

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-370-7  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

DC SPORTS  
DIRECT AIR CHARGER AND COLD AIR EXTENSION

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-45-9;

IT IS ORDERED AND RESOLVED: That the installation of the Direct Air Charger and Cold Air Extension, produced and marketed by DC Sports, 286 Winfield Circle, Corona, California 92880, 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 Acura and Honda vehicles listed in Exhibit A.

The Direct Air Charger and Cold Air Extension include the following main components: open-element reusable air filter, intake system tubing, silicone crankcase ventilation hose (as applicable), assorted brackets, and hardware.

This Executive Order is valid provided that the installation instructions for the DC Sports Direct Air Charger and Cold Air Extension 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 DC Sports Direct Air Charger and Cold Air Extension, 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 DC Sports Direct Air Charger and Cold Air Extension 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 DC Sports Direct Air Charger and Cold Air Extension using any identification other than that shown in this Executive Order or marketing of the DC Sports Direct Air Charger and Cold Air Extension 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 DC Sports Direct Air Charger and Cold Air Extension may have on any warranty either expressed or implied by the vehicle manufacturer.

This Executive Order is granted based on an examination of the On-Board Diagnostic II (OBD-II) system of a 2001 model-year Honda Civic (PC, ULEV) in the modified configuration, and an engineering evaluation of the emissions impact of the device if measured using the Cold-Start CVS-75 Federal Test Procedure. However, the ARB finds that reasonable grounds exist to believe that use of the DC Sports Direct Air Charger and Cold Air Extension may adversely affect emissions of motor vehicles when operating under conditions outside the parameters of the CVS-75 Federal Test Procedure. Accordingly, the ARB reserves the right to conduct additional emission tests, in the future, as such tests are developed, that will more adequately measure emissions from all cycle phases. If such test results demonstrate that the DC Sports Direct Air Charger and Cold Air Extension adversely affect emissions during off-cycle conditions (defined as those conditions which are beyond the parameters of the Cold-Start CVS-75 Federal Test Procedure), this Executive Order shall be effectively rescinded as of the date the test results are validated. Further, if such test results or other evidence provides the ARB with reason to suspect that the Direct Air Charger and Cold Air Extension will affect the durability of emission control systems, DC Sports shall be required to submit durability data to show that the durability of vehicle emission control systems are not, in fact, affected and/or that the add-on or modified part demonstrates adequate durability.

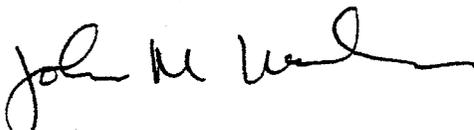
The ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of Title 13, California Code of Regulations, Section 2222, et seq.

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 DC SPORTS' DIRECT AIR CHARGER AND COLD AIR EXTENSION.

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 11<sup>th</sup> day of May 2001.



R. B. Summerfield, Chief  
Mobile Source Operations Division

Exhibit A

Make	Model	Model-Year	DISP. (L.)	Direct Air Ccharger P/N	Cold Air Extension P/N
Acura	Integra	1990-93	1.7	DAC6002	
Acura	Integra GS/RS/LS	1994-2001	1.8	DAC6003	DAE6003
Acura	Integra GS-R	1994-99	1.8	DAC6004	DAE6004
Acura	Integra GS-R	2000-2001	1.8	DAC6006	DAE6006
Acura	Integra Type R	2000-2001	1.8	DAC6005	DAE6005
Acura	Integra Type R	2000-2001	1.8	DAC6005	DAE6005
Honda	CRX/Civic SI	1988-91	1.5, 1.6	DAC5001	
Honda	Civic EX/LX/DX/SI	1992-95	1.5, 1.6	DAC5002	DAE5002
Honda	Civic EX	1996-98	1.6	DAC5006	DAE5006
Honda	Civic EX	1999-2000	1.6	DAC5013	DAE5013
Honda	Civic SI	1999-2000	1.6	DAC5012	DAE5012
Honda	Civic	2001	1.7	DAC5014	
Honda	DelSol VTEC DOHC	1994-95	1.6	DAC5008	
Honda	DelSol VTEC DOHC	1996-97	1.6	DAC5010	
Honda	Prelude S/SI/VTEC	1992-96	2.2	DAC5003	DAE5003
Honda	Prelude	1997-2001	2.2	DAC5007	DAE5007
Honda	Accord (no ABS)	1990-93	2.2	DAC5004	
Honda	Accord	1994-97	2.2	DAC5005	DAE5005
Honda	Accord	1998-2001	2.3	DAC5011	DAE5011
Honda	CR-V	1997-2000	2.0	DAC5009	
Honda	S2000	2000-2001	2.0	DAC5020	

State of California  
AIR RESOURCES BOARD

EVALUATION OF DC SPORTS'  
DIRECT AIR CHARGER AND COLD AIR EXTENSION  
FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE  
SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE  
CALIFORNIA CODE OF REGULATIONS

May 2001

by

Mobile Source Operations Division  
9528 Telstar Avenue  
El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.)

## SUMMARY

DC Sports, of 286 Winfield Circle, Corona, California 92880, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for the DC Sports Direct Air Charger and Cold Air Extension designed for the Acura and Honda vehicles listed in Exhibit A.

