

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-888  
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: XGMXV03.8049 Displacement: 3.8 Liters (231 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

- Sequential Multiport Fuel Injection
- Three Way Catalytic Converter
- Exhaust Gas Recirculation
- Heated Oxygen Sensors (two) (For engine codes 103, 104, 105, 106 & 109)
- Dual Heated Oxygen Sensors (For engine codes 110, 111 & 112)
- Heated Oxygen Sensor (For engine codes 110, 111 & 112)

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	0.067	1.1	0.1	0.001	3.3
100,000	0.079	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.

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").

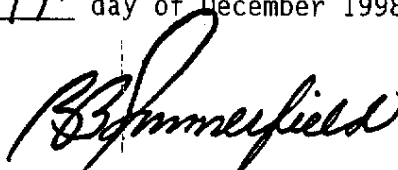
BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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.

Executed at El Monte, California this 17<sup>th</sup> day of December 1998.



R. B. Summerfield, Chief  
Mobile Source Operations Division

(FOR CARB USE ONLY)

E.O. #A-6-888

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8049 EVAP FAMILY: XGMXR0133910  
 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 ( )  
 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: 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.
103	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

ISSUED: ML-XP179

REVISED:

17-XGMXV03.8049-7  
(1999)

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E.O. #A-6-888

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8049

EVAP FAMILY: XGMXR0133910

<u>ENGINE CODE &amp; 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>
111	C	1FP87	A4/31	3750	17096198, 17125506	25314750 (24507468, 24508242)
		2FS87		3875		
		1FP67				
		2FS67				
112		1FP87	M5/49	3625		
		2FS87				
		1FP67		3875		
		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  
CHEVROLET CAMARO  
PONTIAC FIREBIRD

CARLINE CODE  
03125  
07020

ISSUED: ML-XP179

REVISED: ML-XR041

17-XGMXV03.8049-9  
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-888

**1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8049 EVAP FAMILY: XGMXR0133910  
 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 ( )  
 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 ~~1~~-SFI - 2 HO2S  
 RLHP / DPA VALUES: SECTION 08.13.02.00

<u>ENGINE CODE &amp; 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>
110	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  
 CHEVROLET CAMARO  
 PONTIAC FIREBIRD

CARLINE CODE  
 03125  
 07020

ISSUED: ML-XP179

REVISED: ML-XR041

17-XGMXV03.8049-8  
 (1999)

(FOR CARB USE ONLY)

E.O. #A-6-888

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8049

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>
103	16200870, 09357440	09355584	NA	NA
110		16255694		
111		16255704		
112		16255714		

SUED: ML-XP179

REVISED:

17-XGMXV03.8049-10  
(1999)

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV03.8049 EVAP FAMILY: XGMXR0133918  
 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 ( )  
 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.
104	C	3WH69 3WS69 3WX69	A4/24	3750	17096199	24507888 (24508098)
105		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

ISSUED: ML-XP179

REVISED:



(FOR CARB USE ONLY)

E.O. #A-6-888

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8049

EVAP FAMILY: XGMXR0133918

<u>ENGINE CODE &amp; 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>
106	C	4WB69	A4/24	3750	17096199	2450788E (2450809E)
109		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

BUICK: ML-XP179

REVISED:

17-XGMXV03.8049-12  
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-888

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV03.8049

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>
104	16200870, 09357440	09357234	NA	NA
105		09357244		
106		16242204		
109		16242234		

SUED: ML-XP179

REVISED:

17-XGMXV03.8049-13  
(1999)