State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-813
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 medium-duty vehicles:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: WGMXA05.7185 Displacement: 5.7 Liters (350 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Dual Three Way Catalytic Converters
Dual Heated Oxygen Sensors (two)
Secondary Air Injection
Exhaust Gas Recirculation
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) LEV certification exhaust emission standards for this engine family in grams per mile are:

Test Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
3751-5750	50,000	0.160	4.4	0.4	0.018	12.5
	120,000	0.230	6.4	0.6	0.027	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for NMOG reflect application of a 0.94 RAF for 1998 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

Test Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
3751-5750	50,000	0.081	1.8	0.4	0.001	6.5
	120,000	0.092	2.4	0.4	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 medium-duty vehicle phase-in 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" (Title 13, California Code of Regulations, Section 1960.1(h)(2)).

BE IT FURTHER RESOLVED: That under the submitted medium-duty vehicle phase-in compliance plan, if the manufacturer incurs "Vehicle Equivalent Debits" for the aforementioned model year due to the manufacturer's failure to produce and deliver for sale in California the equivalent quantity of medium-duty vehicles certified to low-emission vehicle and/or ultra-low-emission vehicle exhaust emission standards required by the above-referenced standards and test procedures, all "Vehicle Equivalent Debits" incurred 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 8th day of May 1997.

John Kowalski for

R. B. Summerfield, Chief
Mobile Source Operations Division

LIGHT DUTY TRUCK MODEL NUMBER DEFINITION

(Includes California Medium Duty Trucks)

E.O. #A-6-813

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-WP067 REVISED:

(FOR CARB USE ONLY)

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXA05.7185 EVAP FAMILY: WGMXE0111907

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

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

EVAP STD: 50K ( ) USEFUL LIFE WITH R/L (X); IN-USE EXH STD: FULL ( ) ALTERNATIVE (X)

VEH CLASS(ES): PC ( ) LDT1 ( ) LDT2 ( ) MDV1 ( ) MDV2 (X) MDV3 ( ) MDV4 ( ) MDV5 ( )

SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA

FUEL TYPE(S): DEDICATED (X) GASOLINE (X); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

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

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

ENGINE CONFIGURATION: I4 ( ) V6 ( ) V8 (X) DISPLACEMENT: 5.7 LITERS / 350 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 255 @ 4600 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: AIR, EGR, 2HO2S(2), 2TWC, SFI

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, 53	C	C10516	A4	5250	17096309, 25312788	25177735, 25180199
52, 54				5500		

*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
C1500 TAHOE 2WD	03022
C1500 YUKON 2WD	04032

ISSUED: ML-WP067 REVISED: ML-WR008, ML-WR044

(FOR CARB USE ONLY)

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

-R: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXA05.7185 EVAP FAMILY: WGMXE0111907

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

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

EVAP STD: 50K ( ) USEFUL LIFE WITH R/L (X); IN-USE EXH STD: FULL ( ) ALTERNATIVE (X)

VEH CLASS(ES): PC ( ) LDT1 ( ) LDT2 ( ) MDV1 ( ) MDV2 (X) MDV3 ( ) MDV4 ( ) MDV5 ( )

SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA

FUEL TYPE(S): DEDICATED (X) GASOLINE (X); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

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

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

ENGINE CONFIGURATION: I4 ( ) V6 ( ) V8 (X) DISPLACEMENT: 5.7 LITERS / 350 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 255 @ 4600 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: AIR, EGR, 2HO2S(2), 2TWC, SFI

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.
1, 52, 53, 54	C	K10516	A4	5500	17096309, 25312788	25177735, 25180199

*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
K1500 TAHOE 2WD	03075
K1500 YUKON 2WD	04065

ISSUED: ML-WP067 REVISED: ML-WR008, ML-WR044

(FOR CARB USE ONLY)

E.O. #A-6-813

1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXA05.7185 EVAP FAMILY: WGMXE0111911

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

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

EVAP STD: 50K ( ) USEFUL LIFE WITH R/L (X); IN-USE EXH STD: FULL ( ) ALTERNATIVE (X)

VEH CLASS(ES): PC ( ) LDT1 ( ) LDT2 ( ) MDV1 ( ) MDV2 (X) MDV3 ( ) MDV4 ( ) MDV5 ( )

SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA

FUEL TYPE(S): DEDICATED (X) GASOLINE (X); EMISSION TEST FUEL(S): INDOLENE ( ) PHASE 2 (X)

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

R/L TEST PROCEDURE: NA ( ) PT SOURCE (X); HYBRID TYPE: NA APU CYCLE: NA

ENGINE CONFIGURATION: I4 ( ) V6 ( ) V8 (X) DISPLACEMENT: 5.7 LITERS / 350 CU. IN.

VALVES / CYLINDER: 2 (X) 4 ( ) RATED HP: 255 @ 4600 RPM

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

EXHAUST EMISSION CONTROL SYSTEM: AIR, EGR, 2HO2S(2), 2TWC, SFI

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, 52, 53, 54	C	C10706	A4	5500	17096309, 25312788	25177735, 25180199

*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
C1500 TAHOE 2WD	03022
C1500 YUKON 2WD	04032

ISSUED: ML-WP067 REVISED: ML-WR008, ML-WR044

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1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: WGMXA05.7185 EVAP FAMILY: WGMXE0111907 WGMXE0111911

ENGINE CODE	PCM/VCM PART NUMBER	ENGINE CALIB	OPER CALIB	TRANS CALIB
51, 52	16214835/BNSA	16216023	16215972PB	16216105 (C: 3.08, K: 3.42), 16216106 (C: 3.42, K: 3.73), 16216080 (C: 3.73)
51A, 52A	16249385/BZBY	16216023	16258745PC	
51B, 52B	16258835/CCSF, 16266655/CFFR	16267629	16263425PD	
51C, 52C		16249507		
51D, 52D	09355655/CLNR	09364757	09365095PE	
53, 54	16258835/CCSF, 16266655/CFFR	16267630	16263425PD	
53A, 54A		16249508		
53B, 54B	09355655/CLNR	09364758	09365095PE	

ISSUED: ML-WP067 REVISED: ML-WR008, ML-WR061, ML-WR093, ML-WR102

EMISSION DATA RATIOS

TO BE USED FOR ASSEMBLY LINE TESTING

	57T6K038 (Config 001)	57G6K014 (Config 001)
NMHC* (G/MI)	.0758	.0790
NMOG (G/MI)	.0824	.0814
HCHO (G/MI)	.0057	.0012
NMOG:NMHC	1.0871	1.0304
HCHO:NMHC	.0752	.0152

* NMHC includes methane response factor.

Average NMOG:NMHC = 1.059

Average HCHO:NMHC = .045

Ratio established using Phase 2 emission certification fuel.

ISSUED: ML-WP081 REVISED: ML-WP176