

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-381
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 1987 model-year General Motors Corporation exhaust emission control systems are certified as described below for gasoline-powered medium-duty vehicles:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
H3G7.4T5FCY2 (HGC7.4T5HAC3)	454 (7.4)	Air Injection Pump Exhaust Gas Recirculation Three-Way Catalyst Oxidation Catalyst Oxygen Sensor (Central Fuel Injection)

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>Equivalent Inertia Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per mile</u>
4000-5999	0.50	9.0	1.0
6000 & larger	0.60	9.0	1.5

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

<u>Equivalent Inertia Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
4000-5999	0.14	4.2	0.7
6000 & Larger	0.13	2.0	0.8

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 1981 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 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 18 day of August, 1986.


K. D. Drachand, Chief
Mobile Source Division

(For CARB Use Only)

(1987)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(H3C7.4T5HAC3)

Evaporative Family: 7F0-3H

Engine CID (Liters) - Type: 454 (7.4) V-8

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, ^{CFI}~~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
EGR-Exhaust Gas Recirculation
EM-Engine Modification
OC-Oxidation Catalyst System
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~~
^{Central} 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: 07-14-86

REV. NO.:

0109S

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Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)
Engine CID (Liters) - Type: 454 (7.4) V-8

Executive Order No.: A-6-381
Evaporative Family: 3F0-3H

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
S-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

ISSUED: 07-14-86

REV. NO.:

(For CARB Use Only)

(1987)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

LIGHT DUTY TRUCKS _____ MEDIUM DUTY VEHICLES X GAS _____ DIESEL _____

Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
1	CR20903+E62	A-3	5000	16069631	17087021	17087189	25101074*
	CR20903+E63		5250				25100464**
	CR20943		6000				
	CR20906						
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
	CV30943		6500				
	CG31305		5250				
CG31306	6000						
2	CR20903+E62		5250				
	CR20903+E63						
	CR20943		6000				
	CR20906						
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
	CV30943		6500				
	CG31305		5250				
CG31306	6000						

* Front
** Rear

Comments: See page one for abbreviations and evaporative emission family identification. 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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Manufacturer: General Motors Corporation Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2 Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~
(HGC7.4T5HAC3)

Liter (CID): 7.4 (454) Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
3	CR20903+E62		5000	16069691			
	CR20903+E63		5250				
	CR20906		6000				
	CR20943						
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
	CV30943		6500				
	CG31305		5250				
	CG31306		6000				
4	CR20903+E62		5250				
	CR20903+E63						
	CR20943		6000				
	CR20906						
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
	CV30943		6500				
	CG31305		5250				
	CG31306		6000				

Comments: See page one for abbreviations and evaporative emission family identification. 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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Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
5	CR20903+ZW9		8000	16069651			
	CR20943+ZW9						
	CR30903+ZW9						
	CR30943+ZW9						
	CR31003+ZW9						
	CR31403+ZW9						
	CV30903+ZW9						
	CV30943+ZW9						
	CV31003+ZW9						
	CV31403+ZW9						
	CG31303+ZW9						
	CG31332+ZW9						
	CG31603+ZW9						
	CG31632+ZW9						
	CG31303+E31		6500				
	CG31303+E34		6000				
	CG31303+E36						
	CG31603+E38		6500				
	CG31603+E39		6000				

Comments: See page one for abbreviations and evaporative emission family identification. 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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LIGHT DUTY TRUCKS _____ MEDIUM DUTY VEHICLES X GAS _____ DIESEL _____

Manufacturer: General Motors Corporation Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2 Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~
(HGC7.4T5HAC3)

Liter (CID): 7.4 (454) Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
6	CR20903+ZW9		8000				
	CR20943+ZW9						
	CR30903+ZW9						
	CR30943+ZW9						
	CR31003+ZW9						
	CR31403+ZW9						
	CV30903+ZW9						
	CV30943+ZW9						
	CV31003+ZW9						
	CV31403+ZW9						
	CG31303+ZW9						
	CG31332+ZW9						
	CG31603+ZW9						
	CG31632+ZW9						
	CG31303+E31		6500				
	CG31303+E34		6000				
	CG31303+E36						
	CG31603+E38		6500				
	CG31603+E39		6000				

