

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-703  
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 1996 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: TGM1.9V8G2EK Displacement: 1.9 Liters (116 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

- Exhaust Gas Recirculation
- Oxygen Sensor
- Heated Oxygen Sensor
- 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 1996 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	0.082	1.0	0.1	0.001	4.0
100,000	0.099	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 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 5<sup>th</sup> day of June 1995.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source 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

- A - Cutlass Ciera, Cutlass Cruiser, Century, Century Wagon
- B - Caprice, Caprice Wagon, Roadmaster Wagon, Coachbuilder Wagon, Roadmaster
- C - Ninety-Eight, Park Avenue
- D - Fleetwood, Limousine, Funeral Coach/Hearse
- E - Eldorado
- F - Camaro, Firebird/Formula
- G - Riviera, Aurora
- H - Bonneville, Eighty-Eight, LeSabre
- J - Cavalier, Sunfire
- K - Seville
- Ksp - Deville/Concours
- L - Corsica, Beretta
- N - Grand Am, Achieva, Skylark
- W - Grand Prix, Regal, Cutlass Supreme, 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 - Commerical Chassis    |

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

FR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM1.9V8G2EK EVAP. FAMILY: TGM1035AYP0A  
 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 NA  
 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 STD FOR MULTI-CLASS ENGINE FAMILY: NA  
 FUEL TYPE(S): DEDICATED X GASOLINE X ; EMISS TEST FUEL(S): INDO PHASE 2 X  
 SERVICE ACCUM: STD AMA X MFR ADP ; NMOG TEST PROC: NA EQUIV X  
 R/L TEST PROC: NA PT SOURCE ; HYBRID TYPE: NA APU CYCLE: NA  
 ENGINE CONFIGURATION: I4 X V6 V8 DISPLACEMENT: 1.9 LITERS/ 116 CU. IN.  
 VALVES/CYLINDER: 2 X 4 RATED HP: 100 @ 5000 RPM  
 ENGINE LOCATION: FRONT X DRIVE: FWD X RWD 4WD-FT 4WD-PT  
 EXHAUST EMISSION CONTROL SYSTEM: EGR, O2S, HO2S, SFI, TWC, KS  
 RLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC) (C)	VEH MODELS (SEE PAGE 1)	TRANS. (M5, A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO./CALIB	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
A	8ZH69 8ZH35	A4	2625 2750	21007798/ 21007738	25146010	
1B				21007798/ 21007790		
2A	8ZH69 8ZH35		2625 2750	21007798/ 21007738		
2B				21007798/ 21007790		
3A	8ZG69 8ZF69 8ZG35	M5	2625 2750	21007799/ 21007742		
3B				21007799/ 21007791		
4A	8ZG69 8ZF69 8ZG35		2625 2750	21007799/ 21007742		
4B				21007799/ 21007791		

CARLINE NAME	CARLINE CODE
SLI SEDAN	37320
I1 WAGON	37330

ISSUED: ML-TP068

REVISED: ML-TR008, ML-TR050, ML-TR067A

17-TGM1.9V8G2EK-2

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM1.9V8G2EK EVAP. FAMILY: TGM1035AYPOA

<u>ENG CODE (LOC)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS. (M5,A4 ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>IGNITION (ECM/PCM) PART NO./CALIB</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYTIC CONVERTER PART NO.</u>
1C	8ZH69 8ZH35	A4	2625 2750	21007798/ 21008027	21006601	25146010
1D				21007798/ 21008050		
1E				21007798/ 21008072		
1F				21008156/ 21008146		
2C	8ZH69 8ZH35		2625 2750	21007798/ 21008027		
2D				21007798/ 21008050		
2E				21007798/ 21008072		
2F				21008156/ 21008146		
3C	8ZG69 8ZF69 8ZG35	M5	2625 2750	21007799/ 21008031		
3D				21007799/ 21008054		
3F				21008155/ 21008150		
4C	8ZG69 8ZF69 8ZG35		2625 2750	21007799/ 21008031		
4D				21007799/ 21008054		
4F				21008155/ 21008150		

CARLINE NAMESLI SEDAN  
WAGONCARLINE CODE37320  
37330

ISSUED: ML-TR013

REVISED: ML-TR026, ML-TR050, ML-TR067, ML-TR067A

17-TGM1.9V8G2EK-2.1

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM1.9V8G2EK EVAP. FAMILY: TGM1035AYPOA

<u>ENG CODE (LOC) (C)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS. (M5, A4 ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>IGNITION (ECM/PCM) PART NO./CALIB</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYTIC CONVERTER PART NO.</u>
11A	8ZF27	A4	2625	21007798/ 21007738	21006601	25146010
11C				21007798/ 21008027		
11B				21007798/ 21007790		
11D				21007798/ 21008050		
11E				21007798/ 21008072		
11F				21008156/ 21008146		
12A	8ZF27			21007798/ 21007738		
12B				21007798/ 21007790		
12C				21007798/ 21008027		
12D				21007798/ 21008050		
12E				21007798/ 21008072		
12F				21008156/ 21008146		

CARLINE NAME  
SC1 COUPECARLINE CODE  
37310

ISSUED: ML-TP068

REVISED: ML-TR008, ML-TR013, ML-TR026, ML-TR050, ML-TR067,  
ML-TR067A

17-TGM1.9V8G2EK-3

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM1.9V8G2EK EVAP. FAMILY: TGM1035AYPOA

<u>ENG CODE (LOC) (C)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS. (M5, A4 ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>IGNITION (ECM/PCM) PART NO./CALIB</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYTIC CONVERTER PART NO.</u>
13A	8ZE27	M5	2625	21007799/ 21007742	21006601	25146010
13B				21007799/ 21007791		
13C				21007799/ 21008031		
13D				21007799/ 21008054		
13F				21008155/ 21008150		
14A	8ZE27			21007799/ 21007742		
14B				21007799/ 21007791		
14C				21007799/ 21008031		
14D				21007799/ 21008054		
14F				21008155/ 21008150		

CARLINE NAME  
SC1 COUPECARLINE CODE  
37310

ISSUED: ML-TR050

REVISED: ML-TR067, ML-TR067A

17-TGM1.9V8G2EK-3.1



EMISSION DATA RATIOS  
TO BE USED FOR ASSEMBLY LINE TESTING

	<u>19415908</u> (Config 004)	<u>19415908</u> (Config 005)	<u>19415915</u> (Config 004)	<u>19415915</u> (Config 005)
NMHC* (G/MI)	0.0664	0.0474	0.0634	0.0599
NMOG (G/MI)	0.0682	0.0486	0.0656	0.0613
HCHO (G/MI)	0.0008	0.0007	0.0009	0.0007
NMOG:NMHC	1.0271	1.0253	1.0347	1.0234
HCHO:NMHC	0.0120	0.0148	0.0142	0.0117

\* NMHC includes methane response factor.

Average NMOG:NMHC = 1.028

Average HCHO:NMHC = 0.013

Ratio established using Phase 2 emission certification fuel.