State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-518
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 1991 model-year gasoline engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating of 8501 to 14,000 pounds:

Engine Family	Engine Displacement Liters	(Cubic Inches)	Exhaust Emission Control Systems
MGM04.3BLA2	4.3	(262)	Oxidation Catalyst Oxygen Sensor Exhaust Gas Recirculation Throttle Body Electronic Fuel Injection
MGM05.7BLA2	5.7	(350)	Oxidation Catalyst Oxygen Sensor Exhaust Gas Recirculation Throttle Body Electronic Fuel Injection
MGM07.4BNA6	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
MGM04.3BLA2	0.6	11.9	4.8
MGM05.7BLA2	0.4	8.4	3.5
MGM07.4BNA6	0.6	5.4	4.7

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 24 day of January, 1990.

K. D. Drachand, Chief
Mobile Source Division

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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY DUTY GASOLINE ENGINES

LESS THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-518

Engine Families: MGM04.3BLA2
MGM05.7BLA2
MGM07.4BNA6

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
OS-Oxygen Sensor
HOS-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 (Page 2), all 4x2 vehicles are RWD.

ISSUED: 12-18-89 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-6-518

Engine Families:		MGM04.3BLA2	MGM05.7BLA2	MGM07.4NBA6
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	454
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				
C5D042				
C6D042				
C7D042, C7D064				
School Bus				
B6P042				
S7T042				
Forward Control Chassis				
P4T042		262		
P6T042				
Pickup				
CK20		262		454
R20				454
CKRV30			350	454
CKRV20			350	
Suburban				
R20			350	454
V20			350	

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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-6-518

Engine Family: MGM04.3BLA2 Exhaust Emission Control System: EGR/OC/OS (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	16143021 16154381 16154391 16154401 16154411 16158191 16161021	Rochester 17091033 17091034	17087026	25103516
LB4 (2)			16155251 16155261	17091028 17091033		

ISSUED: 12-18-89 REV. NO.: 001
002
006
007
009

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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-6-518

Engine Family: MGM05.7BLA2 Exhaust Emission Control System: EGR/OC/OS (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	16154421 16154441 16154461 16163201 16163221 16163241 16160951 16160971 16160991	Rochester 17091043 17091062	17087185	25103516*
L05 (2)			16136311 16164371	Rochester 17091044		

* Converter welded into tail pipe, assembly P/N 25127585 R/V.

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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-6-518

Engine Family: MGM07.4BNA6 Exhaust Emission Control System: EGR/TWC/OS (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	16154241 16154261 16154281 16154301 16154311 16154331 16154351 16154371	Rochester 17091045	17091064	25128940*
L19 (2) 7.4L			16136561	Rochester 17091046		

* Converter welded into tail pipe, assembly P/N: 25128942 R/V
25128944 G, R/V
25128946 C/K
25128940 P

ISSUED: 12-18-89 REV. NO.: 001, 002