Fuels



State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-6-722
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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1996 model-year General Motors Corporation exhaust emission control systems are certified as described below for medium-duty vehicles:

Fuel Type: Gasoline

Engine Family: TGM4.35PGFEK Displacement: 4.3 Liters (262 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Exhaust Gas Recirculation
Three Way Catalytic Converter
Dual Heated Oxygen Sensors
Heated Oxygen Sensors (Two)
Sequential Multiport Fuel Injection

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

The certification exhaust emission standards for this engine family in grams per mile are:

| Test Weight (lbs.) | Miles | Non-Methane Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Carbon Monoxide (20°F) |
|---|---|---|---|---|---|
| 3751-5750 | 50,000 | 0.32 | 4.4 | 0.7 | 12.5 |
| | 120,000 | 0.46 | 6.4 | 0.98 | n/a |

The certification exhaust emission values for this engine family in grams per mile are:

| Test Weight (lbs.) | Miles | Non-Methane Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Carbon Monoxide (20°F) |
|---|---|---|---|---|---|
| 3751-5750 | 50,000 | 0.15 | 1.6 | 0.6 | 3.9 |
| | 120,000 | 0.23 | 2.6 | 0.79 | n/a |

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles", and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model 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" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, 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 Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) 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 provisions (Title 13, California Code of Regulations, 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 9th day of August 1995.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

(FOR CARB USE ONLY)

E.O. #A-6-722

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

Example, Pattern A: CC10703+E62
Example, Pattern B: 1UM05

## Digit 1 = Marketing Division

| Pattern A | Pattern B |
|---|---|
| C = Chevrolet | 1 = Chevrolet |
| T = GMC | 2 = Pontiac |
| H = Oldsmobile | 3 = Oldsmobile |
| G = Isuzu | |

Note: Digit 1 is not used for Pattern A models on engine family pages or California Supplemental Data Sheets.

## Digit 2 = Chassis Type (all)

U = Conventional 4x2 Front Wheel Drive
C, S, M = Conventional 4x2 Rear Wheel Drive
G = Forward Control 4x2 Rear Wheel Drive
K, T, L = Conventional 4x4 Four Wheel Drive, All Wheel Drive

## Digit 3 = Series/GVWR

| Pattern A | Pattern B |
|---|---|
| 1 = 11,15,1500/3500-7300 | Letter code designates trim level rather than series/GVWR. |
| 2 = 21,25,2500/6400-8600 | |
| 3 = 31,35,3500/7100-14500 | |

## Digits 4 & 5

| Pattern A = Dimensional Grouping | Pattern B |
|---|---|
| 05 = Blazer, Jimmy, Bravada | 05 = Cargo (APV) |
| 06 = S/T Short Box | 06 = Passenger (Lumina APV, Trans Sport, Silhouette) |
| 07 = C/K Short Box | |
| 08 = S/T Long Box & Cab-Chassis | |
| 09 = C/K Long Box, Suburban, | |
| 10 = M/L Long Body | |
| 14 = G Short Wheelbase | |
| 17 = G Long Wheelbase | |

## Digits 6 & 7 = Body/Cab Codes (Pattern A Only)

03 = Conventional Cab, Cab-Chassis
05 = Cargo Van
06 = Passenger Van, 4 Door Special Purpose Vehicle
16 = 2 Door Special Purpose Vehicle
43 = Crew Cab
53 = Extended Cab

## Pickup Body Codes (Optional, Used with Pattern A Only)

+E62 = Stepside, Fenderside
+E63 = Fleetside, Wideside
+ZW9 = Cab-Chassis

ISSUED: ML-TP056 REVISED:

17-TGM4.35PGFEK-1

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM4.35PGFEK

EVAP STD: 50K_X_ USEFUL LIFE WITH R/L___ EVAPORATIVE FAMILY: TGM1089AYMBA

EXH STD: TIER-0___ TIER-1_X_ TLEV___ LEV___ ULEV___ ZEV___; EPA TIER-0___ TIER-1_X_

VEH CLASS(ES): PC___ LDT1___ LDT2___ MDV1___ MDV2_X_ MDV3___ MDV4___ MDV5___

SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA

EXH CERT FUEL(S): INDO___ PH2_X_ DIESEL: 13 CCR 2282___ OR 40 CFR 86.113-90___
OR -94___ M85___ CNG___ LPG___ OTHER (SPECIFY)_____

FUEL TYPE(S): DEDICATED_X_ FLEX-FUEL___ DUAL-FUEL___ GASOLINE_X_ DIESEL___ M85___
CNG___ LNG___ LPG___ OTHER (SPECIFY)_____

