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State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-15-320 Relating to Certification of New Motor Vehicles

NISSAN MOTOR CO., LTD.

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 1998 model-year Nissan Motor Co., Ltd. new pure electric motor vehicles are certified as described below for passenger cars:

Emission Standard Category: Zero-Emission Vehicle (ZEV)

Fuel Type: Battery-Stored Electricity

Engine Family: WNSXV0000GLA

<u>Battery Type</u>: Lithium Ion

<u>Vehicle Model</u>: Altra 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 2.8 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 vehicle models shall not be equipped with any fuel-fired auxiliary power sources or heaters.

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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 _____ day of January 1998.

R. B. Summerfield, Chief Mobile Source Operations Division

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17.06.00 Supplemental I	Data Sheet				
19 <u>98</u> MODEL-YEAR AI	R RESOURCES BO	ARD SUPPL	EMENTAL DAT	A SHEET Page	# <u>A-15</u> -320
ZEV-PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES					
Manufacturer: NISSAN MOTOR CO., LTD. Engine Family : WNSXV0000GLA					
Veh Class(es): PC X_LDT1_LDT2_MDV1_MDV2_MDV3_MDV4_MDV5_					
No. of ZEV Credits per vehicle : <u>2.77</u> 1/					
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 Lithium Metal Disulfide					
Zinc Air Zinc Bromine Lithium polymer Other(specify) Lithium Ion					
Total Battery Weight <u>380.7 kg</u> Total Battery Volume <u>2.82 m2</u>					
Battery specific energy density <u>83.0 Wh/kg</u>					
No. of batteries or modules per vehicle <u>12</u> Total Battery Voltage <u>345 v</u> (Rated)					
Charger(s): on-board off-board X_ conductive inductive X_					
Drive Motors(s): AC Induction DC Brush DC Brushless					
Switched Reluctance Other(specify) AC Synchronous					
No. of Drive Motors 1 Rated motor power 62 KW @ 3720~8500 pm Max pm 13100					
Drive : FWD X RWD 4WD-FT 4WD-PT					
Regenerative Braking : No Yes X FW X RW AW					
Driver Controlled Regen Braking : Yes No X_ Coast Regen Braking : Yes X. No					
Air Conditioning : Yes_X_ No					
Fuel Fired Heater, (NA) Fuel Type : Gas Diesel CNG LNG					
LPG Other(specify) Rated Heat Power kW					
Vehicle Models	Trans. type M5, A4	GVWR	ETW	DPA or	
(if coded see attachment)			or Test Weight	RLHP	
Altra-EV	NA	4579	4000	$RL=A+B'V^{2}$	
				*1 A=36.09	_

B'=0.032969

Issue Date : 10/09/97 Revision Date : 1/ 01/09/98