

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-818

Relating to Certification of New Medium-Duty Motor Vehicle Engines

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 1998 model-year General Motors Corporation Otto-cycle engines are certified for use in medium-duty vehicles with a manufacturer's gross vehicle weight rating (GVWR) between 8,501 to 14,000 pounds:

Fuel Type: Gasoline

<u>Engine Family</u>	<u>Engine Displacement</u> <u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control</u> <u>Systems and Special Features</u>
WGMXH05.7582	5.7	(350)	Dual Three-Way Catalytic Converters Sequential Multiport Fuel Injection Exhaust Gas Recirculation Dual Heated Oxygen Sensors (2)
WGMXH07.4501	7.4	(454)	Dual Three-Way Catalytic Converters Sequential Multiport Fuel Injection Exhaust Gas Recirculation Dual Heated Oxygen Sensors (2)

Engine models and codes are listed on attachments.

The certification exhaust emission standards for these engine families in grams per brake horsepower-hour are:

<u>Non-Methane Hydrocarbons</u> <u>+ Nitrogen Oxides</u>	<u>Carbon</u> <u>Monoxide</u>
3.9	14.4

The certification exhaust emission values for these engine families in grams per brake horsepower-hour are:

<u>Engine Family</u>	<u>Non-Methane Hydrocarbons</u> <u>+ Nitrogen Oxides</u>	<u>Carbon</u> <u>Monoxide</u>
WGMXH05.7582	1.9	4.1
WGMXH07.4501	2.8	9.2

BE IT FURTHER RESOLVED: That the listed engine models are certified to the optional standards and test procedures applicable to incomplete and diesel medium-duty vehicles of 8,501 to 14,000 pounds GVWR pursuant to Title 13, California Code of Regulations, Section 1956.8(g).

BE IT FURTHER RESOLVED: That the listed engine models shall be subject to the in-use compliance provisions applicable to 1995 and subsequent model-year medium-duty vehicle engines set forth in Title 13, California Code of Regulations, Section 2139(c).

BE IT FURTHER RESOLVED: That the listed engine models complies with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(2.0) for the aforementioned model year.

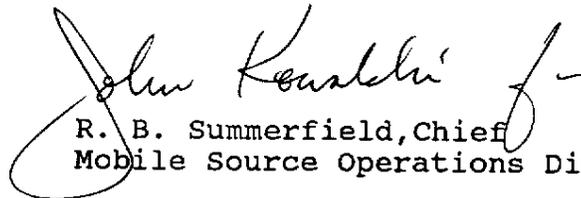
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the listed engine models comply with the "California Motor Vehicle Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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 attachments.

Executed at El Monte, California this 29<sup>th</sup> day of June 1997.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

**1998 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
INCOMPLETE MEDIUM-DUTY VEHICLE ENGINES  
(CERTIFIED USING HEAVY-DUTY OTTO-CYCLE ENGINE TEST PROCEDURES)**

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: WGMXH05.7582  
 ENGINE CONFIG: V8 VALVES/CYL: 2 DISPL: 5.7 LITERS 350 CID  
 CERT STD: TIER-1 X LEV\_\_ ULEV\_\_ ENG INTENDED SERVICE CLASS: M4\_\_ M5\_\_  
 IN-USE STDS: FULL IN-USE X ALT IN-USE\_\_ MAX RATED POWER: 255 HP @ 4600 RPM  
 ALL ENG CODES IN ENG FAMILY: CA X 49S X 50S X  
 FUEL TYPE(S): DEDICATED X FLEX-FUEL\_\_ DUAL-FUEL\_\_ BI-FUEL\_\_ GASOLINE X CNG\_\_  
 LNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EMIS TEST FUEL(S): INDO X CNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EXHAUST ECS (E.G., OC, TWC, MFI, IFI, TC, CAC): \_\_\_\_\_  
 2TWC, SFI, EGR, 2HO2S(2)  
 (USE ABBREVIATIONS PER SAE J1930 SEP91)