HYBRID: TYPE A___ B___ C___ APU CYCLE (E.G., OTTO, DIESEL, TURBINE): NA

ENGINE CONFIGURATION: V6 DISPLACEMENT: 4.3 LITERS 262 CUBIC INCHES

ENGINE: FRONT_X_ MID___ REAR___ DRIVE: FWD___ RWD___ 4WD-FT_X_ 4WD-PT___

EXHAUST EMISSION CONTROL SYSTEM & COMPONENTS: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP/DPA: SECTION 08.13.02.00

| (LOC) ENG CODE (NW) | VEH MODELS (SEE PAGE 1) | TRANS TYPE: A-AUTO M-MAN | EQUIV. TEST WEIGHT | IGN SYSTEM (PCME/PROM) PART NO./CALIB | EGR SYSTEM PART NO. | CATALYST PART NO. |
|---|---|---|---|---|---|---|
| 2.2M | L11005<br>L11006 | A4 | 5000<br>5500 | 16200785/<br>16187577PB-OPER<br>16187679-ENG<br>16187890,<br>16215601-TRANS | 17096188,<br>17096309 | 25153034 |
| 2A,2N | | | | 16200785/<br>16227245PF-OPER<br>16227410-ENG<br>16227560,<br>16227561-TRANS | | |
| 2B,2P | | | | 16200785/<br>16232915PG-OPER<br>16227517-ENG<br>16227583,<br>16227582-TRANS | | |
| 2C,2Q | | | | 16232306-ENG<br>16235505PH-OPER | | |

| CARLINE NAME | CARLINE CODE |
|---|---|
| ASTRO AWD CARGO | 55047 |
| ASTRO AWD PASSENGER | 55062 |
| SAFARI AWD CARGO | 80037 |
| SAFARI AWD PASSENGER | 80052 |

ISSUED: ML-TP056 REVISED: ML-TP073, ML-TR010, ML-TR053, ML-TR066

E.O. #A-6-722

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM4.35PGFEK

EVAP STD: 50K_X_ USEFUL LIFE WITH R/L___ EVAPORATIVE FAMILY: TGM1089AYMBA

EXH STD: TIER-0___ TIER-1_X_ TLEV___ LEV___ ULEV___ ZEV___; EPA TIER-0___ TIER-1_X_

VEH CLASS(ES): PC___ LDT1___ LDT2___ MDV1___ MDV2_X_ MDV3___ MDV4___ MDV5___

SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA

EXH CERT FUEL(S): INDO___ PH2_X_ DIESEL: 13 CCR 2282___ OR 40 CFR 86.113-90___
OR -94___ M85___ CNG___ LPG___ OTHER (SPECIFY)_____

FUEL TYPE(S): DEDICATED_X_ FLEX-FUEL___ DUAL-FUEL___ GASOLINE_X_ DIESEL___ M85___
CNG___ LNG___ LPG___ OTHER (SPECIFY)_____

HYBRID: TYPE A___ B___ C___ APU CYCLE (E.G., OTTO, DIESEL, TURBINE): NA

ENGINE CONFIGURATION: V6 DISPLACEMENT: 4.3 LITERS 262 CUBIC INCHES

ENGINE: FRONT_X_ MID___ REAR___ DRIVE: FWD___ RWD___ 4WD-FT_X_ 4WD-PT___

EXHAUST EMISSION CONTROL SYSTEM & COMPONENTS: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP/DPA: SECTION 08.13.02.00

| (LOC) ENG CODE (NW) | VEH MODELS (SEE PAGE 1) | TRANS TYPE: A-AUTO M-MAN | EQUIV. TEST WEIGHT | IGN SYSTEM (PCME/PROM) PART NO./CALIB | EGR SYSTEM PART NO. | CATALYST PART NO. |
|---|---|---|---|---|---|---|
| 2D,2R | L11005<br>L11006 | A4 | 5000<br>5500 | 16200785/<br>16237015PJ-OPER<br>16232306-ENG<br>16227583,<br>16227582-TRANS | 17096188,<br>17096309 | 25153034 |
| 2E,2S | | | | 16232388-ENG | | |

| CARLINE NAME | CARLINE CODE |
|---|---|
| ASTRO AWD CARGO | 55047 |
| ASTRO AWD PASSENGER | 55062 |
| SAFARI AWD CARGO | 80037 |
| SAFARI AWD PASSENGER | 80052 |

