HCHO	NMHC+NOx	CO
<b>Standard</b>	0.040	1.7	0.2	0.008	0.14	8.0
<b>w/ Device</b>	0.029	0.54	0.1	0.0004	0.048	0.48

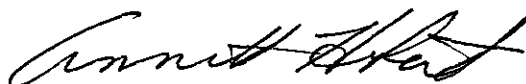
The Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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 PERFORMANCE CAMSHAFTS.

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 22 day of January 2007



Annette Hebert, Chief  
Mobile Source Operations Division

### Exhibit A

Part Number	BMW Model	Model Years	Engine Displacement
D525-0542	330i *	2001-03	3.0L
	330xi	2001-05	3.0L
	330ci	2001-03	3.0L
	530i (E39)	2001-03	3.0L
	Z3 3.0i	2001-02	3.0L
	Z4 3.0i	2003-05	3.0L
D525-0540	M3	2001-06	3.2L
D525-0541	M-Roadster	2001-02	3.2L
	M-Coupe	2001-02	3.2L
D525-0620	M5	2000-03	4.9L
	Z8	2000-03	4.9L
D525-0110	Mini Cooper S **	2002-06	1.6L

\* Excluding 2003 330i with the test group 3BMXV03.0UL2 (LEV II ULEV)

\*\* Excluding John Cooper Works models

Performance Camshaft differences from stock camshaft specifications:

Part Number	Intake		Exhaust	
	Lift @ cam (mm)	Duration (degrees)	Lift @ cam (mm)	Duration (degrees)
D525-0542	+5.00%	+3.94%	+7.53%	+3.33%
D525-0540	+4.51%	+4.48%	+4.51%	+3.82%
D525-0541	+4.51%	+4.48%	+4.51%	+3.82%
D525-0620	+9.71%	+4.69%	+9.71%	+4.69%
D525-0110	+13.10%	-3.91%	+12.50%	+6.25%