

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-39  
Relating to Certification of New Motor Vehicles

TOYOTA MOTOR COMPANY, LTD.

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Sections 43100, 43102, 43103, and 43835; 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 Toyota Motor Company, Ltd. exhaust emission control systems are certified as described below for 1981 model-year gasoline-powered light-duty trucks.

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
BTY2.4T2EM7	144 (2.4)	Air Injection Pump Exhaust Gas Recirculation Closed Loop Three-Way Catalyst

Vehicle Models, Transmissions, Engine Codes and Evaporative Emission Control Families as listed on attachments.

The following are the certification emission values to be listed on the window decal required by California Assembly-Line Test Procedures for 1981 model-year vehicles:

<u>Engine Family</u>	<u>Equiv. Inertia Weight</u>	<u>Hydrocarbons Grams per Mile</u>	<u>Carbon Monoxide Grams per Mile</u>	<u>Nitrogen Oxides Grams per Mile</u>
BTY2.4T2EM7	0-3999	0.15	4.1	0.6

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 1981 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles".

BE IT FURTHER RESOLVED: That Toyota Motor Company, Ltd. has provided to the Executive Officer all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

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 15<sup>th</sup> day of September, 1980.

  
K. D. Drachand, Chief  
Mobile Source Control Division

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Toyota Motor Co., Ltd Executive Order No. A-14-39 Page 1  
 Engine Family BTY2.4T2EM7 Evaporative Family EV-RI, EV-R2  
 ABBREVIATIONS Engine CID (Liters) 144 (2.4)

Ignition System

CA-Centrifugal Advance  
 EEC-Electronic Engine Control  
 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  
 CL-Closed Loop  
 EGR-Exhaust Gas Recirculation  
 EM-Engine Modification  
 OC-Oxidation Catalyst System  
 TR-Thermal Reactor  
 TWC-Three Way Catalyst System

Special Features

CCV-Combustion Chamber Valve  
 CFI-Central Fuel Injection  
 DI-Diesel Injection  
 EFI-Electronic Fuel Injection  
 MFI-Mechanical Fuel Injection  
 TC-Turbocharged

Fuel System

CFI, DI, EFI, MFI  
 nV-nVenturi Carburetor  
 VV-Variable Venturi

Engine Code

Model

1, 2, 3, 4  
 1, 2, 3, 4  
 1, 2  
 5, 6  
 7, 8

Pickup 2WD Short - Bed  
 Pickup 2WD Long - Bed  
 Pickup 2WD 3/4 Ton  
 Pickup 4WD Short - Bed  
 Pickup 4WD Long - Bed  
 Cab & Chassis

## 1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars  Light-Duty Trucks  Medium-Duty Vehicles  Gas  Diesel

Manufacturer Toyota Motor Company, Ltd.

Page 2

Engine Family BTY2.4T2EM7

Engine Code 1, 2, 3, 4, 5, 6, 7, 8.

ECS (Special Features) AIP+EGR+CL+TWC

CID (Liter)-Type 144 (2.4)-I-4

Engine Code	Vehicle Models (If Coded see attachment)	Trans.	Equiv. Test Weight	Ign. System VA, CA, EI Part No.	Fuel System 2V Part No.	EGR Valve Part No.	Label Ident. Part No.
1, 2 1-R1,1-R2(1)	Pickup 2WD Short bed	4M 5M	2875	Nippondenso 19100-35010 19100-35040(2)	Aisan Kogyo 21100-35010	25620-35010	See Page 3
3, 4 1-R3,1-R4(1)		4A				25620-35030	
1, 2 1-R1, 1-R2(1)	Pickup 2WD Long bed	4M 5M				25620-35010	
3, 4, 1-R3,1-R4		4A				25620-35030	
1, 2 1-R1,1-R2(1)	Pickup 2WD 3/4 ton	4M				25620-35010	
5, 6 1-R5,1-R6(1)	Pickup 4WD Short bed Pickup 4WD Long bed	4M 5M	3250		21100-35060	25620-35020	See Page 4
7, 8 1-R7,1-R8	Cab & Chassis	4M	3500			25620-35030	See Page 5

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.

\*Add 10% to dyno test HP for air conditioning usage.


Date of Issue - 091580

Revisions: (1)R/C81-R-9, add Eng. Codes. (2)R/C 81-R-11, Add dist. p/n.

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Toyota Motor Co., Ltd. Executive Order No. A-14-39 Page 3


Engine Family BTY2.4T2EM7

VEHICLE EMISSION CONTROL INFORMATION	
ENGINE FAMILY : BTY2.4T2EM7      144.4 CID EVAP. FAMILY : EV-R1 EXHAUST EMISSION CONTROL SYSTEM AI/EGR/TWC/O <sub>2</sub> S	
MAKE ALL ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED, AIR CONDITIONER OFF AND TRANSMISSION IN NEUTRAL.	
ENGINE TUNE-UP SPECIFICATIONS	
IDLE SPEED (RPM)	MANUAL 700 AUTO. 750
IGNITION TIMING (°BTDC)	8° @ 950 RPM MAX. WITH ALL VACUUM HOSES DISCONNECTED FROM DISTRIBUTOR AND SEALED.
IDLE MIXTURE SETTING	IDLE MIXTURE SCREW IS PRESET AND SEALED AT FACTORY. ADJUSTMENT DURING TUNE-UP IS NOT RECOMMENDED
FAST IDLE SPEED (RPM)	2,600 WITH ALL VACUUM HOSES DISCONNECTED FROM EGR VALVE AND DISTRIBUTOR AND SEALED.
VALVE CLEARANCE (IN)	INTAKE 0.008 (0.20 mm) EXHAUST 0.012 (0.30 mm)
 TOYOTA MOTOR CO., LTD.	CATALYST
THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1981 MODEL YEAR NEW MOTOR VEHICLES AND HAS DEMONSTRATED COMPLIANCE AT ALTITUDES BELOW 4,000 FEET.	

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Toyota Motor Co., Ltd. Executive Order No. A-14-39 Page 4

Engine Family BTY2.4T2EM7


VEHICLE EMISSION CONTROL INFORMATION	
ENGINE FAMILY : BTY2.4T2EM7      144.4 CID. EVAP. FAMILY : EV-R2 EXHAUST EMISSION CONTROL SYSTEM AI/EGR/TWC/O <sub>2</sub> S	
MAKE ALL ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN, AIR CLEANER INSTALLED, AIR CONDITIONER OFF AND TRANSMISSION IN NEUTRAL.	
ENGINE TUNE-UP SPECIFICATIONS	
IDLE SPEED (RPM)	700
IGNITION TIMING (°BTDC)	8° @ 950 RPM MAX. WITH ALL VACUUM HOSES DISCONNECTED FROM DISTRIBUTOR AND SEALED.
IDLE MIXTURE SETTING	IDLE MIXTURE SCREW IS PRESET AND SEALED AT FACTORY. ADJUSTMENT DURING TUNE-UP IS NOT RECOMMENDED.
FAST IDLE SPEED (RPM)	2,600 WITH ALL VACUUM HOSES DISCONNECTED FROM EGR VALVE AND DISTRIBUTOR AND SEALED.
VALVE CLEARANCE (IN.)	INTAKE 0.008 (0.20 mm) EXHAUST 0.012 (0.30 mm)
 TOYOTA MOTOR CO., LTD.	CATALYST
THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1981 MODEL YEAR NEW MOTOR VEHICLES AND HAS DEMONSTRATED COMPLIANCE AT ALTITUDES BELOW 4,000 FEET.	

1981 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Toyota Motor Co., Ltd. Executive Order No. A-14-39

Page 5

Engine Family BTY2.4T2EM7

VEHICLE EMISSION CONTROL INFORMATION	
ENGINE FAMILY : BTY2.4T2EM7      144.4 CID	
EVAP. FAMILY : EV-R2	
EXHAUST EMISSION CONTROL SYSTEM AI/EGR/TWC/O <sub>2</sub> S	
MAKE ALL ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE FULL OPEN AIR CLEANER INSTALLED, AIR CONDITIONER OFF AND TRANSMISSION IN NEUTRAL.	
ENGINE TUNE-UP SPECIFICATIONS	
IDLE SPEED (RPM)	700
IGNITION TIMING (°BTDC)	8° @ 950 RPM MAX. WITH ALL VACUUM HOSES DISCONNECTED FROM DISTRIBUTOR AND SEALED.
IDLE MIXTURE SETTING	IDLE MIXTURE SCREW IS PRESET AND SEALED AT FACTORY. ADJUSTMENT DURING TUNE-UP IS NOT RECOMMENDED.
FAST IDLE SPEED (RPM)	2,600 WITH ALL VACUUM HOSES DISCONNECTED FROM EGR VALVE AND DISTRIBUTOR AND SEALED.
VALVE CLEARANCE (IN.)	INTAKE 0.008 (0.20 mm) EXHAUST 0.012 (0.30 mm)
 TOYOTA MOTOR CO., LTD.	CATALYST
THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1981 MODEL YEAR NEW MOTOR VEHICLES AND HAS DEMONSTRATED COMPLIANCE AT ALTITUDES BELOW 4,000 FEET WHEN COMPLETED AT A MAXIMUM CURB WEIGHT OF 3,260 POUNDS AND A MAXIMUM FRONTAL AREA OF 37.5 SQUARE FEET.	