

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-356
Relating to Certification of New Motor Vehicles

TOYOTA MOTOR 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 1999 model-year Toyota Motor Corporation exhaust emission control systems are certified as described below for medium-duty vehicles:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: XTYXT04.7GBX Displacement: 4.7 Liters (285 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Dual Three Way Catalytic Converters (two)
Dual Heated Oxygen Sensors (two)
Sequential Multiport Fuel Injection

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

The non-methane organic gases (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) LEV certification exhaust emission standards for this engine family in grams per mile are:

| <u>Test Weight</u> <u>(lbs.)</u> | <u>Miles</u> | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> | <u>HCHO</u> | <u>CO (20°F)</u> |
|-------------------------------------|--------------|-------------|-----------|------------|-------------|------------------|
| 5751-8500 | 50,000 | 0.195 | 5.0 | 0.6 | 0.022 | 12.5 |
| | 120,000 | 0.280 | 7.3 | 0.9 | 0.032 | n/a |

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for NMOG reflect application of a 0.94 RAF for 1999 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

| <u>Test Weight</u> <u>(lbs.)</u> | <u>Miles</u> | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> | <u>HCHO</u> | <u>CO (20°F)</u> |
|-------------------------------------|--------------|-------------|-----------|------------|-------------|------------------|
| 5751-8500 | 50,000 | 0.088 | 1.2 | 0.3 | 0.001 | 3.6 |
| | 120,000 | 0.108 | 1.7 | 0.4 | 0.001 | n/a |

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the medium-duty vehicle phase-in requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" (Title 13, California Code of Regulations, Section 1960.1(h)(2)).

BE IT FURTHER RESOLVED: That under the submitted medium-duty vehicle phase-in compliance plan, if the manufacturer incurs "Vehicle Equivalent Debits" for the aforementioned model year due to the manufacturer's failure to produce and deliver for sale in California the equivalent quantity of medium-duty vehicles certified to low-emission vehicle and/or ultra-low-emission vehicle exhaust emission standards required by the above-referenced standards and test procedures, all "Vehicle Equivalent Debits" incurred by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent 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 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 and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").


BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit 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 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 5th day of August 1998.


R. B. Summerfield, Chief
Mobile Source Operations Division

17.11.00

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1999 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: XTYXT04.7GBX Evap Fam: XTYXE0145AF0
 All Eng Codes in Eng Fam: CA ___ 49S ___ 50S x AB965 ___ , ORVR: YES ___ NO x
 Exh Std: CA Tier-1 ___ TLEV ___ LEV x ULEV ___ SULEV ___ , US EPA Tier-1 x
 Veh Class(es): PC ___ LDT1 ___ LDT2 ___ MDV1 ___ MDV2 ___ MDV3 x MDV4 ___ MDV5 ___
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s): Dedicated x Flcx-Fuel ___ Dual-Fuel ___ Bi-Fuel ___ Gasoline x Diesel ___
 CNG ___ LNG ___ LPG ___ M85 ___ Other (specify) _____
 Exh Emiss Test Fuel(s): Indo ___ CBG x CNG ___ LPG ___ M85 ___ Other (specify) _____
 Diesel: 13 CCR 2282 ___ 40 CFR 86.113-90 ___ 40 CFR 86.113-94 ___
 Evaporative Emission Test Procedure: California ___ Federal x
 Service Accum: Std AMA ___ Mod AMA ___ Mfr ADP x Other (specify) _____
 NMOG Test Procedure: N/A ___ Std x Equiv ___ R/L Test Proc: SHED x Pt Source ___
 Engine Configuration: V-8 Displacement: 4.7 Liters 284.6 Cubic Inches
 Valves per Cylinder: 4 Rated HP1: 230/4800 RPM
 Engine: Front x Mid ___ Rear ___ Drive: FWD ___ RWD ___ 4WD-FT x 4WD-PT ___
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,2HO2S(2),2TWC(2)
 (use abbreviations per SAE J1930 JUN93)

| Engine Code (also list CA/49S/50ST) | Vehicle Models (if coded see attachment) | Trans. (M5, A4, etc.) | ETW or Test Wt | DPA or RLHP | Ignition (ECM/PCM) Part No. | EGR system Part No. | Catalytic Converter Part No. |
|-------------------------------------|--|-----------------------|----------------|-------------|--|---------------------|------------------------------|
| 1, | UZJ100L-GNPEKA | L4 | 6000 | 14.5 | 89661-60610*1 *3 | N/A | U14 |
| 1R1 | UZJ100L-GNPGKA | | | | 89661-60611 *4 89666-60260*2 *3 89666-60261 *4 | | W01 |

Comment : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.

VEHICLE MODELS:

LAND CRUISER WAGON

LX 470

4WD

UZJ100L-GNPEKA

UZJ100L-GNPGKA

(Note)

*1 : Before running change 99-TR-9

*3 : Before running change 99-TR-16

*2 : After running change 99-TR-9

*4 : After running change 99-TR-16