File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-16-222
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 1998 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: WTKXV01.5VDM Displacement: 1.5 Liters (91 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:

Miles	Non-Methane Organic Gases	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
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 1998 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Organic Gases	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
50,000	0.089	0.8	0.04	0.001	3.5
100,000	0.095	0.8	0.04	0.001	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 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 "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 manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines").

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 18th day of July 1997.

Raphael Summerfield

for R. B. Summerfield, Chief
Mobile Source Operations Division

17-ZD-2

1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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Manufacturer Mazda Motor Corporation Exh Eng Fam: WTKXV01.5VDM Evap Fam: WTKXE0104BFA

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) Phase II

Diesel : 13 CCR 2282 ____ 40CFR 86.113-90 ____ 40 CFR 86.113-94 ____

Evaporative Emission Test Procedure : California X Federal ____

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 : 1.5 / ____ Liters 90.9 / ____ Cubic Inches

Valves per Cylinder : 4 Rated HP : 90 @ 5500 RPM

Engine : Front X Mid. ____ Rear ____ Drive: FWD X RWD ____ 4WD-FT ____ 4WD-PT ____

Exhaust ECS (e.g., MFI, EGR, TC, CAC) : HO2S/WU-TWC/TWC/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.
2Z5D2AA7	Protege	M5	2750	6.3 *1	Distrubutor: BP1A ECU: Z5A8	EGR Control Valve: BP3C	B6GD Z5A8
2Z5D2AAV				6.2 *2			
				6.9 *1			
				6.8 *2			
2Z5DTAA7		A4	2875	6.3 *1	Distrubutor: BP1A ECU: Z5A9		
2Z5DTAAV				6.2 *2			
				6.9 *1			
				6.8 *2			

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)	10.0	, ---	, ---
Idle CO for LDT (%)	---	, ---	, ---
HCHO (mg/mi)	15	, 18	, ---
CST -HC	---	, ---	, ---
CST -CO	---	, ---	, ---
NMOG (g/mi) *1	0.25	, ---	, ---
HCHO (mg/mi) *1	30	, ---	, ---

*1: for 50 F

Revisions: *1:175 tire

1290 *2:185 tire

Issue date:	April 25, 1997				
Rev. No.					
Date					