

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-732

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

GENERAL MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following General Motors Corporation 1996 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

| <u>Engine Family</u> | <u>Liters (Cubic Inches)</u> | | <u>Exhaust Emission Control Systems and Special Features</u> |
|----------------------|------------------------------|-------|--|
| TGM6.5C6DAAA | 6.5 | (395) | Oxidation Catalytic Converter |
| TGM6.5C6DABA | 6.5 | (395) | Turbocharger Oxidation Catalytic Converter |
| TGM6.5C6DABW | 6.5 | (395) | Turbocharger Oxidation Catalytic Converter |

Engine models and codes are listed on attachments.

The certification exhaust emission standards for these engine families in grams per brake horsepower-hour are:

| <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulates</u> |
|---------------------------|------------------------|------------------------|---------------------|
| 1.3 | 15.5 | 5.0 | 0.10 |

The certification exhaust emission values for these engine families in grams per brake horsepower-hour are:

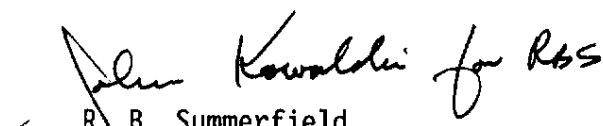
| <u>Engine Family</u> | <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulates</u> |
|----------------------|---------------------------|------------------------|------------------------|---------------------|
| TGM6.5C6DAAA | 0.5 | 3.3 | 4.0 | 0.07 |
| TGM6.5C6DABA | 0.4 | 2.1 | 3.8 | 0.06 |
| TGM6.5C6DABW | 0.1 | 1.2 | 3.8 | 0.08 |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Engines 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 attachments.

Executed at El Monte, California this 31st day of August 1995.


R. B. Summerfield
Assistant Division Chief
Mobile Source Division

1996 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL-STANDARD ENGINES

MANUFACTURER: GENERAL MOTORS CORPORATION

ENGINE FAMILY: TGM6.5C6DAAA

DISPLACEMENT: 6.5L

395 CUBIC INCHES

ALL ENG CODES IN ENG FAMILY: CA___ 49S___ 50S_X STROKES/CYCLE: 4 VALVES/CYLINDER: 2

IGNITION: COMPRESSION___ COMPRESSION WITH GLOW PLUG_X SPARK___

FUEL TYPE(S): DEDICATED___ FLEX-FUEL___ DUAL-FUEL___ BI-FUEL___ DIESEL_X CNG___

LNG___ LPG___ M85___ M100___ OTHER _____

DIESEL CERT FUEL: 13 CCR 2282_X 40 CFR 86.1313-90___ 40 CFR 86.1313-94___

MAXIMUM RATED POWER: 160 HP @ 3400 RPM

ENGINE CONFIGURATION: V8

EXHAUST ECS (E.G., OC, EGR, PTOX, IFI, TC, CAC): IFI, OC

| ENGINE MODEL (ENG CODE) | RATED HP @ RPM | FUEL RATE @ RATED HP MM ³ /STROKE (LBS/HR) | FUEL PUMP & INJECTOR P/N | ECM/PCM P/N | EGR VALVE P/N | PTOX/ CATALYTIC CONVERTER P/N |
|----------------------------|-------------------|--|-----------------------------|----------------|------------------|--|
| (1) | 160 @ 3400 | 50.5 (76.1) | 10229115 & 10233973 | NA | NA | 25143901 25153008 |
| L57 (2) | 150 @ 3400 | 45.5 (68.6) | 10229119* & 10233973 | | | |
| L57 (3) | 127 @ 2600 | 47.0 (54.2) | 10238969 & 10233973 | | | |

* High altitude

17-TGM6.5C6DABA-5

E.O. #A-6-732

1996 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL-STANDARD ENGINES

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM6.5C6DABA
DISPLACEMENT: 6.5L 395 CUBIC INCHES
ALL ENG CODES IN ENG FAMILY: CA___ 49S___ 50S_X STROKES/CYCLE: 4 VALVES/CYLINDER: 2
IGNITION: COMPRESSION___ COMPRESSION WITH GLOW PLUG_X SPARK___
FUEL TYPE(S): DEDICATED___ FLEX-FUEL___ DUAL-FUEL___ BI-FUEL___ DIESEL_X CNG___
LNG___ LPG___ M85___ M100___ OTHER _____
DIESEL CERT FUEL: 13 CCR 2282___ 40 CFR 86.1313-90___ 40 CFR 86.1313-94_X
MAXIMUM RATED POWER: 190 HP @ 3400 RPM ENGINE CONFIGURATION: V8
EXHAUST ECS (E.G., OC, EGR, PTOX, IFI, TC, CAC): IFI, OC, TC

| <u>ENGINE MODEL</u> (<u>ENG CODE</u>) | <u>RATED HP</u> <u>@ RPM</u> | <u>FUEL RATE</u> <u>@ RATED HP</u> <u>MM³/STROKE</u> <u>(LBS/HR)</u> | <u>FUEL PUMP &</u> <u>INJECTOR P/N</u> | <u>ECM/PCM</u> <u>P/N</u> | <u>EGR VALVE</u> <u>P/N</u> | <u>PTOX/</u> <u>CATALYTIC</u> <u>CONVERTER</u> <u>P/N</u> |
|--|---------------------------------|--|---|------------------------------|--------------------------------|--|
| (1) | 190 @ 3400 | 59.5 (89.7) | 12551521 & 10233973 | NA | NA | 25143188 |

1996 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL-STANDARD ENGINES

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM6.5C6DABW
 DISPLACEMENT: 6.5L 395 CUBIC INCHES
 ALL ENG CODES IN ENG FAMILY: CA___ 49S___ 50S_X STROKES/CYCLE: 4 VALVES/CYLINDER: 2
 IGNITION: COMPRESSION___ COMPRESSION WITH GLOW PLUG_X SPARK___
 FUEL TYPE(S): DEDICATED___ FLEX-FUEL___ DUAL-FUEL___ BI-FUEL___ DIESEL_X CNG___
 LNG___ LPG___ M85___ M100___ OTHER_____
 DIESEL CERT FUEL: 13 CCR 2282_X 40 CFR 86.1313-90___ 40 CFR 86.1313-94___
 MAXIMUM RATED POWER: 200 HP @ 3400 RPM ENGINE CONFIGURATION: V8
 EXHAUST ECS (E.G., OC, EGR, PTOX, IFI, TC, CAC): IFI, OC, TC

| ENGINE MODEL (ENG CODE) | RATED HP @ RPM | FUEL RATE @ RATED HP MM ³ /STROKE (LBS/HR) | FUEL PUMP & INJECTOR P/N | ECM/PCM P/N | EGR VALVE P/N | PTOX/ CATALYTIC CONVERTER P/N |
|----------------------------|-------------------|--|-----------------------------|--|------------------|--|
| (1) | 190 @ 3400 | 61.2 (92.3) | 10225930 & 10233973 | 16216865 16216875 16216895 16216905 | NA | 25144421 25144427 25143882 25152218 25144425 25143891 25143901 25143188 |
| L65 (2) | 200 @ 3400 | 64.1 (96.6) | | 12551832 | | |
| L65 (3) | 190 @ 3400 | 61.2 (92.3) | | 12551833 | | |
| L65 (5) | 190 @ 3400 | 61.2 (92.3) | | 16215205 16215215 16215225 | | |
| L65 (6) | 200 @ 3400 | 64.1 (96.6) | | 112551834 | | |
| L65 (7) | 190 @ 3400 | 61.2 (92.3) | | 16216885 16216915 | | |
| L65 (8) | 200 @ 3400 | 67.0 (101.0) | | 16217065 | | 15963895 |