

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-117-1  
Relating to Certification of New Motor Vehicles

TOYOTA 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 Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1988 model-year Toyota Motors Corporation exhaust emission control systems are certified as described below for gasoline-powered light-duty trucks:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
JTY2.2T5FBBX	2.2 (136.5)	Exhaust Gas Recirculation Three-Way Catalyst Heated Oxygen Sensor Oxygen Sensor (After Catalyst) (Electronic Port Fuel Injection) (On-Board Diagnostics)

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

The following are the emission standards for this engine family:

<u>Loaded Vehicle Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
0-3750	0.39	9.0	1.0

The following are the certification emission values for this engine family:

<u>Loaded Vehicle Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
0-3750	0.26	2.4	0.5

BE IT FURTHER RESOLVED: That the listed models were certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered 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" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s] ..." (Title 13, California Administrative Code, Section 1968) 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 regulations (Title 13, California Administrative Code, Section 2035 et seq.) and with Health and Safety Code Section 43204.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order supersedes Executive Order A-14-117 dated August 26, 1987.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 15<sup>th</sup> day of October, 1987.

*A. F. Donnelly* (for KDD)  
K. D. Drachand, Chief  
Mobile Source Division

Manufacturer Toyota Motor Corporation Engine Family JTY2.2T5FBBX  
 Evaporative Family EV-E Engine Type 4 cyl. in-line  
 Liters (CID) 2.2 (136.5)

**ABBREVIATIONS**

Ignition System

CA-Centrifugal Advance  
 ECU-Electronic Control Unit  
 EI-Electronic Ignition  
 ESAC-Electronic Spark Advance Control  
 VA-Vacuum Advance  
 VR-Vacuum Retard

Exhaust Emissions Control System

AIP-Air Injection-Pump  
 AIV-Air Injection-Valve  
 DBC-Dual Bed Catalyst  
 EGR-Exhaust Gas Recirculation  
 EIC-Electronic Injection Control  
 EM-Engine Modification  
 OC-Oxidation Catalyst  
 OS-Oxygen sensor  
 HOS-Heated Oxygen Sensor  
 SPL-Smoke Puff Limiter or Throttle Delay  
 TOC-Trap Oxidizer, Continual  
 TOP-Trap Oxidizer, Periodical  
 TWC-Three-Way Catalyst  
 WUOC-Warm-Up Oxidation Catalyst  
 WUTWC-Warm-Up Three-Way Catalyst

Special Features

CCV-Combustion Chamber Valve  
 CFI-Central Fuel Injection  
 DID-Diesel Injection-Direct  
 DIP-Diesel Injection-Prechamber  
 EFI-Electronic Fuel Injection  
 IC-Intercooler or aftercooler  
 MFI-Mechanical Fuel Injection  
 OBD-On-Board Diagnostics  
 TC-Turbocharger

Fuel System

CFI, CL, DID, DIP, EFI, MFI  
 nV-nVenturi Carburetor

VEHICLE MODELS :

Van 2WD (Passenger)

YR22LG-MDEA  
 -MQEA  
 -PDEA  
 -PQEA

Van 2WD (Cargo)

YR23LV-MDEA  
 -PDEA  
 YR29LV-MRBEA  
 -PRBEA

Engine: Front  x  Mid.   Rear    
 Drive: FWD   RWD  x  4WD Full time   4WD Part time

## 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Page 2Passenger Cars  Light-Duty Trucks  Medium-Duty Vehicles  Gas  Diesel Manufacturer Toyota Motor Corporation Engine family JTY2.2T5FBBXLiter (CID) 2.2 (136.5) Eng. Type 4 cyl. in-lineEmission Control Sys. (Special Features) EGR + OS + HOS + TWC (EFI + OBD)

Engine code	Vehicle Models (If Coded see attachment) (Dyno Hp: Refer to 08.13.03.00)	Trans. Type	Equiv. Test Weight	Ign. System EEC, EI, ESAC Part No. [Computer]	Fuel System CL, EFI Part No. [Computer] [Air flow meter] [Injector]	EGR Valve Part No.	Catalyst Part No.
1 thru 4	YR22LG-MDEA -MQEA YR23LV-MDEA YR29LV-MREA -MRBEA	M5	3,250 3,375 3,500 3,625 3,625	89661-28090	89661-28090 22250-73010 23250-73010	25620-73010	18450-73110
1R1 thru 4R1	YR22LG-MDEA -MQEA YR23LV-MDEA YR29LV-MREA -MRBEA			89661-28091	89661-28091 22250-73010 23250-73010		
5 thru 8	YR22LG-PDEA -PQEA YR23LV-PDEA YR29LV-PREA -PRBEA	A4	3,250 3,375 3,500 3,625	89661-28090	89661-28090 22250-73010 23250-73010		
5R1 thru 8R1	YR22LG-PDEA -PQEA YR23LV-PDEA YR29LV-PREA -PRBEA			89661-28091	89661-28091 22250-73010 23250-73010		

Comments : See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.