

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-153
Relating to Exemptions under Section 27156
of the Vehicle Code

EMISSION PARTS SUPPLY

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 Universal Neck Insert Kit (UNIK) manufactured by Emission Parts Supply 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 repairing damaged or missing fuel fill pipe restrictors on vehicles certified for unleaded gasoline only.

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 EMISSION PARTS SUPPLY'S UNIVERSAL NECK INSERT KIT (UNIK).

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 El Monte, California, this 15th day of March, 1985.



K. D. Drachand, Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF EMISSION PARTS SUPPLY'S UNIVERSAL NECK INSERT KIT FOR EXEMPTION
FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION
2222, TITLE 13, OF THE CALIFORNIA ADMINISTRATIVE CODE

March, 1985

State of California
AIR RESOURCES BOARD

Evaluation of Emission Parts Supply's Universal Neck Insert Kit for Exemption
from the Prohibitions of Vehicle Code Section 27156 in Accordance with Section
2222, Title 13, of the California Administrative Code

by

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State of California
Air Resources Board
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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

Emission Parts Supply of Petaluma, California, has applied for exemption from the California Vehicle Code Section 27156 for the Universal Neck Insert Kit (UNIK) to be used for repairing damaged fuel fill pipe restrictors on California certified vehicles designed to operate using unleaded gasoline. Section 27156 prohibits modifications to emission controlled vehicles which cause a reduction in the effectiveness of the vehicles's emission control systems.

The applicant submitted the specifications of the kit and two samples, one of which was inserted into a sample fill pipe with a damaged restrictor.

The staff evaluated the device in accordance with the requirements of the "Specifications for Fill Pipe and Openings of Motor Vehicle Fuel Tanks", (Specifications), as incorporated by reference in Section 2290 of Title 13, California Administrative Code. The evaluation of the device did not detect any dimensional or functional discrepancies between the device and the Specifications.

Based on the above the staff recommends that the Emission Parts Supply's Universal Neck Insert Kit be exempted from the prohibitions of Vehicle Code Section 27156 and Executive Order D-153 be issued.

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EVALUATION OF EMISSION PARTS SUPPLY'S UNIVERSAL NECK INSERT KIT FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA ADMINISTRATIVE CODE

I. INTRODUCTION

Emission Parts Supply of Petaluma, California, has applied for exemption from the California Vehicle Code Section 27156 for the company's Universal Neck Insert Kit (UNIK) which is designed to replace the damaged or missing original equipment manufacturers' (OEM) fuel tank fill pipe restrictor. Section 27156 prohibits tampering of the vehicle's emission control systems by the installation of add-on devices or vehicle modifications. Exemptions to the Section's prohibitions are granted provided that it is determined that the device does not increase emissions.

The applicant submitted two UNIK samples for inspection and evaluation. The applicant also submitted drawings and specifications of the kit for the evaluation.

II. CONCLUSION

Based on detailed studies of the design and installation instructions of the Universal Neck Insert Kit an evaluation of the device was made in accordance to the requirements of the Specifications. Based on its evaluation, the staff concluded that the device meets all the Vehicle Code Section 27156 exemption requirements.

III. RECOMMENDATION

The staff recommends that the Emission Parts Supply's Universal Neck Insert Kit be exempted from the prohibitions of Vehicle Code Section 27156 and that Executive Order D-153 be issued.

IV. DEVICE DESCRIPTION

The Emission Parts Supply's Universal Neck Insert Kit is a fuel fill pipe restrictor designed to replace any damaged or tampered OEM restrictor in

the existing fuel tank fill pipe. It consists of two 0.125 inch thick plates separated by a 0.187 inch thick spacer. There is a filling hole of 0.910 inch diameter for inserting the nozzle to the required depth in the fill pipe. Attached to the center piece is an eccentric with a knife sharp edge and a ratchet accompanied by a corresponding spring pawl. The complete structure is kept in place by an Allen cap screw and three rivets and spacers. A door is attached below the bottom plate, covering the filling hole; it is maintained at the closed position by a spring. The total thickness of the device is 0.637 inch (Figures 1 and 2).

