Bill

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-331-1
Relating to Certification of New Motor Vehicles

BOMBARDIER INC.

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 Bombardier Inc. 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

Battery Type: Lead Acid

Vehicle Model: Sport-e; Class-e

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 been demonstrated, based on the vehicle range capabilities or on the specific energy of the battery, to qualify for and shall be granted one ZEV credit pursuant to 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 29th day of October 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# A-331 Page 1 of 1

98-99 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
ZEV – PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Bombardier Inc. Engine Family: Electric

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

No. of ZEV Credits per vehicle: 1

Fuel Type: Electric chemical Battery X Fuel Cell ___ Capacitor ___ Other (specify) ___

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

Prop. Battery Weight: 166 kg. Battery Volume: 4 284 sq. in. Battery specific energy: 28.2 Wh/kg*

Acces. Battery Weight: 12 kg. Total Battery Volume: 273 sq. in. Battery specific energy: 23.0 Wh/kg

* Battery specific energy is based on a «real life» Bombardier test cycle. Battery specific energy would be 32.5 Wh/kg and 39.0 Wh/kg respectively according to $C_3/2$ and $C_6/6$ tests (SAE 1798).

No. of batteries or modules per vehicle: 6X12V (Prop.) + 1X12V (Acces.)

Battery Voltage: 72V (Prop.) + 12V (Acces.)

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

Drive Motor(s): AC Induction ___ DC Brush ___ DC Brushless ___ Switched Reluctance ___ Other (specify): DC Brush Shunt

No. of Drive Motors 1 Rated motor power 4 kw @ 3600 rpm Max rpm: 4000

Drive: FWD ___ RWD X 4WD-FT ___ 4WD-PT ___

Regenerative Braking: No ___ Yes X FW ___ RW ___ AW ___

Driver Controlled Regen Braking: Yes ___ No X Coast Regen Braking: Yes X No ___

Air Conditioning: Yes ___ No X.

Fuel Fired Heater: 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	Curb Weight	ETW or Test Weight	DPA or RLHP
Sport-e & Class-e	N/A	1775 lbs	1275 lbs	1425 lbs	1.5 HP (1125 W) @ 20 MPH)

Date Issued:

Revisions: