State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-743
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:

Emission Standard Category: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: VGM1.9V8G2EK Displacement: 1.9 Liters (116 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

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

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

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

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20^0F)
50,000	0.125	3.4	0.4	0.015	10.0
100,000	0.156	4.2	0.6	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for non-methane organic gas (NMOG) reflect application of a 0.98 RAF for 1997 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20^{0}F)
50,000	0.103	1.0	0.1	0.001	4.0
100,000	0.124	1.3	0.2	0.002	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 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 50,000-mile evaporative emission standards applicable to 1980 through 1994 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, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model 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" 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.).

BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

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 30th day of April 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

(FOR CARB USE ONLY)

E.O. #A-6-743

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-VP057 REVISED:

(FOR CARB USE ONLY)

E.O. #A-6-743

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM1.9V8G2EK EVAP FAMILY: VGM1035AYPAA

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

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

EVAP STD: 50K (X) USEFUL LIFE WITH R/L ( ); 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 (X) MFR ADP ( ); NMOG TEST PROCEDURE: NA ( ) EQUIV (X)

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

ENGINE CONFIGURATION: I4 (X) V6 ( ) V8 ( ) DISPLACEMENT: 1.9 LITERS / 116 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 100 @ 5000 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: EGR, O2S, HO2S, SFI, TWC, KS

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.
1	8ZH69	A4	2625	21008156/21008146	21006601	25146010
	8ZH35		2750			
	8ZF27		2625			
1A				21008668/21008655		
1B				21008668/21008695		
2	8ZH69			21008156/21008146		
	8ZH35		2750			
	8ZF27		2625			
2A				21008668/21008655		
2B				21008668/21008695		
3	8ZG69	M5		21008155/21008150		
	8ZF69					
	8ZG35		2750			
	8ZE27		2625			
3A				21008666/21008659		
4	8ZG69			21008155/21008150		
	8ZF69					
	8ZG35		2750			
	8ZE27		2625			
4A				21008666/21008659		

CARLINE NAME	CARLINE CODE
SL1 SEDAN	37320
SW1 WAGON	37330
C1 COUPE	37310

ISSUED: ML-VP057 REVISED: ML-VR022, ML-VR022A, ML-VR094

EMISSION DATA RATIOS

TO BE USED FOR ASSEMBLY LINE TESTING

	19426942 (Config 001)	19426942 (Config 002)	19426932 (Config 001)	19426932 (Config 002)
NMHC* (G/MI)	0.0520	0.0548	0.0432	0.0381
NMOG (G/MI)	0.0530	0.0560	0.0441	0.0390
HCHO (G/MI)	0.0004	0.0007	0.0005	0.0005
NMOG:NMHC	1.0192	1.0219	1.0208	1.0236
HCHO:NMHC	0.0077	0.0128	0.0116	0.0131

* NMHC includes methane response factor.

Average NMOG:NMHC = 1.021

Average HCHO:NMHC = 0.011

Ratio established using Phase 2 emission certification fuel.

ISSUED: ML-VP106 REVISED: ML-VP220