

*F. Hall*

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-729  
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 1996 model-year General Motors Corporation exhaust emission control systems are certified as described below for medium-duty vehicles:

Fuel Type: Gasoline

Engine Family: TGM7.4J8G1EK Displacement: 7.4 Liters (454 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

- Exhaust Gas Recirculation
- Dual Three Way Catalytic Converters
- Dual Heated Oxygen Sensors (Two)
- Sequential Multiport Fuel Injection
- Secondary Air Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The certification exhaust emission standards for this engine family in grams per mile are:

<u>Test Weight</u> <u>(lbs.)</u>	<u>Miles</u>	<u>Non-Methane</u> <u>Hydrocarbons</u>	<u>Carbon</u> <u>Monoxide</u>	<u>Nitrogen</u> <u>Oxides</u>
5751-8500	50,000	0.39	5.0	1.1
	120,000	0.56	7.3	1.53

The certification exhaust emission values for this engine family in grams per mile are:

<u>Test Weight</u> <u>(lbs.)</u>	<u>Miles</u>	<u>Non-Methane</u> <u>Hydrocarbons</u>	<u>Carbon</u> <u>Monoxide</u>	<u>Nitrogen</u> <u>Oxides</u>
5751-8500	50,000	0.29	3.2	0.6
	120,000	0.30	3.4	0.57

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 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, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

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).

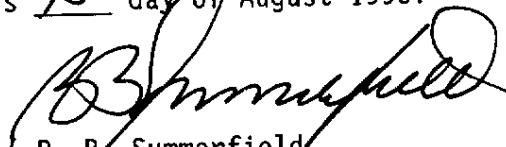
BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

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.).

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 15<sup>th</sup> day of August 1995.



R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
LIGHT DUTY TRUCKS AND MEDIUM DUTY VEHICLES

Example, Pattern A: CC10703+E62

Example, Pattern B: 1UM05

Digit 1 = Marketing Division

<u>Pattern A</u>	<u>Pattern B</u>
C = Chevrolet	1 = Chevrolet
T = GMC	2 = Pontiac
H = Oldsmobile	3 = Oldsmobile
G = Isuzu	

Note: Digit 1 is not used for Pattern A models on engine family pages or California Supplemental Data Sheets.

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

<u>Pattern A</u>	<u>Pattern B</u>
1 = 11,15,1500/3500-7300	Letter code designates trim level rather than series/GVWR.
2 = 21,25,2500/6400-8600	
3 = 31,35,3500/7100-14500	

Digits 4 & 5

<u>Pattern A = Dimensional Grouping</u>	<u>Pattern B</u>
05 = Blazer, Jimmy, Bravada	05 = Cargo (APV)
06 = S/T Short Box	06 = Passenger (Lumina APV, Trans Sport, Silhouette)
07 = C/K Short Box	
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	

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
+ZW9 = Cab-Chassis

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM7.4J8G1EK EVAP. FAMILY: TGM1098AYMBA  
 ALL ENGINE CODES IN ENGINE FAMILY: CA X 49S      50S      AB965       
 EXH STD: CA Tier-1 X TLEV      LEV      ULEV      ZEV     ; U.S. EPA Tier-1 X  
 EVAP STD: 50K X USEFUL LIFE WITH R/L     ; IN-USE EXH STD: FULL      ALTERNATIVE X  
 VEH CLASS(ES): PC      LDT1      LDT2      MDV1      MDV2      MDV3 X MDV4      MDV5       
 SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA  
 FUEL TYPE(S): DEDICATED X GASOLINE X; EMISS TEST FUEL(S): INDO      PHASE 2 X  
 SERVICE ACCUM: STD AMA      MFR ADP X; NMOG TEST PROC: NA EQUIV       
 R/L TEST PROC: NA PT SOURCE     ; HYBRID TYPE: NA APU CYCLE: NA  
 ENGINE CONFIGURATION: I4      V6      V8 X DISPLACEMENT: 7.4 LITERS/ 454 CU. IN.  
 VALVES/CYLINDER: 2 X 4      RATED HP: 290 @ 4200 RPM  
 ENGINE LOCATION: FRONT X DRIVE: FWD      RWD X 4WD-FT      4WD-PT       
 EXHAUST EMISSION CONTROL SYSTEM: EGR, 2HO2S(2), 2TWC, SFI, AIR  
 RLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS. (M5, A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO.	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
51	C20906	A4	7000	16177425/BBAH	17096200	25160620
	C30903+E63		7000	16187577PG-OPER		
			7500	16187624-ENG		
	C30943+E63		7500	16187808,		
			8000	16187809,		
	C30953+E63		7000	16187802-TRANS		
			8000			
	C20903+E63		7000			
	C20753+E63					
	C20953+E63					
51A				16227535-ENG		
				16232915PG-OPER		
				16227587(3.42/3.73),		
				16227588(4.10/4.56)-TRANS		
51B				16235505PH-OPER		
				16227598(3.42/3.73),		
				16227599(4.10/4.56)-TRANS		
51C				16237015PJ-OPER		
				16227598(3.42/3.73),		
				16227599(4.10/4.56)-TRANS		

CARLINE NAME	CARLINE CODE
C2500 SUBURBAN 2WD	55066
C2500 SUBURBAN 2WD	80056
C3500 PICKUP 2WD	55021
C3500 SIERRA 2WD	80016

ISSUED: ML-TP096

REVISED: ML-TR012, ML-TR057, ML-TR080

17-TGM7.4J8G1EK-2

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM7.4J8G1EK EVAP. FAMILY: TGM1098AYMBAALL ENGINE CODES IN ENGINE FAMILY: CA\_X 49S\_\_ 50S\_\_ AB965\_\_EXH STD: CA Tier-1\_X TLEV\_\_ LEV\_\_ ULEV\_\_ ZEV\_\_; U.S. EPA Tier-1 XEVAP STD: 50K\_X USEFUL LIFE WITH R/L\_\_; IN-USE EXH STD: FULL\_\_ ALTERNATIVE\_XVEH CLASS(ES): PC\_\_ LDT1\_\_ LDT2\_\_ MDV1\_\_ MDV2\_\_ MDV3\_X MDV4\_\_ MDV5\_\_SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NAFUEL TYPE(S): DEDICATED\_X GASOLINE\_X; EMISS TEST FUEL(S): INDO\_\_ PHASE 2\_XSERVICE ACCUM: STD AMA\_\_ MFR ADP\_X; NMOG TEST PROC: NA EQUIV\_\_R/L TEST PROC: NA PT SOURCE\_\_; HYBRID TYPE: NA APU CYCLE: NAENGINE CONFIGURATION: I4\_\_ V6\_\_ V8\_X DISPLACEMENT: 7.4 LITERS / 454 CU. IN.VALVES/CYLINDER: 2\_X 4\_\_ RATED HP: 290 @ 4200 RPMENGINE LOCATION: FRONT\_X DRIVE: FWD\_\_ RWD\_X 4WD-FT\_\_ 4WD-PT\_XEXHAUST EMISSION CONTROL SYSTEM: EGR, 2HO2S(2), 2TWC, SFI, AIRRLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS. (M5,A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO.	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
51	K20906	A4	7500	16177425/BBAH	17096200	25160620
	K30903+E63		7500	16187577PB-OPER		
			8000	16187624-ENG		
	K30943+E63		7500	16187832,		
			8500	16187833,		
51A	K30953+E63	8000	16187837,			
	K20903+E63	7000	16187838-TRANS			
	K20753+E63					
	K20953+E63	7500				
51B			16227535-ENG			
			16232915PG-OPER			
			16227587(3.42/3.73), 16227588(4.10/4.56)-TRANS			
51C			16235505PH-OPER			
			16227598(3.42/3.73), 16227599(4.10/4.56)-TRANS			
51D			16237015PH-OPER			
			16232401-ENG			

CARLINE NAME	CARLINE CODE
K2500 SUBURBAN 4WD	55081
K2500 SUBURBAN 4WD	80071
K3500 PICKUP 4WD	55036
K3500 SIERRA 4WD	80026

