Full

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-761-A
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 1997 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: VGM4.32PG2EK Displacement: 4.3 Liters (262 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Three Way Catalytic Converter
Dual Heated Oxygen Sensors
Heated Oxygen Sensors (two)
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) 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)
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 1997 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)
3751-5750	50,000	0.131	1.7	0.3	0.002	3.8
	100,000	0.165	2.0	0.3	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 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 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 12th day of August 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

(FOR CARB USE ONLY)

E.O. #A-6-761-A

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM4.32PG2EK EVAP FAMILY: VGM1111AYMEA

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

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

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

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 ( ) 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 (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 ( ) 4WD-PT ( )

EXHAUST EMISSION CONTROL SYSTEM: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP / DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC) (C)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
2	M11005 M11006	A4	4250 4750	16213175-PCM 16204025PB-OPER 16237509-ENG 16204041, 16204042, 16215610-TRANS	17096188, 17096309	25161908
2A				16213175-PCM 16243345PF-OPER 16243459-ENG 16243550, 16243551, 16243552-TRANS		
2B				16243345PF-OPER 16243493-ENG		
2C				16243345PF-OPER 16243517-ENG		
2D				16256455PG-OPER 16256252-ENG		

CARLINE NAME	CARLINE CODE
CHEVROLET ASTRO CARGO VAN 2WD	55045
CHEVROLET ASTRO PASSENGER VAN 2WD	55060
GMC SAFARI CARGO VAN 2WD	80035
GMC SAFARI PASSENGER VAN 2WD	80050

ISSUED: ML-VR040 REVISED: ML-VR065, ML-VP178, ML-VP188, ML-VR103

(FOR CARB USE ONLY)

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MFR: GENERAL MOTORS CORP. ENGINE FAMILY: VGM4.32PG2EK EVAP FAMILY: VGM1111AYMEA

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

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

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

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 ( ) 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 (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 ( ) 4WD-FT (X) 4WD-PT ( )

EXHAUST EMISSION CONTROL SYSTEM: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP / DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC) (C)	VEH MODELS (SEE PAGE 1)	TRANS (M5,A4,ETC.)	EQUIV. TEST WEIGHT	IGNITION (PCM/CALIB PART NO.)	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
4	L11005	A4	4500	16213175-PCM 16204025PB-OPER 16237503-ENG 16215610, 16204042-TRANS	17096188, 17096309	25161908
4A				16213175-PCM 16243345PF-OPER 16243462-ENG 16243551, 16243552-TRANS		
4B				16243345PF-OPER 16243496-ENG		
4C				16243345PF-OPER 16243520-ENG		
4D				16256455PG-OPER 16256256-ENG		

CARLINE NAME	CARLINE CODE
GMC SAFARI CARGO VAN AWD	80037
CHEVROLET ASTRO ARGO VAN AWD	55047

ISSUED: ML-VR040 REVISED: ML-VR065, ML-VP178, ML-VP188, ML-VR103

EMISSION DATA RATIOS

TO BE USED FOR ASSEMBLY LINE TESTING

	43T6M004 (Config 002)	43T6M004 (Config 003)
NMHC* (G/MI)	0.104	0.093
NMOG (G/MI)	0.106	0.096
HCHO (G/MI)	0.001	0.002
NMOG:NMHC	1.019	1.032
HCHO:NMHC	0.010	0.022

* NMHC includes methane response factor.

Average NMOG:NMHC = 1.026

Average HCHO:NMHC = 0.016

Ratio established using Phase 2 emission certification fuel.