According to the installation instruction, after bending the damaged OEM fuel fill pipe restrictor to clear the passage of the fill pipe, the device is positioned at the same location as the OEM restrictor. The Allen cap screw is turned clockwise to expand the eccentric to make contact with the wall of the fill pipe. The kit is completely secured when the Allen cap screw is tightened.

V. DISCUSSION

Emission Parts Supply, Petaluma, California, has applied for exemption from the prohibitions in California Vehicle Code Section 27156 for the company's Universal Neck Insert Kit. The device is designed to replace damaged OEM fuel fill pipe restrictors on vehicles certified for unleaded gasoline.

According to the Specifications, "angle alpha" and "angle beta" are the angles between the axial centerline of the fill pipe face and the axial centerline of the test nozzle spout when in its normal resting position and unlatched position, respectively. The angle alpha should range between -10° and 20° for 1979 and older model-year vehicles and no less than 30° for 1980 and newer model-year vehicles. The angle beta should be at

a certain angle so that the penetration of the test fuel nozzle in the fill pipe be at least 2.25 centimeters. These angles will be changed and may be out of the specifications if the restrictor's filling hole, which is eccentric with respect to the fill pipe centerline, is not at the designed position.

In the process of evaluating the device, the staff inspected the fuel fill pipe submitted by the applicant with the sample UNIK device installed and determined that the device may not align exactly with the proper OEM restrictor location because the OEM filling hole has been severely damaged. The applicant was notified of this condition and subsequently submitted a revised copy of installation instructions to assure exact positioning of the UNIK kit. (See attachments 1 and 2.)

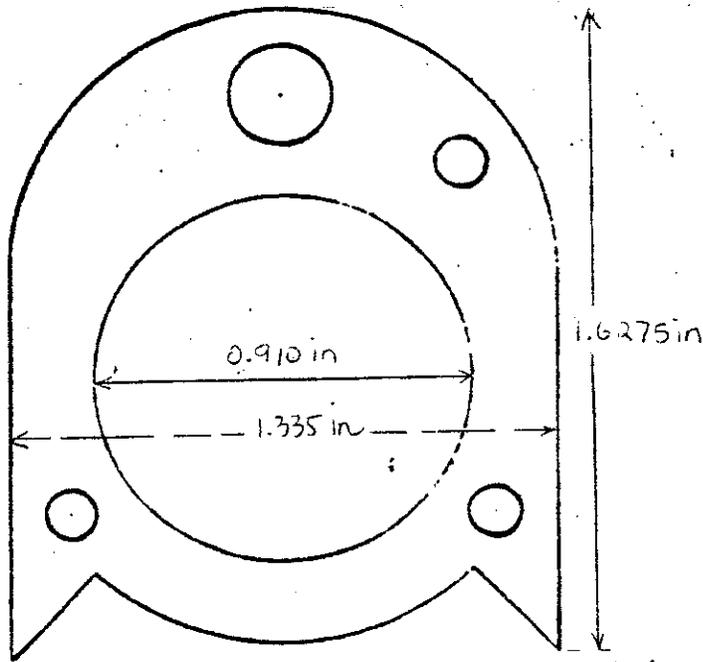
The UNIK kit does not completely cover the cross-sectional area of the fuel fill pipe; there are openings between the outside contour of the device and the inside wall of the fill pipe. The staff conducted an experiment to find out if fuel could pass through these openings by feathering the nozzle to allow small quantities of fuel to flow into the tank. The experiment determined that very little fuel can pass through the openings. Most of the fuel coming out of the fuel nozzle splashed out of the fill pipe even though the trigger of the fuel nozzle was in a minimum flow position. The staff is of the opinion, therefore, that it would be difficult to misfuel with a UNIK installed in the fill pipe.

With the revised installation instructions and the results from the experiment, the staff is of the opinion that the Universal Neck Insert Kit, when installed properly, will satisfy the ARB's "angles" requirement and will function as well as the OEM restrictor.

