

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-16-241
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 2000 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: YTKXV01.6VJM 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 2000 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 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 August 1999.



R. B. Summerfield, Chief
Mobile Source Operations Division

Manufacturer: Mazda Motor Corporation Exh Eng Fam: YTKXV01.6VJM Evap Fam: YTKXR0125BFB
 All Engine Codes in Engine Family: CA 49S 50S X 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/H02S/EGR/SFI
 (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	Protege	M5	2750	5.7	Distributor: N/A	EGR Control Valve: BP4W	ZM01 ZM02
JZMD2AAX				6.3 (A/C)	ECU: ZM37		
JZMDTAA9		A4	2875	5.7	Distributor: N/A		
JZMDTAAX				6.3 (A/C)	ECU: ZM38		
Certification Standards (50,000 mile / 100,000 mile / 120,000 mile)							
HC (g/mi)	...	...	...	...	...	...	...
NMOG (g/mi)	0.040	0.035	...	...	...	...	...
NMHC (g/mi)	...	...	...	...	...	...	...
CO (g/mi)	1.7	2.1	...	...	...	...	...
NOx (g/mi)	0.2	0.3	...	...	...	...	...
HWFET NOx (g/mi)	0.3	0.4	...	...	...	...	...
Evap. (EPA: g/test)	...	...	...	...	...	...	...
Evap. (ARB: g/test)	...	2.0	...	...	...	...	...
Evap. (Abbrev: g/test)	...	2.2	...	...	...	...	...
Running Loss (g/test)	...	0.04	...	...	...	...	...
Spit Back (g/test)	...	1.0	...	...	...	...	...
ORVR (g/gallon)	...	...	...	...	...	...	...
Cold CO (g/mi)	10.0	...	...	...	...	...	...
Idle CO for LDT (%)	...	...	...	...	...	...	...
HCHO (mg/mi)	...	11	...	...	...	...	...
CST -HC (ppm)	at Idle: 100,	at 2500 rpm: 10	...	...	...	...	...
CST -CO (%)	at Idle: 0.5,	at 2500 rpm: 0.5	...	...	...	...	...
NMOG (g/mi) for 50°F	0.040
HCHO (mg/mi) for 50°F	16

Revisions:

Issue Date: May 21, 1999

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Date					