

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-753  
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 1997 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: VGM3.8V8G2EK Displacement: 3.8 Liters (231 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Exhaust Gas Recirculation  
Heated Oxygen Sensors (two)  
Three Way Catalytic Converter  
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 Gas</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20<sup>0</sup>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 gas (NMOG) reflect application of a 0.98 RAF for 1997 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 Gas</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20<sup>0</sup>F)</u>
50,000	0.062	1.2	0.1	0.001	5.0
100,000	0.073	1.4	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 50,000-mile evaporative emission standards applicable to 1980 through 1994 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, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

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 listed vehicle models also comply with the "California Motor Vehicle Emission Control 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.

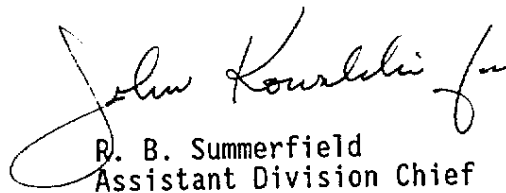
BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

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."

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 11<sup>th</sup> day of April 1996.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

EMISSION DATA RATIOS  
TO BE USED FOR ASSEMBLY LINE TESTING

	<u>3846H1004</u> <u>(Config 002)</u>	<u>3846G1084</u> <u>(Config 002)</u>
NMHC* (G/MI)	0.0452	0.0511
NMOG (G/MI)	0.0474	0.0525
HCHO (G/MI)	0.0011	0.0007
NMOG:NMHC	1.0478	1.0274
HCHO:NMHC	0.0243	0.0137

\* NMHC includes methane response factor.

Average NMOG:NMHC = 1.038

Average HCHO:NMHC = 0.019

Ratio established using Phase 2 emission certification fuel.

ISSUED: ML-VR011

REVISED: ML-VP220

17-VGM3.8V8G2EK-14

**AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
GASOLINE-FUELED PASSENGER CARS**

VEHICLE MODELS:

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

ISSUED: ML-VP009

REVISED:

17-VGM3.8V8G2EK-1  
(1997)

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM3.8V8G2EK EVAP FAMILY: VGM1058AYMAA

ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S ( ) 50S ( ) AB965 ( )

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): INDOLINE ( ) PHASE 2 (X)

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

R/L TEST PROCEDURE: NA (X) PT SOURCE ( ); 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

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

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
(C) 16	2WJ37 2WP37 2WJ69 2WP69	A4/16	3625  3750	16218060, 16218070/ 16234244	17096199	24505995
16A				16218060, 16218070/ 16243634		
16B				16218060, 16218070/ 16251804		
16C				16218060, 16218070/ 16252974		
16D				16218060, 16218070/ 16265854		
26				16218060, 16218070/ 16234244		25173893, 24507888 (24507884)
26A				16218060, 16218070/ 16243634		
26B				16218060, 16218070/ 16251804		
26C				16218060, 16218070/ 16252974		
26D				16218060, 16218070/ 16265854		

CARLINE NAME  
PONTIAC GRAND PRIX

CARLINE CODE  
33055

ISSUED: ML-VP009

REVISED: ML-VR011, ML-VR013, ML-VP118, ML-VR031, ML-VR056, ML-VR118, ML-VR129

17-VGM3.8V8G2EK-2

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM3.8V8G2EK EVAP FAMILY: VGM1095AYMEA

ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S ( ) 50S ( ) AB965 ( )

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

EVAP STD: 50K ( ) USEFUL LIFE WITH R/L (X); 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): INDOLINE ( ) PHASE 2 (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

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

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
(C) 15	4WB69	A4/15	3750	16218060, 16218070/ 16234234	17096199	24505995
15A				16218060, 16218070/ 16253004		
15B				16218060, 16218070/ 16259924		
15C				16218060, 16218070/ 16265884		
25				16218060, 16218070/ 16234234		25173893, 24507888 (24507884)
25A				16218060, 16218070/ 16253004		
25B				16218060, 16218070/ 16259924		
25C				16218060, 16218070/ 16265884		

CARLINE NAME  
BUICK REGAL/CENTURY

CARLINE CODE  
08022

ISSUED: ML-VR031

REVISED: ML-VR077, ML-VR118, ML-VR129, ML-VR131

17-VGM3.8V8G2EK-2.1

(FOR CARB USE ONLY)  
 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. #A-6-753

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM3.8V8G2EK EVAP FAMILY: VGM1070AYPAA  
 ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S ( ) 50S ( ) AB965 ( )  
 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)  
 SERVICE ACCUMULATION: STD AMA (X) MFR ADP ( ); NMOG TEST PROCEDURE: NA ( ) EQUIV (X)  
 R/L TEST PROCEDURE: NA (X) PT SOURCE ( ); 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

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
(C)						
11	4CW69	A4/22	4000	16218060/16231324	17096199	25168033
11A				16218060/16245244		
11B				16218060/16251394		
11C				16218060/16254074		
11D				16218060/16254704		
11E				16218060/16259004		
21				16218060/16231324		
21A				16218060/16245244		
21B				16218060/16251394		
21C				16218060/16254074		
21D				16218060/16254704		
21E				16218060/16259004		
12	4GD07			16218060/16231334		25168033
12A				16218060/16243824		
12B				16218060/16253224		
12C				16218060/16255234		
12D				16218060/16257684		
22				16218060/16231334		25174346
22A				16218060/16243824		
22B				16218060/16253224		
22C				16218060/16255234		
22D				16218060/16257684		

<u>CARLINE NAME</u>	<u>CARLINE CODE</u>
BUICK PARK AVENUE	08040
BUICK RIVIERA	08045

ISSUED: ML-VP009

REVISED: ML-VR011, ML-VR013, ML-VR060, ML-VR066, ML-VR072, ML-VR090, ML-VR131

17-VGM3.8V8G2EK-3