File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-747
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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1997 model-year General Motors Corporation exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: VGM2.4VJG1EK Displacement: 2.4 Liters (145 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Exhaust Gas Recirculation
Three Way Catalytic Converter
Oxygen Sensor
Heated Oxygen Sensor
Sequential Multiport Fuel Injection

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

The certification exhaust emission standards for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.25	3.4	0.4	10.0
100,000	0.31	4.2	0.6	n/a

The certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.09	2.6	0.3	7.5
100,000	0.10	3.3	0.4	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average non-methane organic gas (NMOG) exhaust mass emission requirements as set forth 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 under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

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" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, 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 Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) 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 provisions (Title 13, California Code of Regulations, 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 3rd day of June 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
GASOLINE-FUELED PASSENGER CARS

VEHICLE MODELS: 1 J C 3 7 (EXAMPLE)

Digit 1 - Selling Division

1 - Chevrolet
2 - Pontiac
3 - Oldsmobile
4 - Buick
6 - Cadillac
8 - Saturn

Digit 2 - Body Designation

C - Ninety-Eight, Park Avenue
E - Eldorado
F - Camaro, Firebird/Formula
G - Riviera, Aurora
H - Bonneville, Eighty-Eight, LeSabre
J - Cavalier, Sunfire
K - Seville
Ksp - Deville/Concours
N - Grand Am, Achieva, Skylark, Malibu, Cutlass Supreme
V - Catera
W - Grand Prix, Regal, Century, Lumina, Monte Carlo
Y - Corvette
Z - Saturn SC, SL, SW

Digit 3 - Trim Level

B, C, D, E, F, G, H, J, K, L, M, N, P, R, S, T, U, V, W, X, Y, Z

Digits 4 & 5 - Body Style

07 - 2Dr Sport Coupe
08 - 2Dr Hatchback Coupe
11 - 2Dr Notchback
15 - 2Dr Station Wagon
19 - 4Dr Sedan
23 - 4Dr Aux. Seat Sedan
27 - 2Dr (Notchback) Coupe
29 - 4Dr 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
87 - 2Dr Hatchback Coupe
90 - Commercial Chassis

ISSUED: ML-VP105 REVISED:

(FOR CARB USE ONLY)

E.O. #A-6-747

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM2.4VJG1EK EVAP FAMILY: VGM1095AYMEA

ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S ( ) 50S ( ) AB965 ( )

EXH STD: CA TIER-1 (X) TLEV ( ) LEV ( ) ULEV ( ) ZEV ( ); U.S. EPA TIER-1 ( )

EVAP STD: 50K ( ) USEFUL LIFE WITH R/L (X); IN-USE EXH STD: FULL (X) ALTERNATIVE ( )

VEH CLASS(ES): PC (X) LDT1 ( ) LDT2 ( ) MDV1 ( ) MDV2 ( ) MDV3 ( ) MDV4 ( ) MDV5 ( )

SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA

FUEL TYPE(S): DEDICATED (X) GASOLINE (X); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

SERVICE ACCUMULATION: STD AMA ( ) MFR ADP (X); NMOG TEST PROCEDURE: NA (X) EQUIV ( )

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

ENGINE CONFIGURATION: I4 (X) V6 ( ) V8 ( ) DISPLACEMENT: 2.4 LITERS / 145 CU. IN.

VALVES / CYLINDER: 2 ( ) 4 (X) RATED HP: 150 @ 5600 RPM

ENGINE LOCATION: FRONT (X) DRIVE: FWD (X) RWD ( ) 4WD-FT ( ) 4WD-PT ( )

EXHAUST EMISSION CONTROL SYSTEM: EGR, 02S, HO2S, SFI, TWC

RLHP / DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
21	3NE37	M5	3250	16204850/16235503	17096306, 17096100	25160531
	2NE69					
	2NW37					
	3NL37					
	3NL69					
	2NW69		3375			
21A				16204850/16246923		
21B				16204850/16250993		
21C				16204850/16253103		
21D				16204850/16254883		
21E				16204850/16258663		
21F				16204850/16259873		

CARLINE NAME	CARLINE CODE
CAVALIER	12060
SUNFIRE	33060
ACHIEVA	29010

ISSUED: ML-VP105 REVISED: ML-VR051, ML-VR057, ML-VR070, ML-VR086, ML-VR113, ML-VR127

(FOR CARB USE ONLY)

E.O. #A-6-747

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
22	1JF37 2JB37 2JD37	M5	3125	16204850/16235483	17096306, 17096100	25160527
	1JF67 2JB67		3250			
22A				16204850/16246993		
22B				16204850/16250923		
22C				16204850/16253023		
22D				16204850/16254793		
22E				16204850/16258603		
22F				16204850/16259763		

CARLINE NAME	CARLINE CODE
CAVALIER	12060
SUNFIRE	33060
ACHIEVA	29010

ISSUED: ML-VR127 REVISED:

17-VGM2.4VJG1EK-2.1
(1997)

EMISSION DATA RATIOS

TO BE USED FOR ASSEMBLY LINE TESTING

	2426NLS0M (Config 005)	2426NLS0M (Config 006)
NMHC* (G/MI)	0.0613	0.0633
NMOG (G/MI)	0.0629	0.0653
HCHO (G/MI)	0.0009	0.0011
NMOG:NMHC	1.0261	1.0316
HCHO:NMHC	0.0147	0.0174

* NMHC includes methane response factor.

Average NMOG:NMHC = 1.029

Average HCHO:NMHC = 0.016

Ratio established using Phase 2 emission certification fuel.

ISSUED: ML-VP108 REVISED: ML-VP220