

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-378
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 2000 model-year Toyota Motor Corporation exhaust emission control systems are certified as described below for medium-duty vehicles:

B Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: YTYXT04.7GXW Displacement: 4.7 Liters (285 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Dual Three Way Catalytic Converters
Three Way Catalytic Converter
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>
3751-5750	50,000	0.160	4.4	0.4	0.018	12.5
	120,000	0.230	6.4	0.6	0.027	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 2000 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>
3751-5750	50,000	0.084	1.0	0.1	0.002	4.5
	120,000	0.096	1.1	0.2	0.002	n/a

TOYOTA MOTOR CORPORATION

EXECUTIVE ORDER A-14-378
(Page 2 of 3)

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."

TOYOTA MOTOR CORPORATION

EXECUTIVE ORDER A-14-378
(Page 3 of 3)

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 17th day of December 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

17.11.00

E.O.# A-14-378
Page 1

2000 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: YTYXT04.7GXW Evap Fam: YTYXE0145AF0
 All Eng Codes in Eng Fam: CA 49S 50S AB965 , ORVR: YES NO
 Exh Std: CA Tier-1 TLEV LEV ULEV SULEV , US EPA Tier-1
 Veh Class(es): PC LDT1 LDT2 MDV1 MDV2 MDV3 MDV4 MDV5
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s): Dedicated Flex-Fuel Dual-Fuel Bi-Fuel Gasoline Diesel
 CNG LNG LPG M85 Other (specify) _____
 Exh Emiss Test Fuel(s): Indo CBG 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
 Service Accum: Std AMA Mod AMA Mfr ADP Other (specify) _____
 NMOG Test Procedure: N/A Std Equiv R/L Test Proc: SHED Pt Source
 Engine Configuration: V-8 Displacement: 4.7 Liters 284.6 Cubic Inches
 Valves per Cylinder: 4 Rated HP : 230/4800 RPM
 Engine: Front Mid Rear Drive: FWD RWD 4WD-FT 4WD-PT
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,2HO2S(2),2TWC,TWC
 (use abbreviations per SAE J1930 JUN93)

Note *1 : for TOYOTA Tundra 2WD.
Note *2 : for TOYOTA Tundra 4WD.

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	UCK30L-ARSSKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	14.3/15.6/16.0	89661-0C090 for UCK30L series 89661-0C100 for UCK40L series	N/A	Q10 X01
2	UCK30L-ARSLKA UCK30L-ARSSKA UCK40L-ARSLKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	15.7/17.3/ 17.0/17.4			

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

VEHICLE MODELS:

TOYOTA TUNDRA 2WD

UCK30L-ARSLKA
UCK30L-ARSSKA

TOYOTA TUNDRA 4WD

UCK40L-ARSLKA
UCK40L-ARSSKA
UCK40L-TRSSKA

17.11.00

E.O.# A-14-378
Page 2

2000 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: YTYXT04.7GXW Evap Fam: YTYXE0145AF0
 All Eng Codes in Eng Fam: CA 49S 50S AB965 , ORVR: YES NO
 Exh Std: CA Tier-1 TLEV LEV ULEV SULEV , US EPA Tier-1
 Veh Class(es): PC LDT1 LDT2 MDV1 MDV2 MDV3 MDV4 MDV5
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s): Dedicated Flex-Fuel Dual-Fuel Bi-Fuel Gasoline Diesel
 CNG LNG LPG M85 Other (specify) _____
 Exh Emiss Test Fuel(s): Indo CBG 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
 Service Accum: Std AMA Mod AMA Mfr ADP Other (specify) _____
 NMOG Test Procedure: N/A Std Equip R/L Test Proc: SHED Pt Source
 Engine Configuration: V-8 Displacement: 4.7 Liters 284.6 Cubic Inches
 Valves per Cylinder: 4 Rated HP : 230/4800 RPM
 Engine: Front Mid Rear Drive: FWD RWD 4WD-FT 4WD-PT
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,2HO2S(2),2TWC,TWC
 (use abbreviations per SAE J1930 JUN93)

Note *1 : for TOYOTA Tundra 2WD.
Note *2 : for TOYOTA Tundra 4WD.

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	UCK30L-ARSSKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	14.3/15.6/16.0	89661-0C090*3 89661-0C130*4 for UCK30L series	N/A	Q10 X01
2, 2R1	UCK30L-ARSLKA UCK30L-ARSSKA UCK40L-ARSLKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	15.7/17.3/ 17.0/17.4	89661-0C100*3 89661-0C140*4 for UCK40L series		

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

VEHICLE MODELS:

TOYOTA TUNDRA 2WD
UCK30L-ARSLKA
UCK30L-ARSSKA

TOYOTA TUNDRA 4WD
UCK40L-ARSLKA
UCK40L-ARSSKA
UCK40L-TRSSKA

(Note)

*3:Before running change 00-TR-1

*4:After running change 00-TR-1

17.11.00

E.O.# A-14-378
Page _____

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Manufacturer: TOYOTA Exh Eng Fam: YTYXT04.7GXW Evap Fam: YTYXE0145AE0
 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 x MDV3 ___ 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 Equip ___ 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 HP : 230/4800 RPM
 Engine: Front x Mid ___ Rear ___ Drive: FWD ___ RWD x*1 4WD-FT ___ 4WD-PT x*2
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,2HO2S(2),2TWC,TWC
 (use abbreviations per SAE J1930 JUN93)

Note *1 : Applied to TOYOTA Tundra 2WD.
 Note *2 : Applied to TOYOTA Tundra 4WD.

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 1R2	UCK30L-ARSSKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	14.3/15.6/16.0	89661-0C090*3*5 89661-0C091*6 89661-0C130*4*5 89661-0C0131*6	N/A	G10 X01
2, 2R1 2R2	UCK30L-ARSLKA UCK30L-ARSSKA UCK40L-ARSLKA UCK40L-TRSSKA UCK40L-ARSSKA	L4	5250	15.7/17.3/ 17.0/17.4	for UCK30L series 89661-0C100*3*5 89661-0C101*6 89661-0C140*4*5 89661-0C141*6 for UCK40L series		

Comment : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.
 (Note)
 *3 : Before running change 00-TR-1 *5 : Before running change 00-TR-6
 *4 : After running change 00-TR-1 *6 : After running change 00-TR-6