ENGINE MODEL (IG CODE)	RATED HP @ RPM	IGNITION SYSTEM OR ECM/PCM P/N	FUEL SYSTEM INJECTOR AND PUMP P/N	EGR VALVE P/N	CATALYTIC CONVERTER P/N
L31 (50)	255 @ 4600	16249385/ 16258745PC-OPER 16232619-ENG	PART OF INTAKE MANIFOLD ASM 17096072	25312788, 25312789	25160620; 2 USED
L31 (51)	250 @ 4200	16249385/ 16258745PC-OPER 16216045-ENG			
L31 (52)	235 @ 4000	16249385/ 16258745PC-OPER 162160437-ENG			
L31 (53)	250 @ 4600	16249385/ 16258745PC-OPER 16215998-ENG			

ISSUED: 05-15-97

REV. NO.:

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INCOMPLETE MEDIUM-DUTY VEHICLE ENGINES  
(CERTIFIED USING HEAVY-DUTY OTTO-CYCLE ENGINE TEST PROCEDURES)**

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: WGMXH05.7582  
 ENGINE CONFIG: V8 VALVES/CYL: 2 DISPL: 5.7 LITERS 350 CID  
 CERT STD: TIER-1 X LEV\_\_ ULEV\_\_ ENG INTENDED SERVICE CLASS: M4\_\_ M5\_\_  
 IN-USE STDS: FULL IN-USE X ALT IN-USE\_\_ MAX RATED POWER: 255 HP @ 4600 RPM  
 ALL ENG CODES IN ENG FAMILY: CA X 49S X 50S X  
 FUEL TYPE(S): DEDICATED X FLEX-FUEL\_\_ DUAL-FUEL\_\_ BI-FUEL\_\_ GASOLINE X CNG\_\_  
 LNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EMIS TEST FUEL(S): INDO X CNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EXHAUST ECS (E.G., OC, TWC, MFI, IFI, TC, CAC): 2TWC, SFI, EGR, 2HO2S(2)  
 (USE ABBREVIATIONS PER SAE J1930 SEP91)

ENGINE MODEL (ENG CODE)	RATED HP @ RPM	IGNITION SYSTEM OR ECM/PCM P/N	FUEL SYSTEM INJECTOR AND PUMP P/N	EGR VALVE P/N	CATALYTIC CONVERTER P/N
'31 (54)	245 @ 4200	16249385/ 16258745PC-OPER 16216001-ENG	PART OF INTAKE MANIFOLD ASM	25312788, 25312789	25160620: 2 USED
L31 (12)	250 @ 4200	16249385/ 16258745PC-OPER 16216044-ENG			

ISSUED: 05-15-97

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INCOMPLETE MEDIUM-DUTY VEHICLE ENGINES  
(CERTIFIED USING HEAVY-DUTY OTTO-CYCLE ENGINE TEST PROCEDURES)**

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: WGMXH07.4501  
 ENGINE CONFIG: V8 VALVES/CYL: 2 DISPL: 7.4 LITERS 454 CID  
 CERT STD: TIER-1 X LEV\_\_ ULEV\_\_ ENG INTENDED SERVICE CLASS: M4\_\_ M5\_\_  
 IN-USE STDS: FULL IN-USE X ALT IN-USE\_\_ MAX RATED POWER: 290 HP @ 4000 RPM  
 ALL ENG CODES IN ENG FAMILY: CA X 49S X 50S X  
 FUEL TYPE(S): DEDICATED X FLEX-FUEL\_\_ DUAL-FUEL\_\_ BI-FUEL\_\_ GASOLINE X CNG\_\_  
 LNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EMIS TEST FUEL(S): INDO X CNG\_\_ LPG\_\_ M85\_\_ M100\_\_ OTHER (SPECIFY) \_\_\_\_\_  
 EXHAUST ECS (E.G., OC, TWC, MFI, IFI, TC, CAC): \_\_\_\_\_ 2TWC, SFI, EGR, 2HO2S(2)  
 (USE ABBREVIATIONS PER SAE J1930 SEP91)

ENGINE MODEL (ENG CODE)	RATED HP @ RPM	IGNITION SYSTEM OR ECM/PCM P/N	FUEL SYSTEM INJECTOR AND PUMP P/N	EGR VALVE P/N	CATALYTIC CONVERTER P/N
L29 (50)	290 @ 4000	16214855/ 16215972PA-OPER 16216004, 16216228-ENG	17096076	17096200	25160620: 2 USED
L29 (60)		16214855/ 16215972PA-OPER 16216226-ENG			

ISSUED: 05-15-97

REV. NO.: