

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-191  
Relating to Exemptions Under Section 27156  
of the Vehicle Code

SAGEBRUSH INDUSTRIES, INC.  
DUALFILL DEVICE

Pursuant to the authority vested in the Air Resources 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 DualFill Device manufactured by SageBrush Industries, Inc. of P.O. Box 1944, 4116 Praireview, Colstrip, MT 59323 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 the following applications:

<u>Model</u>	<u>Application (for all fuels)</u>
DF2002	1973-1978 model-year GM 1/2 to 1 ton trucks all engines
DF4002	1979-1982 model-year GM 1/2 to 1 ton trucks all engines
DF6002	1983-1986 model-year GM 1/2 to 1 ton trucks all engines

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 device shall not be construed as an exemption to sell, offer for sale, or advertise any component of a device 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 DUALFILL DEVICE.

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.


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 5<sup>th</sup> day of May, 1989.

  
K. D. Drachand, Chief  
Mobile Source Division

State of California  
AIR RESOURCES BOARD

EVALUATION OF SAGEBRUSH INDUSTRIES, INC. DUALFILL DEVICE  
MODEL NOS. DF2002, DF4002, AND DF6002 FOR EXEMPTION FROM THE PROHIBITIONS  
OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF  
THE CALIFORNIA ADMINISTRATIVE CODE

May 1989

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AIR RESOURCES BOARD

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THE CALIFORNIA ADMINISTRATIVE CODE

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

SageBrush Industries, Inc. has requested an exemption from the prohibitions of Vehicle Code Section 27156 for their DualFill device. The DualFill device is used to connect the two fuel tanks on 1973-1986 General Motors 1/2 to 1 ton trucks so that both tanks may be filled from one side of the truck. The DualFill device is available for use on all engines and fuels in the following model year categories of GM 1/2 to 1 ton trucks: (1) model #DF2002 for 1973-1978, (2) model #DF4002 for 1979-1982, and (3) model #DF6002 for 1982-1986.

Based on the fact that (1) there are no modifications to the fuel tank vent lines, to the fuel supply lines and to the fuel return lines, (2) the materials used for the DualFill device are compatible with commonly used fuels and (3) there is no significant evaporative loss from the connection points of the DualFill device, the staff believes that the DualFill device will have no adverse emissions effect on the vehicles for which the exemption is requested.

The staff recommends that SageBrush Industries, Inc. be granted an exemption from Vehicle Code Section 27156 as requested and that Executive Order D-191 be issued.

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EVALUATION OF SAGEBRUSH INDUSTRIES, INC. DUALFILL DEVICE  
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OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF  
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I. INTRODUCTION

SageBrush Industries, Inc. of P.O. Box 1944, 4116 Praireview, Colstrip, MT 59323, has requested an exemption from the prohibitions of Vehicle Code Section 27156 for their DualFill device. The DualFill device is used to connect the two fuel tanks on 1973-1986 General Motors 1/2 to 1 ton trucks so that both tanks may be filled from one side of the truck. The DualFill device is available for use on all engines and fuels in the following model year categories of GM 1/2 to 1 ton trucks: (1) model #DF2002 for 1973-1978, (2) model #DF4002 for 1979-1982, and (3) model #DF6002 for 1982-1986.

II. CONCLUSIONS

Based on the fact that (1) there are no modifications to the fuel tank vent lines, to the fuel supply lines and to the fuel return lines, (2) the materials used for the DualFill device are compatible with commonly used fuels and (3) there is no significant evaporative loss from the connection points of the DualFill device, the staff believes that the DualFill device will have no adverse emissions effect on the vehicles for which the exemption is requested.

III. RECOMMENDATION

The staff recommends that SageBrush Industries, Inc. be granted an exemption from Vehicle Code Section 27156 as requested and that Executive Order D-191 be issued.

