

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-16-232
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: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: XTKXV01.8VDM Displacement: 1.8 Liters (112 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 TLEV 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	0.125	3.4	0.4	0.015	10.0
100,000	0.156	4.2	0.6	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.98 RAF for 1999 model-year TLEVs. The TLEV 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	0.068	0.9	0.1	0.0004	5.6
100,000	0.072	1.0	0.1	0.0005	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 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 4th day of December 1997.



R. B. Summerfield, Chief
Mobile Source Operations Division

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

A-16-232 17-S-2
E.O.# _____ page _____

Manufacturer: Mazda Motor Corporation Exh Eng Fam: XTKXV01.8VDM Evap Fam: XTKXE0120BFB
 All Engine Codes in Engine Family: CA X 49S _____ 50S _____ AB965 _____, ORVR: YES _____ NO X
 Exh Std: CA Tier-1 _____ TLEV X LEV _____ ULEV _____ 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 Equip _____ R/L Test Proc: SHED _____ PT Source X
 Engine Configuration: I-4 Displacement: 1.8 / _____ Liters 112.3 / _____ Cubic Inches
 Valves per Cylinder: 4 Rated HP: 138 @ 6500 RPM
 Engine: Front X Mid. _____ Rear _____ Drive: FWD _____ RWD X 4WD-FT _____ 4WD-PT _____
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): _____ HO2S/SFI/WU-TWC/TWC/EGR
 (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.
DBPD2LA9	MX-5 Miata	M5	2625	8.0	Distributor: N/A	EGR Control Valve: BP4W	BP4Y BP5M *1 BP4Z *1
DBPD2LAX				8.8 (A/C)	ECU: BP4W, BP4Y		
DBPDTLA9		A4	2625	8.2	Distributor: N/A		
DBPDTLAX				9.0 (A/C)	ECU: BP4X, BP4Z		
Certification Standards (50,000 mile/ 100,000 mile/120,000 mile)							
HC (g/mi)	---	---	---				
NMOG (g/mi)	0.125	0.156	---				
Non-methane HC (g/mi)	---	---	---				
CO (g/mi)	3.4	4.2	---				
NOx (g/mi)	0.4	0.6	---				
HWFET NOx (g/mi)	0.5	0.8	---				
Evap. (EPA : g/test)	---	---	---				
Evap. (ARB : g/test)	---	2.0	---				
Evap. (Abbrev : g/test)	---	2.5	---				
Running Loss (g/test)	---	0.05	---				
Spit Back (g/test)	---	1.0	---				
Cold CO (g/mi)	10	---	---				
Idle CO for LDT (%)	---	---	---				
HCHO (mg/mi)	1.5	1.8	---				
CST-HC	---	---	---				
CST-CO	---	---	---				
NMOG (g/mi) for 50° F	0.25	---	---				
HCHO (mg/mi) for 50° F	30	---	---				

*1: added (refer to page 20-S-36)

Issue date:	September 12, 1997			
Rev. No.				
Date				