SUED: ML-TP096

REVISED: ML-TR012, ML-TR057, ML-TR080, ML-TR083, ML-TR012A, ML-TR115

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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 ALL ENGINE CODES IN ENGINE FAMILY: CA X 49S\_\_\_ 50S\_\_\_ AB965\_\_\_  
 EXH STD: CA Tier-1 X TLEV\_\_\_ LEV\_\_\_ ULEV\_\_\_ ZEV\_\_\_ ; U.S. EPA Tier-1 X  
 EVAP STD: 50K X USEFUL LIFE WITH R/L\_\_\_ ; IN-USE EXH STD: FULL\_\_\_ ALTERNATIVE X  
 VEH CLASS(ES): PC\_\_\_ LDT1\_\_\_ LDT2\_\_\_ MDV1\_\_\_ MDV2\_\_\_ MDV3 X MDV4\_\_\_ MDV5\_\_\_  
 SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA  
 FUEL TYPE(S): DEDICATED X GASOLINE X ; EMISS TEST FUEL(S): INDO\_\_\_ PHASE 2 X  
 SERVICE ACCUM: STD AMA\_\_\_ MFR ADP X ; NMOG TEST PROC: NA EQUIV\_\_\_  
 R/L TEST PROC: NA PT SOURCE\_\_\_ ; HYBRID TYPE: NA APU CYCLE: NA  
 ENGINE CONFIGURATION: I4\_\_\_ V6\_\_\_ V8 X DISPLACEMENT: 7.4 LITERS/ 454 CU. IN.  
 VALVES/CYLINDER: 2 X 4\_\_\_ RATED HP: 290 @ 4200 RPM  
 ENGINE LOCATION: FRONT X DRIVE: FWD\_\_\_ RWD X 4WD-FT\_\_\_ 4WD-PT\_\_\_  
 EXHAUST EMISSION CONTROL SYSTEM: EGR, 2HO2S(2), 2TWC, SFI, AIR  
 RLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS. (M5, A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO.	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
52	C20906 C30903+E63	A4	7500 7000 8000	16177425/BBAH 16187577PB-OPER 16187624-ENG	17096200	25160620
	C30943+E63		7500 8000	16187808. 16187809.		
	C30953+E63		7500 8000	16187802-TRANS		
	C20903+E63 C20753+E63 C20953+E63		7000			
52A				16227535-ENG 16232915PG-OPER 16227587(3.42/3.73). 16227588(4.10/4.56)-TRANS		
52B				16235505PH-OPER 16227598(3.42/3.73). 16227599(4.10/4.56)-TRANS		
52C				16237015PH-OPER 16227598(3.42/3.73). 16227599(4.10/4.56)-TRANS		

CARLINE NAME	CARLINE CODE
C2500 SUBURBAN 2WD	55066
C2500 SUBURBAN 2WD	80056
C3500 PICKUP 2WD	55021
C3500 SIERRA 2WD	80016

ISSUED: ML-TP096

REVISED: ML-TR012, ML-TR057, ML-TR080

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM7.4J8G1EK EVAP. FAMILY: TGM1098AYMBAALL ENGINE CODES IN ENGINE FAMILY: CA X 49S\_\_\_ 50S\_\_\_ AB965\_\_\_EXH STD: CA Tier-1 X TLEV\_\_\_ LEV\_\_\_ ULEV\_\_\_ ZEV\_\_\_; U.S. EPA Tier-1 XEVAP STD: 50K X USEFUL LIFE WITH R/L\_\_\_; IN-USE EXH STD: FULL\_\_\_ ALTERNATIVE XVEH CLASS(ES): PC\_\_\_ LDT1\_\_\_ LDT2\_\_\_ MDV1\_\_\_ MDV2\_\_\_ MDV3 X MDV4\_\_\_ MDV5\_\_\_SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NAFUEL TYPE(S): DEDICATED X GASOLINE X; EMISS TEST FUEL(S): INDO\_\_\_ PHASE 2 XSERVICE ACCUM: STD AMA\_\_\_ MFR ADP X; NMOG TEST PROC: NA EQUIV\_\_\_R/L TEST PROC: NA PT SOURCE\_\_\_; HYBRID TYPE: NA APU CYCLE: NAENGINE CONFIGURATION: I4\_\_\_ V6\_\_\_ V8 X DISPLACEMENT: 7.4 LITERS / 454 CU. IN.VALVES/CYLINDER: 2 X 4\_\_\_ RATED HP: 290 @ 4200 RPMENGINE LOCATION: FRONT X DRIVE: FWD\_\_\_ RWD X 4WD-FT\_\_\_ 4WD-PT XEXHAUST EMISSION CONTROL SYSTEM: EGR, 2HO2S(2), 2TWC, SFI, AIRRLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS. (M5,A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO.	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
52	K20906 K30903+E63	A4	7500 7500 8000	16177425/BBAH 16187577PB-OPER 16187624-ENG	17096200	25160620
	K30943+E63		8500	16187832, 16187833,		
	K30953+E63 K20903+E63 K20753+E63 K20953+E63		8000 7000 7500	16187837, 16187838-TRANS		
52A				16227535-ENG 16232915PG-OPER 16227587(3.42/3.73), 16227588(4.10/4.56)-TRANS		
52B				16235505PH-OPER 16227598(3.42/3.73), 16227599(4.10/4.56)-TRANS		
52C				16237015PJ-OPER		
52D				16232401-ENG		

