

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-16-233
Relating to Certification of New Motor Vehicles

MAZDA 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 Mazda Motor Corporation exhaust emission control systems are certified as described below for passenger cars:

Emission Standard Category: Ultra-Low Emission Vehicle (ULEV)

Fuel Type: Gasoline

Engine Family: XTKXV01.6VJM Displacement: 1.6 Liters (98 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Warm Up Three Way Catalytic Converter
Three Way Catalytic Converter
Heated Oxygen Sensors (two)
Exhaust Gas Recirculation
Sequential Multiport Fuel Injection

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

The ULEV certification exhaust emission standards for this engine family in grams per mile are:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Oxides of Nitrogen</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.040	1.7	0.2	0.008	10.0
100,000	0.055	2.1	0.3	0.011	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.94 RAF for 1999 model-year ULEVs. The ULEV certification exhaust emission values for this engine family in grams per mile are:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Oxides of Nitrogen</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.033	0.3	0.1	0.0004	3.1
100,000	0.034	0.4	0.1	0.0004	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average NMOG exhaust mass emission requirements as set forth 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 under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the "California Refueling Emission Standards and Test Procedures for 1998 and Subsequent Model Motor Vehicles," Title 13, California Code of Regulations, Section 1978, and the listed vehicle models comply with those standards.

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" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, 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 Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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

BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit 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 "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) 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 provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

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 9th day of June 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

Manufacturer: Mazda Motor Corporation Exh Eng Fam: XTKXV01.6VJM Evap Fam: XTKXR0125BFB
 All Engine Codes in Engine Family: CA X 49S _____ 50S _____ AB965 _____, ORVR: YES X NO _____
 Exh Std: CA Tier-1 _____ TLEV _____ LEV _____ ULEV X SULEV _____, US EPA Tier-1 _____
 Veh Class (es): PC X LDT1 _____ LDT2 _____ MDV1 _____ MDV2 _____ MDV3 _____ MDV4 _____ MDV5 _____
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type (s): Dedicated X Flex-Fuel _____ Duel-Fuel _____ Bi-Fuel _____ Gasoline X Diesel _____
 CNG _____ LNG _____ LPG _____ M85 _____ Other (specify) _____
 Exh Emiss Test Fuel (s): Indo _____ CBG X CNG _____ LPG _____ M85 _____ Other (specify) _____
 Diesel: 13 CCR 2282 _____ 40CFR 86.113-90 _____ 40 CFR 86.113-94 _____
 Evaporative Emission Test Procedure: California _____ Federal X _____
 Service Accum: Std. AMA X Mod AMA _____ Mfr ADP _____ Other (specify) _____
 NMOG Test Procedure: N/A _____ Std X _____ Equiv _____ R/L Test Proc: SHED _____ PT Source X _____
 Engine Configuration: I-4 Displacement: 1.6 / _____ Liters 97.5 / _____ Cubic Inches
 Valves per Cylinder: 4 Rated HP: _____ 103 @ _____ 5500 RPM
 Engine: Front X Mid. _____ Rear _____ Drive: FWD X RWD _____ 4WD-FT _____ 4WD-PT _____
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): _____ TWC/WU-TWC: /EGR/SFI/HO2S(2)
 (Use abbreviations per SAE J1930 MAY91)

Engine Code (also list CA/ 49ST/50ST)	Vehicle Models (if coded see attachment)	Trans. Type (M5, A4 etc.)	ETW or Test Wt.	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalyst Part No.
JZMD2AA9 <i>No A/C</i>	Protege	M5	2750	5.7	Distributor: N/A	EGR Control Valve: BP4W	ZM01 ZM02 ZM03
JZMD2AAX <i>A/C</i>				6.3	ECU: ZM03		
JZMDTAA9 <i>No A/C</i>		A4	2875	5.7	Distributor: N/A	EGR Control Valve: BP4W	
JZMDTAAAX <i>A/C</i>				6.3	ECU: ZM04		
Certification Standards (50,000 mile / 100,000 mile / 120,000 mil) HC (g/mi) _____ / _____ / _____ NMOG (g/mi) <u>0.040</u> / <u>0.055</u> / _____ NMHC (g/mi) _____ / _____ / _____ CO (g/mi) <u>1.7</u> / <u>2.1</u> / _____ NOx (g/mi) <u>0.2</u> / <u>0.3</u> / _____ HWFET NOx (g/mi) <u>0.3</u> / <u>0.4</u> / _____ Evap. (EPA : g/test) _____ / _____ / _____ Evap. (ARB : g/test) _____ / <u>2.0</u> / _____ Evap. (Abbrev : g/test) _____ / <u>2.5</u> / _____ Running Loss (g/test) _____ / <u>0.05</u> / _____ Spilt Back (g/test) _____ / <u>1.0</u> / _____ ORVR (g/gallon) _____ / _____ / _____ Cold CO (g/mi) <u>10.0</u> / _____ / _____ Idle CO for LDT (%) _____ / _____ / _____ HCHO (mg/mi) <u>8</u> / <u>11</u> / _____ CST -HC (ppm) _____ / _____ / _____ CST -CO (%) _____ / _____ / _____ NMOG (g/mi) for 50°F <u>0.080</u> / _____ / _____ HCHO (mg/mi) for 50°F <u>15</u> / _____ / _____							

Revisions:

Issue Date: April 3, 1998				
Rev. No.				
Date				