

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-841
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: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: XGMXV03.8048 Displacement: 3.8 Liters (231 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

- Three Way Catalytic Converter
- Heated Oxygen Sensors (two)
- Exhaust Gas Recirculation
- 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:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
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 gases (NMOG) reflect application of a 0.98 RAF for 1999 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.070	1.1	0.1	0.001	3.3
100,000	0.083	1.3	0.2	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 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 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 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 10th day of March 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 | |

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8048 EVAP FAMILY: XGMXR0133910
 ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S () 50S () AB965 () ORVR: YES (X) NO ()
 EXH STD: CA TIER-1 () TLEV (X) LEV () ULEV () SULEV (); U.S. EPA TIER-1 ()
 EVAP STD: USEFUL LIFE (X)
 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 (✓) GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLENE () CBG (X)
 EVAP EMIS TEST PROCEDURE: CALIF () FED (X)
 SERVICE ACCUMULATION: STD AMA (X) MFR ADP (); NMOG TEST PROCEDURE: NA () EQUIV (X)
 R/L TEST PROCEDURE: PT SOURCE (X)
 ENGINE CONFIGURATION: I4 () V6 (X) V8 () DISPLACEMENT: 3.8 LITERS / 231 CU. IN.
 VALVES / CYLINDER: 2 (X) 4 () RATED HP: 205 @ 5200 RPM
 ENGINE LOCATION: FRONT (X) DRIVE: FWD (X) RWD () 4WD-FT () 4WD-PT ()
 EXHAUST EMISSION CONTROL SYSTEM: EGR-TWC-HO2S(2)-SFI
 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.
53	C	4CW69	A4/23	4000	17096199, 17125507	25174346

*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
 BUICK PARK AVENJUE

CARLINE CODE
 01040

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8048 EVAP FAMILY: XGMXR0133910
 ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S () 50S () AB965 () ORVR: YES (X) NO ()
 EXH STD: CA TIER-1 () TLEV (X) LEV () ULEV () SULEV (); U.S. EPA TIER-1 ()
 EVAP STD: USEFUL LIFE (X)
 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 () GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLINE () CBG (X)
 EVAP EMIS TEST PROCEDURE: CALIF () FED (X)
 SERVICE ACCUMULATION: STD AMA (X) MFR ADP (); NMOG TEST PROCEDURE: NA () EQUIV (X)
 R/L TEST PROCEDURE: PT SOURCE (X)
 ENGINE CONFIGURATION: I4 () V6 (X) V8 () DISPLACEMENT: 3.8 LITERS / 231 CU. IN.
 VALVES / CYLINDER: 2 (X) 4 () RATED HP: 200 @ 5200 RPM
 ENGINE LOCATION: FRONT (X) DRIVE: FWD () RWD (X) 4WD-FT () 4WD-PT ()
 EXHAUST EMISSION CONTROL SYSTEM: EGR-TWC-HO2S(2)-SFI
 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.
60	C	1FP87 2FS87 1FP67 2FS67	A4/30	3750 3875	17096198, 17125506	25314750 (24507468, 24508242)

*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
CHEVROLET CAMARO	03125
PONTIAC FIREBIRD	07020

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8048 EVAP FAMILY: XGMXR0133910

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	1FP87	A4/31	3750	17096198, 17125506	25314750 (24507468, 24508242)
		2FS87		3875		
		1FP67				
		2FS67				
62		1FP87	M5/49	3625		
		2FS87		3875		
		1FP67				
		2FS67				

*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
CHEVROLET CAMARO	03125
PONTIAC FIREBIRD	07020

(FOR CARB USE ONLY)

E.O. #A-6-841

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8048

EVAP FAMILY: XGMXR0133910

<u>ENGINE CODE</u>	<u>PCM/VCM PART NUMBER</u>	<u>ENGINE CALIB</u>	<u>OPER CALIB</u>	<u>TRANS CALIB</u>
53	16200870, 09357440	09355584	NA	NA
53A		09361174		
53B		16250954		
53C		09367154		
60		16255694		
60A		09365954		
60B		09367774		
60C		09369324		
61		16255704		
61A		09365984		
61B		09367804		
61C		09369354		
62		16255714		
62A		09366034		
62B		09367854		
62C		09369404		

ISSUED: ML-XP097

REVISED: ML-XR004, ML-XR020, ML-XR042, ML-XR068, ML-XR074

17-XGMXV03.8048-10
(1999)

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8048 EVAP FAMILY: XGMXR0133918
 ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S () 50S () AB965 () ORVR: YES (X) NO ()
 EXH STD: CA TIER-1 () TLEV (X) LEV () ULEV () SULEV (); U.S. EPA TIER-1 ()
 EVAP STD: USEFUL LIFE (X)
 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 (✓) GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLINE () CBG (X)
 EVAP EMIS TEST PROCEDURE: CALIF () FED (X)
 SERVICE ACCUMULATION: STD AMA (X) MFR ADP (); NMOG TEST PROCEDURE: NA () EQUIV (X)
 R/L TEST PROCEDURE: PT SOURCE (X)
 ENGINE CONFIGURATION: I4 () V6 (X) V8 () DISPLACEMENT: 3.8 LITERS / 231 CU. IN.
 VALVES / CYLINDER: 2 (X) 4 () RATED HP: 195 @ 5200 RPM
 ENGINE LOCATION: FRONT (X) DRIVE: FWD (X) RWD () 4WD-FT () 4WD-PT ()
 EXHAUST EMISSION CONTROL SYSTEM: EGR-TWC-HO2S(2)-SFI
 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.
54	C	3WH69 3WS69 3WX69	A4/24	3750	17096199	24507888 (24508098)
55		3WH69 3WS69 3WX69				

*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
 OLDSMOBILE INTRIGUE

CARLINE CODE
 06055

(FOR CARB USE ONLY)

E.O. #A-6-841

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8048

EVAP FAMILY: XGMXR0133918

<u>ENGINE CODE & LETTER DERIVATIVES*1</u>	<u>LOC (C/F/NW)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS (M5,A4,ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYTIC CONVERTER PART NO.</u>
56	C	4WB69	A4/24	3750	17096199	24507888 (24508098)
59		2WP37 2WJ69 2WP69	A4/25			

*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
BUICK REGAL
PONTIAC GRAND PRIX

CARLINE CODE
01062
07055

ISSUED: ML-XP097

REVISED:

17-XGMXV03.8048-12
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-841

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8048 EVAP FAMILY: XGMXR0133918

<u>ENGINE CODE</u>	<u>PCM/VCM PART NUMBER</u>	<u>ENGINE CALIB</u>	<u>OPER CALIB</u>	<u>TRANS CALIB</u>
54	16200870, 09357440	09357234	NA	NA
55		09357244		
56		16242204		
56A		09368204		
59		16242234		

SUPERSEDED