

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-224  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

ENERGY EFFICIENCY, INC.  
Empower Plus System  
Models 1-A, 1-B, 1-C, 1-D, and D

WHEREAS, Vehicle Code Section 27156 and Title 13, California Code of Regulations (hereafter "CCR") Section 2222(e), authorize the California Air Resources Board (ARB) and its Executive Officer to exempt add-on and modified parts from the prohibitions of Vehicle Code Section 27156.

WHEREAS, Energy Efficiency, Inc. has applied to the ARB for exemption from the prohibitions of Vehicle Code Section 27156 for the Empower Plus System, Models 1-A, 1-B, 1-C, 1-D, and D.

WHEREAS, pursuant to the authority vested in the Executive Officer by Health and Safety Code Section 39515 and in the Chief, Mobile Source Division by Health and Safety Code Section 39516 and Executive Order G-45-5, the Air Resources Board finds:

1. The Empower Plus System is an add-on device which is part of the PCV valve emission control unit.
2. The Empower Plus System is intended for use with a required motor vehicle pollution control system.
3. The Empower Plus System by being installed in the fuel line alters the original design of a motor vehicle pollution control system.
4. The Empower Plus System is a device subject to the prohibitions of Vehicle Code Section 27156 and add-on part as defined by 13 CCR Section 1900(b)(10).
5. The Empower Plus System does not reduce the effectiveness of any required motor vehicle pollution control device.
6. The Air Resources Board, in the exercise of technical judgement, is aware of no basis on which the Empower Plus System will provide an increase in fuel economy.
7. It has not been determined what effect use of the Empower Plus System may have on any warranty, either expressed or implied, by the manufacturer of a motor vehicle on which the device is installed.

8. The Empower Plus System is not a certified motor vehicle pollution control device pursuant to Health and Safety Code Section 43644.
9. The Air Resources Board by granting an exemption to Energy Efficiency, Inc. for the Empower Plus System, Models 1-A, 1-B, 1-C, 1-D, and D does not recommend or endorse in any way the Empower Plus System for emissions reduction, fuel economy, or any other purpose.

IT IS HEREBY RESOLVED that the Empower Plus System (Models 1-A, 1-B, 1-C, 1-D, and D) is exempt from the prohibitions of Vehicle Code Section 27156 for installation in 1991 and older model year vehicles subject to the following conditions.

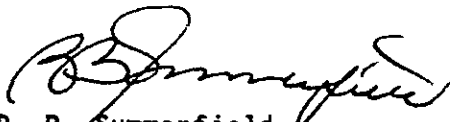
1. This exemption shall not apply to any device, apparatus, or mechanism advertised, offered for sale or sold with, or installed on, a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.
2. No changes are permitted to the device as described in the application for exemption. Any changes to the device, applicable model year, or other factors addressed in this order must be evaluated and approved by the Air Resources Board prior to marketing in California.
3. 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 the Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of this product shall not be construed as an exemption to sell, offer for sale, or advertise any component of the product as an individual device.
4. Any oral or written references to this Executive Order or its content by Energy Efficiency, Inc., its principals, agents, employees, distributors, dealers, or other representatives must include the disclaimer that the Executive Order or the exemption it provides is not an endorsement or approval of any fuel economy or emissions reduction claims for the Empower Plus System (Models 1-A, 1-B, 1-C, 1-D, and D) and is only a finding that the device is exempt from the prohibitions of Vehicle Code Section 27156.
5. 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.

ENERGY EFFICIENCY, INC.  
EMPOWER PLUS SYSTEM,  
Models 1-A, 1-B, 1-C, 1-D, and D

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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 11<sup>th</sup> day of June, 1991.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

State of California  
AIR RESOURCES BOARD

EVALUATION OF ENERGY EFFICIENCY, INC. EMPOWER PLUS SYSTEM  
FROM THE PROHIBITIONS OF VEHICLE CODE SECTION  
27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13  
OF THE CALIFORNIA CODE OF REGULATIONS

JUNE 1991

State of California  
AIR RESOURCES BOARD

EVALUATION OF ENERGY EFFICIENCY, INC. EMPOWER PLUS SYSTEM  
FROM THE PROHIBITIONS OF VEHICLE CODE SECTION  
27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13  
OF THE CALIFORNIA CODE OF REGULATIONS

by

Mobile Source Division  
State of California  
Air Resources Board  
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

Energy Efficiency, Inc., of 2486 Commerce Blvd., Grand Junction, CO 81505, has applied for an exemption from the prohibitions in Section 27156 of the California Vehicle Code for the Empower Plus System, Models 1-A, 1-B, 1-C, 1-D, and D designed for installation on 1991 and older model year vehicles.


Previously, the Air Resources Board exempted three similar devices; "Protector 7" by Energy Innovations USA, Inc., the "Condensator" by Condensator, Inc. and "Clean Air Valve/PCV Enhancer" by Ventures Unlimited, Inc. Based on the engineering evaluation of the Empower Plus System and the exemption of similar devices, the staff believes the Empower Plus System does not have any adverse effects on exhaust emissions of vehicles. The staff recommends that the Empower Plus System, Model 1-A, 1-B, 1-C, 1-D, and D be exempted from the prohibitions in Vehicle Code Section 27156 and that Executive Order D-224 be issued.

