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#### State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-804-1 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 1998 model-year General Motors Corporation exhaust emission control systems are certified as described below for light-duty trucks:

Emission Standard Category: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: WGMXT04.3185 Displacement: 4.3 Liters (262 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Three Way Catalytic Converter Warm Up Three Way Catalytic Converter Dual Heated Oxygen Sensors Heated Oxygen Sensor 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 non-methane organic gas (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) TLEV certification exhaust emission standards for this engine family in grams per mile are:

| Loaded Vehicle<br>Weight (lbs.) | _Miles_ | NMOG  | <u>_co</u> | NOx | HCHO  | <u>CO (20°F)</u> |
|---------------------------------|---------|-------|------------|-----|-------|------------------|
| 3751-5750                       | 50,000  | 0.160 | 4.4        | 0.7 | 0.018 | 12.5             |
|                                 | 100,000 | 0.200 | 5.5        | 0.9 | 0.023 | n/a              |

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for 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:

| Loaded Vehicle<br>Weight (lbs.) | Miles   | NMOG  | <u></u> | <u>NOx</u> | нсно  | <u>CO (20<sup>0</sup>F)</u> |
|---------------------------------|---------|-------|---------|------------|-------|-----------------------------|
| 3751-5750                       | 50,000  | 0.042 | 0.5     | 0.1        | 0.001 | 4.8                         |
|                                 | 100,000 | 0.046 | 0.5     | 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." GENERAL MOTORS CORPORATION

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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 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 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 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 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.

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 17 day of June 1998.

R. B. Summerfield, Chief Mobile Source Operations Division

#### (FOR CARB USE ONLY)

E.O. #A-6-804-1

#### 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

EVAP FAMILY: WGMXE0095904 ENGINE FAMILY: WGMXT04.3185 MFR: GENERAL MOTORS CORP. ALL ENGINE CODES IN ENGINE FAMILY: CA(X) 49S() 50S() AB965() ORVR: YES() NO(X) EXH STD: CA TIER-1 ( ) TLEV ( X ) LEV ( ) ULEV ( ) SULEV ( ); U.S. EPA TIER-1 ( ) PC() LDT1() LDT2(X) MDV1() MDV2() MDV3() MDV4() MDV5() VEH CLASS(ES): 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 ) DISPLACEMENT: 4.3 LITERS / 262 CU. IN. ENGINE CONFIGURATION: I4 ( ) V6 ( X ) V8 ( ) RATED HP: 180 @ 4400 RPM VALVES/CYLINDER: 2(X) 4() RATED HP: 190 @ 4400 RPM

ENGINE LOCATION: FRONT (X)

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

EXHAUST EMISSION CONTROL SYSTEM: LEGR, WUTWC+TWC, SFI, 2HO2S-HO2S,AIR

RLHP / DPA VALUES: SECTION 08.13.02.00

| ENGINE CODE<br>& LETTER<br>DERIVATIVES*1 | LOC<br>(C/F/NW) | VEH MODELS<br>(SEE PAGE 1)  | TRANS<br>( <u>M5,A4,ETC.)</u> | EQUIV.<br>TEST<br><u>WEIGHT</u> | EGR<br>SYSTEM<br><u>PART NO.</u> | CATALYTIC<br>CONVERTER<br><u>PART NO.</u>      |
|--|-----------------|-----------------------------|-------------------------------|---------------------------------|----------------------------------|--|
| 1,2                                      | С               | T10603<br>JT10603<br>T10803 | A4                            | 4000                            | 25312788                         | 25175249,<br>25173633-<br>Warm-Up              |
|  |                 | T10653<br>JT10653           |                               | 4250                            |                                  |  |
| 11,12                                    |                 | ⊤10603<br>⊤10803            |                               | 4000                            |                                  | 25175249<br>(T-PU),                            |
|  |                 | T10653                      |                               | 4250                            |                                  | 25314447                                       |
|  |                 | S10516                      |                               | 4000                            |                                  | (4DR UTL).                                     |
|  |                 | T10516                      |                               | 4500                            |                                  | 25314446<br>(2DR UTL).<br>25173633-<br>Warm-Up |

