

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-399-1
Relating to Certification of New Motor Vehicles

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1988 model-year General Motors Corporation exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
01G2.0V5XAG7	2.0 (121)	Exhaust Gas Recirculation Three-Way Catalyst Oxidation Catalyst Oxygen Sensor (Central Fuel Injection) (On-Board Diagnostics)

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per mile</u>
0.39	7.0	0.7

The following are the certification emission values for this engine family:

<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
0.19	1.8	0.5

BE IT FURTHER RESOLVED: That the listed models were certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Years..." (Title 13, California Administrative Code, Section 1968) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2035 et seq.).

Vehicles 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 attachment.

Executed at El Monte, California this 13th day of May, 1987.


K. D. Drachand, Chief
Mobile Source Division

17-J1G2.OV5XAG7-1A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation

Executive Order No.: A-6-399-1

Engine Family: J1G2.OV5XAG7

Evaporative Families: JAO-1E (J-Body)*
JBO-1G (L-Body)

Engine Displacement Liters (Cubic Inches) - Type: 2.0 (121) - I4

Exhaust Emission Control System (Special Features): EGR, TWC, OS (CFI, OBD)

ABBREVIATIONS:

Ignition System

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

Fuel System

CFI, CL, DID, DIP, EFI, MFI
nV-nVenturi Carburetor
VV-Variable Venturi

GM Abbreviations

A/C-Air Conditioning
CID Cubic Inch Displacement
ETW-Equivalent Test Weight
FC Forward Control
HD-Heavy Duty
RI-Rail & Injector
RWD-Rear Wheel Drive
TBI-Throttle Body Injection
4x2-Two Wheel Drive
4x4-Four Wheel Drive
6x4-Four Wheel Drive

Exhaust Emission Control System

AIP-Air Injection Pump
AIV-Air Injection Valve
EGR-Exhaust Gas Recirculation
EIC-Electronic Injection Control
EM-Engine Modification
DBC-Dual Bed Catalyst
HOS-Heated Oxygen Sensor
OC-Oxidation Catalyst
OS-Oxygen Sensor
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trip Oxidizer, Continual
TOP-Trip Oxidizer, Periodical
TR-Thermal Reactor
TWC-Three-Way Catalyst
WUOC-Warm-up Oxidation Catalyst
WUTWC-Warm-up Three-Way Catalyst

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
OBD-On Board Diagnostics
TC-Turbocharger

* Includes L-Body after RC J1-019.

ISSUED: 11-13-86

REV. NO.: 002

0228T/22T

17-J1G2.OV5XAG7-2A

(For CARB Use Only)
(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
GASOLINE-FUELED PASSENGER CARS

Executive Order No. A-6-399-1

VEHICLE MODELS:

1 1 U 2 7 (EXAMPLE)

Digit 1
Selling Division

1-Chevrolet
2-Pontiac
3-Oldsmobile
4-Buick
6-Cadillac

Digit 2 - Body Designation

A-Celebrity, 6000, Cutlass Ciera, Cutlass Cruiser, Century
B-Caprice, Safari Wagon, Custom Cruiser, LeSabre/Electra Wagon
C-Ninety-Eight Regency, Electra, DeVille, Fleetwood, Limousine
D-Brougham
E-Toronado, Riviera, Eldorado
F-Camaro, Firebird, Trans Am, Formula
G-Monte Carlo, El Camino, Caballero
H-Bonneville, Delta 88 Royale, LeSabre
J-Cavalier, Sunbird, Firenza, Skyhawk, Cimarron
K-Seville
L-Corsica, Beretta
N-Grand Am, Calais, Somerset/Skylark
P-Fiero
T-Lemans
V-Allante
W-Grand Prix, Regal, Cutlass Supreme
Y-Corvette
Z-Commercial Chassis

Digit 3
Trim Level

Digits 4 & 5 - Body Style

07-2Dr Sport Coupe	47-2Dr Hardtop Coupe
08-2Dr Hatchback Coupe	57-2Dr Hardtop Coupe
11-2Dr Notchback Coupe/Sedan	67-2Dr Convertible Coupe
19-4Dr Sedan	68-4Dr Hatchback Sedan
23-4Dr Auxiliary Seat Sedan	69-4Dr (Notchback) Sedan
27-2Dr (Notchback) Coupe	77-2Dr Hatchback Coupe
33-4Dr Auxiliary Seat Sedan	80-2Dr Sedan Pickup
35-4Dr Station Wagon	87-2Dr Hatchback Coupe
37-2Dr Hardtop Coupe	90-Commercial Chassis
	97-2Dr Hardtop Coupe

Engine: Front

Drive: FWD

ISSUED: 11-13-86

REV. NO.: 002

0228T/22T

17-J1G2.OV5XAG7-2.9A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS___ MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETH	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.		
1	1JC37	M5	2750	16066482	17088026,	17087145	25101872,		
	1JC35				17087400		25103456		
	1JC69				(Bar Code 8026)				
	1JE37								
	1JE69								
	3JC27								
	3JC69								
	3JD27								
	3JD69								
	4JS27								
	4JS69								
	1JE35				2875				
	3JC35								
	4JS35								
2	3JD27		2625						
	4JS27								
	1JC35		2750					2875	
	1JC37								
	1JC69								
	1JE35								
	1JE37								
	1JE69								
	3JC27								
	3JC69								
	3JD69								
	4JS69								
	3JC35		2875						
	4JS35								

1A,2A

16083422

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 002

REV. NO.: 003
004

0228T/22T

17-J1G2.OV5XAG7-3A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS MEDIUM DUTY VEHICLES GAS X DIESEL

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETH	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
3	1JC37	M5	2750	16075551	17087401	17087145	25101872, 25103456
	1JC35						
	1JC69						
	1JE37						
	1JE69						
	3JC27						
	3JC69						
	3JD27						
	3JD69						
	4JS27						
	1JE35		2875				
	3JC35						
	1LT69			3000			16075541
	1LV37						
4	3JC27		2625	16075551		25101872, 25103456	
	4JS27						
	1JC35		2750				
	1JC37						
	1JC69						
	1JE35						
	1JE37						
	1JE69						
	3JC35						
	3JC69						
	3JD27						
	3JD69						
	1LT69		3000	16075541		25102803, 25103894	
	1LV37						

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 11-13-86

REV. NO.: 001
002

0228T/22T

17-J1G2.OV5XAG7-3.1A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS MEDIUM DUTY VEHICLES GAS X DIESEL

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
5	1LT69 1LV37	M5	3000	16080152	17088026, 17087400 (Bar Code 8026)	17087145	25102803, 25103894
6	1LT69 1LV37						
5A,6A				16083412			

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 002

REV. NO.: 003
004

0228T/22T

17-J1G2.OV5XAG7-4A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS___ MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETH	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
11	1JC37 1JC69 1JE37 1JE69 3JC27 3JD27 4JS27 1JC35 1JE35 3JC35 3JC69 3JD69 4JS35 4JS69	A3	2750 2875	16071361	17087400	17087145	25101872, 25103456
12	1JC37 1JC35 1JC69 1JE35 1JE37 1JE69 3JC27 3JC69 3JD27 3JD69 4JS27 4JS69 3JC35 4JS35	A3	2750 2875				

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 11-13-86

REV. NO.: 002

0228T/22T

17-J1G2.0V5XAG7-4.1A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS MEDIUM DUTY VEHICLES GAS X DIESEL

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
11A	1JC37 1JC69 1JE37 1JE69 3JC27 3JD27 4JS27 1JC35 1JE35 3JC35 3JC69 3JD69 4JS35 4JS69	A3	2750 2875	16066462	17088026	17087145	25101872, 25103456
12A	1JC37 1JC35 1JC69 1JE35 1JE37 1JE69 3JC27 3JC69 3JD27 3JD69 4JS27 4JS69 3JC35 4JS35	A3	2750 2875				

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 002

REV. NO.:

0228T/22T

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS X LIGHT DUTY TRUCKS MEDIUM DUTY VEHICLES GAS X DIESEL

Liters (CID): 2.0 (121)

Type: I4

Executive Order No. A-6-399-1

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
13	1LT69 1LV37	A3	3000	16071391	17087400	17087145	25102803, 25103894
13A	1LT69 1LV37			16066442	17088026, 17087400 (Bar Code 8026)		
14	1LT69 1LV37			16071391	17087400		
14A	1LT69 1LV37			16066442	17088026, 17087400 (Bar Code 8026)		

Comments: See page one for abbreviations and family information. Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

ISSUED: 11-13-86

REV. NO.: 002

004

0228T/22T