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:

| Test Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 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:

| Test Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 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.

John Kowalski for
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 Flex-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, 1R1 | UZJ100L-GNPEKA<br>UZJ100L-GNPGKA | L4 | 6000 | 14.5 | 89661-60610*1 *3<br>89661-60611 *4<br>89666-60260*2 *3<br>89666-60261 *4 | N/A | U14<br>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 4WD | LX 470 |
|---|---|
| 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