State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-401-1
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:

Engine Family	Displacement Liters (Cubic Inches)	Exhaust Emission Control Systems (Special Features)
J162.8W8XRZ2	2.8 (173)	Air Injection-Pump (Some Models) Exhaust Gas Recirculation Three-Way Catalyst Oxygen Sensor (Electronic Fuel Injection) (On-Board Diagnostics-Some Models)

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

The following are the emission standards for this engine family:

Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per mile
0.39	7.0	0.7

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

Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per Mile
0.31	2.6	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 in Attachment A also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s] ..." (Title 13, California Administrative Code, Section 1968) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed in Attachment B have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s] ..." (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 14th day of May, 1987.

K. D. Drachand, Chief
Mobile Source Division

17-J1G2.8W8XRZ2-1A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation

Executive Order No.: A-6-401-1

Engine Family: J1G2.8W8XRZ2

Evaporative Family: JBO-1L, JAO-1B

Engine Displacement Liters (Cubic Inches) - Type: 2.8 (173) - V6

Exhaust Emission Control System (Special Features): EGR-TWC-OS (EFI)(OBD)(1)
AIP-EGR-TWC-OS (EFI)(OBD)(1)(2)

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-Trap Oxidizer, Continual
TOP-Trap 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

(1) No OBD for F, P, L and W car lines.
(2) AIP applies only to A, W and F cars with manual transmissions.

ISSUED: 12-02-86 REV. NO.: 003
004

0230T/25T

17-J1G2.8W8XRZ2-2A

(For CARB Use Only)
(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
GASOLINE-FUELED PASSENGER CARS

Executive Order No. A-6-401-1

VEHICLE MODELS: 1 J 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
08-2Dr Hatchback Coupe
11-2Dr Notchback Coupe/Sedan
19-4Dr Sedan
23-4Dr Auxiliary Seat Sedan
27-2Dr (Notchback) Coupe
33-4Dr Auxiliary Seat Sedan
35-4Dr Station Wagon
37-2Dr Hardtop Coupe
47-2Dr Hardtop Coupe
57-2Dr Hardtop Coupe
67-2Dr Convertible Coupe
68-4Dr Hatchback Sedan
69-4Dr (Notchback) Sedan
77-2Dr Hatchback Coupe
80-2Dr Sedan Pickup
87-2Dr Hatchback Coupe
90-Commercial Chassis
97-2Dr Hardtop Coupe

Engine: Front(1)(2), Rear(3) Drive: FWD(1), RWD(2)

(1) Front engine/front wheel drive for A, J, L and W Cars.
(2) Front engine/rear wheel drive for F cars.
(3) Rear engine/rear wheel drive for P cars.

ISSUED: 12-02-86 REV. NO.: 004

0230T/25T

17-J1G2.8W8XRZ2-3A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
51	1AW27	A-3	3250	16072761	17087154,	17087106	25101346,
	1AW19				17087247		25104019
	2AF19						
	2AG19						
	2AE19						
	3AJ19			16072771			
	3AM19						
	3AJ37						
	3AM37						
	4AH19						
	4AL19						
	4AH37						
	4AL37						
	4AH27						
	4AL27						
51B	1AW27	A-3	3250	16081321	17087154,	17087106	25101346,
	1AW19				17087247		25104019
	2AF19						
	2AE19						
	2AG19						
	3AJ19			16081331			
	3AM19						
	3AJ37						
	3AM37						
	4AH19						
	4AL19						
	4AH37						
	4AL37						
	4AH27						
	4AL27						

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: 12-02-86 REV. NO.: 001, 003, 004, 007, 010

17-J1G2.8W8XRZ2-3.1A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
52	1AW27 1AW19 3AJ19 3AM19 3AJ37 3AM37 4AH19 4AL19 4AH37 4AL37 4AH27 4AL27	A-4	3250	16072841 16072851	17087154, 17087247	17087106	25101346, 25104019
3	1AW27 1AW19 3AJ19 3AM19 3AJ37 3AM37 4AH19 4AL19 4AH37 4AL37 4AH27 4AL27	A-4	3250	16081861 16081871	17087154, 17087247	17087106	25101346, 25104019
53	1AW27 1AW19 2AE19	M-5	3125 3250	16072871	17087154, 17087247	17087105	25101346, 25104019
53B	1AW27 1AW19 2AE19	M-5	3125 3250	16081891	17087154, 17087247	17087105	25101346, 25104019

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.

17-J1G2.8W8XRZ2-3.2A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
51C	1AW27	A-3	3250	16086911	17087154,	17087106	25101346,
	1AW19				17087247		25104019
	2AF19						
	2AE19						
	2AG19						
	3AJ19			16086921			
	3AM19						
	3AJ37						
	3AM37						
	4AH19						
	4AL19						
	4AH37						
	4AL37						
	4AH27						
	4AL27						
52C	1AW27	A-4	3250	16086951	17087154,	17087106	25101346,
	1AW19				17087247		25104019
	3AJ19			16086961			
	3AM19						
	3AJ37						
	3AM37						
	4AH19						
	4AL19						
	4AH37						
	4AL37						
	4AH27						
	4AL27						
53C	1AW27	M-5	3125	16086981	17087154,	17087105	25101346,
	1AW19		3250		17087247		25104019
	2AE19						

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.

JED: 011 REV. NO.:

0230T/25T

ATTACHMENT A

17-J1G2.8H8XRZ2-4A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
62	2AF19	A-4	3375	16072941	17087154, 17087247	17087106	25101346, 25104019
	2AG19						
	2AE19						
	2AH19						
	1AW35						
	2AF35		3500				
	2AG35						
	2AE35						
	3AJ35			16072951			
	3AM35						
	4AH35		3375				
	4AL35						
62B	2AF19	A-4	3375	16081921, 16082141	17087154, 17087247	17087106	25101346, 25104019
	2AG19						
	2AE19						
	2AH19						
	1AW35						
	2AF35		3500				
	2AG35						
	2AE35						
	3AJ35			16081931			
	3AM35						
	4AH35		3375				
	4AL35						
63	2AE35	M-5	3500	16072971	17087154, 17087247	17087105	25101346, 25104019
	2AH19		3375				
	1AW35						

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: 06-18-87 REV. NO.: 003, 004, 006, 007

0230T/25T

ATTACHMENT A

17-J1G2.8W8XRZ2-4.1A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
63B	2AE35 2AH19 1AW35	M-5	3500 3375	16081951	17087154, 17087247	17087105	25101346, 25104019
81	6JG69	A-3	3125	16073071	17087154, 17087247	17087106	25102485, 25104025
81B	6JG69	A-3	3125	16082161	17087154, 17087247	17087106	25102485, 25104025
82	1JF37 1JF67	A-3	3000 3125	16073091	17087154, 17087247	17087106	25101350, 25104027
82B	1JF37 1JF67	A-3	3000 3125	16082161	17087154, 17087247	17087106	25101350, 25104027
83	6JG69 1JC35	M-5	3000	16073111	17087154, 17087247	17087105	25102485, 25104025
83B	6JG69 1JC35	M-5	3000	16082201	17087154, 17087247	17087105	25102485, 25104025
84	1JF37 1JF67	M-5	3000	16073131	17087154, 17087247	17087105	25101350, 25104027
84B	1JF37 1JF67	M-5	3000	16082201	17087154, 17087247	17087105	25101350, 25104027
85	1JC35	A-3	3000	16080191	17087154, 17087247	17087106	25102485, 25104025

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: 007 REV. NO.: 009
011
013

0230T/25T

17-J1G2.8W8XRZ2-4.2A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
62C	2AF19	A-4	3375	16087011,	17087154,	17087106	25101346,
	2AG19			16087061	17087247		25104019
	2AE19						
	2AH19						
	1AW35						
	2AF35		3500				
	2AG35						
	2AE35						
	3AJ35			16087021			
	3AM35						
	4AH35		3375				
	4AL35						
63C	2AE35	M-5	3500	16087041	17087154,	17087105	25101346,
	2AH19		3375		17087247		25104019
	1AW35						

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: 011 REV. NO.:

30T/25T

17-J1G2.8W8XRZ2-5A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (No OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
64	2WJ37 2WK37 3WH47 3WR47 4WJ57 4WB57 4WD57 2WP37 3WS47 4WN57	A-4	3375 3500	16052771	17087247	17087106	25102500, 25104031
64B	2WJ37 2WK37 3WH47 3WR47 4WJ57 4WB57 4WD57 2WP37 3WS47 4WN57	A-4	3375 3500	16082541	17087247	17087106	25102500, 25104031
65	2WJ37 2WK37 2WP37 3WH47 3WS47 3WR47	M-5	3375	16052751	17087247	17087105	25102500, 25104031

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 listedd, the lower weight will be used for testing.

ISSUED: 12-02-86 REV. NO.: 003 004 006 007

17-J1G2.8W8XRZ2-5.1A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (No OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
65B	2WJ37 2WK37 2WP37 3WH47 3WS47 3WR47	M-5	3375	16082531	17087247	17087105	25102500, 25104031
71	1LV37 1LT69	A-3	3125	16073011	17087154, 17087247	17087106	25102804, 25103928
72	1LV37 1LT69	A-3	3125	16072991	17087154, 17087247	17087106	25102804, 25103928
72B	1LV37 1LT69	A-3	3125	16082221	17087154, 17087247	17087106	25102804, 25103928
73	1LV37 1LT69	M-5	3125 3000	16073031	17087154, 17087247	17087105	25102804, 25103928
74	1LV37 1LT69	M-5	3125	16073051	17087154, 17087247	17087105	25102804, 25103928
74B	1LV37 1LT69	M-5	3125	16082241	17087154, 17087247	17087105	25102804, 25103928

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: 007 REV. NO.:

30T/25T

17-J1G2.8W8XRZ2-5.2A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (No OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
64C	2WJ37 2WK37 3WH47 3WR47 4WJ57 4WB57 4WD57 2WP37 3WS47 4WN57	A-4	3375 3500	16087151	17087247	17087106	25102500, 25104031
65C	2WJ37 2WK37 2WP37 3WH47 3WS47 3WR47	M-5	3375	16087141	17087247	17087105	25102500, 25104031
72C	1LV37 1LT69	A-3	3125	16087091	17087154, 17087247	17087106	25102804, 25103928
74C	1LV37 1LT69	M-5	3125	16087111	17087154, 17087247	17087105	25102804, 25103928

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: 011 REV. NO.:

0230T/25T

17-J1G2.8W8XRZ2-6A

(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): 2.8 (173) Type: V6 Executive Order No. A-6-401-1 (No OBD)

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (EFI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
91	1FP87	A-4	3375	16052981	17085039	17085913	25101348, 25104023
91A				16079901, 16087171			
92	2FS87	A-4	3500	16053401	17085039	17085913	25101348, 25104023
92A				16079911, 16087181			
[illegible]	1FP87	M-5	3375	16053011	17085039	17085914	25101348, 25104023
94	2FS87	M-5	3500	16053431	17085039	17085914	25101348, 25104023
97	2PF37 2PE37 2PG97	A-3	3125 3250	16074322, 16083402	17085038	17085897	25101356, 25104029
98	2PF37 2PE37 2PG97	M-5	3125 3250	16083392	17085038	17085897	25101356, 25104029

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: 12-02-86 REV. NO.: 002 012
003
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0230T/25T