State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-254-5
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 Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1989 model-year Hyundai Motor Company emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family	Displacement Liters (Cubic Inches)	Exhaust Emission Control Systems (Special Features)
KHY2.4V5FCDX	2.4 (143.4)	Exhaust Gas Recirculation Oxygen Sensor Three-Way Catalyst (Combustion Chamber Valve) (Sequential Fuel Injection)

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

The following are the emission standards for this engine family:

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile)
0.41	7.0	0.4

The following are the certification emission values for this engine family:

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile
0.29	3.0	0.1

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor 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" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Administrative Code, Section 1968) 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 regulations (Title 13, California Administrative Code, 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 21st day of September, 1988.

K. D. Drachand, Chief
Mobile Source Division

17.16.02 Supplemental Data Sheet

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1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer	Hyundai Motor Company	Engine Family	KHY2.4V5FCDX
Evap. Family	KHY2.4IC	Engine Type	4 cyl. In-line
		Liters (CID)	2.4L (143.4)

ABBREVIATIONS

Exhaust Emissions Control System

AIP - Air Injection - Pump
AIV - Air Injection - Valve
EGR - Exhaust Gas Recirculation
EIC - Electronic Injection Control (Diesel)
EM - Engine Modification
SPL - Smoke Puff Limiter or throttle Delay
TOC - Trap Oxidizer, Continual
TOP - Trap Oxidizer, Periodical
DBC - Dual Bed Catalyst
OC - Oxidation Catalyst System
TWC - Three-Way Catalyst System
WUOC - Warm-Up Oxidation Catalyst
WUTWC- Warm-Up Three-Way Catalyst
OS - Oxygen Sensor
HOS - Heated Oxygen Sensor

Special Features

CFI - Central Fuel Injection or Throttle Body Injection
EPFI - Electronic Port Fuel Injection
MPFI - Mechanical Port Fuel Injection
SFI - Sequential Fuel Injection
DID - Diesel Injection - Direct
DIP - Diesel Injection - Prechamber
TC - Turbocharger
SC - Supercharger
IC - Intercooler or Aftercooler
CCV - Combustion Chamber Valve
OBD - On-Board Diagnostics

Fuel System

CFI, EPFI, MPFI, SFI, DID, DIP, HOS, OS
nV - nVenturi Carburetor
VV - Variable Venturi Carburetor

Ignition System

CA - Centrifugal Advance
ECU - Electronic Control Unit
EI - Electronic Ignition
ESAC - Electronic Spark Advance Control
VA - Vacuum Advance
VR - Vacuum Retard

VEHICLE MODELS: SONATA

Engine: Front X Mid. ____ Rear ____
Drive : FWD X RWD ____ 4WD Full Time ____ 4WD Part Time ____

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1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars X Light-Duty Trucks _ Medium-Duty Vehicles _ Gas X Diesel _

Manufacturer Hyundai Engine Family KHY2.4V5FCDX

Liter (CID) 2.4 (143.4) Eng. Type 4 cyl. In-line

Emission Control Sys. (Special Features) OS+EGR+TWC (CCV+SFI)

Engine Code	Vehicle Model	Trans. Type	Equiv. Test Weight	Ign. System (ECU) ID No.	Fuel System ID No.	EGR Valve ID No.	Catalyst Part No.
ACM5 /CM5	SONATA	M5	3250	CLS1	35310-32660 or B275	TC4	28950 -32661
ACL4 /CL4	SONATA	L4	3250	CLS1	35310-32660 or B275	TE2	28950 -32661

Coastdown Horsepower

Car Line (Engine Family)	Body Style	Trans.	Test Weight	Test HP With Air Con.	Coastdown Time With Air Con.	Tire
SONATA (KHY2.4V5FCDX)	4-NB	M5	3250	8.6	15.18	P195/70R14
		L4	3250	7.6	15.97	P195/70R14

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