State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-254-52
Relating to Certification of New Motor Vehicles

HYUNDAI MOTOR COMPANY

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 Hyundai Motor Company 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: WHYXV02.02HM Displacement: 2.0 Liters (121.9 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Warm Up Three Way Catalytic Converter
Three Way Catalytic Converter
Heated Oxygen Sensors (two)
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 Gas	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 gas (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 Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde	Carbon Monoxide (20°F)
50,000	0.072	1.0	0.05	0.001	7.0
100,000	0.082	1.2	0.1	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 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 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.).

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 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).

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 1st day of July 1997.

R. B. Summerfield, Chief
Mobile Source Operations Division

17.16.02 Supplemental Data Sheet-1

E.O.# A-254-52
Page 1 of 3

1998 MODEL-YEAR AIR RESOURCES SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer : HYUNDAI MOTOR CO. Exh Eng Fam : WHYXV02.02HM Evap Fam : WHYXV009221S
All Eng Codes in Eng Fam : CA X 49S ___ 50S ___ AB965 ORVR : YES ___ NO X
Exh Std : CA Tier-1 ___ TLEV X LEV ___ ULEV ___ ZEV ___ ; US EPA Tier-1 ___
Evap Std : 100K X Useful life with R/L X In-Use Exh Std : Full In Use X Alt In Use ___
Veh Class(es) : PC X LDT1 ___ LDT2 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___
Single Cert Std for Muli-Class Eng Fam : N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type(s) : Dedicated X Flex-Fuel ___ Dual-Fuel ___ Bi-Fuel ___ Gasoline X Diesel ___
CNG ___ LNG ___ LPG ___ M85 ___ Other (specify) ___
Emiss Test Fuel(s) : Indo X PH2 ___ CNG ___ LPG ___ M85 ___ Other (specify) ___
Diesel : 13 CCR 2282 ___ 40 CFR 86.113-90 ___ 40 CFR 86.113-94 ___
Evaporative Emission Test Procedure : California ___ Federal X
Service Accum : Std AMA X Mod AMA ___ Mfr ADV ___ OTHER (SPECIFY) ___
NMOG Test procedure : N/A ___ Std X Equiv ___ R/L Test Proc : SHED X Pt Source ___
Hybrid : Type A ___ B ___ C ___, APU Cycle (e.g., Otto, Diesel, Turbine) ___
Engine Configuration : I-4 Displacement : 2.0 / ___ Liters 121.9 / ___ Cubic Inches
Valves Per Cylinder : 4 Rated HP : 125 @ 5,800 RPM
Engine : Front X Mid ___ Rear ___ Drive : FWD X RWD ___ 4WD-FT ___ 4WD-PT ___
Exhaust ECS (e.g., MFI EGR., TC, CAC, : HO2S(2) + TWC + SFI + OBD II + WU-TWC
(use abbreviations per SAE J1930 JUN 93)

Eng. Code (list CA/ 49ST/50ST)	Veh. Models (If Coded see Attachment)	Trans. Type : L-Auto. M-Man.	Equiv. Test Weight	DPA or RLHP	Ign. Sys. (ECM/PCM) part No.	EGR System Part No.	Catalyst Part No.
ACM5-Z /CM5-Z (CA)	SONATA	M5	3250	8.0	39110-33980 (CLSD13)	N/A	28530-33600(Rr) 28950-33750(Frt)
ACL4-Z /CL4-Z (CA)		L4	↑	8.4	↑	↑	↑

Issued : 6-1-97
Revised : 6-27-97