

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-72
Relating to Exemptions under Section 27156
of the Vehicle Code

WALTER D. ANDERSON
IGNITION PERFORMANCE LOOP

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 of the Health and Safety Code and Executive Order G-30A;

IT IS ORDERED AND RESOLVED: That the installation of the Ignition Performance Loop manufactured by Walter D. Anderson, 3736 W. Warner Ave., Santa Ana, California has been found to not 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 1976 and older model-year vehicles equipped with 12 volt battery, standard ignition coil and negative ground ignition systems except vehicles equipped with "High Energy Ignition Systems".

The device consists of an insulated wire formed into a series of loops which fit around each tower of the distributor cap. The device also incorporates a small neon bulb which ignites due to the small current induced in the wire by the changing magnetic field.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different from those listed by the vehicle 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.

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 IGNITION PERFORMANCE LOOP.

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.

Executed at Sacramento, California, this 28th day of October, 1976.

Original Signed By

Thomas C. Austin
Deputy Executive Officer-Technical

State of California

Air Resources Board

Staff Report

September 24, 1976

Evaluation of Ignition Performance Loop for Compliance
With the Requirements of Section 27156 of
the California Motor Vehicle Code

I. Introduction

Walter D. Anderson, 3736 West Warner Ave., Santa Ana has submitted an application (see Appendix I) requesting an exemption from Section 27156 of the California Vehicle Code for his Ignition Performance Loop. The following similar devices were granted exemptions from the prohibitions of Vehicle Code Section 27156:

Paser 500 - Executive Order D-23 - Jan. 22, 1974

Paser Magnum - Resolution 71-25 - April 21, 1971

Ionizer - Resolution 71-90 October 20, 1971

The Air Resources Board has previously evaluated these devices and found that they had no adverse effects on existing pollution control systems (Staff Reports dated January 17, 1974, October 20, 1971, and April 21, 1971).

The Air Resources Board Laboratory performed emission tests on various vehicles with and without the device and found no effect on emissions (Project 177 dated August 1970 and Project 203 dated April 1971).

Evaluation of Ignition Performance Loop
for Compliance With the Requirements of
Section 27156 of the California Motor
Vehicle Code

September 24, 1976

II. System Description

The device consists of a continuous insulated wire looped around each distributor tower with one end open and a small neon bulb at the other end which glows due to the small current induced by the rising and falling magnetic field.

III. System Evaluation

The staff is of the opinion that there is no difference in effect between this device and the other three devices named above.

However, the staff is of the opinion that this device should not be installed on American Motors and General Motors "High Energy Ignition" (HEI) systems since it may result in cross firing. The maximum voltage in the secondary of the HEI systems is approximately 30% higher than a conventional system.

IV. Applicants Claims

The applicant claims that the device will improve engine performance, increase gas mileage, give quicker starting and require less needed tuneups. The staff has found no evidence that these claims are valid and is of the opinion that the device serves no useful purpose.

September 24, 1976

V. Conclusion and Recommendation

Based on an engineering evaluation and on previous tests performed on similar devices, the staff concludes that this device will have no effect on emissions. The staff therefore recommends that the "Ignition Performance Loop" be exempted from the prohibitions of Section 27156 of the Vehicle Code for 1976 and older model vehicles excluding those with high energy ignition systems.

This report is being circulated to the Attorney General of the State of California and to the persons listed in Table-1, for whatever action they may deem advisable.

TABLE 1

EXECUTIVE ORDER AND STAFF REPORT DISTRIBUTION LIST

Mr. Tom Ziebarth
U. S. Postal Service
Consumer Protection Office
Washington, D. C. 20260

State Attorney General's Office
Attn: Herschel Elkins
3580 Wilshire Blvd.
Los Angeles, CA 90010

Mr. L. J. Gerlach, Chief
Transportation Research Section
U. S. Postal Service
11711 Parklawn Drive
Rockville, MD 20852

U. S. E. P. A.
Attn: Ralph C. Stahman, TAEB
2565 Plymouth Road
Ann Arbor, MI 48105

Mr. Paul Foldes
Federal Trade Commission
Division of National Advertising
Washington, D. C. 20580

Mr. Ben Jackson
U. S. E. P. A.
Office of Enforcement and
General Counsel
401 "M" Street S. W.
Washington, D. C. 20460

Mr. Kingsley Macomber
Chief Counsel, ARB
P. O. Box 2815
Sacramento, CA 95812

Mr. Taketsugu Takei
Director, Department of Consumer Affairs
1020 "N" Street
Sacramento, CA 95814

August 11, 1976

working the installer can check after dark to see if the firing bulb is lighted. Attached in a marked exhibit B are proposed installation instructions and illustrations.

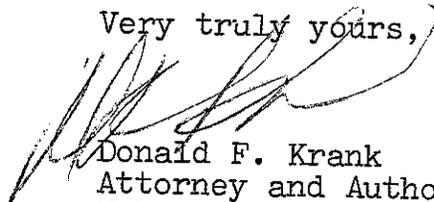
4. Applicable emission test data is omitted as per letter of G. C. Hass dated September 22, 1975, a copy of which is attached and marked Exhibit C.

5. A board finding is requested with respect to all four, six and eight cylinder model automobiles both foreign and domestic. The ruling requested covers that area of testing which would be classified as an ignition bridge. Walter D. Anderson, as manufacturer through his agent, Donald F. Krank, agrees that he will deliver to the board upon request of the executive officer any such device, apparatus or mechanism for independent evaluation.

If you need any further information, please do not hesitate to contact me. In addition to the information contained in this letter, I am requesting that Mr. Anderson, under separate cover, forward to the Board two samples of the Ignition Performance Loop for use by the Board in reaching its result.

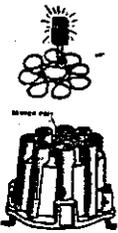
Should you need anything further, please do not hesitate to contact me.

Very truly yours,



Donald F. Krank
Attorney and Authorized Agent for
Walter D. Anderson, Manufacturer
Ignition Performance Loop

DFK:nbm

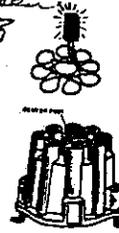


WHY PAY MORE FOR LESS

It is the opinion of the designers of the Ignition Performance Loop that those who will buy & install this Loop will find that these following things will happen.



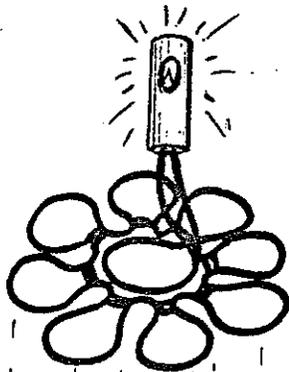
COPYRIGHT & ALL RIGHTS RESERVED 1975 LIC. PAT. #3,019,276



The engine in their car will give quicker starts, better performance, with longer lasting tune-ups.

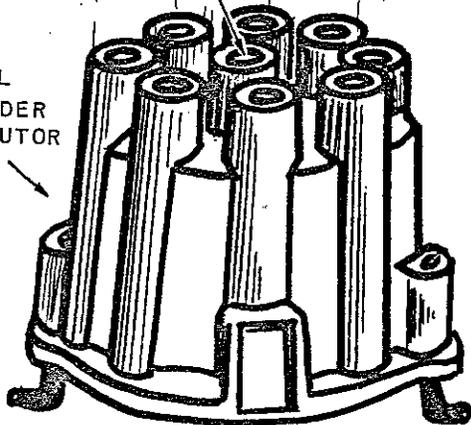
Designed for 2 cyl., 4 cyl., 6 cyl., and 8 cyl. ignition fired engine.

 Cly.



CENTER POST

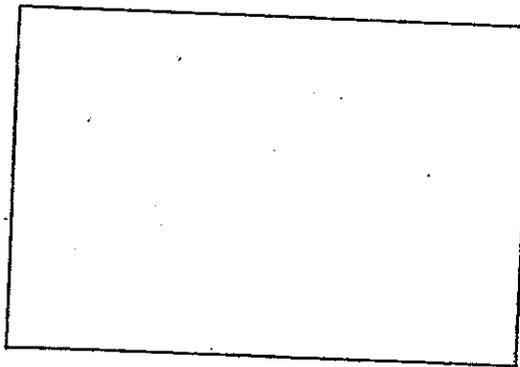
TYPICAL 8 CYLINDER DISTRIBUTOR CAP



CAN BE INSTALLED IN A FEW MINUTES BY MOST CAR OWNERS

Remove the coil lead from the distributor cap - insert center loop around distributor post. Replace coil lead. Remove No. 1 lead and place loop over distributor post and continue the process until all loops have been installed over distributor posts and leads have been re-installed. CAUTION do not remove more than 1 lead at a time unless you are completely familiar with firing order of engine.

It may not be possible to see the firing bulb during sunlight hours. But by checking after dark, you will be able to clearly see the firing of each cylinder by the pulsating of the bulb.



MANUFACTURED FOR AND DISTRIBUTED BY TRUST CLUB AUTO CLINIC
3736 W. WARNER, SANTA ANA, CALIFORNIA

Walter D. Lindgren
714-968-2643

IGNITION PERFORMANCE LOOP

Abstract of the Disclosure

The invention is directed to an electrical wire looping that is provided to the distributor of an automobile engine for the purpose of ionizing or otherwise preconditioning the charges in the cylinders of the engine.

Background of the Invention

Field of the Invention

The invention is directed to combustion systems for automobile engines and, more particularly, to a device for improving the performance of an internal combustion engine.

Description of the Prior Art

U. S. Patent No. 3,019,276 is directed to a device for improving the combustion in an internal combustion engine. The invention is directed to a device that is incorporated in the distributor cap of an automobile engine. The device requires the use of a special distributor cap. The device further lacks any indication of the operativeness of the combustion performance loop.

Summary of the Invention

The invention is directed to a device for improving the combustion in the combustion chamber of an internal combustion engine. The invention is utilized with the distributor cap of the internal combustion engine. The invention is placed on the distributor cover around the towers for the wires feeding into the distributor cover. The invention is a closed loop construction of metal coils which are positioned around the towers of the distributor cover and incorporate visual indicator means which discloses the operativeness of the closed loop of wire

Brief Description of the Drawing

Figure 1 is a top view of the invention on a distributor cover; and

Figure 2 is a view of the ignition performance loop.

Description of the Preferred Embodiment

The invention relates to combustion systems for internal combustion engines. The broad object of the invention is to provide improved means for preconditioning the charge in an internal combustion engine to insure more efficient combustion, to reduce the amount of CO and other harmful exhaust products, and to improve engine performance, smoother idling, faster acceleration, higher top speed, better fuel economy, etc.

More specifically, an object of the invention is to provide an improved ignition system which, in the interval between successive ignitions in a cylinder, will pass a non-igniting electrical disturbance to the charge in the cylinder, repeatedly or continuously, to ionize or otherwise precondition the charge in advance of the firing spark to insure more efficient combustion.

Another object is to provide, in connection with a multi-cylinder spark-ignition engine, a distributor attachment constructed and arranged to deliver the igniting spark to one cylinder and at the same time to bombard the contents of the other cylinders with non-igniting electrical discharges to ionize or otherwise precondition the charges and thus to produce more efficient combustion and improved engine performance. Another object is to provide means for adjusting or predetermining the relative intensity of the non-igniting discharges to suit any engine. Another object is to accomplish the foregoing with no substantial increase in manufacturing cost.

Briefly described, the invention consists of means for collecting the static and corona type electrical emissions in the region surrounding a conductor carrying a high-voltage discharge such as that used to ignite a charge in a cylinder, and for distributing these non-igniting emissions to the contents of the combustion chamber, to ionize or otherwise precondition the charge and prepare it for ignition.

Referring to the drawings, the distributor cover 10 of Figure 1 is of the usual construction with a central tower socket 11 for receiving the insulated lead from the coil, and terminal tower sockets 12 for receiving the leads to the spark plugs of the engine. The attachment 13 is placed around these towers. The attachment 13 is a single continuous wire 14 which is electrically conductive and is formed in a closed loop by one piece of wire. The diameter of the wire and the thickness and type of insulation between the wire and surrounding material predetermines the intensity of the ignitions which will be inducted to, picked up and delivered to the several combustion chambers. A good size of wire to use is

Ties 15 are used to form loops in the wire to enable the wire to encircle the towers of the distributor. The two ends of the wire are connected together and being joined to two separate contacts of a typical neon bulb. A typical bulb which may be used is

The bulb with the wire forms an electrically continuous loop.

In operation, whenever an igniting high-voltage current is delivered from the coil to the socket in the central tower 11 and transmitted by the rotor (not shown) to a terminal tower socket 12 and the corresponding spark plug of the engine, certain emissions surrounding this current are picked up by the coils of the wire 14 surrounding

tower 11 and particularly tower 12. These emissions are transmitted by wire 14 to other coils and by their respective leads and spark plugs to all combustion chambers of the engine, to ionize or otherwise precondition the charge in one or more of the cylinders. The neon bulb provides an indication of the operativeness of the system since it will produce a visible light as the charges are developed in the ignition performance loop. Also, the attachment can be readily adapted to any conventional distributor cover and need only be altered depending upon whether the engine has either 4, 6, or 8 cylinders.

Having thus described the invention and its operation, it is obvious that the objects, as stated, have been attained in a practical manner. It is understood that changes may be made in the construction and in the arrangement and operation of the invention without departing from the spirit or scope of the invention as expressed in the following claims.

WHAT IS CLAIMED IS:

1. A device for improving the combustion in the combustion chamber of an internal combustion engine having an ignition system including high-voltage wiring and spark plugs, said device being used on a distributor cover having the usual terminal sockets for receiving said high-voltage wiring, said device comprising metallic coils about said terminal sockets and an electrical interconnection between said coils, said electrical interconnection between said coils ^{including} ~~being~~ a neon bulb.

2. In the device for improving the combustion in the combustion chamber of an internal combustion engine, ^{as set forth in claim 1} the metallic coils around said terminal sockets being a single loop of wire.