Based on engineering evaluation and an examination of the On-Board Diagnostic II (OBD-II) system with the Direct Air Charger and Cold Air Extension installed, the staff concludes that the DC Sports Direct Air Charger and Cold Air Extension will not adversely affect exhaust emissions from vehicles for which the exemption is requested.

The staff recommends that DC Sports, be granted an exemption as requested and that Executive Order D-370-7 be issued.

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I. INTRODUCTION

DC Sports, of 286 Winfield Circle, Corona, California 92880, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for the DC Sports Direct Air Charger and Cold Air Extension designed for the Acura and Honda vehicles listed in Exhibit A.

II. CONCLUSIONS

Based on engineering evaluation and an examination of the On-Board Diagnostic II (OBD-II) system with the Direct Air Charger installed, the staff concludes that the DC Sports Direct Air Charger and Cold Air Extension will not adversely affect exhaust emissions from the vehicles for which the exemption is requested.

III. RECOMMENDATION

The staff recommends that DC Sports be granted an exemption for their Direct Air Charger and Cold Air Extension for installation on the Acura and Honda vehicles listed in Exhibit A.

IV. DIRECT AIR CHARGER AND COLD AIR EXTENSION DESCRIPTION

DC Sports offers various intake systems through its Direct Air Charger and Cold Air Extension product line. These intake systems have been specifically designed for installation on the vehicles listed in Exhibit A. Each system operates in conjunction with the original equipment manufacturer's (OEM) computer controlled fuel injection system and emission control system already certified with the stock engine, with the exception of the stock airbox and some intake tubing.

The intent of installing the Direct Air Charger and Cold Air Extension is to increase the vehicle's volumetric efficiency and power output at particular engine loads and throttle openings. At heavy engine loads and increased throttle openings, the airflow into the engine is increased because the Direct Air Charger and Cold Air Extension systems are less restrictive than stock air filters. This allows more air to enter the engine, which is compensated by the vehicle engine control module with an increase in fuel flow, resulting in a higher power output. However, the fuel enrichment is limited and the typical net effect is an overall leaning effect of the fuel mixture. The leaning effect is manifested in a marginal, but measurable, NOx increase. Worst-case vehicles are examined for their certification emissions. In cases where certification emissions have values low enough to accommodate any small increase in emissions (in this case NOx), emission testing is deemed not required.

The Direct Air Charger locates the open element air filter in the engine compartment. The Cold Air Extension relocates the open element air filter outside of the engine compartment adjacent to the wheel well, where the air is cooler. The reason for the placement of the air filter to the wheel well is that the cooler air is denser and should allow the engine to produce more power due to the cooler air charge.

The filter element used in the Direct Air Charger and Cold Air Extension is an open-element, reusable cotton gauze unit, designed to be less restrictive than the stock air filter.

The installation of the kit does not require any major modifications to the stock motor, except for the modification of the factory air intake system to accommodate the Direct Air Charger and Cold Air Extension air filter and plumbing. On some models, relocation of the crankcase ventilation hose is required. In these cases, the Direct Air

Charger and Cold Air Extension systems are supplied with silicone crankcase ventilation hoses.

V. DISCUSSION OF THE DIRECT AIR CHARGER AND COLD AIR EXTENSION

No emissions measurement was required for the evaluation of the Direct Air Charger and Cold Air Extension. Similar systems have been tested and have shown to have only a slight influence on emissions, namely a marginal increase in NO<sub>x</sub> due to a leaning effect of the less restrictive intake system. The affected vehicles have certification values which are low enough to accommodate any small increase in NO<sub>x</sub> emissions.

A 2001 Honda Civic with a 1.7 liter four cylinder engine (engine family 1HNXV01.7XJ9) was used for the evaluation of the Direct Air Charger and Cold Air Extension. The test vehicle was certified to the Passenger Car Low-Emission Vehicle (PC ULEV) standards and was equipped with an enhanced evaporative system. Testing consisted of one CVS-75 Federal Test Procedures (FTP) in the modified configuration (Direct Air Charger installed) to set all On-Board Diagnostics (OBD) II readiness indicators. Testing was conducted at Automotive Testing and Development Services. The ARB did not perform testing to confirm the test results submitted by the applicant.

The Cold Air Extension was not installed for testing because the engine cooling fan used during dynamometer testing is directed toward the engine compartment with the vehicle hood open. Therefore, intake air would not be cooler if the Cold Air Extension had been installed, and there would be no difference in the effect of the device on the operation of the OBD II system.

Based on engineering evaluation and the OBD-II test results, the staff concludes that the DC Sports Direct Air Charger and Cold Air Extension meet the requirements for VC 27156 exemption of general criteria parts. However, the ARB finds that reasonable grounds exist to believe that use of the DC Sports Direct Air Charger and Cold Air Extension may adversely affect emissions of motor vehicles when operating under conditions outside the parameters of the previously prescribed test procedure. Accordingly, the ARB reserves the right to conduct additional test in the future, as such tests are developed.

DC Sports has submitted all the required information and fulfilled the requirements for an exemption.

Exhibit A

Make	Model	Model-Year	DISP. (L.)	Direct Air Ccharger P/N	Cold Air Extension P/N
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Acura	Integra Type R	2000-2001	1.8	DAC6005	DAE6005
Honda	CRX/Civic SI	1988-91	1.5, 1.6	DAC5001	
Honda	Civic EX/LX/DX/SI	1992-95	1.5, 1.6	DAC5002	DAE5002
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