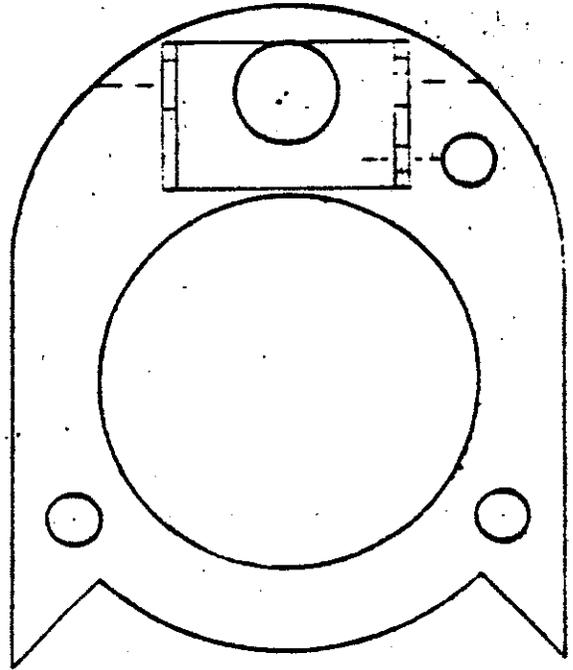
The staff recommends that the Emission Parts Supply's Universal Neck Insert Kit be exempted and that Executive Order D-153 be issued.

