

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-607

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) over 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
PGM07.0BLA5	6.0 & 7.0 (366 & 427)		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>
1.9	37.1	5.0

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

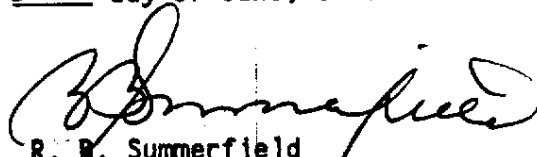
<u>Engine Family</u>	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>
PGM04.3BLAX	0.5	7.5	3.7
PGM05.7BLAX	0.6	9.0	3.4
PGM07.0BLA5	0.9	10.4	4.6
PGM07.4BNA3	0.6	14.0	3.9

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

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

Engine Families: PGM04.3BLAX
PGM05.7BLAX
PGM07.0BLA5
PGM07.4BNA3

Engine CID (Liters) - Type: 262 (4.3), 350 (5.7), 366 (6.0), 427 (7.0), 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 Injection

GM Abbreviations

A/C-Air Conditioning
FC-Forward Control Injection
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
IC-Intercooler/Aftercooler
MFI-Mechanical Fuel
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

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

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 (4)	155 @ 4000	230 @ 2400	16155521 16167811	Rochester 17091028 17093045	17087026	25131438

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HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

Engine Family: PGM05.7BLAX

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

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 (3)	190 @ 4000	300 @ 2400	16157961 16173001 16173011 16174271 16174301 16174321	Rochester 17092198 17093033	17087185	25131438 25131442 25131444
L05 (4)			16170821	Rochester 17093035		

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AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

Engine Family: PGM07.0BLA5

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

Liter (CID): 7.0 (427), 6.0 (366)

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.
LSO (1) 6.0L	210 @ 4000	325 @ 2400	16141221 16141231 16141241 16141251 16141261 16141271 16166311	Rochester 17091128	17090002	25131438
LRO (2) 7.0L	240 @ 4000	375 @ 2800	16141281 16156791 16156801 16156811 16157931 16166291 16166301	Rochester 17091129		

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HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

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 (ECU) MFR PART NO.	FUEL SYSTEM (TBI) MFR PART NO.	EGR VALVE MFR PART NO.	CATALYST MFR PART NO.
L19 (3) 7.4L	230 @ 3600	385 @ 1600	16158071 16158111 16162041 16158121 16158091 16158141 16162061 16158171 16158181	Rochester 17093049	17091064	25143848 25130005 25131392 25130892 25130001
L19 (4) 7.4L			16136561	Rochester 17093050		

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HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation

Executive Order No.: A-6-607

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 (3)	190 @ 4000	300 @ 2400	16157981	Rochester	17087185	25131438	
			16173001	17092198			25131442
			16173011	17093033			25131444
			16174271	17093190			
			16174301	17093176			
			16174321				
			16187405				
			16187415				
			16187425				
			16187435				
			16187445				
			16187455				
			16187465				
L05 (4)			16170821	Rochester			
			16187385	17093035			
				17093176			

ISSUED: 01-10-92

REV. NO.: 001, 002, 003