

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-420-8

Relating to Exemptions under  
Section 27156 of the Vehicle Code

Engine Control Systems Ltd.  
AZ Purifier and AZ Purimuffler

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-02-003;

**IT IS ORDERED AND RESOLVED:** That installation of the AZ Purifier and AZ Purimuffler, manufactured by Engine Control Systems Ltd. of 165 Pony Drive, Newmarket, Ontario, Canada L3Y 7V1, has been found not to reduce the effectiveness of the applicable engine emission control system, and therefore, the AZ Purifier and AZ Purimuffler are exempt from the prohibitions in Section 27156 of the Vehicle Code for installation on 2003 and older model-year on-road heavy-duty diesel engines certified to particulate matter emission standards of 0.60 g/bhp-hr or less and not otherwise equipped with an aftertreatment emission control system such as a catalytic converter or a particulate matter filter.

The AZ Purifier and AZ Purimuffler exempted under this Executive Order can be installed on engines operated using standard California diesel with a maximum sulfur content of 500 parts per million by weight (ppmw), ultra-low sulfur diesel with a maximum sulfur content of 15 ppmw, or PuriNOx water emulsion fuel based on standard California diesel. The AZ Purifier and AZ Purimuffler exempted under this Executive Order are identified in Attachment A.

This exemption is based on emission tests conducted by Engine Control Systems Ltd. with the AZ Purimuffler. Test data showed that the AZ Purimuffler has no adverse impact on engine emissions. The same emissions impact is expected when the AZ Purifier and AZ Purimuffler are installed on any of the engines listed above.

This Executive Order is valid provided that installation instructions for the AZ Purifier and AZ Purimuffler do not recommend tuning the engines to specifications different from those of the engine manufacturer.

Changes made to the design or operating conditions of the AZ Purifier or AZ Purimuffler, as exempted by the Air Resources Board, which adversely affect the performance of the engine's pollution control system, shall invalidate this Executive Order.

Marketing of the AZ Purifier and AZ Purimuffler using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

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

This Executive Order does not constitute any opinion as to the effect the use of the AZ Purifier and AZ Purimuffler may have on any warranty either expressed or implied by the engine manufacturer.

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.

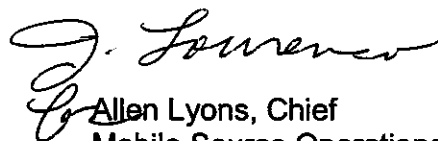
In addition to the foregoing, the Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of California Code of Regulations, Title 13, Section 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 ENGINE CONTROL SYSTEMS LTD.'S AZ PURIFIER AND AZ PURIMUFFLER.**

Violation of any of the above conditions shall be grounds for revocation of this Executive Order. The Executive Order may be revoked only after a ten-day written notice of intention to revoke the Executive Order, in which period the holder of the Executive 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 Executive Order may not be revoked until a determination is made after a hearing that grounds for revocation exist.

Executive Order D-420-3, dated June 9, 2003, is hereby superseded and is of no further force and effect.

Executed at El Monte, California, this 25<sup>th</sup> day of January 2006.



Allen Lyons, Chief  
Mobile Source Operations Division

## Attachment A

AZ Purifier and AZ Purimuffler	
ECS Part Number	Catalyst Model
A16-XXXX A17-XXXX A18-XXXX	AZ27
	AZ28
	AZ29
	AZ30
	AZ31
	AZ33
	AZ34
	AZ36

**Note:** ECS Part Number  
 Pre-fixes A16, A17, and A18 designate converter design format:  
 (1) A16 designates the Purifier format (converter only).  
 (4) A17 designates the Purimuffler format (converter and muffler).  
 (5) A18 designates the Purimuffler format (converter and muffler, UL approved spark arresting).

Catalyst Model  
 AZ designates catalyst formulation.  
 Numbers 27 through 36 designate catalyst size.  
 For custom direct fit applications, the part number will describe the converter design format and application, i.e. AZ Purimuffler for ABC Trucking with Cummins B engine.