

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-161-15
Relating to Exemptions under Section 27156
of the Vehicle Code

GALE BANKS ENGINEERING
TURBOCHARGER KIT MODEL 6.2G

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 add-on turbocharger kit Model 6.2G manufactured by Gale Banks Engineering, using a Rotomaster turbocharger Model No. T04B with an A/R ratio of 1.00 has been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1982 through 1990 model year Chevrolet/GMC 6.2L heavy-duty diesel vehicles.

Modifications to the OEM emission-related parts due to the installation of the turbocharger kit include replacement of the OEM exhaust system with a 3" diameter exhaust system and an air cleaner assembly.

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

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this 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. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of a kit as an individual device.

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 ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE GALE BANKS ENGINEERING TURBOCHARGER KIT FOR INSTALLATION ON 1982-1990 MODEL YEAR CHEVROLET/GMC 6.2L HEAVY-DUTY DIESEL VEHICLES.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

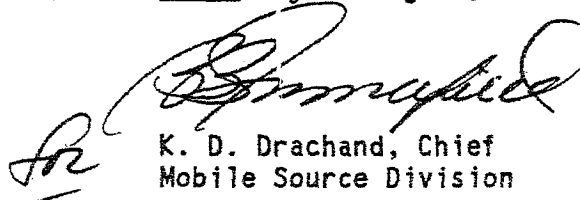
Section 43644 of the Health and Safety Code provides as follows:

"43644. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executive Order D-161-13 dated December 8, 1988, is superseded and of no further force and effect.

Executed at El Monte, California, this 9th day of August, 1989.


K. D. Drachand, Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF GALE BANKS ENGINEERING'S ADD-ON TURBOCHARGER KIT
MODEL 6.2G FOR INSTALLATION IN 1982-1990 MODEL YEAR
CHEVROLET/GMC 6.2L HEAVY-DUTY DIESEL VEHICLES

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by

Mobile Source Division

State of California
AIR RESOURCES BOARD
9528 Telstar Avenue
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(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

Gale Banks Engineering (Banks) has applied for an update to Executive Order D-161-13, which exempts their turbocharger kit model 6.2G from the prohibitions in Vehicle Code Section 27156 for 1982-1989 model year Chevrolet/GMC 6.2L heavy-duty diesel vehicles. The update request is for the inclusion of the 1990 model year Chevrolet/GMC heavy-duty diesel vehicles in the exemption.

Because Banks was granted an exemption for 1982-1989 model year 6.2L Chevrolet/GMC heavy-duty diesel vehicles and that 1990 model year 6.2L heavy-duty diesel engine is carry-over from the previous years, the staff concludes that Banks' add-on turbocharger kit model 6.2G will not have an adverse effect on exhaust emissions from vehicles for which the exemption update has been requested.

The staff recommends that Banks be granted an update as requested and that Executive Order D-161-15 be issued.

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EVALUATION OF GALE BANKS ENGINEERING'S ADD-ON TURBOCHARGER KIT
MODEL 6.2G FOR INSTALLATION IN 1982-1990 MODEL YEAR
CHEVROLET/GMC 6.2L HEAVY-DUTY DIESEL VEHICLES

I. INTRODUCTION

Gale Banks Engineering (Banks) of 546 Duggan Avenue, Azusa, CA 91702, has applied for an update to Executive Order D-161-13, which exempts their turbocharger kit model 6.2G from the prohibitions in Vehicle Code Section 27156 for 1982-1989 model year Chevrolet/GMC 6.2L heavy-duty diesel vehicles. The update request would include 1990 model year Chevrolet/GMC heavy-duty diesel vehicles in the exemption.

II. CONCLUSION

Because Banks was granted an exemption for 1982-1989 model year 6.2L Chevrolet/GMC heavy-duty diesel vehicles and that 1990 model year 6.2L heavy-duty diesel engine is carry-over from the previous years, the staff concludes that the Banks' add-on turbocharger kit model 6.2G will not have an adverse effect on exhaust emissions from vehicles for which the exemption update has been requested.

III. RECOMMENDATIONS

The staff recommends that Banks be granted an update as requested and that Executive Order D-161-15 be issued.

IV. TURBOCHARGER KIT DESCRIPTION

The purpose of the Banks turbocharger system is to increase the power output of the engine by compressing the intake charge to pressures above that of the atmosphere. This increased pressure allows a greater charge density to enter the combustion chamber and increases the volumetric efficiency of the engine. The maximum fuel delivery is slightly increased in order to maintain proper air-fuel ratios when the turbocharger is providing positive manifold pressure (boost). Maximum positive manifold pressure is limited to 10 psig by the size of the turbine and the

compressor. The maximum engine speed is regulated by the original equipment manufacturer (OEM) fuel injection governor. Therefore, by controlling maximum engine speed, maximum turbine speed and corresponding boost pressures are also controlled.

The major components of the system include a 1.0 A/R ratio Rotomaster model no. T04B turbocharger, custom intake adaptors, 3" diameter exhaust pipe, air cleaner assembly, brackets, hoses and the hardware necessary to complete the installation. Modification to the OEM emission related parts due to the installation of the turbocharger kit include replacement of the air cleaner assembly and replacement of the OEM exhaust system with a 3" diameter exhaust system.

V. DISCUSSION

Banks' add-on turbocharger kit model 6.2G is designed for installation on 6.2L Chevrolet/GMC heavy-duty diesel engines. The applicant is making the turbocharger available for 1990 model year 6.2L Chevrolet/GMC heavy-duty diesel vehicles. The applicant claims that no modifications to the kit are necessary for installation on 1990 model year applicable vehicles. Certification documents show that the 1990 model year 6.2L Chevrolet/GMC diesel engine is carried over from the previous years. Based on these considerations the staff concludes that no additional testing is required.