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State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-846 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)

<u>Fuel Type</u>: Gasoline

Engine Family: XGMXV05.7082 Displacement: 5.7 Liters (350 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Dual Three Way Catalytic Converters Dual Heated Oxygen Sensors (two) Exhaust Gas Recirculation Secondary Air Injection 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 <u>Monoxide</u> | Nitrogen Oxides | <u>Formaldehyde</u> | Carbon <u>Monoxide (20°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 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 <u>Monoxide</u> | Nitrogen <u>Oxides</u> | <u>Formaldehyde</u> | Carbon <u>Monoxide (20°F)</u> |
|---------|------------------------------|---------------------------|---------------------------|---------------------|----------------------------------|
| 50,000 | 0.092 | 1.3 | 0.1 | 0.002 | 2.7 |
| 100,000 | 0.109 | 1.6 | 0.1 | 0.002 | 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.

E 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.

R. B. Summerfield, Chief

Mobile Source Operations 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

- C Park Avenue
- E Eldorado
- F Camaro, Firebird/Formula
- G Riviera, Aurora
- H Bonneville, Eighty-Eight/Regency, LeSabre
- J Cavalier, Sunfire
- K Seville
- Ksp Deville, Limousine, Funeral Coach/Hearse
- N Grand Am, Achieva, Skylark, Malibu, Cutlass
- V Catera
- W Grand Prix, Regal, Century, Lumina, Monte Carlo, Intrigue
- Y Corvette
- Z Saturn SC, SL, SW, EV1

Digit 3 - Trim Level (Examples)

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 (Examples)

| 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-XP120

REVISED:

17-XGMXV05.7082-1 (1999)

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

| FR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXV05.7082 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() |
| 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 (X) GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLENE () CBG (X) |
| EVAP EMIS TEST PROCEDURE: CALIF () FED (X) |
| SERVICE ACCUMULATION: STD AMA() MFR ADP(X); NMOG TEST PROCEDURE: NA() EQUIV(X) |
| R/L TEST PROCEDURE: PT SOURCE (X) |
| ENGINE CONFIGURATION: I4() V6() V8(X) DISPLACEMENT: 5.7 LITERS / 350 CU. IN. |
| VALVES / CYLINDER: 2 (X) 4 () RATED HP: 305 @ 5200 RPM *1 RATED HP: 335 @ 4000 RPM *2 |
| ENGINE LOCATION: FRONT(X) DRIVE: FWD() RWD(X) 4WD-FT() 4WD-PT() |
| EXHAUST EMISSION CONTROL SYSTEM: AIR, EGR, 2TWC, SFI, 2HO2S#(2) |
| RLHP / DPA VALUES: SECTION 08.13.02.00 |
| |

| ENGINE CODE & LETTER ERIVATIVES*3 | LOC (C/F/NW) | VEH MODELS (SEE PAGE 1) | TRANS (M5,A4,ETC.) | EQUIV. TEST <u>WEIGHT</u> | EGR SYSTEM PART NO. | CATALYTIC CONVERTER <u>PART NO.</u> |
|---|-----------------|----------------------------------|-----------------------|---------------------------------|---------------------------|---|
| 11,12 *1 22 *2 | С | 1FP87 2FV87 1FP67 2FV67 | A4 | 3750 3875 | 17099322 | 25180065, 25180066 |
| 15 *1 25 *2 | | 1FP87 2FV87 1FP67 2FV67 | M6 | 3750 3875 | | |

^{*3} 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/FORMULA | 07020 |

SSUED: ML-XP120

REVISED:

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET **PCM AND CALIBRATION PART NUMBERS**

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXV05.7082 EVAP FAMILY: XGMXR0133910

| ENGINE CODE | PCM/VCM PART NUMBER | ENGINE CALIB | OPER CALIB | TRANS CALIB |
|-------------|------------------------|----------------------------|------------|-------------|
| 11 | 16253971 | 09350411 *1 09350421 *2 | NA | NA |
| 11A | 16220610 | 16263755 | 09363996 | 16253300 |
| 11B | | | 09365637 | |
| 11C | | 16253240 | | |
| 12,22 | 16253971 | 09350461 | NA | NA |
| 12A,22A | 16220610 | 16263756 | 09363996 | 16253300 |
| 12B,22B | | | 09365637 | |
| 12C,22C | | 16263831 | | |
| 15,25 | 16253971 | 09350511 *1 09350521 *2 | NA | NA |
| 15A,25A | 16220610 | 16263758 | 09363996 | 16264130 |
| 15B,25B | | | 09365637 | |
| 15C,25C | | 16263833 | | |
| | | | | |

^{*1} With P235/55ZR16 tires

^{*2} With 245/50ZR16 tires