

State of California  
AIR RESOURCES BOARD

## EXECUTIVE ORDER A-6-605

Relating to Certification of New Heavy-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-45-3;

IT IS ORDERED AND RESOLVED: That the following 1993 model-year General Motors Corporation Otto-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 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>
PGM04.3BLAX	4.3	(262)	Oxidation Catalytic Converter Heated Oxygen Sensor Exhaust Gas Recirculation Throttle Body Fuel Injection
PGM05.7BLAX	5.7	(350)	Oxidation Catalytic Converter Oxygen Sensor Exhaust Gas Recirculation Throttle Body Fuel Injection
PGM07.4BNA3	7.4	(454)	Three-Way Catalytic Converter Oxygen Sensor Exhaust Gas Recirculation Throttle Body Fuel Injection

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>Total</u> <u>Hydrocarbons</u>	<u>Carbon</u> <u>Monoxide</u>	<u>Nitrogen</u> <u>Oxides</u>
1.1	14.4	5.0

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

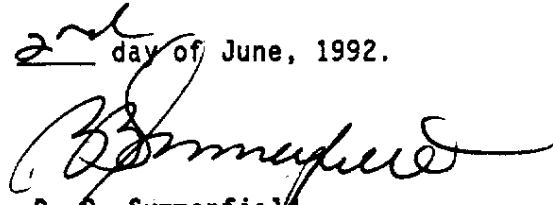
<u>Engine Family</u>	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>
PGM04.3BLAX	0.5	7.5	3.7
PGM05.7BLAX	0.6	9.0	3.4
PGM07.4BNA3	0.6	14.0	3.9

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.).

Engines 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 2nd day of June, 1992.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

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(1993)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-605

Engine Families: PGM04.3BLAX  
PGM05.7BLAX  
PGM07.4BNA3

Engine CID (Liters) - Type: 262 (4.3), 350 (5.7), 454 (7.4)

ABBREVIATIONS:

Ignition System

CA-Centrifugal Advance  
EEC-Electronic Engine Control  
EI-Electronic Ignition  
ESAC-Electronic Spark Advance Control  
VA-Vacuum Advance  
VR-Vacuum Retard  
ECU-Electronic Control Unit

Fuel System

CFI, CL, DID, DIP, EFI, MFI  
nV-nVenturi Carburetor

GM Abbreviations

A/C-Air Conditioning  
FC-Forward Control  
HD-Heavy Duty  
CID-Cubic Inch Displacement  
TBI-Throttle Body Injection  
RWD-Rear Wheel Drive  
4x2-Two Wheel Drive  
4x4-Four Wheel Drive  
6x4-Four Wheel Drive

Exhaust Emission Cont System

AIP-Air Injection Pump  
AIV-Air Injection Valve  
CL-Closed Loop  
DBC-Dual Bed Catalyst  
EGR-Exhaust Gas Recirculation  
EIC-Electronic Injection Control  
EM-Engine Modification  
OC-Oxidation Catalyst System  
O2S-Oxygen Sensor  
HO2S-Heated Oxygen Sensor  
SPL-Smoke Puff Limiter or Throttle Delay  
TOC-Trap Oxidizer, Continual  
TOP-Trap Oxidizer, Periodical  
TR-Thermal Reactor  
TWC-Three-Way Catalyst System

Special Features

CCV-Combustion Chamber Valve  
CFI-Central Fuel Injection  
DID-Diesel Injection-Direct  
DIP-Diesel Injection-Prechamber  
EFI-Electronic Fuel Injection  
IC-Intercooler/Aftercooler  
MFI-Mechanical Fuel Injection  
TC-Turbocharger

Engine: Front (all Vehicles)

Drive: See Chassis Type, all 4x2 vehicles are RWD.

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AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-605

Engine Family: PGM04.3BLAX

Exhaust Emission Control System: EGR/OC/HO2S/TBI

Liter (CID): 4.3 (262)

ENG MODEL (ENG CODE)	MAXIMUM RATED HP AT RPM	RATED TORQUE AT RPM	IGNITION SYS (ECU) MFR PART NO.	FUEL SYSTEM (TBI) MFR PART NO.	EGR VALVE MFR PART NO.	CATALYST MFR PART NO.
LB4 (1)	155 @ 4000	230 @ 2400	16169381 16169391 16169401 16169411 16169421 16169431	Rochester 17093045 17093046	17087026	25131438
LB4 (2)			16155521 16167811	17091028 17093045		

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AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-605

Engine Family: PGM07.4BNA3

Exhaust Emission Control System: EGR/TWC/O2S/TBI

Liter (CID): 7.4 (454)

ENG MODEL (ENG CODE)	MAXIMUM RATED HP AT RPM	RATED TORQUE AT RPM	IGNITION SYS (LCU) MFR PART NO.	FUEL SYSTEM (TBI) MFR PART NO.	EGR VALVE MFR PART NO.	CATALYST MFR PART NO.
L19 (1) 7.4L	230 @ 3600	385 @ 1600	16158071 16158111 16162041 16158121 16158091 16158141 16162061 16158171 16158181	Rochester 17093049	17091064	25143848 25130005 25131392 25130892 25130001
L19 (2) 7.4L			16136561	Rochester 17093050		

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HEAVY-DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-605

Engine Family: PGM05.7BLAX

Exhaust Emission Control System: EGR/OC/02S/CFI

Liter (CID): 5.7 (350)

ENG MODEL (ENG CODE)	MAXIMUM RATED HP AT RPM	RATED TORQUE AT RPM	IGNITION SYS (ECU) MFR PART NO.	FUEL SYSTEM (TBI) MFR PART NO.	EGR VALVE MFR PART NO.	CATALYST MFR PART NO.
L05 (1)	190 @ 4000	300 @ 2400	16157981 16173001 16173011 16174271 16174301 16174321 16187405 16187415 16187425 16187435 16187445 16187455 16187465	Rochester 17092041 17092198 17093033 17093034 17093190 17093176	17087185	25131438 25131442 25131444
L05 (2)			16170821 16187385	Rochester 17093035 17093176		

ISSUED: 01-10-92

REV. NO.: 001, 002, 003