ISSUED: ML-TR066 REVISED: ML-TR077

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM4.35PGFEK

EVAP STD: 50K_X_ USEFUL LIFE WITH R/L___ EVAPORATIVE FAMILY: TGM1098AYMBA

EXH STD: TIER-0___ TIER-1_X_ TLEV___ LEV___ ULEV___ ZEV___; EPA TIER-0___ TIER-1_X_

VEH CLASS(ES): PC___ LDT1___ LDT2___ MDV1___ MDV2_X_ MDV3___ MDV4___ MDV5___

SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA

EXH CERT FUEL(S): INDO___ PH2_X_ DIESEL: 13 CCR 2282___ OR 40 CFR 86.113-90___
OR -94___ M85___ CNG___ LPG___ OTHER (SPECIFY)_____

FUEL TYPE(S): DEDICATED_X_ FLEX-FUEL___ DUAL-FUEL___ GASOLINE_X_ DIESEL___ M85___
CNG___ LNG___ LPG___ OTHER (SPECIFY)_____

HYBRID: TYPE A___ B___ C___ APU CYCLE (E.G., OTTO, DIESEL, TURBINE): NA

ENGINE CONFIGURATION: V6 DISPLACEMENT: 4.3 LITERS 262 CUBIC INCHES

ENGINE: FRONT_X_ MID___ REAR___ DRIVE: FWD___ RWD___ 4WD-FT___ 4WD-PT_X_

EXHAUST EMISSION CONTROL SYSTEM & COMPONENTS: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP/DPA: SECTION 08.13.02.00

| (LOC) ENG CODE | VEH MODELS (SEE PAGE 1) | TRANS TYPE: A-AUTO M-MAN | EQUIV. TEST WEIGHT | IGN SYSTEM (PCME/PROM) PART NO. | EGR SYSTEM PART NO. | CATALYST PART NO. |
|---|---|---|---|---|---|---|
| (NW) | | | | | | |
| 3,4 | K10703+E62<br>K10703+E63<br>K10903+E63<br>K10753+E62<br>K10753+E63 | A4 | 5250<br><br><br>5500 | 16200785/BKCX<br>16187577PB-OPER<br>16187648-ENG<br>16187775,<br>16187776-TRANS | 17096188,<br>17096309 | 25152823 |
| 3A,4A | | | | 16200785/BKCX<br>16227245PF-OPER<br>16227404-ENG<br>16227556,<br>16227557-TRANS | | 25160245 |
| (C) | | | | | | |
| 53,<br>54 | K10703+E62<br>K10703+E63<br>K10903+E63 | M5 | 5250 | 16200785/BKCX<br>16187577PB-OPER<br>16187642-ENG<br>16187774-TRANS | | 25152823 |
| 53A,<br><br>54A | | | | 16200785/BKCX<br>16227245PF-OPER<br>16227403-ENG<br>16227591-TRANS | | 25160245 |

| CARLINE NAME | CARLINE CODE |
|---|---|
| K1500 PICKUP 4WD | 55030 |
| K1500 SIERRA 4WD | 80020 |

ISSUED: ML-TP056 REVISED: ML-TP073, ML-TR010, ML-TR066

E.O. #A-6-722

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM4.35PGFEK

EVAP STD: 50K_X_ USEFUL LIFE WITH R/L___ EVAPORATIVE FAMILY: TGM1098AYMBA

EXH STD: TIER-0___ TIER-1_X_ TLEV___ LEV___ ULEV___ ZEV___; EPA TIER-0___ TIER-1_X_

VEH CLASS(ES): PC___ LDT1___ LDT2___ MDV1___ MDV2_X_ MDV3___ MDV4___ MDV5___

SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA

EXH CERT FUEL(S): INDO___ PH2_X_ DIESEL: 13 CCR 2282___ OR 40 CFR 86.113-90___
OR -94___ M85___ CNG___ LPG___ OTHER (SPECIFY)_____

FUEL TYPE(S): DEDICATED_X_ FLEX-FUEL___ DUAL-FUEL___ GASOLINE_X_ DIESEL___ M85___
CNG___ LNG___ LPG___ OTHER (SPECIFY)_____