#### IV. DESCRIPTION AND OPERATION

The DualFill device consists of a cross tube and a vent tube made of 16 gauge steel and 18 gauge steel respectively. The exterior of the tubing is plated with .002" of pure zinc with a clear chromate coating.

The cross tube is used to connect the two fuel tanks at the fill neck so that both tanks may be filled from one side (refer to Appendix C, page 7). The cross tube has a 2" outer diameter (O.D.) and is 58" in length. At 5" from both ends there is a 1 1/2" vertical tube of 1 1/2" O.D. Each of these tubes is connected to a fuel tank.

In order to maintain proper venting, the vent lines from the fill necks to the tanks are connected by a 56" in length vent tube of 5/8" O.D. At either end of the vent tube there is a vertical tube of 1 1/2" which clamps to the vent line from each tank.

#### V. DISCUSSION

The DualFill device is designed to connect the two independent fuel tanks on GM 1/2 to 1 ton trucks so that both tanks may be filled from one side of the truck. Basically, two modifications are made: (1) the filler hoses which connect the filler necks to the gas tanks are removed from both tanks and replaced with steel tubing thus connecting both fuel tanks and (2) the vent lines are similarly connected through a vent tube.

No emissions-related concerns were raised regarding the fuel system since there were no modifications to the fuel tank vent lines, to the fuel supply lines or the fuel return lines.

The DualFill device is designed for all commonly used fuels. A statement has been provided by the vendor indicating that the DualFill device



is made of 16 and 18 gauge steel with .002" of pure zinc on the exterior of the tubing with a clear chromate coating. This material is acceptable for all commonly used fuels.

According to the vendor, no fill problems have been encountered. The existing filler necks and gas caps are used with the device. Appropriate warnings have been placed in the installation instructions for replacement of a malfunctioning gas cap. Hose clamps are used to secure the device to the fill neck, gas tank and vent lines. There are no significant evaporative losses from the connections if the clamps are properly used as described in the installation instructions.

Based on these facts, staff believes that no testing is needed for granting the exemption.

## E-Z INSTALLATION INSTRUCTIONS FOR DF2004

Dualfill solves the frustration of two fuel tanks on General Motors Trucks. DUALFILL allows both tanks to fill simultaneously from either side of the vehicle.

## Tools Required:

Screwdriver, or 5/16 nut driver  
10mm socket and ratchet  
Knife

- (1) Remove existing vent and filler hoses from both fuel tanks.
- (2) Remove right filler neck from truck box.
- (3) Insert vent tube under truck box through filler door, install with red end toward left side (drivers side). Tube should lay between frame and truck box.
- (4) Slide 5/8" hose onto the vertical vent stubs with a #10 clamp on top and bottom of each short hose.
- (5) Slide the short pieces of 2" tubing over both ends of the cross-tube, insert the crosstube into the truck body through the filler hole. The crosspipe should fit between the frame and the bottom of the truck box to the rear of the vent tube.
- (6) Slide the 1½" X 3" hoses onto the vertical stubs on the crosstube. Slip two #24 clamps over the hose on each side, insert the short hose onto the tank neck.
- (7) Install two #36 clamps on each end of the crosstube, slide the 2" hose outward onto the right filler neck. Reinstall the left filler neck and slide the 2" hose over it.
- (8) Install the 5/8" X 8" hose with two clamps on the left side, make sure you run the vent hose over the crosstube.
- (9) Connect 5/8" X 6" hose to the right filler neck with two #10 clamps to the vent tube.
- (10) Tighten all clamps carefully, do not over tighten, fill with fuel, check for leaks, if you find leaks tighten clamps. Check gas cap on the opposite side of the truck for leaks, if so replace the cap with the non vented type. Remember that DualFill works on the gravity flow principle so always fill the tank that is on the high side if parked on unlevel ground.

NOTE: On 1979-1982 GM Trucks to increase fill rate try drilling two new holes in the filler neck mounting plate in the truck box and raise the filler neck ½".

**SATISFACTION GUARANTEED OR YOUR MONEY BACK**

APPENDIX B  
DEVICE LABEL

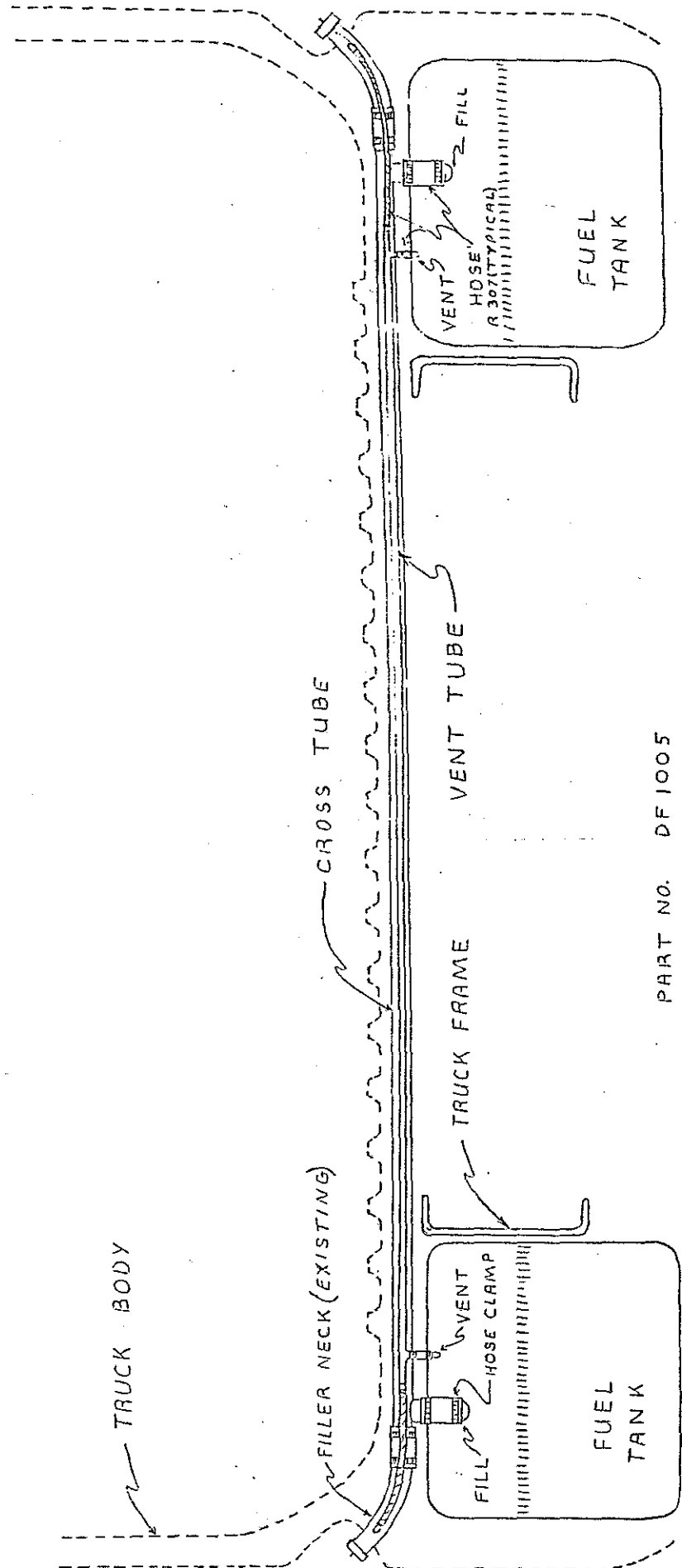
SAGEBRUSH INDUSTRIES INC.  
P.O. Box 1944  
Colstrip, Mt. 59323

RECEIVED  
APR 24 1989  
MOBILE SOURCE DIVISION

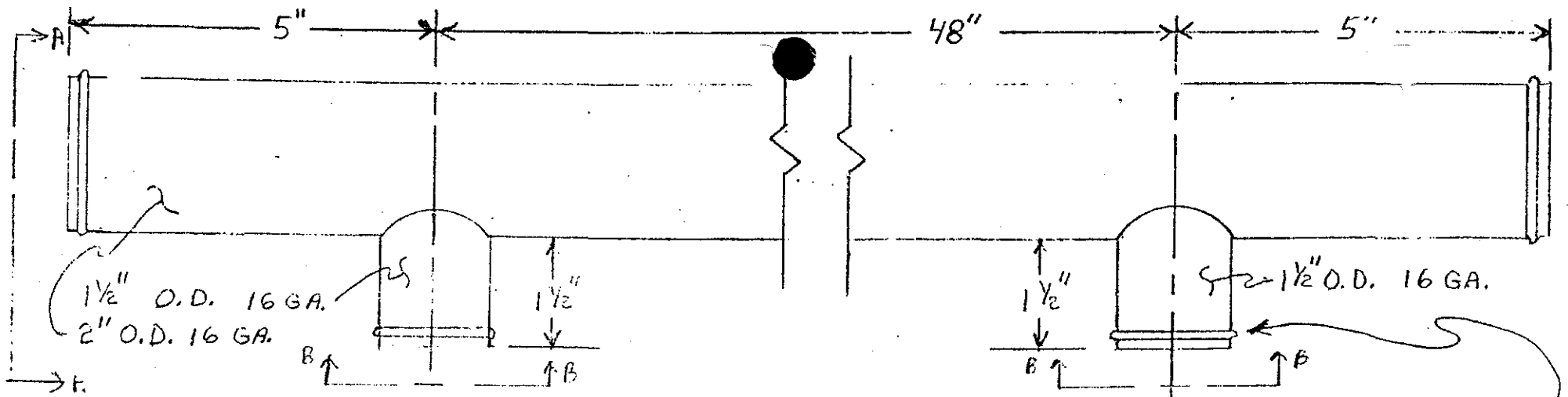
RE: DualFill Identification Label

**DAULFILL**  
Model # DF0000 CARB E.O.# D-000  
SageBrush Ind. Inc. (406)748-4444

APPENDIX C  
DEVICE  
SCHEMATICS



