State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-519
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 over 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
MGM07.0BLA8	6.0/7.0	(366/427)	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
1.9	37.1	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
MGM07.0BLA8	0.9	10.4	4.6
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 24th 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

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

Engine Families: MGM04.3BLA2
MGM05.7BLA2
MGM07.0BLA8
MGM07.4BNA6

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

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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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY DUTY GASOLINE VEHICLES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

Engine Families: MGM07.0BLA8

Vehicle Models (Series)	Engine CID Values Appear Below
Forward Control - G Models	
Hi-Cube Van/Magnavan - G30	
Cutaway Van/Vandura Spl - G30	
Van/Vandura - G30	
Sportvan/Rally Wagon - G30	
Forward Control - P Models	
Forward Control Chassis - P20	
Step-Van/Value Van - P20	
Forward Control Chassis - P30	
Motor Home Chassis - P30	
Step-Van/Value Van - P30	
Conventional Cab & Chassis	
C5D042	366
C6D042	366
C7D042, C7D064	366, 427
School Bus	
B6P042	366
S7T042	366
B7P042	366, 427
Forward Control Chassis	
P4T042	
P6T042	366, 427
Pickup	
CK20CC	
R20	
CKRV30	
Suburban	
R20	

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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

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 (3)	190 @ 4000	300 @ 2400	16154421 16154441 16154461 16163201 16163221 16163241 16160951 16160971 16160991	Rochester 17091043 17091062	17087185	25103516
L05 (4)			16136311 16164371	Rochester 17091044		

ISSUED: 12-18-89 REV. NO.: 001, 007, 008, 010

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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-6-519

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 (4)	155 @ 4000	230 @ 2400	16155251 16155261	Rochester 17091028 17091033	17087026	25103516

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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

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 (3)	190 @ 4000	300 @ 2400	16154421 16154431 16154441 16154451 16154461 16154471	Rochester 17091043 17091062	17087185	25103516
L05 (4)			16136311	Rochester 17091044		

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

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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

Engine Family: MGM07.0BLA8 Exhaust Emission Control System: EGR/OC/OS (CFI)

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.
LS0 (1) 6.0L	210 @ 4000	325 @ 2400	16141221 16141231 16141241 16141251 16141261 16141271	Rochester 17090004 17091128	17090002	25103516
LR0 (2) 7.0L	240 @ 4000	375 @ 2800	16141291 16141301 16141311 16141321 16141281 16156781 16156791 16156801 16156811 16157931	Rochester 17090005 17091129		

ISSUED: 12-18-89 REV. NO.: 003, 005

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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 16158731 16154301 16154311 16154331 16158741 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, 005

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(1991)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY GASOLINE ENGINES

GREATER THAN 14,000 GVWR

Manufacturer: General Motors Corporation Executive Order No.: A-6-519

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 (3) 7.4L	230 @ 3600	385 @ 1600	16154241 16154261 16158731 16154301 16154311 16154331 16158741 16154371	Rochester 17091045	17091064	25128940*
L19 (4) 7.4L			16136561	Rochester 17091046		

* Converter welded into tail pipe, assembly P/N: 25128946 C/K
25128940 P

ISSUED: 12-18-89 REV. NO.: 001, 002, 003, 005