HYBRID: TYPE A___ B___ C___ APU CYCLE (E.G., OTTO, DIESEL, TURBINE): NA

ENGINE CONFIGURATION: V6 DISPLACEMENT: 4.3 LITERS 262 CUBIC INCHES

ENGINE: FRONT_X_ MID___ REAR___ DRIVE: FWD___ RWD___ 4WD-FT___ 4WD-PT_X_

EXHAUST EMISSION CONTROL SYSTEM & COMPONENTS: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP/DPA: SECTION 08.13.02.00

| (LOC) ENG CODE | VEH MODELS (SEE PAGE 1) | TRANS TYPE: A-AUTO M-MAN | EQUIV. TEST WEIGHT | IGN SYSTEM (PCME/PROM) PART NO./CALIB | EGR SYSTEM PART NO. | CATALYST PART NO. |
|---|---|---|---|---|---|---|
| (NW) | | | | | | |
| 3B,4B | K10703+E62<br>K10703+E63<br>K10903+E63 | A4 | 5250 | 16200785/<br>16232915PG-OPER<br>16187648-ENG | 17096188,<br>17096309 | 25160245 |
| | K10753+E62<br>K10753+E63 | | 5500 | 16187775,<br>16187776-TRANS | | |
| 6 | K10753+E63<br>K10753+E62 | | | 16235505PH-OPER<br>16232342-ENG | | |
| 6A | | | | 16237015PJ-OPER | | |
| 8 | K10703+E62<br>K10703+E63<br>K10903+E63 | | 5250 | 16235505PH-OPER<br>16232313-ENG | | |
| 8A | | | | 16237015PJ-OPER | | |
| (C) | | | | | | |
| 53B,54B | K10703+E62<br>K10703+E63<br>K10903+E63 | M5 | | 16200785/<br>16232915PG-OPER<br>16227504-ENG<br>16227591-TRANS | | |
| 53C,54C | | | | 16235505PH-OPER<br>16232310-ENG | | |

| CARLINE NAME | CARLINE CODE |
|---|---|
| K1500 PICKUP 4WD | 55030 |
| K1500 SIERRA 4WD | 80020 |

ISSUED: ML-TR053 REVISED: ML-TR066

# 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

MANUFACTURER: GENERAL MOTORS CORPORATION ENGINE FAMILY: TGM4.35PGFEK

EVAP STD: 50K_X_ USEFUL LIFE WITH R/L___ EVAPORATIVE FAMILY: TGM1098AYMBB

EXH STD: TIER-0___ TIER-1_X_ TLEV___ LEV___ ULEV___ ZEV___; EPA TIER-0___ TIER-1_X_

VEH CLASS(ES): PC___ LDT1___ LDT2___ MDV1___ MDV2_X_ MDV3___ MDV4___ MDV5___

SINGLE CERT STD FOR MULTI-CLASS ENGINE FAMILY: NA

EXH CERT FUEL(S): INDO___ PH2_X_ DIESEL: 13 CCR 2282___ OR 40 CFR 86.113-90___
OR -94___ M85___ CNG___ LPG___ OTHER (SPECIFY)_____

FUEL TYPE(S): DEDICATED_X_ FLEX-FUEL___ DUAL-FUEL___ GASOLINE_X_ DIESEL___ M85___
CNG___ LNG___ LPG___ OTHER (SPECIFY)_____

HYBRID: TYPE A___ B___ C___ APU CYCLE (E.G., OTTO, DIESEL, TURBINE): NA

ENGINE CONFIGURATION: V6 DISPLACEMENT: 4.3 LITERS 262 CUBIC INCHES

ENGINE: FRONT_X_ MID___ REAR___ DRIVE: FWD___ RWD_X_ 4WD-FT___ 4WD-PT___

EXHAUST EMISSION CONTROL SYSTEM & COMPONENTS: LEGR, TWC, 2HO2S-HO2S(2), SFI

RLHP/DPA: SECTION 08.13.02.00

| (LOC) ENG CODE (C) | VEH MODELS (SEE PAGE 1) | TRANS TYPE: A-AUTO M-MAN | EQUIV. TEST WEIGHT | IGN SYSTEM (PCME/PROM) PART NO. | EGR SYSTEM PART NO. | CATALYST PART NO. |
|---|---|---|---|---|---|---|
| 51, 51M, 52, 52M | G11405 | A4 | 5500 | 16200785/BKCX<br>16187577PB-OPER<br>16187762-ENG<br>16187776-TRANS | 17096188,<br>17096309 | 25152823 |
| 51A, 51N, 52A, 52N | | | | 16200785/BKCX<br>16227245PF-OPER<br>16227405-ENG<br>16227557,<br>16227558-TRANS | | 25160245 |

| CARLINE NAME | CARLINE CODE |
|---|---|
| CHEV VAN 2WD | 55050 |
| GMC SAVANA 2WD | 80040 |

ISSUED: ML-TP056 REVISED: ML-TP073, ML-TR010, ML-TR066