

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-250-4

Relating to Exemptions Under Section 27156  
of the Vehicle Code

AIRFLOW RESEARCH, INC.  
SMALL BLOCK CHEVY LS1 GEN 3 ALUMINUM CYLINDER HEADS

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 Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads, manufactured and marketed by Airflow Research, Inc., 10490 Ilex Avenue, Pacoima, California 91331 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 2005 and older General Motors vehicles equipped with a 4.8, 5.3, 5.7, or 6.0L small block dedicated gasoline V8 engine, excluding the following engine test groups certified to Low Emission Vehicle II (LEV II) emission standards and Super Ultra Low Emission Vehicle (SULEV) emission standards: 2004 model year, 4GMXT06.0187, 4GMXA06.0189; 2005 model year, 5GMXA6.0189, and 5GMXT06.0187.

<b>Part No.</b>	<b>Intake Port Volume</b>	<b>Chamber Volume</b>	<b>Valve Size Intake/Exhaust</b>
1510, 1520	205cc	66cc	2.02"/1.6"
1530, 1540	205cc	76cc	2.02"/1.6"
1550, 1560	200cc	64cc	2.02"/1.6"
1570, 1580	200cc	74cc	2.02"/1.6"
1550-1, 1560-1	200cc	66cc	2.02"/1.6"
1570-1, 1580-1	200cc	76cc	2.02"/1.6"
1610, 1620	225cc	66cc	2.08"/1.6"
1630, 1640	225cc	76cc	2.08"/1.6"
1650, 1660	220cc	64cc	2.08"/1.6"
1670, 1680	220cc	74cc	2.08"/1.6"
1650-1, 1660-1	220cc	66cc	2.08"/1.6"
1670-1, 1680-1	220cc	76cc	2.08"/1.6"

This Executive Order is valid provided the installation instructions for the Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads 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 Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads, 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 Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads using any identification other than that shown in this Executive Order or marketing of the Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

Exemption of the Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads shall not be construed as exemption to sell, offer for sale, or advertise any component of the kit as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of the Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on submitted emissions test data which showed that the worst case cylinder head, part no. 1630, did not adversely affect tailpipe emissions during a Cold-Start CVS-75 Federal Test Procedure (FTP) and the Supplemental Federal Test Procedure (SFTP US06) test cycles. A 2002 Chevrolet Corvette Z06 certified to the Low Emission Vehicle (LEV) emission standards was used as the test vehicle. Results are in grams per mile with deterioration factors (dfs) added to CVS-75 FTP results. Emission levels of the modified vehicle met the applicable emission standards.

	CVS-FTP				US06	
	NMOG	CO	NOX	HCHO	NMHC+NOx	CO
Stock	0.075	3.4	0.2	0.015	0.14	8.0
Device w/dfs	0.04	1.2	0.05	0.001	0.04	1.0

This Executive Order is also based on the On-Board Diagnostic II (OBD II) tests conducted on the same test vehicle. Test data showed that the Small Block Chevy LS1 Gen 3 Aluminum Cylinder Heads when installed on the vehicle did not affect the vehicle's ability to perform its OBD II monitoring.

The ARB 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 AIRFLOW RESEARCH, INC.'S SMALL BLOCK CHEVY LS1 GEN 3 ALUMINUM CYLINDER HEADS.**

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 after hearing that grounds for revocation exist.

Executed at El Monte, California, this 27<sup>TH</sup> day of October 2004.



Allen Lyons, Chief  
Mobile Source Operations Division