

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-412
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 light-duty trucks:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
J3G2.8T5XA55	2.8 (173)	Air Injection - Pump Exhaust Gas Recirculation Three-Way Catalyst Oxygen Sensor (Electronic 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>Loaded Vehicle Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per mile</u>
0-3750	0.39	9.0	1.0
3751-5750	0.50	9.0	1.0

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

<u>Loaded Vehicle Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
0-3750	0.23	5.8	0.4
3751-5750	0.19	4.2	0.6

BE IT FURTHER RESOLVED: That the listed models in the 0-3750 loaded vehicle weight class 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 listed vehicle models 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 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 2nd day of March, 1987.



K. D. Drachand, Chief
Mobile Source Division

17-J3G2.8T5XAS5-1A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation Executive Order No.: A-6-412
Engine Family: J3G2.8T5XAS5 Evaporative Family: JBO-3C
Engine Displacement Liters (Cubic Inches) - Type: 2.8 (173)
Exhaust Emission Control System (Special Features): AIP/EGR/OS/TWC (EFI/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

CI, CL, DID, DIP, EFI, MFI
NV-nVenturi Carburetor
VV-Variable Venturi

Other 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

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REV. NO.:

0246T

17-J3G2.8T5XAS5-2A

(For CARB Use Only)
(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
LIGHT DUTY TRUCKS AND MEDIUM DUTY VEHICLES

Executive Order No. A-6-412

VEHICLE MODELS:

C C 1 0 7 0 3 + E 6 3 (EXAMPLE)

Digit 1
Selling Division

C-Chevrolet
T-GMC Truck

Digit 2
Chassis Type

C-Conventional 4x2
G-Forward Control 4x2
(Body Frame Integral)
K-Conventional 4x4
M-Forward Control 4x2
(Body Frame Integral)
P-Forward Control 4x2
(Conventional)
R-Conventional 4x2
-S10/15 4x2
T-S10/15 4x4
V-Conventional 4x4

Digit 3
Series/GVWR Range

1-3400 to 7300 lbs
2-6400 to 8600 lbs
3-7400 to 14500 lbs

Digits 4 & 5
CA Dimension/Model Type

05-Blazer/Jimmy, Step-Van/
Value Van
06-S10/15
07-42"/Pickup, Chassis-Cab
08-FC or Motor Home Chassis,
Step-Van/Value Van
09-56"/Suburban, Chassis-
Cab, Pickup
10-60" FC Chassis, Chevy
Van/Vandura, Sportvan/
Rally, Chassis-Cab,
Step-Van/Value Van
11-Motor Home Chassis
13-Chevy Van/Vandura,
Sportvan/Rally, Cutaway
Van/Vandura Special,
Hi-Cube Van/Magnavan
14-84"/FC or Motor Home,
Chassis, Chassis-Cab,
Step-Van/Value Van
16-Cutaway Van/Vandura
Special, Hi-Cube Van/
Magnavan
18-Motor Home Chassis

Digits 6 & 7
Cab or Body Style

03-Conventional Cab
(S10/15, C-K, R-V
Models)
-Cutaway Van/Vandura
Special, Hi-Cube Van/
Magnavan (G Models)
05-Chevy Van/Vandura
06-Suburban/Sportvan/
Rally with Panel Rear
Doors
16-Blazer/Jimmy
32-Motor Home Chassis
42-Forward Control
Chassis, Step-Van/
Value Van
43-Bonus Cab, Crew Cab
53-Extended Cab
(S10/15 Models)

Digits 8, 9 & 10
Body Ordering Code

ZW9-Base Body
C6P-HD Chassis; 8600 lb GVWR
C7C-HD Chassis; 10500 lb GVWR
C7E-HD Chassis; 11000 lb GVWR
E31-Hi-Cube Van (10' Steel 96" Wide)
E32-Step-Van/Value Van (Steel)
E33-Step-Van/Value Van (Aluminum)

E34-Hi-Cube Van (10' Steel 82" Wide)
E36-Hi-Cube Van/Magnavan (10' Aluminum)
E37-Utility Box (Aluminum)
E38-Hi-Cube Van/Magnavan (12' Steel)
E39-Hi-Cube Van/Magnavan (12' Aluminum)
E62-Stepside/Fenderside Pickup
E63-Fleetwide/Wideside Pickup

Engine Location: Front (All Vehicles)
Drive Axle Location: See Chassis Type; All 4x2 Vehicles are RWD

ISSUED: 01-27-87

REV. NO.:

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17-J3G2.8T5XAS5-3A

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS___ LIGHT DUTY TRUCKS X MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 2.8 (173)

Type: V-6

Executive Order No. A-6-412

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
21	CS10603+E63 CS10803+E63 CS10653+E63 CS10516	M4	3125 3250 3250 3500	16069171	17087087	17086720	26103262
22	CS10603+E63 CS10803+E63 CS10653+E63 CS10516		3125 3250 3375 3625				
23	CT10603+E63 CT10803+E63 CT10653+E63 CT10516		3625 3750 3750 4000	16069201A, 16069201	17087088		
24	CT10603+E63 CT10803+E63 CT10653+E63 CT10516		3625 3750 3750 4000				
25	CS10603+E63 CS10803+E63 CS10653+E63	M5	3125 3250 3250	16069231A, 16069231	17087087		

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: 01-27-87

REV. NO.: 001

0246T

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS___ LIGHT DUTY TRUCKS X MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 2.8 (173)

Type: V-6

Executive Order No. A-6-412

ENG CODE	VEH MODELS	TRANS TYPE	ETH	IGN SYSTEM	FUEL SYSTEM	EGR VALVE PART NO.	CATALYST PART NO.
				(ECU) PART NO.	(TBI) PART NO.		
26	CS10603+E63	M5	3250	16069231A,	17087087	17086720	25103262
	CS10803+E63		3250	16069231			
	CS10653+E63		3375				
27	CS10516		3500	16069241A,	17087087,		
	CT10603+E63		3625	16069241	17087088		
	CT10803+E63		3625				
	CT10653+E63		3875				
	CT10516		3875				
28	CS10516		3625				
	CT10603+E63		3625				
	CT10803+E63		3750				
	CT10653+E63		3875				
	CT10516		4000				
29	CS10603+E63	A3	3125	16069151A,	17087086		
	CS10803+E63		3250	16069151			
	CS10653+E63		3250				
	CS10516		3625				
30	CS10603+E63		3250				
	CS10803+E63		3250				
	CS10653+E63		3375				
	CS10516		3625				

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.

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0246T/25T

(For CARB Use Only)

(1988)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS___ LIGHT DUTY TRUCKS X MEDIUM DUTY VEHICLES___ GAS X DIESEL___

Liters (CID): 2.8 (173)

Type: V-6

Executive Order No. A-6-412

ENG CODE	VEH MODELS	TRANS TYPE	ETH	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
31	CS10603+E63 CS10803+E63 CS10653+E63 CS10516	A4	3250 3250 3375 3625	16069271A, 16069271	17087086, 17087087	17086720	25103262
32	CS10603+E63 CS10803+E63 CS10653+E63 CS10516		3250 3375 3375 3625				
33	CT10603+E63 CT10803+E63 CT10653+E63 CT10516		3625 3750 3875 4000	16069261A, 16069261	17087088		
34	CT10603+E63 CT10803+E63 CT10653+E63 CT10516		3750 3750 3875 4000				
35	CS10803+ZW9		3875	16069191A, 16069191	17087086, 17087087		
36	CS10803+ZW9		3875				

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.

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002
003

0246T/25T