\*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 CODE |
|----------------------|--------------|
| GMC SONOMA PU        | 04072        |
| CHEVROLET S10 PU     | 03037        |
| HOMBRE PU            | 11550        |
| CHEVROLET BLAZER 2WD | 03090        |
| CHEVROLET BLAZER 4WD | 03070        |
| GMC JIMMY 2WD        | 04076        |
| GMC JIMMY 4WD        | 04060        |
|                      |              |

ISSUED: ML-WR090

REVISED: ML-WR090A, ML-WR104

E.O. #A-6-804-1

#### 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXT04.3185 EVAP FAMILY: WGMXE0095905 ALL ENGINE CODES IN ENGINE FAMILY: CA(X) 49S() 50S() AB965() ORVR: YES() NO(X) EXH STD: CA TIER-1 () TLEV (X) LEV () ULEV () SULEV (); U.S. EPA TIER-1 () VEH CLASS(ES): PC() LDT1() LDT2(X) 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: 14 ( ) V6 ( X ) V8 ( ) DISPLACEMENT: 4.3 LITERS / 262 CU. IN. VALVES/CYLINDER: 2(X) 4() RATED HP: 190 @ 4400 RPM ENGINE LOCATION: FRONT (X) DRIVE: FWD() RWD(X) 4WD-FT(X) 4WD-PT(X) EXHAUST EMISSION CONTROL SYSTEM: LEGR, WUTWC+TWC, SFI, 2HO2S-HO2S, AIR RLHP / DPA VALUES: SECTION 08.13.02.00

| ENGINE CODE<br>& LETTER<br>DERIVATIVES*1 | LOC<br>(C/F/NW) | VEH MODELS<br>(SEE PAGE 1) | TRANS<br>(M5,A4,ETC.) | EQUIV.<br>TEST<br><u>WEIGHT</u> | EGR<br>SYSTEM<br><u>PART NO.</u> | CATALYTIC<br>CONVERTER<br><u>PART NO.</u> |
|--|-----------------|----------------------------|-----------------------|---------------------------------|----------------------------------|---|
| 11,12                                    | с               | HT10506<br>T10506          | A4                    | 4750                            | 25312788                         | 25314447-                                 |
|  |                 | S10506                     |                       | <b>42</b> 50                    |                                  | 25173633-<br>Warm-Up                      |

\*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 |
|----------------------|--------------|
| GMC JIMMY 4WD        | 04060        |
| CHEVROLET BLAZER 4WD | 03070        |
| BRAVADA AWD          | 06520        |
| CHEVROLET BLAZER 2WD | 03090        |
| GMC JIMMY 2WD        | 04076        |
|                      |              |

ISSUED: ML-WR090

### (FOR CARB USE ONLY)

E.O. #A-6-804-1

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### **1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**

#### PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXT04.3185 EVAP FAMILY: WGMXE0095904 WGMXE0095905

| ENGINE CODE | PCM/VCM<br>PART NUMBER | ENGINE CALIB | OPER CALIB | TRANS CALIB                        |
|-------------|------------------------|--------------|------------|------------------------------------|
| 1,2         | 16251685               | 16240955     | 09360505PA | 16241025,<br>16241026,<br>16241027 |
| 11,12       |                        | 16240940     |            | 16241028,<br>16241029,<br>16241030 |

ISSUED: ML-WP089

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REVISED: ML-WR007, ML-WP145, ML-WP152, ML-WR070, ML-WR073, ML-WR090, ML-WR090A

17-WGMXT04.3185-5 (1998)

## **EMISSION DATA RATIOS**

# TO BE USED FOR ASSEMBLY LINE TESTING

|              | 43T6M019     |                     |  |
|--------------|--------------|---------------------|--|
|              | (Config 001) | <u>(Config 002)</u> |  |
| NMHC* (G/MI) | .056         | .057                |  |
| NMOG (G/MI)  | .058         | .059                |  |
| HCHO (G/MI)  | .002         | .002                |  |
| NMOG:NMHC    | 1.036        | 1.035               |  |
| HCHO:NMHC    | .036         | .035                |  |

\* NMHC includes methane response factor.

Average NMOG:NMHC = 1.036

Average HCHO:NMHC = .036

Ratio established using Phase 2 emission certification fuel.

ISSUED: ML-WP074

REVISED: ML-WP176

17-WGMXT04.3187-10 (1998)