

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-832  
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: XGMXV01.9004 Displacement: 1.9 Liters (116 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

- Sequential Multiport Fuel Injection
- Three Way Catalytic Converter
- Warm Up Oxidation Catalytic Converter
- Heated Oxygen Sensor
- Oxygen Sensor
- Secondary Air Injection
- Exhaust Gas Recirculation

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:

<u>Miles</u>	<u>Non-Methane Organic Gas</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
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:

<u>Miles</u>	<u>Non-Methane Organic Gas</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.028	0.4	0.1	0.001	3.0
100,000	0.037	0.7	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.

E 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 listed 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 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.

Executed at El Monte, California this 8 day of May 1998.

  
R. B. Summerfield, Chief  
Mobile Source Operations 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 - Park Avenue
- E - Eldorado
- F - Camaro, Firebird/Formula
- G - Riviera, Aurora
- H - Bonneville, Eighty-Eight/Regency, LeSabre
- J - Cavalier, Sunfire
- K - Seville
- Ksp - Deville, Limousine, Funeral Coach/Hearse
- N - Grand Am, Alero, Skylark, Malibu, Cutlass
- V - Catera
- W - Grand Prix, Regal, Century, Lumina, Monte Carlo, Intrigue
- Y - Corvette
- Z - Saturn SC, SL, SW, EV1

**Digit 3 - Trim Level (Examples)**

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 (Examples)**

- |                            |                            |
|----------------------------|----------------------------|
| 07 - 2Dr Sport Coupe       | 57 - 2DR Hardtop Coupe     |
| 08 - 2Dr Hatchback Coupe   | 67 - 2DR Convertible Coupe |
| 19 - 4Dr Sedan             | 68 - 4Dr Hatchback Sedan   |
| 27 - 2Dr (Notchback) Coupe | 69 - 4Dr (Notchback) Sedan |
| 29 - 4Dr Sedan             | 77 - 2Dr Hatchback Coupe   |
| 35 - 4Dr Station Wagon     | 87 - 2Dr Hatchback Coupe   |
| 37 - 2DR Hardtop Coupe     | 90 - Commercial Chassis    |
| 47 - 2DR Hardtop Coupe     |                            |

ISSUED: ML-XP146

REVISED:

17-XGMXV01.9004-1  
(1999) F

(FOR CARB USE ONLY)

E.O. #A-6-832

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV01.9004 EVAP FAMILY: XGMXR0080902  
 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): INDOLINE ( ) 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: 1.9 LITERS / 116 CU. IN.  
 VALVES / CYLINDER: 2 ( ) 4 (X) RATED HP: 124 @ 5600 RPM  
 ENGINE LOCATION: FRONT (X) DRIVE: FWD (X) RWD ( ) 4WD-FT ( ) 4WD-PT ( )  
 EXHAUST EMISSION CONTROL SYSTEM: EGR, O2S, HO2S, SFI, TWC+WUOC, AIR  
 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.
2	C	8ZK69 8ZK35 8ZH27	A4	2750 2875 2750	21006601	21013182, 21008239
4		8ZJ69 8ZJ35 8ZG27	M5			

\*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
SC COUPE	08310
SL SEDAN	08320
SW WAGON	08330

ISSUED: ML-XP146

REVISED: ML-XR054

17-XGMXV01.9004-2  
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-832

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV01.9004 EVAP FAMILY: XGMXR0080902

<u>ENGINE CODE</u>	<u>PCM/VCM PART NUMBER</u>	<u>ENGINE CALIB</u>	<u>OPER CALIB</u>	<u>TRANS CALIB</u>
2	21008827	21008803	NA	NA
2A	21008900	21008891		
2B	21008931, 21008900	21008921		
4	21008825	21008807		
4A	21008898	21008894		
4B	21008929, 21008898	21008924		

ISSUED: ML-XP146

REVISED: ML-XR054, ML-XR073, ML-XR073A

17-XGMXV01.9004-3  
(1999)