State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-343
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 new pure electric motor vehicles are certified as described below for light-duty trucks:

Emission Standard Category: Zero-Emission Vehicle (ZEV)

Fuel Type: Battery-Stored Electricity

Engine Family: XTYXT00.0ZZZ

Battery Type: Nickel Metal Hydride

Vehicle Model: RAV4 EV

BE IT FURTHER RESOLVED: That because the listed vehicle models are powered by battery-stored electricity and have no on-board systems which consume any fuel other than electricity, the vehicles produce zero exhaust or evaporative emissions of any criteria pollutant (or precursor pollutant) and therefore qualify as ZEVs according to Title 13, California Code of Regulations, Section 1960.1(g)(1), note (2.1); the listed vehicle models also meet the definition of "low-emission motor vehicle" set forth in Health and Safety Code Sections 39037.05 and 43800.

BE IT FURTHER RESOLVED: That the listed vehicle models have demonstrated, based on the specific energy of the battery, to qualify for and shall be granted 2.1 ZEV placement credits for purposes of paragraph I.D.2. of the Memorandum of Agreement between the manufacturer and the Air Resources Board.

BE IT FURTHER RESOLVED: That to the extent that the manufacturer exceeds its obligation to place new ZEVs with advanced technology batteries into service in California urban areas pursuant to said Memorandum of Agreement, the listed vehicle models have demonstrated, based on the vehicle range or on the specific energy of the battery, to qualify for and shall be granted three ZEV credits for purposes of Title 13, California Code of Regulations, Section 1960.1(g)(2), note (9)a.

BE IT FURTHER RESOLVED: That the listed vehicles models shall not be equipped with any fuel-fired auxiliary power sources or heaters.

BE IT FURTHER RESOLVED: That the listed vehicle models shall comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" (Title 13, California Code of Regulations, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed vehicle models shall be clearly labeled as "low-emission motor vehicles" pursuant to the requirements of Health and Safety Code Section 43802(a).

BE IT FURTHER RESOLVED: That because the vehicles certified by this executive order have no parts that affect emissions for which there is an applicable emission requirement, the manufacturer is not required to provide an emission control system warranty pursuant to Health and Safety Code Section 43205 or Title 13, California Code of Regulations, Sections 2035 et seq.

Quarterly production reports shall be submitted to the Executive Officer no later than 45 days after the end of each quarter.

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.

Executed at El Monte, California this 24th day of September 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

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

Manufacturer: Toyota Engine Family: XTYXT00.0ZZZ

Veh Class(es): PC (LDT1) LDT2 MDV1 MDV2 MDV3 MDV4 MDV5

No. of ZEV Credits per vehicle: 3

Fuel Type: (Electro chemical Battery) Fuel Cell Capacitor Other (specify): _____

Battery Type(s): Lead Acid Nickel Cadmium SBLA Sodium Sulfur
Sodium Nickel Chloride (Nickel Metal Hydride) Lithium Metal Disulfide
Zinc Air Zinc Bromine Lithium Polymer Other (specify): _____

Total Battery Weight: 450 kg Total Battery Volume: _____ Battery Voltage: 12 V

No. of batteries or modules per vehicle: 24 Total Battery Voltage: 288 V

Charger(s): (on-board) off-board (conductive) inductive

Drive Motors(s): AC Induction DC Brush (DC Brushless)
Switched Reluctance Other (specify): _____

No. of Drive Motors 1 Maximum motor power 50 kW @ 3100 ~4600 rpm Max rpm: 8600

Drive: (FWD) RWD 4WD-FT 4WD-PT

Regenerative Braking: No (Yes) (FW) RW AW

Driver Controlled Regen Braking: (Yes) No Coast Regen Braking: (Yes) No

Air Conditioning: (Yes) No

Fuel Fired Heater: Yes (No) Fuel Type: Gas Diesel CNG LNG
LPG Other (specify): _____ Rated Heat Power: _____ kW

Vehicle Models (If coded see attachment)	Trans. Type M5, A4 (if applicable)	GVWR (lbs)	Curb Weight (lbs)	ETW or Test Weight (lbs)	DPA or RLHP (N)
RAV4 EV (BEA11L-AWDFSA)	A1	4,266	3,440	3,750	$F=111.8+0.05041V^{2}$ *1

Note *1: on-road RLHP without air conditioning

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Manufacturer: Toyota Engine Family: XTYXT00.0ZZZ

Veh Class(es): PC__ LDT1 x LDT2__ MDV1__ MDV2__ MDV3__ MDV4__ MDV5__

No. of ZEV Credits per vehicle: 3

Fuel Type: Electro chemical Battery x Fuel Cell__ Capacitor__ Other (specify):_____

Battery Type(s): Lead Acid__ Nickel Cadmium__ SBLA__ Sodium Sulfur__

Sodium Nickel Chloride__ Nickel Metal Hydride x Lithium Metal Disulfide__

Zinc Air__ Zinc Bromine__ Lithium Polymer__ Other (specify):_____

Total Battery Weight: 450 kg Total Battery Volume:_____ Battery Voltage: 12 V

No. of batteries or modules per vehicle: 24 Total Battery Voltage: 288 V

Charger(s): on-board__ off-board x conductive__ inductive x

Drive Motors(s): AC Induction__ DC Brush__ DC Brushless x

Switched Reluctance__ Other (specify):_____

No. of Drive Motors 1 Maximum motor power 50 kW @ 3100 -4600 rpm Max rpm: 8600

Drive: FWD x RWD__ 4WD-FT__ 4WD-PT__

Regenerative Braking: No__ Yes x FW x RW__ AW__

Driver Controlled Regen Braking: Yes x No__ Coast Regen Braking: Yes x No__

Air Conditioning: Yes x No__

Fuel Fired Heater: Yes__ No x Fuel Type: Gas__ Diesel__ CNG__ LNG__

LPG__ Other (specify):_____ Rated Heat Power:_____kW

Vehicle Models (If coded see attachment)	Trans. Type M5, A4 (if applicable)	GVWR (lbs)	Curb Weight (lbs)	ETW or Test Weight (lbs)	DPA or RLHP (N)
RAV4 EV (BEA11L-AWDHSA)	A1	4,266	3,440	3,750	$F=111.8+0.05041 * V^{2*1}$

Note *1: on-road RLHP without air conditioning

This R/C changes to off-board inductive charging.