State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-829
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: WGMXT04.3193 Displacement: 4.3 Liters (262 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Warm Up Three Way Catalytic Converter
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 Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 0-3750 | 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 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 Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 0-3750 | 50,000 | 0.048 | 0.7 | 0.1 | 0.001 | 4.4 |
| | 100,000 | 0.052 | 0.7 | 0.1 | 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 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 11th day of June 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

# LIGHT DUTY TRUCK MODEL NUMBER DEFINITION
(Includes California Medium Duty Trucks)

E.O. #A-6-829

Example, Pattern A: CC10703+E62
Example, Pattern B: 1UM05

**Digit 1 = Marketing Division**

Pattern A
C = Chevrolet
T = GMC
H = Oldsmobile
J = Isuzu

Pattern B
1 = Chevrolet
2 = Pontiac
3 = Oldsmobile

Note: Digit 1 is only used for Pattern A models on engine family pages or California Supplemental Data Sheets when necessary to discriminate by division model.

**Digit 2 = Chassis Type (all)**

U = Conventional 4x2 Front Wheel Drive
C, S, M = Conventional 4x2 Rear Wheel Drive
G = Forward Control 4x2 Rear Wheel Drive
K, T, L = Conventional 4x4 Four Wheel Drive, All Wheel Drive

**Digit 3 = Series/GVWR**

Pattern A
1 = 11,15,1500/3500-7300
2 = 21,25,2500/6400-8600
3 = 31,35,3500/7100-14500

Pattern B
Letter code designates trim level rather than series/GVWR.

**Digits 4 & 5**

Pattern A = Dimensional Grouping
05 = Utility: Tahoe (2Dr), Yukon (2Dr), Blazer, Jimmy, Bravada
06 = S/T Short Box
07 = C/K Short Box, Tahoe (4Dr), Yukon (4Dr)
08 = S/T Long Box & Cab-Chassis
09 = C/K Long Box, Suburban
10 = M/L Long Body
14 = G Short Wheelbase
17 = G Long Wheelbase

Pattern B = Body Style
06 = Passenger (Venture, Trans Sport, Silhouette)
16 = Passenger (Venture, Trans Sport, Silhouette) Dual Sliding Doors

**Digits 6 & 7 = Body/Cab Codes (Pattern A Only)**

03 = Conventional Cab, Cab-Chassis
05 = Cargo Van
06 = Passenger Van, 4 Door Special Purpose Vehicle
16 = 2 Door Special Purpose Vehicle
43 = Crew Cab
53 = Extended Cab

**Pickup Body Codes (Optional, Used with Pattern A Only)**

+E62 = Stepside, Fenderside
+E63 = Fleetside, Wideside

ISSUED: ML-WP179 REVISED:

(FOR CARB USE ONLY)

E.O. #A-6-829

**1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXT04.3193 EVAP FAMILY: WGMXE0095904

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 ( X ) 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 ( X ) V8 ( ) DISPLACEMENT: 4.3 LITERS / 262 CU. IN.

VALVES / CYLINDER: 2 ( X ) 4 ( ) RATED HP: 170 @ 4400 RPM

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

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

RLHP / DPA VALUES: SECTION 08.13.02.00

| ENGINE CODE & LETTER DERIVATIVES*1 | 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 | C | S10603<br>JS10603<br>S10803 | A4 | 3625 | 17096309,<br>25312788 | 25179076,<br>25173633:<br>Warm-Up |
| 52 | | S10603<br>JS10603<br>S10803 | | 3750 | | |
| 61 | C | S10603<br>JS10603<br>S10803 | M5 | 3625 | 17096309,<br>25312788 | 25179076,<br>25173633:<br>Warm-Up |
| 62 | | S10603<br>JS10603<br>S10803 | | 3750 | | |

*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 |
|---|---|
| CHEVROLET S10 PICKUP 2WD | 03082 |
| GMC SONOMA PICKUP 2WD | 04072 |
| ISUZU HOMBRE PICKUP 2WD | 11520 |

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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 ( X ) 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 ( X ) V8 ( ) DISPLACEMENT: 4.3 LITERS / 262 CU. IN.

VALVES / CYLINDER: 2 ( X ) 4 ( ) RATED HP: 180 @ 4400 RPM

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

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

RLHP / DPA VALUES: SECTION 08.13.02.00

| ENGINE CODE & LETTER DERIVATIVES*1 | LOC (C/F/NW) | VEH MODELS (SEE PAGE 1) | TRANS (M5,A4,ETC.) | EQUIV. TEST WEIGHT | EGR SYSTEM PART NO. | CATALYTIC CONVERTER PART NO. |
|---|---|---|---|---|---|---|
| 71,72 | C | S10603<br>S10803 | A4 | 3750 | 17096309,<br>25312788 | 25179076,<br>25173633:<br>Warm-Up |
| 81,82 | | S10603<br>S10803 | M5 | | | |

*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 |
|---|---|
| CHEVROLET S10 PICKUP 2WD | 03082 |
| GMC SONOMA PICKUP 2WD | 04072 |

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## 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

## PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXT04.3193 EVAP FAMILY: WGMXE0095904

| ENGINE CODE | PCM/VCM PART NUMBER | ENGINE CALIB | OPER CALIB | TRANS CALIB |
|---|---|---|---|---|
| 51,52 | 16251685, 16266635 | 16240955 | 09360505PA | 16241025, 16241026, 16241027 |
| 61,62 | 16251685, 16266635 | 16240958 | 09360505PA | 16232746 |
| 71,72 | 16251685, 16266635 | 16240940 | 09360505PA | 16241028, 16241029, 16241030 |
| 81,82 | 16251685, 16266635 | 16240947 | 09360505PA | 16232746 |

ISSUED: ML-WP179 REVISED: