

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-870
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 medium-duty vehicles:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: XGMXA05.7186 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:

<u>Test Weight</u> <u>(lbs.)</u>	<u>Miles</u>	<u>NMOG</u>	<u>CO</u>	<u>NOx</u>	<u>HCHO</u>	<u>CO (20°F)</u>
5751-8500	50,000	0.195	5.0	0.6	0.022	12.5
	120,000	0.280	7.3	0.9	0.032	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 1999 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

<u>Test Weight</u> <u>(lbs.)</u>	<u>Miles</u>	<u>NMOG</u>	<u>CO</u>	<u>NOx</u>	<u>HCHO</u>	<u>CO (20°F)</u>
5751-8500	50,000	0.083	1.8	0.4	0.002	5.7
	120,000	0.094	2.4	0.5	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 21st day of January 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

LIGHT DUTY TRUCK MODEL NUMBER DEFINITION

(Includes California Medium Duty Trucks)

E.O. #A-6-870

Example, Pattern A: CC10703+E62

Example, Pattern B: 1UM05

Digit 1 = Marketing Division

Pattern A

C = Chevrolet
T = GMC
H = Oldsmobile
J = Isuzu
D = Cadillac

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),
Escalade (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-XP075

REVISED: ML-XR069

17-XGMXA05.7186-1
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-870

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXA05.7186 EVAP FAMILY: XGMXE0133913
ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S () 50S () AB965 () ORVR: YES () NO (X)
EXH STD: CA TIER-1 () TLEV () LEV (X) ULEV () SULEV (); U.S. EPA TIER-1 ()
VEH CLASS(ES): PC () LDT1 () LDT2 () MDV1 () MDV2 () MDV3 (X) MDV4 () MDV5 ()
SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA
FUEL TYPE(S): DEDICATED () GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLINE () 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: 255 @ 4600 RPM
ENGINE LOCATION: FRONT (X) DRIVE: FWD () RWD (X) 4WD-FT () 4WD-PT (X)
EXHAUST EMISSION CONTROL SYSTEM: AIR, EGR, 2HO2S(2), 2TWC, SFI
RLHP / DPA VALUES: SECTION 08.13.02.00

<u>ENGINE CODE & LETTER DERIVATIVES*1</u>	<u>LOC (C/F/NW)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS (M5,A4,ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYT CONVERTER PART NO.</u>
1,2,5,6,51,52	C	C10906	A4	6000	25312788	25180193
4,10,54		K10906		6500		

*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.

<u>CARLINE NAME</u>	<u>CARLINE CODE</u>
C1500 CHEVROLET SUBURBAN 2WD	03065
K1500 CHEVROLET SUBURBAN 4WD	03080
C1500 GMC SUBURBAN 2WD	04055
K1500 GMC SUBURBAN 4WD	04070

ISSUED: ML-XP075

REVISED: ML-XR001, ML-XR069

17-XGMXA05.7186-2
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-870

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXA05.7186 EVAP FAMILY: XGMXE0111911
ALL ENGINE CODES IN ENGINE FAMILY: CA (X) 49S () 50S () AB965 () ORVR: YES () NO (X)
EXH STD: CA TIER-1 () TLEV () LEV (X) ULEV () SULEV (); U.S. EPA TIER-1 ()
VEH CLASS(ES): PC () LDT1 () LDT2 () MDV1 () MDV2 () MDV3 (X) MDV4 () MDV5 ()
SINGLE CERT STANDARD FOR MULTI-CLASS ENGINE FAMILY: NA
FUEL TYPE(S): DEDICATED () GASOLINE (X); EXH EMIS TEST FUEL(S): INDOLINE () 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: 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

<u>ENGINE CODE & LETTER DERIVATIVES*1</u>	<u>LOC (C/F/NW)</u>	<u>VEH MODELS (SEE PAGE 1)</u>	<u>TRANS (M5,A4,ETC.)</u>	<u>EQUIV. TEST WEIGHT</u>	<u>EGR SYSTEM PART NO.</u>	<u>CATALYTIC CONVERTER PART NO.</u>
1,2,51,52	C	K10706	A4	6000	25312788	25180199
8		TK10706				
64		TK10706 DK10706				

*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.

<u>CARLINE NAME</u>	<u>CARLINE CODE</u>
K1500 CHEVROLET TAHOE 4WD	03075
K1500 GMC YUKON 4WD	04065
CADILLAC ESCALADE 4WD	02510

ISSUED: ML-XP075

REVISED: ML-XR001, ML-XR069

17-XGMXA05.7186-3
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-870

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP.

ENGINE FAMILY: XGMXA05.7186

EVAP FAMILY: XGMXE0111911
XGMXE0133913

<u>ENGINE CODE</u>	<u>PCM/VCM PART NUMBER</u>	<u>ENGINE CALIB</u>	<u>OPER CALIB</u>	<u>TRANS CALIB</u>
1, 2	16258835 (CCSF), 16266655 (CFFR)	16249507	16263425PD	16216080 (C:3.73), 16216106 (C:3.42, K:3.73), 16216105 (K:3.42)
1A, 2A	09355655 (CLNR)	09364757	09365095PE	
4	16258835 (CCSF), 16266655 (CFFR)	16249507	16263425PD	16216106 (3.73), 16216105 (3.42)
4A	09355655 (CLNR)	09364757	09365095PE	
5, 6	16258835 (CCSF), 16266655 (CFFR)	16249508	09365095PD	16216080 (C:3.73), 16216106 (C:3.42, K:3.73), 16216105 (K:3.42)
5A, 6A	09355655 (CLNR)	09364758	09365095PE	
8	16258835 (CCSF), 16266655 (CFFR)	16249508	09365095PD	16216259
8A	09355655 (CLNR)	09364758	09365095PE	
10	16258835 (CCSF), 16266655 (CFFR)	16249508	09365095PD	16216106 (3.73), 16216104 (3.42)
10A	09355655 (CLNR)	09364758	09365095PE	

ISSUED: ML-XP075

REVISED: ML-XR001, ML-XR009, ML-XP128, ML-XR033, ML-XR051

17-XGMXA05.7186-4
(1999)

(FOR CARB USE ONLY)

E.O. #A-6-870

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PCM AND CALIBRATION PART NUMBERS

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: XGMXA05.7186 EVAP FAMILY: XGMXE0111911
XGMXE0133913

<u>ENGINE CODE</u>	<u>PCM/VCN PART NUMBER</u>	<u>ENGINE CALIB</u>	<u>OPER CALIB</u>	<u>TRANS CALIB</u>
51, 52, 54	16249335 (BZBS)	16240915	16265965KA	16232738 (C:3.73), 16232737 (C:3.42,K:3.73), 16232736 (K:3.42)
51A, 52A, 54A	16251705 (CDLY)		09360505PA	
51B, 52B	09360615 (CMUF)	09364825	09365085PB	
54B		09364824	09365085PE	
64	16249335 (BZBS)	16240915	16265965KA	16232739
64A	16251705 (CDLY)		09360505PA	
64B	09360615 (CMUF)	09364824	09365085PE	

ISSUED: ML-XR051

REVISED:

17-XGMXA05.7186-4.1
(1999)