FIGURE I

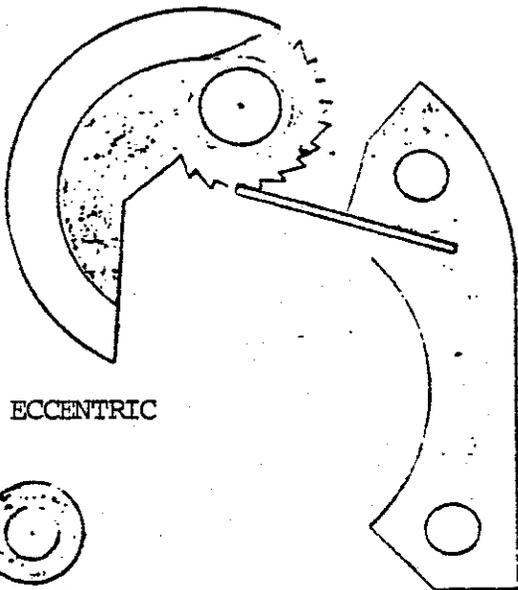
COMPONENTS OF THE UNIVERSAL NECK INSERT KIT



TOP FRAME



BOTTOM FRAME

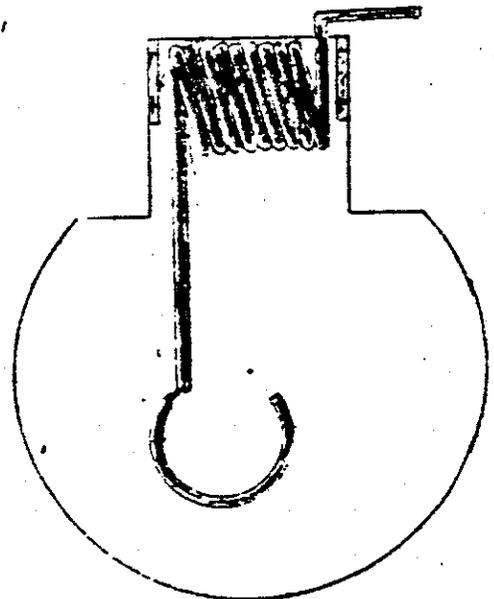


ECCENTRIC



ALLEN
CAP SCREW

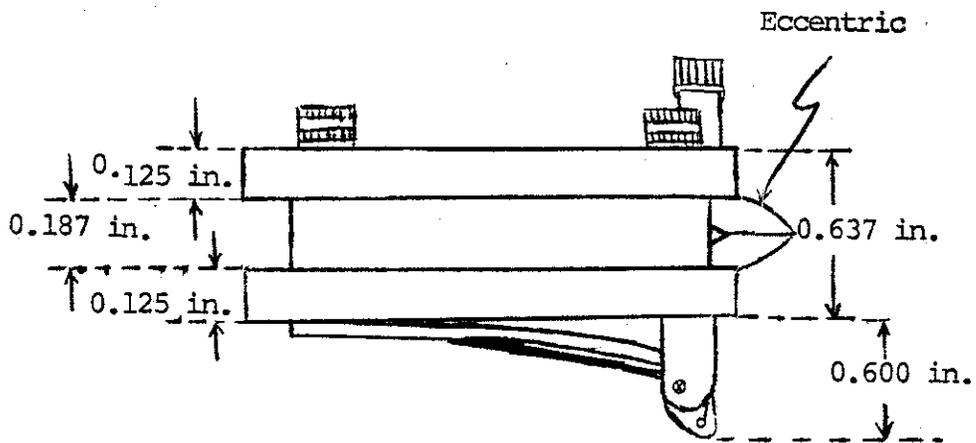
RACHET SPRING



DOOR

FIGURE 2

SIDE VIEW OF THE UNIVERSAL NECK INSERT KIT



Total thickness: Left - 0.637 inch
Right - 1.237 inch

EMISSION PARTS SUPPLY

Original

INSTALLATION INSTRUCTIONS

NOTE : Do not attempt to move mechanism before reading instructions carefully. Unik's tamper-proof design, allows for expansion one time only!

1. To allow for adequate fuel door clearance, remove or bend any existing obstruction out of the way as nec.
2. Affix Unik's special installation tool (Unik - T1) to the top frame and insert unit through filler neck opening.
3. [REDACTED]
4. Test operation of fuel door to insure proper clearances have been obtained.
5. Be careful not to block or defeat the purpose of vent lines, etc..
6. When suitable position has been attained, turn allen cap screw clockwise, while holding Unik in position with special tool.
7. Gently tighten untill resistance is felt, then continue turning one additional click.
8. If Unik is not secure, tighten one additional click.
9. Remove special tool, test operation of fuel door, replace cap.

Revised copy
~~Submitted~~
Received 2/19/85

EMISSION PARTS SUPPLY

INSTALLATION INSTRUCTIONS

NOTE : Do not attempt to move mechanism before reading instructions carefully. Unik's tamper-proof design, allows for expansion one time only!

1. To allow for adequate fuel door clearance, remove or bend any existing obstruction out of the way as necessary.
2. Affix Unik's special installation tool (Unik - T1) to the top frame and insert unit through filler neck opening.
3. Position Unik in filler neck, as close as possible to original location, noting door and depth position carefully.
4. Test operation of fuel door to insure proper clearances have been obtained.
5. Be careful not to block or defeat the purpose of vent lines, etc..
6. When suitable position has been attained, turn allen cap screw clockwise, while holding Unik in position with special tool.
7. Gently tighten until resistance is felt, then continue turning one additional click.
8. If Unik is not secure, tighten one additional click.
9. Remove special tool, test operation of fuel door, replace cap.

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Carlsbad, Ca. 92008
619-434-1007

CORDOVA TRUCK DISMANTLERS
4075 Happy Lane
Sacramento, Ca. 95826
916-366-6866

AVALON AUTO TRUCK
916 E. Blauson Ave.
L. A., Ca. 90011
213-232-8188

GREENBERG'S
459 Soscol Ave.
Napa, Ca. 94559
707-252-4268

AVENUE AUTO
1600 Industrail Rd.
Carlos, Ca. 94070
415-591-0381

LUTTRELL'S (TOM)
1396 N. Blackstone Ave.
Fresno, CA 93703
209-465-7296

AUTO PART MART
1540 West 228th St.
Torrance, Ca. 90501
213-534-1000

NEELY'S TRANSMISSION
825 Redwood St.
Vallejo, Ca. 94590
707-644-5566

B & D AUTO PARTS
4000 Industrail Way
Concord, Ca. 94520
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SMOG & SAFTEY SERVICES
21855 Homestead Rd.
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CENTRAL DIST. CO.
5925 Stockton Blvd.
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TUNE - IN
1500 Mendocino Ave.
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BIG JACK'S
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SAN ANSELMO TIRE & BRAKE
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