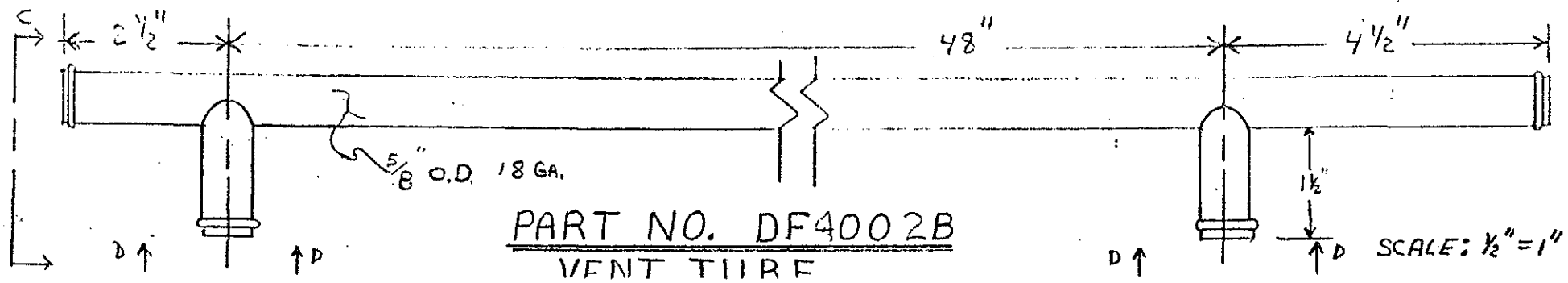
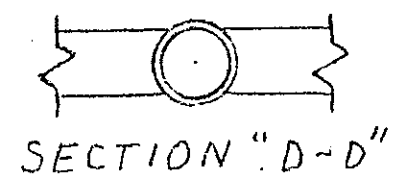
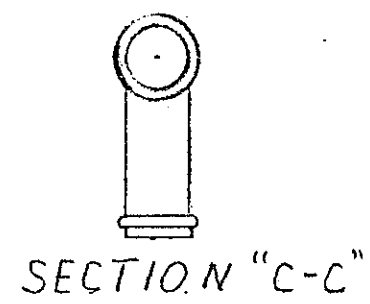
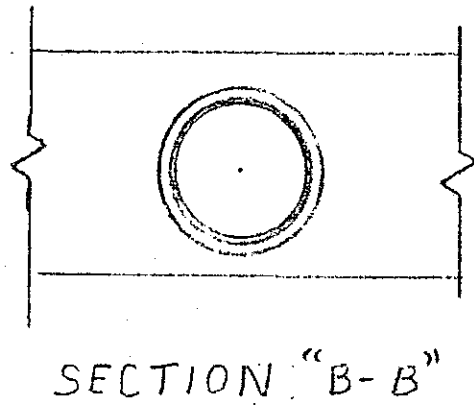
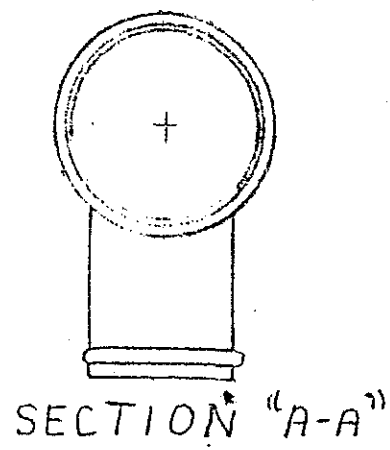
PART NO. DF1005



PART NO. DF4002A  
CROSS TUBE.

MS BEAD (TYP.)

