State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-834-1
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 1999 model-year General Motors Corporation exhaust emission control systems are certified as described below for passenger cars:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: XGMXV02.2023 Displacement: 2.2 Liters (134 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Sequential Multiport Fuel Injection
Three Way Catalytic Converter
Heated Oxygen Sensor
Oxygen Sensor

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

The LEV 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°F)
50,000	0.075	3.4	0.2	0.015	10.0
100,000	0.090	4.2	0.3	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for non-methane organic gas (NMOG) reflect application of a 0.94 RAF for 1999 model-year LEVs. The LEV 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°F)
50,000	0.064	1.6	0.1	0.001	4.1
100,000	0.067	2.0	0.1	0.001	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 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 vehicle manufacturer is certifying the listed vehicle models to the "California Refueling Emission Standards and Test Procedures for 1998 and Subsequent Model Motor Vehicles," Title 13, California Code of Regulations, Section 1978, 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 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."

BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines").

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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.

Executive Order A-6-834 dated June 11, 1998, is superseded and replaced by Executive Order A-6-834-1.

Executed at El Monte, California this 9th day of October 1998.

Raphael Susnowitz
for R. B. Summerfield, Chief
Mobile Source Operations Division

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV02.2023 EVAP FAMILY: XGMXR0124912

ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S ( ) 50S ( ) AB965 ( ) ORVR: YES (X) NO ( )

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

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); EXH EMIS TEST FUEL(S): INDOLENE ( ) CBG (X)

EVAP EMIS TEST PROCEDURE: CALIF ( ) FED (X)

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

R/L TEST PROCEDURE: PT SOURCE (X)

ENGINE CONFIGURATION: I4 (X) V6 ( ) V8 ( ) DISPLACEMENT: 2.2 LITERS / 134 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 120 @ 5200 RPM

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

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

RLHP / DPA VALUES: SECTION 08.13.02.00

ENGINE CODE & LETTER DERIVATIVES*1	LOC (C/F/NW)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
61	C	1JC37 1JC69 2JB37 2JB69	A3	3000	NA	25177767
62		1JC37 J1C69 2JB37 2JB69		3125		

*1 Base engine codes are the same as letter derivatives unless otherwise noted. Refer to PCM/VCM part number page for additional engine code letter derivative information.

CARLINE NAME	CARLINE CODE
CAVALIER	03160
SUNFIRE	07060

ISSUED: ML-XP154 REVISED: ML-XP158

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

R: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV02.2023 EVAP FAMILY: XGMXR0124912

ENGINE CODE & LETTER DERIVATIVES*1	LOC (C/F/NW)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
63	C	1JC37	A4	3000	NA	25177767
		2JB37				
		1JF69		3125		
		1JC69		3000		
		2JB69		3125		
64		1JC37		3000		
		1JC69		3125		
		1JF69				
		2JB37				
		2JB69				
		2JB67		3250		
		1JF67				

*1 Base engine codes are the same as letter derivatives unless otherwise noted. Refer to PCM/VCM part number page for additional engine code letter derivative information.

CARLINE NAME	CARLINE CODE
CAVALIER	03160
SUNFIRE	07060

IED: ML-XP154 REVISED:

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV02.2023 EVAP FAMILY: XGMXR0124912

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
61,62	16204850	09350513	NA	NA
61A,62A		09365293		
63,64		09350563		
63A,64A		09365323		

ISSUED: ML-XP154 REVISED: ML-XR066