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FROM THE PROHIBITIONS OF VEHICLE CODE SECTION  
27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13  
OF THE CALIFORNIA CODE OF REGULATIONS

I. INTRODUCTION

Energy Efficiency, Inc., of 2486 Commerce Blvd., Grand Junction,   
CO 81505, has applied for an exemption from the prohibitions in Section  
27156 of the California Vehicle Code for the Empower Plus System, Models  
1-A, 1-B, 1-C, 1-D, and D which are designed for installation on 1991 and  
older model year vehicles.

II. CONCLUSION

Previously, the Air Resources Board exempted three similar  
devices; "Protector 7" by Energy Innovations USA, Inc., the "Condensator" by  
Condensator, Inc. and "Clean Air Valve/PCV Enhancer" by Ventures Unlimited,  
Inc. Based on the engineering evaluation of the Empower Plus System and the  
exemption of similar devices, the staff believes the Empower Plus System  
will not have any adverse effects on exhaust emissions of vehicles.

III. RECOMMENDATION

The staff recommends that the Empower Plus System, Model 1-A,  
1-B, 1-C, 1-D, and D be exempted from the prohibitions in Vehicle Code  
Section 27156 and that Executive Order D-224 be issued.

IV. DEVICE DESCRIPTION

The Empower Plus System is designed to mechanically filter  
crankcase blow-by gases through a 40 mesh stainless steel screen. The  
blow-by is introduced into a separator/reservoir body and gases pass through  
a 40 mesh screen, separating the liquid and solid matter from the gaseous



portion. The separated gases are then fed back into the engine intake. The liquid and solids are held in the separator/reservoir body until drained by removing drain cap.

The Empower Plus System is a closed system with tight fitting hose connections. There is no air bleed into the system to lean the fuel/air mixture going into the engine. The device comes in five models, with a corresponding range of applications.

Model 1-A is designed for gasoline and propane engines less than 85 cubic inches ( 1.4 liter). The unit measures approx. 2" x 4" (5.08 cm x 10.16 cm) and is equipped with connections for 1/4" (6.35 mm) diameter hose. Model 1-A is suitable for motorcycles.

Model 1-B is designed for gasoline, diesel, propane and natural gas engines from 85 cubic inches (1.4 liter) up to 400 cubic inches (6.6 liter). The unit measures approx. 2.75" x 6" (6.35 cm x 15.24 cm) and is equipped with connections for 1/2" (9.5 mm) diameter hose. Model 1-B is suitable for most automobiles and small trucks.

Model 1-C is designed for gasoline, diesel, propane and natural gas engines from 400 cubic inches (6.6 liter) up to 500 cubic inches (8.2 liter). The unit measures approx. 2.75" x 8" (6.35 cm x 20.32 cm) and is equipped with connections for 1/2" (12.7 mm) diameter hose. Model 1-C is suitable for high performance autos, trucks and motor homes. This unit should not be used where crankcase pressure is a concern, as in some large diesel engines.

Model 1-D is designed for diesel, propane and natural gas engines from 500 cubic inches (8.2 liter) up to 854 cubic inches (14 liter). The unit measures approx. 3.75" x 14" (8.89 cm x 35.56 cm) and is equipped

with connections for 5/8" (15.8 mm) diameter hose. The Model 1-D is suitable for larger diesel engines in trucks, buses or motorhomes. It is equipped with a special crankcase pressure regulating system. The reservoir body and drain hose will hold approximately 1.1 quarts (1 liter) of contaminants.

Model D is designed for diesel, propane and natural gas engines 854 cubic inches (14 liter) and greater or smaller engines which carry considerable blow-by gases. Multiple units should be used for very large applications. The unit measures approx. 4.75" x 8" (11.43 cm x 35.56 cm) and is equipped with connections for 3/4" & 1" (25.4 mm) diameter hose. The Model D is suitable for larger diesel engines in trucks and buses, and is equipped with a crankcase pressure regulating system for high crankcase pressure engines and a by-pass for engines designed for low crankcase pressure.

The manufacturer claims the device is also suitable for marine, construction or utility engine applications. However since engines for such applications are currently unregulated, a Vehicle Code Section 27156 exemption is not needed for these applications.

#### V. DISCUSSION

The ARB did not perform any emission or fuel economy tests to substantiate the claims made by the manufacturer. No adjustments are included in the installation instructions. Previously, the ARB exempted three similar devices; Protector 7, Condensator, and Clean Air Valve/PCV Enhancer. The exemptions were granted based on emissions testing and engineering evaluation. Because of the previous exemptions issued to devices with the same operating principle and the fact that qualifying for

an exemption is based on not adversely affecting exhaust emissions, the staff recommends that Energy Efficiency, Inc. be granted an exemption as requested.