State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-547
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 General Motors Corporation 1992 model-year gasoline engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 8,501 to 14,000 pounds:

Engine Family	Engine Displacement Liters	(Cubic Inches)	Exhaust Emission Control Systems
NGM04.3BLA1	4.3	(262)	Oxidation Catalyst Heated Oxygen Sensor Exhaust Gas Recirculation Throttle Body Electronic Fuel Injection
NGM05.7BLA1	5.7	(350)	Oxidation Catalyst Oxygen Sensor Exhaust Gas Recirculation Throttle Body Electronic Fuel Injection
NGM07.4BNA5	7.4	(454)	Three-Way Catalyst Oxygen Sensor Exhaust Gas Recirculation Throttle Body Electronic Fuel Injection

Engine models and codes are listed on attachments.

The following are the emission standards for these engine families:

Hydrocarbons gm/bhp-hr	Carbon Monoxide gm/bhp-hr	Nitrogen Oxides gm/bhp-hr
1.1	14.4	5.0

The following are the certification emission values of these engine families:

Engine Family	Hydrocarbons gm/bhp-hr	Carbon Monoxide gm/bhp-hr	Nitrogen Oxides gm/bhp-hr
NGM04.3BLA1	0.5	7.5	3.7
NGM05.7BLA1	0.5	9.1	3.5
NGM07.4BNA5	0.6	14.0	3.9

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty provisions (California Health and Safety Code Section 43205.5).

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 22 day of March, 1991.

Raphael Sasnowitz

for R. B. Summerfield
Assistant Division Chief
Mobile Source Division

(FOR CARB USE ONLY)

(1992)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-547

Engine Families: NGM04.3BLA1
NGM05.7BLA1
NGM07.4BNA5

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.

ISSUED: 12-17-90 REV. NO.:

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AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY DUTY GASOLINE VEHICLES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-547

Engine Families:		NGM04.3BLA1	NGM05.7BLA1	NGM07.4BWA5
Vehicle Models (Series)		Engine CID Values Appear Below		
Forward Control - G Models				
Hi-Cube Van/Magnavan	- G30	262	350	454
Cutaway Van/Vandura Spl	- G30	262	350	454
Van/Vandura	- G30		350	
Sportvan/Rally Wagon	- G30		350	454
Forward Control - P Models				
Forward Control Chassis	- P20		350	
Step-Van/Value Van	- P20		350	
Forward Control Chassis	- P30	262	350	454
Motor Home Chassis	- P30			454
Step-Van/Value Van	- P30	262	350	454
Conventional Cab & Chassis				
C6D042				
C7D042, C7D064				
School Bus				
B6P042				
S7T042				
Forward Control Chassis				
P4T042		262		
P6T042				
Pickup				
CK20		262	350	454
CK30			350	454
Suburban				
CK20			350	454

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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-6-547

Engine Family: NGM04.3BLA1 Exhaust Emission Control System: EGR/OC/HO2S (CFI)

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	16158021 16158031 16158041 16158051 16158061 16162031 16167151 16167161 16167171 16167181 16167191 16167201	Rochester 17091003 17091034	17087026	25103516
LB4 (2)			16155521 16155531 16167811	17091028 17091033		

ISSUED: 12-17-90 REV. NO.: 001, 003, 004

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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-6-547

Engine Family: NGM05.7BLA1 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	16157941 16157961 16157991 16162081 16162101 16155581 16166331 16166351	Rochester 17091043 17092041 17092147	17087185	25103516
L05 (2)			16157601	Rochester 17091044		

ISSUED: 12-17-90 REV. NO.: 001, 003

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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-6-547

Engine Family: NGM07.4BNA5 Exhaust Emission Control System: EGR/TWC/O2S (CFI)

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 (1) 7.4L	230 @ 3600	385 @ 1600	16158071 16158111 16162041 16158121 16158091 16158141 16162061 16158171 16158181	Rochester 17091045	17091064	25128940
L19 (2) 7.4L			16136561	Rochester 17091046		

ISSUED: 12-17-90 REV. NO.: 001