

Ed. Book

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-441
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 1989 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</u> <u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems</u> <u>(Special Features)</u>
K3G2.5T5TEGO	2.5	(151)	Exhaust Gas Recirculation Three-Way 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>Loaded Vehicle</u> <u>Weight(lbs.)</u>	<u>Hydrocarbons</u> <u>(Grams per Mile)</u>	<u>Carbon Monoxide</u> <u>(Grams per Mile)</u>	<u>Nitrogen Oxides</u> <u>(Grams per Mile)</u>
0-3750	0.39	9.0	1.0

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

<u>Loaded Vehicle</u> <u>Weight(lbs.)</u>	<u>Hydrocarbons</u> <u>(Grams per Mile)</u>	<u>Carbon Monoxide</u> <u>(Grams per Mile)</u>	<u>Nitrogen Oxides</u> <u>(Grams per Mile)</u>
0-3750	0.26	7.6	0.6

BE IT FURTHER RESOLVED: That the listed models are 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 vehicle manufacturer is certifying to the optional NOx standard by providing evidence that there are sufficient projected sales of vehicles certifying to the primary NOx emission standard, or is allowed a delay in implementation under small volume manufacturer provisions, or is allowed a delay in implementation under the "In lieu" standards, or is certifying passenger cars weighing more than 5250 lbs. loaded vehicle weight.

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 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 25th day of February, 1988.


K. D. Drachand, Chief
Mobile Source Division

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation Executive Order No.: A-6-441
 Engine Family: K3G2.5T5TEGO Evaporative Family: KBO-3A
 Engine Displacement Liters (Cubic Inches) - Type: 2.5 (151) I-4
 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, DID, DIP, EPFI, HOS, MPFI, OS, SFI
 V-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
 FWD-Front Wheel Drive
 4WD-Four 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 (Diesel Only)
 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
 TWC-Three-Way Catalyst
 MUOC-Warm-up Oxidation Catalyst
 MUTWC-Warm-up Three-Way Catalyst

Special Features

CCV-Combustion Chamber Valve
 CFI-Central Fuel Injection or Throttle
 Body Injection
 DID-Diesel Injection-Direct
 DIP-Diesel Injection-Prechamber
 EPFI-Electronic Port Fuel Injection
 IC-Intercooler/Aftercooler
 MPFI-Mechanical Port Fuel Injection
 OBD-On-Board Diagnostics
 SC-Supercharger
 SFI-Sequential Fuel Injection
 TC-Turbocharger

17-K3G2.5T5TEGO-Index 1A

(For CARB Use Only)

(1989)

SUPPLEMENTAL DATA AND CERTIFICATION REVIEW SHEETS

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17-K3G2.5T5TEGO-1A	02-10-88	Supplemental Data Sheet
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17-K3G2.5T5TEGO-4A	02-10-88	Supplemental Data Sheet
17-K3G2.5T5TEGO-5A	002	Supplemental Data Sheet
17-K3G2.5T5TEGO-6A	02-10-88	Certification Review Sheet

NOTES:

- (1) See page one for abbreviations and family information.
- (2) Please refer to manufacturer's HP lists for correct dyno test HP settings based on model and equipment.
- (3) If two test weights are listed, the lower weight will be used for testing.
- (4) Letter derivative codes are the same as corresponding numeric codes except as indicated.

ISSUED: 02-10-88

REV. NO.: 001 (RC K3-024)
002 (RC K3-095)

0193V/10V

17-K362.5T5TEGO-2A

(For CARB Use Only)
(1989)

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

Executive Order No. A-6-441

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)
-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/
Valve 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: 02-10-88

REV. NO.:

0193V/

17-KG32.5T5TEGO-3A

(For CARB Use Only)

(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS___ LIGHT DUTY TRUCKS_X MEDIUM DUTY VEHICLES___ GAS_X DIESEL___

Liters (CID): 2.5 (151)

Type: I-4

Executive Order No. A-6-441

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
3	S10603+E63 S10803+E63 S10653+E63 S10516	A4	3125 3250 3375	16088441	17087282	17087252	25103222
3A	S10603+E63 S10803+E63 S10653+E63		3125 3250	16135851			
4	S10603+E63 S10803+E63 S10653+E63 S10516		3125 3250 3500				
4A	S10603+E63 S10803+E63 S10653+E63		3125 3250				
5	T10603+E63 T10803+E63 T10653+E63		3500 3625	16086771			
6	T10603+E63 T10803+E63 T10653+E63		3500 3625				

ISSUED: 02-10-88

REV. NO.: 002

0193V/10V

17-K362.5T5TEGO-4A

(For CARB Use Only)

(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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

Liters (CID): 2.5 (151)

Type: I-4

Executive Order No. A-6-441

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
7	M10905	A4	3625	16086781	17087283	17087252	25057244
8	M10905						
15	S10603+E63 S10653+E63 S10803+E63 S10516	M5	3000 3125 3375	16069451	17087282	17088114	25103222
16	S10603+E63 S10653+E63 S10803+E63 S10516		3000 3125 3375				
17	T10603+E63 T10803+E63 T10653+E63			16069341			
18	T10603+E63 T10803+E63 T10653+E63		3500 3375 3500				

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: 02-10-88

REV. NO.:

0193V/

17-KG32.5T5TEGO-5A

(For CARB Use Only)

(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS___ LIGHT DUTY TRUCKS_X MEDIUM DUTY VEHICLES___ GAS_X DIESEL___

Liters (CID): 2.5 (151)

Type: I-4

Executive Order No. A-6-441

ENG CODE	VEH MODELS	TRANS TYPE	ETW	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM () PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
19	M10905	M5	3625	16069371	17087283	17088114	25027244
20	M10905						
21	S10603+E63 S10653+E63 S10803+E63		3000 3125	16123721	17087282		25103222
21A				16135831			
22	S10603+E63 S10653+E63 S10803+E63		3000 3125	16123721			
22A				16135831			
23	S10603+E63 S10653+E63 S10803+E63		3000 3125	16123731			
23A				16135811			
24	S10603+E63 S10653+E63 S10803+E63		3000 3125	16123731			
24A				16135811			

ISSUED: 02-10-88

REV. NO.: 001
002

0193V/10V