Comments: See page one for abbreviations and evaporative emission family identification. 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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Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
7	CR20903+ZW9		8000	16069671			
	CR20943+ZW9						
	CR30903+ZW9						
	CR30943+ZW9						
	CR31003+ZW9						
	CR31403+ZW9						
	CV30903+ZW9						
	CV30943+ZW9						
	CV31003+ZW9						
	CV31403+ZW9						
	CG31303+ZW9						
	CG31332+ZW9						
	CG31603+ZW9						
	CG31632+ZW9						
	CG31303+E31		6500				
	CG31303+E34		6000				
	CG31303+E36						
	CG31603+E38		6500				
	CG31603+E39		6000				

Comments: See page one for abbreviations and evaporative emission family identification. 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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LIGHT DUTY TRUCKS _____ MEDIUM DUTY VEHICLES X GAS _____ DIESEL _____

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Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
8	CR20903+ZW9		8000				
	CR20943+ZW9						
	CR30903+ZW9						
	CR30943+ZW9						
	CR31003+ZW9						
	CR31403+ZW9						
	CV30903+ZW9						
	CV30943+ZW9						
	CV31003+ZW9						
	CV31403+ZW9						
	CG31303+ZW9						
	CG31332+ZW9						
	CG31603+ZW9						
	CG31632+ZW9						
	CG31303+E31		6500				
	CG31303+E34		6000				
	CG31303+E36						
	CG31603+E38		6500				
	CG31603+E39		6000				

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Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
9	CR20903+E62	M-4	5250	16069621	17087257		
	CR20903+E63						
	CR20943		6000				
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
CV30943	6500						
10	CR20903+E62		5250				
	CR20903+E63						
	CR20943		6000				
	CR30903+E62		5500				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63						
CV30943	7000						
11	CR20903+E62		5250				
	CR20903+E63						
	CR20943		6000				
	CR30903+E62		5250				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63		6000				
CV30943	6500						

Comments: See page one for abbreviations and evaporative emission family identification. 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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Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} ~~(EFI)~~

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
12	CR20903+E62		5250				
	CR20903+E63						
	CR20943		6000				
	CR30903+E62		5500				
	CR30903+E63		6000				
	CR30943		6500				
	CV30903+E63						
CV30943		7000					
13	CR20903+ZW9		8000	16069641			
	CR20943+ZW9						
	CR30903+ZW9						
	CR30943+ZW9						
	CR31003+ZW9						
	CR31403+ZW9						
	CV30903+ZW9						
	CV30943+ZW9						
CV31003+ZW9							
CV31403+ZW9							

Comments: See page one for abbreviations and evaporative emission family identification. 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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LIGHT DUTY TRUCKS _____ MEDIUM DUTY VEHICLES X GAS _____ DIESEL _____

Manufacturer: General Motors Corporation

Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2
(HGC7.4T5HAC3)

Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CFI} (EFI)

Liter (CID): 7.4 (454)

Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
14	CR20903+ZW9 CR20943+ZW9 CR30903+ZW9 CR30943+ZW9 CR31003+ZW9 CR31403+ZW9 CV30903+ZW9 CV30943+ZW9 CV31003+ZW9 CV31403+ZW9		8000				
15	CR20903+ZW9 CR20943+ZW9 CR30903+ZW9 CR30943+ZW9 CR31003+ZW9 CR31403+ZW9 CV30903+ZW9 CV30943+ZW9 CV31003+ZW9 CV31403+ZW9			16069681			

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LIGHT DUTY TRUCKS _____ MEDIUM DUTY VEHICLES X GAS _____ DIESEL _____

Manufacturer: General Motors Corporation Executive Order No.: A-6-381

Engine Family: H3G7.4T5FCY2 Exhaust Emission Control System: AIP/EGR/TWC/OC/CL ^{CEL} ~~(EFI)~~
(HGC7.4T5HAC3)

Liter (CID): 7.4 (454) Engine Type: V-8

ENG CODE	VEH MODELS	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM (ECU) PART NO.	FUEL SYSTEM (TBI) PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
16	CR20903+ZW9 CR20943+ZW9 CR30903+ZW9 CR30943+ZW9 CR31003+ZW9 CR31403+ZW9 CV30903+ZW9 CV30943+ZW9 CV31003+ZW9 CV31403+ZW9		8000				

Comments: See page one for abbreviations and evaporative emission family identification. 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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