

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-440
Relating to Certification of New Motor Vehicles

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1989 model-year General Motors Corporation exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

| <u>Engine Family</u> | <u>Displacement Liters (Cubic Inches)</u> | <u>Exhaust Emission Control Systems (Special Features)</u> |
|----------------------|---|---|
| K1G5.0W8NTA8 | 5.0 (305) | Air Injection - Pump Exhaust Gas Recirculation Oxygen Sensor Dual Bed Catalyst (Electronic Port Fuel Injection) |

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

| <u>Hydrocarbons (Grams per Mile)</u> | <u>Carbon Monoxide (Grams per Mile)</u> | <u>Nitrogen Oxides (Grams per Mile)</u> |
|--|---|---|
| 0.39 | 7.0 | 0.7 |

The following are the certification emission values for this engine family:

| <u>Hydrocarbons (Grams per Mile)</u> | <u>Carbon Monoxide (Grams per Mile)</u> | <u>Nitrogen Oxides (Grams per Mile)</u> |
|--|---|---|
| 0.23 | 2.2 | 0.5 |

BE IT FURTHER RESOLVED: That the listed models are certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying to the optional NOx standard by providing evidence that there are sufficient projected sales of vehicles certifying to the primary NOx emission standard, or is allowed a delay in implementation under small volume manufacturer provisions, or is allowed a delay in implementation under the "in lieu" standards, or is certifying passenger cars weighing more than 5250 lbs. loaded vehicle weight.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Administrative Code, Section 1968) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 17th day of February, 1988.


K. D. Drachand, Chief
Mobile Source Division

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation Executive Order No.: A-6-440
 Engine Family: K1G5.0W8NTA8 Evaporative Family: KBO-1B
 Engine Displacement Liters (Cubic Inches) - Type: 5.0 (305) - V8
 Exhaust Emission Control System (Special Features): AIP, EGR, DBC, OS (EFI)

ABBREVIATIONS:

Ignition System

CA-Centrifugal Advance
 ECU-Electronic Control Unit
 EI-Electronic Ignition
 ESAC-Electronic Spark Advance Control
 VA-Vacuum Advance
 VR-Vacuum Retard

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 CV-Venturi Carburetor
 VV-Variable Venturi

Other Abbreviations

A/C-Air Conditioning
 CID Cubic Inch Displacement
 ETW-Equivalent Test Weight
 FC Forward Control
 HD-Heavy Duty
 RI-Rail & Injector
 RWD-Rear Wheel Drive
 TBI-Throttle Body Injection
 4x2-Two Wheel Drive
 4x4-Four Wheel Drive
 6x4-Four Wheel Drive

Exhaust Emission Control System

AIP-Air Injection Pump
 AIV-Air Injection Valve
 EGR-Exhaust Gas Recirculation
 EIC-Electronic Injection Control
 EM-Engine Modification
 DBC-Dual Bed Catalyst
 HOS-Heated Oxygen Sensor
 OC-Oxidation Catalyst
 OS-Oxygen Sensor
 SPL-Smoke Puff Limiter or Throttle Delay
 TOC-Trap Oxidizer, Continual
 TOP-Trap Oxidizer, Periodical
 TR-Thermal Reactor
 TWC-Three-Way Catalyst
 WUOC-Warm-up Oxidation Catalyst
 WUTWC-Warm-up Three-Way Catalyst

Special Features

CCV-Combustion Chamber Valve
 CFI-Central Fuel Injection
 DID-Diesel Injection-Direct
 DIP-Diesel Injection-Prechamber
 EFI-Electronic Fuel Injection
 IC-Intercooler/Aftercooler
 MFI-Mechanical Fuel Injection
 OBD-On-Board Diagnostics
 TC-Turbocharger

(For CARB Use Only)
(1989)AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
GASOLINE-FUELED PASSENGER CARS

Executive Order No. A-6-440

VEHICLE MODELS:

1 J U 2 7 (EXAMPLE)Digit 1
Selling Division1-Chevrolet
2-Pontiac
3-Oldsmobile
4-Buick
6-CadillacDigit 2 - Body DesignationA-Celebrity, 6000, Cutlass Ciera, Cutlass Cruiser, Century
B-Caprice, Safari Wagon, Custom Cruiser, LeSabre/Electra Wagon
C-Ninety-Eight Regency, Electra, DeVille, Fleetwood, Limousine
D-Brougham
E-Toronado, Riviera, Eldorado
F-Camaro, Firebird, Trans Am, Formula
G-Monte Carlo, El Camino, Caballero
H-Bonneville, Delta 88 Royale, LeSabre
J-Cavalier, Sunbird, Firenze, Skyhawk, Cimarron
K-Seville
L-Corsica, Beretta
N-Grand Am, Calais, Somerset/Skylark
P-Fiero
T-Lemans
V-Allante
W-Grand Prix, Regal, Cutlass Supreme
Y-Corvette
Z-Commercial ChassisDigit 3
Trim LevelDigits 4 & 5 - Body Style07-2Dr Sport Coupe
08-2Dr Hatchback Coupe
11-2Dr Notchback Coupe/Sedan
19-4Dr Sedan
23-4Dr Auxiliary Seat Sedan
27-2Dr (Notchback) Coupe
33-4Dr Auxiliary Seat Sedan
35-4Dr Station Wagon
37-2Dr Hardtop Coupe
47-2Dr Hardtop Coupe
57-2Dr Hardtop Coupe
67-2Dr Convertible Coupe
68-4Dr Hatchback Sedan
69-4Dr (Notchback) Sedan
77-2Dr Hatchback Coupe
80-2Dr Sedan Pickup
87-2Dr Hatchback Coupe
90-Commercial Chassis
97-2Dr Hardtop Coupe

Engine: Front

Drive: RWD

ISSUED: 01-25-88

REV. NO.:

0180V/

(For CARB Use Only)

(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS___ MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 5.0 (305)

Type: V8

Executive Order No. A-6-410

| ENG CODE | VEH MODELS | TRANS TYPE | ETW | IGN SYSTEM (ECU) PART NO. | FUEL SYSTEM (RI) PART NO. | EGR VALVE PART NO. | CATALYST PART NO. |
|----------|----------------|---------------|-----------------|---------------------------------|---------------------------------|-----------------------|----------------------|
| 51 | 1FP87 1FP67 | A4 | 3750 3875 | 16082581 | 17089024 | 17087263 | 25100645 |
| 53 | 2FS87 2FW87 | | 3750 3750(1) | 16082102 | | | |
| 55 | 1FP87 1FP67 | M5 | 3625 3750 | 16085371 | | 17087262 | |
| 57 | 1FP87 | | 3750 | 16085361 | | | |
| 59 | 2FS87 2FW87 | | 3750 | 16085381 | | | |
| 61 | 2FS87 2FW87 | | 3750 | 16085411 | | | |

(1) 2FW87 with 2.77 final drive at 3875 ETW.

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 01-25-88

REV. NO.:

0180V/