State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-794
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 1998 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: WGMXV03.8048 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:

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 1998 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	0.073	1.0	0.2	0.001	2.0
100,000	0.086	1.2	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 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 listed vehicle 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 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 24th day of April 1997.

R. B. Summerfield, Chief
Mobile Source Operations Division

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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 - Ninety-Eight, Park Avenue
E - Eldorado
F - Camaro, Firebird/Formula
G - Riviera, Aurora
H - Bonneville, Eighty-Eight, LeSabre
J - Cavalier, Sunfire
K - Seville
Ksp - Deville/Concours
N - Grand Am, Achieva, Skylark, Malibu, Cutlass Supreme
V - Catera
W - Grand Prix, Regal, Century, Lumina, Monte Carlo
Y - Corvette
Z - Saturn SC, SL, SW

Digit 3 - Trim Level

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

07 - 2Dr Sport Coupe
08 - 2Dr Hatchback Coupe
11 - 2Dr Notchback
15 - 2Dr Station Wagon
19 - 4Dr Sedan
23 - 4Dr Aux. Seat Sedan
27 - 2Dr (Notchback) Coupe
29 - 4Dr Sedan
35 - 4Dr Station Wagon
37 - 2Dr Hardtop Coupe
47 - 2Dr Hardtop Coupe
57 - 2Dr Hardtop Coupe
67 - 2Dr Convertible Coupe
68 - 4Dr Hatchback Sedan
69 - 4Dr (Notchback) Sedan
77 - 2Dr Hatchback Coupe
87 - 2Dr Hatchback Coupe
90 - Commercial Chassis

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXV03.8048 EVAP FAMILY: WGMXE0086903

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

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

EVAP STD: 50K (X) USEFUL LIFE WITH R/L ( ); IN-USE EXH STD: FULL (X) ALTERNATIVE ( )

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); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

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

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

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

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	LOC (C/F/NW)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
51,51A,51B,51C, 51D,51E	C	2HX69 2HC69 3HN69 4HP69 4HR69	A4/21	3875 3750	17125507, 17096199	25174347
52,52A,52B,52C, 52D,52E		2HZ69 3HC69 3HY69 2HX69 3HN69 4HP69 4HR69	A4/22	3875 3750		

CARLINE NAME	CARLINE CODE
PONTIAC BONNEVILLE	07045
OLDSMOBILE 88/REGENCY	06025
BUICK LESABRE	01030

ISSUED: ML-WP071 REVISED: ML-WR006, ML-WR026, ML-WR046, ML-WR075, ML-WR087

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXV03.8048 EVAP FAMILY: WGMXE0095904

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

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

EVAP STD: 50K (X) USEFUL LIFE WITH R/L ( ); IN-USE EXH STD: FULL (X) ALTERNATIVE ( )

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); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

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

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

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

ENGINE CONFIGURATION: I4 ( ) V6 (X) V8 ( ) DISPLACEMENT: 3.8 LITERS / 231 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 195 @ 5200 RPM
200 @ 5200 RPM *1

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

GINE CODE & LETTER DERIVATIVES	LOC (C/F/NW)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
54,54A	C	3WH69 3WS69	A4/24	3750	17096199	24506936, 24507888
55,55A		3WH69 3WS69				
56		4WB69				

CARLINE NAME	CARLINE CODE
OLDSMOBILE INTRIGUE	06055
BUICK REGAL	01022

*1 Chevrolet W Model

ISSUED: ML-WP071 REVISED: ML-WR005, ML-WR006, ML-WR046

17-WGMXV03.8048-3
(1998)

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXV03.8048 EVAP FAMILY: WGMXE0095904

ENGINE CODE & LETTER DERIVATIVES	LOC (C/F/NW)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
57	C	1WX27 1WL69 1WN69	A4/25	3625 3750	17096199	25178562
58		1WX27 1WL69 1WN69		3625 3750		
59,59A		2WP37 2WJ69 2WP69				24506936, 24507888

CARLINE NAME	CARLINE CODE
CHEVROLET LUMINA/MONTE CARLO	03150
PONTIAC GRAND PRIX	07055

ISSUED: ML-WP071 REVISED: ML-WR005, ML-WR006

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXV03.8048 EVAP FAMILY: WGMXE0086903

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
51	16200870	16236604 *1 16236884 *2	NA	NA
51A		16266434 *1 16266414 *2		
51B		09351484 *1 09351464 *2		
51C		09353194 *1 09353174 *2		
51D		09357174 *1 09357154 *2		
51E		09361344 *1 09361324 *2		
52		16236614		
52A		16266464		
52B		09351514		
52C		09353094		
52D		09357204		
52E		09361374		

*1 With all tires except P225/60R16
*2 With tire P225/60R16

ISSUED: ML-WP071 REVISED: ML-WR005, ML-WR026, ML-WR046, ML-WR075, ML-WR087

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PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXV03.8048 EVAP FAMILY: WGMXE0095904

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
54	16200870	16265104	NA	NA
54A		16267214		
55		16265124		
55A		16267234		
56		16237184		
57		16237464		
57A		09351374		
57B		09353044		
58		16242924		
58A		09351404		
58B		09353074		
59		16237154		
59A		16266354		

ISSUED: ML-WP071 REVISED: ML-WR005, ML-WR026, ML-WR046A