File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-841-1
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: 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:

a. Three Way Catalytic Converter
b. Exhaust Gas Recirculation
c. Sequential Multiport Fuel Injection
d. Heated Oxygen Sensors (two) (For engine codes 53, 54, 55, 56 and 59)
e. Dual Heated Oxygen Sensors (For engine codes 60, 61 and 62)
f. Heated Oxygen Sensor (For engine codes 60, 61 and 62)

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 Gases	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
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:

Miles	Non-Methane Organic Gases	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
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.

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 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.

Executive Order A-6-841 dated March 10, 1998, is superseded and replaced by Executive Order A-6-841-1.

Executed at El Monte, California this 14th day of December 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

(FOR CARB USE ONLY)

E.O. #A-6-841 — 1

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 ECC 1

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	CARLINE CODE
BUICK PARK AVENJUE	01040

ISSUED: ML-XP097 REVISED:

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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: 200 @ 5200 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: EGR-TWC-HO2S(X)-SFI — 2 HO2S ECS2

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)

*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

ISSUED: ML-XP097 REVISED:

ECC2

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

*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

ISSUED: ML-XP097 REVISED:

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

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

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
53	16200870	09355584	NA	NA
60		16255694		
61		16255704		
62		16255714		

ISSUED: ML-XP097 REVISED:

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E.O. #A-6-841 -1

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): 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: 195 @ 5200 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: EGR-TWC-HO2S(2)-SFI ECS 1

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	CARLINE CODE
OLDSMOBILE INTRIGUE	06055

ISSUED: ML-XP097 REVISED:

ECS 1

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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

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.
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	CARLINE CODE
BUICK REGAL	01062
PONTIAC GRAND PRIX	07055

ISSUED: ML-XP097 REVISED:

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1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

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

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
54	16200870	09357234	NA	NA
55		09357244		
56		16242204		
59		16232234		

ISSUED: ML-XP097 REVISED: