

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-23-72  
Relating to Certification of New Motor Vehicles

HONDA MOTOR CO., LTD.

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 Honda Motor Co., Ltd. exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
KHN2.0V2F5C5	2.0 (119)	Air Injection - Valve Oxygen Sensor Exhaust Gas Recirculation Three-Way Catalyst On-Board Diagnostics (Exempted)

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

The following are the emission standards for this engine family:

<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0.39	7.0	0.7

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

<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0.14	2.4	0.2

BE IT FURTHER RESOLVED: That the listed models are certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying to the optional NOx standard by providing evidence that there are sufficient projected sales of vehicles certifying to the

primary NOx emission standard, or is allowed a delay in implementation under small volume manufacturer provisions, or is allowed a delay in implementation under the "in lieu" standards, or is certifying passenger cars weighing more than 5250 lbs. loaded vehicle weight.

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.), and with the 2 year/24,000 mile warranty provisions of Health and Safety Code Section 43204.

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 28<sup>th</sup> day of August, 1988.

  
K. D. Drachand, Chief  
Mobile Source Division

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer HONDA Engine Family KHN2.OV2F5C5  
 Evaporative Family 89FB Engine Type I - 4  
 Liters (CID) 2.0 (119)

ABBREVIATIONS

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Special Features</u>
CA-Centrifugal Advance	AIP-Air Injection - Pump	CFI-Central Fuel Injection or Throttle Body Injection
ECU-Electronic Control Unit	AIV-Air Injection - Valve	EPFI-Electronic Port Fuel Injection
EI-Electronic Ignition	EGR-Exhaust Gas Recirculation	MPFI-Mechanical Port Fuel Injection
ESAC-Electronic Spark Advance Control	EIC-Electronic Injection Control (Diesel Only)	SFI-Sequential Fuel Injection
VA-Vacuum Advance	EM-Engine Modification	DID-Diesel Injection-Direct
VR-Vacuum Retard	SPL-Smoke Puff Limiter or Throttle Delay	DIP-Diesel Injection-Prechamber
	TOC-Trap Oxidizer, Continual	TC-Turbocharger
	TOP-Trap Oxidizer, Periodical	SC-Supercharger
	DBC-Dual Bed Catalyst	IC-Intercooler or Aftercooler
	OC-Oxidation Catalyst	CCV-Combustion Chamber Valve
	TWC-Three-way Catalyst	OBD-On-Board Diagnostics
	WUOC-Warm-Up Oxidation Catalyst	
	WUTWC-Warm-Up Three-Way Catalyst	
	OS-Oxygen Sensor	
	HOS-Heated Oxygen Sensor	

Fuel System

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

VEHICLE MODELS:

Accord Sedan LX - Automatic Transmission

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

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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Passenger Cars X Light-Duty Trucks      Medium-Duty Vehicles      Gas X Diesel       
 Manufacturer HONDA Engine Family KHN2.OV2F5C5  
 Liter (CID) 2.0 (119) Engine Type I - 4  
 Emission Control Sys. (Special Features) AIV, OS, EGR, TWC (OBD Exempt)

Engine Code	Vehicle Models (If Coded see attachment) *(Dyno HP)	Trans. Type	Equiv. Test Weight	Ign. System	Fuel System	EGR Valve	Catalyst
				Part No. (Vendor's)	Part No. (Vendor's)	Part No. (Vendor's)	Part No. (Vendor's)
K53/1	Accord Sedan LX	L4	3000	CA, EI & VA  Toyo Denso Distributor: 30100-PH4 -6745 (TD-42K)  Hitachi Distributor: 30100-PH4 -6735 (D4R84-58)	2V  Keihin Carburetor: 16100-PH4 -6930 (ED40B)	18710-PH4 -6631 (135000 -2920)	18150-PH3 -X010(HDD)  18150-PH3 -X020(HDD)

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing. Add 10% to dyno test HP for air conditioning usage.

\*: Please refer to page 08-1.1 in 1989 Application.

Date of Issued 05/31/88 Revisions:

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars  Light-Duty Trucks  Medium-Duty Vehicles  Gas  Diesel   
 Manufacturer HONDA Engine Family KHN2.0V2F5C5  
 Liter (CID) 2.0 (119) Engine Type I - 4  
 Emission Control Sys. (Special Features) AIV, OS, EGR, TWC

Engine Code	Vehicle Models (If Coded see attachment) *(Dyno HP)	Trans. Type	Equiv. Test Weight	Ign. System Part No. (Vendor's)	Fuel System Part No. (Vendor's)	EGR Valve Part No. (Vendor's)	Catalyst Part No. (Vendor's)
K53/1 -16	Accord Sedan LX	L4	3000	CA, EI & VA  Toyo Denso Distributor: 30100-PH4 -6747 (TD-42K)  Hitachi Distributor: 30100-PH4 -6737 (D4R84-58)	2V  Keihin Carburetor: 16100-PH4 -6932 (ED40B)	18710-PH4 -6631 (135000 -2920)	18150-PH3 -X010(HDD)  18150-PH3 -X020(HDD)  18150-PH3 -X020 (9XXXXJ)

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing. Add 10% to dyno test HP for air conditioning usage.

\*: Please refer to page 08-1.1 in 1989 Application.

Date of Issued 02/14/89

Revisions: 06/23/89 (P/N update)

## 08.00.00 GENERAL TECHNICAL DESCRIPTION

## Road Force and Dynamometer Setting Specifications

Vehicle Model	Tires	Trs.	ETW	W/O AC Factor		W/ AC Factor	
				CD Time	Test HP	CD Time	Test HP
Prelude S	185/70HR13(BS)	M5	2875	15.91	7.5	15.07	8.2
	185/70HR13(DL)	M5	2875	15.11	7.5	14.34	8.2
	185/70HR13(BS)	L4	3000	15.91	7.5	15.07	8.2
	185/70HR13(DL)	L4	3000	15.11	7.5	14.34	8.2
Prelude Si	195/60R14 85H	M5	3000	N/A	N/A	13.28	8.2
	195/60R14 85H	L4	3000	N/A	N/A	13.28	8.2
Accord DX	P185/70R13	M5	2875	16.66	6.2	15.82	6.8
	P185/70R13	L4	2875	16.66	6.2	15.82	6.8
Accord LX	P185/70R13	M5	2875	N/A	N/A	16.02	7.7
	P185/70R13	L4	3000	N/A	N/A	16.02	7.7
Accord LXi	195/60R14 85H	M5	3000	N/A	N/A	14.76	7.4
	195/60R14 85H	L4	3000	N/A	N/A	14.76	7.4
Accord SEi	195/60R14 85H	M5	3000	N/A	N/A	14.76	7.4
	195/60R14 85H	L4	3125	N/A	N/A	14.76	7.4
Legend Sedan	205/60R15 90H	M5	3500	N/A	N/A	15.01	8.5
	205/60R15 90H	L4	3625	N/A	N/A	15.01	8.5
Legend Coupe	205/60VR15	M5	3500	N/A	N/A	15.96	7.7
	205/60VR15	L4	3625	N/A	N/A	15.96	7.7

Note: CD Time/Test HP determined using coastdown method.

## DURABILITY VEHICLE CARRYOVER SELECTION COMPARISON

	<u>1986 Durability Vehicle (VID : A86EA1)</u>	<u>1989 California Family Durability Vehicle Selection</u>
Engine Family-Displacement	GHN2.OV2FEF2 -119 CID	KHN2.OV2F5C5 -119 CID
Model	Accord Sedan LX	Accord Sedan LX
Exhaust Emission Control System	AIV, OS, EGR, TWC	AIV, OS, EGR, TWC
Crankcase Emission Control System	PCV	PCV
Catalyst Code	TW-10	TW-16
Transmission	M-5	L-4
Horsepower/Type	7.6/CD	7.7/CD
Inertia Weight	2750 lbs.	3000 lbs.
Equivalent Test Weight	2750 lbs.	3000 lbs.
Final Drive Ratio	3.87	4.07
N/V Ratio-rpm/mph	39.7	42.4
Tire Size	P185/70R13	P185/70R13

Note

Based on the criteria specified in U.S.E.P.A. OMS Advisory Circular No.17F, the durability data derived from A86EA1 can be carried-over to engine family KHN2.OV2F5C5.