-7-

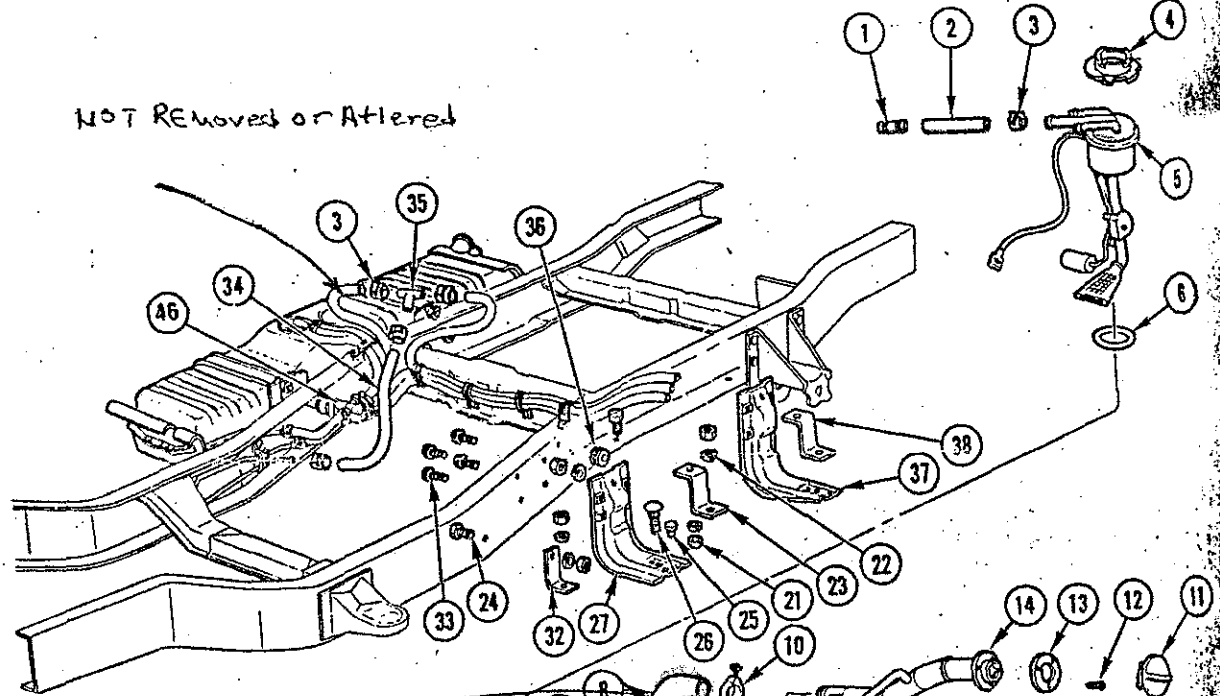


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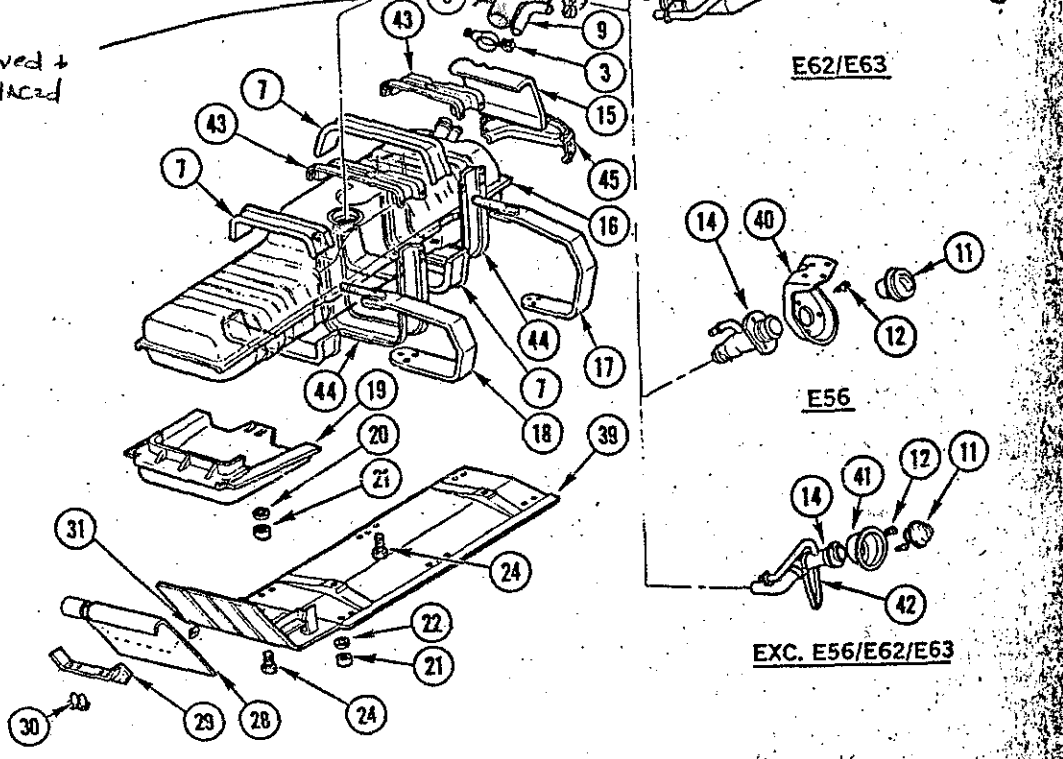
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TM03-044  
071482

NOT REMOVED OR ALTERED



Removed + Replaced



TM03-044

1979-84 "CK(03-43)" FUEL TANK/BASE & AUXILIARY-NL2