CARLINE NAME	CARLINE CODE
K2500 SUBURBAN 4WD	55081
K2500 SUBURBAN 4WD	80071
K3500 PICKUP 4WD	55036
K3500 SIERRA 4WD	80026

ISSUED: ML-TP096

REVISED: ML-TR012, ML-TR057, ML-TR080, ML-TR083, ML-TR012A, ML-TR115

17-TGM7.4J8G1EK-5

## 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MFR: GENERAL MOTORS CORP. ENGINE FAMILY: TGM7.4J8G1EK EVAP. FAMILY: TGM1098AYMBBALL ENGINE CODES IN ENGINE FAMILY: CA X 49S     50S     AB965    EXH STD: CA Tier-1 X TLEV     LEV     ULEV     ZEV    ; U.S. EPA Tier-1 XEVAP STD: 50K X USEFUL LIFE WITH R/L    ; IN-USE EXH STD: FULL     ALTERNATIVE XVEH CLASS(ES): PC     LDT1     LDT2     MDV1     MDV2     MDV3 X MDV4     MDV5    SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NAFUEL TYPE(S): DEDICATED X GASOLINE X; EMISS TEST FUEL(S): INDO     PHASE 2 XSERVICE ACCUM: STD AMA     MFR ADP X; NMOG TEST PROC: NA EQUIV    R/L TEST PROC: NA PT SOURCE    ; HYBRID TYPE: NA APU CYCLE: NAENGINE CONFIGURATION: I4     V6     V8 X DISPLACEMENT: 7.4 LITERS / 454 CU. IN.VALVES/CYLINDER: 2 X 4 RATED HP: 290 @ 4200 RPMENGINE LOCATION: FRONT X DRIVE: FWD     RWD X 4WD-FT     4WD-PT    EXHAUST EMISSION CONTROL SYSTEM: EGR, 2HO2S(2), 2TWC, SFI, AIRRLHP/DPA VALUES: SECTION 08.13.02.00

ENG CODE (LOC)	VEH MODELS (SEE PAGE 1)	TRANS. (M5,A4 ETC.)	EQUIV. TEST WEIGHT	IGNITION (ECM/PCM) PART NO.	EGR SYSTEM PART NO.	CATALYTIC CONVERTER PART NO.
53,53M, 54,54M	G31405 G31406 G31705 G31706	A4	7500 8000 7500 8000	16213165/BNHL, 16177425/BBAH 16187739-ENG 16187577PB-OPER 16187857(3.42), 16187858(3.73), 16187859(4.10)-TRANS	17096200	25160620
53A,54A, 53N,54N				16227536-ENG 16232915PG-OPER 16227587(3.42/3.73), 16227588(4.10/4.56)-TRANS		
53B,54B, 53P,54P				16235505PH-OPER 16227598(3.42/3.73), 16227599(4.10/4.56)-TRANS		
53C,54C, 53Q,54Q				16237015PJ-OPER		
53D,54D, 53R,54R				16232402-ENG		

CARLINE NAMECARLINE CODEG3500 CHEV EXPRESS 2WD  
G3500 CHEV VAN 2WD  
G3500 SAVANA 2WD (PASS.)  
G3500 VANDURA 2WD55052  
55056  
80046  
80042

ISSUED: ML-TP096

REVISED: ML-TR012, ML-TR057, ML-TR080, ML-TR083, ML-TR115



EMISSION DATA RATIOS  
TO BE USED FOR ASSEMBLY LINE TESTING

	<u>19425912</u> (Config 005)	<u>19425912</u> (Config 006)	<u>19425913</u> (Config 005)	<u>19425913</u> (Config 006)
NMHC* (G/MI)	0.0368	0.0389	0.0385	0.0432
NMOG (G/MI)	0.0377	0.0396	0.0393	0.0439
HCHO (G/MI)	0.0003	0.0003	0.0002	0.0004
NMOG:NMHC	1.0245	1.0180	1.0208	1.0162
HCHO:NMHC	0.0082	0.0077	0.0052	0.0093

\* NMHC includes methane response factor.

Average NMOG:NMHC = 1.020

Average HCHO:NMHC = 0.008

Ratio established using Phase 2 emission certification fuel.