

State of California
AIR RESOURCES BOARD

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

DC FABRICATION
EXHAUST MANIFOLD

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-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Exhaust Manifold, manufactured out of #16 gauge stainless steel by DC Fabrication of 505 N. Smith Street, Unit 101, Corona, California 91720, 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 following vehicle applications:

<u>Make</u>	<u>Model</u>	<u>Model Year</u>	<u>Engine Displacement</u>
Honda	Prelude SI	1992-1994	2.3L
Honda	Prelude V TEC	1993-1994	2.2L
Honda	Civic-Del Sol	1992-1994	1.6L
Honda	Civic-CRX	1988-1991	1.6L
Acura	Integra	1990-1993	1.8L

This Executive Order is valid provided that installation instructions for the DC Fabrication Exhaust Manifold 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 device, as exempt by the Air Resources Board, which adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using any identification other than that shown in this Executive Order or marketing of the device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

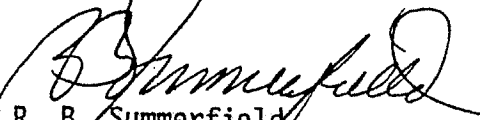
This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF DC FABRICATION'S EXHAUST MANIFOLD.

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 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 30th day of November, 1994.



R. B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF THE DC FABRICATION
EXHAUST MANIFOLD FOR EXEMPTION FROM THE PROHIBITIONS OF
VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

November 1994

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AIR RESOURCES BOARD

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by

Mobile Source Division
9528 Telstar Avenue
El Monte, CA 91731-2990

(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 Fabrication of 505 N. Smith Street, Unit 101, Corona, California 91720, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Exhaust Manifold. The exhaust manifold system is designed for installation on those model/model year vehicles listed in the Appendix.

Based on the results from emission tests performed at an independent laboratory on a 1994 Honda Prelude, the staff concludes that DC Fabrication's Exhaust Manifold will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

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

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I. INTRODUCTION

DC Fabrication of 505 N. Smith Street, Unit 101, Corona, California 91720, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code (VC) for their Exhaust Manifold. The exhaust manifold system is designed for installation on those model/model year vehicles listed in the Appendix.

DC Fabrication has submitted test data from a 1994 Honda Prelude equipped with a 2.3L engine tested at Environmental Testing Corporation, Orange, California.

II. CONCLUSIONS

Based on the results from back-to-back emission tests performed at Environmental Testing Corporation on a 1994 Honda Prelude, the staff concludes that DC Fabrication's Exhaust Manifold will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

III. RECOMMENDATION

The staff recommends that DC Fabrication be granted an exemption for their Exhaust Manifold for installation on those model/model-year vehicles listed in the Appendix. The staff also recommends that Executive Order D-370 be issued.

IV. DESCRIPTION OF THE DC FABRICATION EXHAUST MANIFOLD

The DC Fabrication Exhaust Manifold has been specifically designed for installation on those model/model-year vehicles listed in the Appendix. The exhaust manifold 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.

The purpose of modifying the exhaust system of the engine is to increase

horsepower and torque throughout the R.P.M. range. As with the original equipment manufacturer's (OEM) exhaust system, DC Fabrication's Exhaust Manifold, which is a header system, routes exhaust gases from the engine into the catalytic converter. The Exhaust Manifold is manufactured using T-304 stainless steel tubing and is a tri-y design (4 into 2 into 1). Each cylinder has a 1-5/8 inch diameter primary pipe that fits into 1-3/4 inch secondary pipes which then combine into a 2.0 inch collector pipe. This 2.0 inch collector pipe fits directly onto the catalytic converter. The Exhaust Manifold is manufactured using 16 gauge steel and includes 3/8" thick CNC machined flanges. Installation of DC Fabrication's Exhaust Manifold does not alter the OEM location of the oxygen sensor and the catalyst. The tune-up specifications also remain the same.

V. DISCUSSION OF THE DC FABRICATION EXHAUST MANIFOLD

A 1994 Honda Prelude with a 2.3L fuel injected engine was used for the evaluation of the Exhaust Manifold system. The dynamometer inertia weight and horsepower setting were 3743-lbs and 7.6-hp respectively. The emission tests conducted by Environmental Testing Corporation for DC Fabrication consisted of one Cold 505 emission test in the baseline configuration and one Cold 505 emission test in the modified (exhaust manifold system installed) configuration. The ARB did not perform test to confirm the test results submitted by the applicant. A summary of the test results is shown below:

Exhaust Emission Test Results

- On A 1994 Honda Prelude

Test	Exhaust Emissions (gm/mi)		
<u>Mode</u>	<u>HC</u>	<u>CO</u>	<u>NOx</u>
Baseline	.531	4.204	.454
Device	.532	4.723	.434
Difference	+0.001	+0.519	-.020
% Difference	+0.188	+12.345	-4.405

Results from the emission test conducted at Environmental Testing Corporation show the vehicle emissions with the DC Fabrication Exhaust Manifold system installed are within the allowable increase of 10 percent or 0.1 gm/mile HC, 15 percent or 1.0 gm/mile CO and 10 percent 0.1 gm/mile NOx above the baseline as specified under the "Procedures for Exemption of Add-On or Modified Parts." Therefore, based on the test results, the staff concludes that the installation of the DC Fabrication's Exhaust Manifold, (header system) did not have an adverse effect on exhaust emissions of the 1994 Honda Prelude equipped with a 2.3L engine.

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

Appendix

LIST OF MODEL, MODEL YEAR VEHICLES AND ENGINE DISPLACEMENTS THAT ARE COMPATIBLE WITH DC FABRICATION'S EXHAUST MANIFOLD.

<u>Make</u>	<u>Model</u>	<u>Model Year</u>	<u>Engine Displacement</u>
Honda	Prelude SI	1992-1994	2.3L
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