

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-2-49  
Relating to Certification of New Motor Vehicles

FUJI HEAVY INDUSTRIES 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 1988 model-year Fuji Heavy Industries 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>
JFJ1.8V5HCV4	1.8 (109)	Oxidation Catalyst Three-Way Catalyst Oxygen Sensor Exhaust Gas Recirculation (Some Models) (Central Fuel Injection - Some Models) (Electronic Port Fuel Injection - Some Models) (On-Board Diagnostics)

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>
0.41	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>
0.25	4.2	0.3

BE IT FURTHER RESOLVED: That the listed models were 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 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.

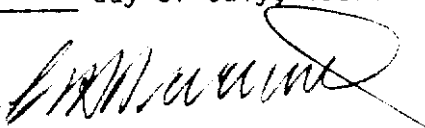
BE IT FURTHER RESOLVED: That the vehicle models listed also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s] ..." (Title 13, California Administrative Code, Section 1968) for the aforementioned model year.

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 15<sup>th</sup> day of July, 1987.

  
K. D. Drachand, Chief  
Mobile Source Division

Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4  
 Evaporative Family KU Engine Type HO4  
 Liters (CID) 1.8 liters (109)

## ABBREVIATIONS

Ignition System

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

Fuel System

CFI, CL, DID, DIP, EFI, MFI  
 nV-nVenturi Carburetor

Exhaust Emissions Control System

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

Special Features

CCV-Combustion  
 Chamber Valve  
 CFI-Central Fuel  
 Injection or  
 Throttle Body  
 Injection  
 DID-Diesel  
 Injection-  
 Direct  
 DIP-Diesel  
 Injection-  
 Prechamber  
 EFI-Electronic  
 Fuel  
 Injection  
 IC-Intercooler  
 or Aftercooler  
 MFI-Mechanical  
 Fuel  
 Injection  
 OBD-On-Board  
 Diagnostics  
 TC-Turbocharger

VEHICLE MODELS:

AC4; 4-door Sedan  
 AC5; 4 door Sedan 4WD  
 AG4; 3-door  
 AG5; 3-door 4WD  
 AN4; Station Wagon  
 AN5; Station Wagon 4WD  
 AX4; XT  
 AX7; XT 4WD

Engine: Front X Mid. \_\_\_\_\_ Rear \_\_\_\_\_

Drive: FWD X RWD \_\_\_\_\_ 4WD Full Time \_\_\_\_\_ 4WD Part Time X

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. # A-2-49

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

Page 1 of 5

Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4

Displacement (CID) 1.8 Liters (109) Eng. Type HO4

Emission Control Sys. (Special Features) OS, EGR, OC(1), IWC(1), (CFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment)  (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU)  EEC Part No.	Fuel System  CFI Part No.	EGR Valve  Part No.	Catalyst  Part No.
8V5CVSM	AC4 (DL) (7.0/7.7)	M5	2500	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Hitachi APDQ72-3	Fuji's Part No.
	AG4 (DL) (6.8/7.5)		2625 (2500)#	Fuji's Part No.	Fuji's Part No.	Fuji's Part No.	Front: 20805AA120
	AC4 (GL) (7.0/7.7)		2625	-22100AA440	16114AA170	14710AA241	Rear: 20805AA150
	AG4 (GL) (6.8/7.5)		2750	Electronic Control Unit: Fuji's Part No. 22611AA391			
	AN4 (DL) (7.5/8.2)						
	AN4 (GL) (7.5/8.2)		2875 (2750)#				
	AC5 (8.3/9.1)						
	AG5 (8.1/8.9)						
AN5 (DL) (8.5/9.4)	2875						
AN5 (GL) (8.5/9.4)							

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  
displacement. If two test weights are listed, the lower weight will be used for testing.  
#The model is tested at higher ETW in accordance with 40 CFR 86.084-26(a)(2).

Date of Issue May 22, 1987

Revisions: 6/25/'87

9/9/'87 by R/C #88-6

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. # A-2-49

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

Page 2 of 5

Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4

Displacement (CID) 1.8 Liters (109) Eng. Type H04

Emission Control Sys. (Special Features) OS, EGR, OC(1), TWC(1), (CFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment)  (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU)  SEC Part No.	Fuel System  CFI Part No.	EGR Valve  Part No.	Catalyst  Part No.	
8V5CVSMA	AC4 (DL) (7.0/7.7)	M5	2625	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Hitachi APDQ72-3	Fuji's Part No.	
	AC4 (GL) (7.0/7.7)		2625	Fuji's Part No. 22100AA440	Fuji's Part No. 16114AA170	Fuji's Part No. 14710AA241	Front: 20805AA120	
	AG4 (DL) (6.8/7.5)							Rear: 20805AA150
	AG4 (GL) (6.8/7.5)		2750 (2625)#	Electronic Control Unit: Fuji's Part No. 22611AA391				
	AN4 (7.5/8.2)		2750					
	AC5 (8.3/9.1) AG5 (8.1/8.9) AN5 (DL) (8.5/9.4)		2875					
	AN5 (GL) (8.5/9.4)		3000					

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 engine. If two test weights are listed, the lower weight will be used for testing. #The model is tested at higher ETW in accordance with 40 CFR 86.084-26(a)(2).

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1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.C. # A-2-49

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

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Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4

Displacement (CID) 1.8 Liters (109) Eng. Type HO4

Emission Control Sys. (Special Features) OS, EGR, OC(1), TWC(1), (CFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment)  (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU)  EEC Part No.	Fuel System  CFI Part No.	EGR Valve  Part No.	Catalyst  Part No.
8V5CVSA	AC4 (DL) (7.0/7.7)	A3	2625 (2500)#	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Atsugi AEY78-14	Fuji's Part No.
	AC4 (GL) (7.0/7.7)		2625	Fuji's Part No.	Fuji's Part No.	Fuji's Part No.	Front: 20805AA120
	AG4 (DL) (6.8/7.5)			2210CAA440	16114AA170	14710AA251	Rear: 20805AA150
	AG4 (GL) (6.8/7.5)		2750 (2625)#	Electronic Control Unit: Fuji's Part No.			
	AN4 (7.5/8.2)		2750	22611AA391			
	AG5 (8.1/8.9)		2875 (2750)#				
	AC5 (8.3/9.1) AN5 (8.5/9.4)		2875				

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. #The model is tested at higher ETW in accordance with 40 CFR 86.084-26(a)(2).

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Passenger Cars  Light-Duty Trucks \_\_\_\_\_ Medium-Duty Vehicles \_\_\_\_\_ Gas \_\_\_\_\_ Diesel \_\_\_\_\_  
 Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4  
 Liter (CID) 1.8 Liters (109) Eng. Type HO4  
 Emission Control Sys. (Special Features) C6, EGR, OC(1), TWC(1), (CFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) EEC Part No.	Fuel System CFI Part No.	EGR Valve Part No.	Catalyst Part No.
1.8V5CVSAA	AC4 (DL) (7.0/7.7) AG4 (DL) (6.8/7.5)	A3	2625	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Atsugi AEY78-14  Fuji's Part No. 14710AA251	Fuji's Part No. 20805AA120 Rear: 20805AA150
	AC4 (GL) (7.0/7.7)		2750 (2625)#	Fuji's Part No. 22100AA440	Fuji's Part No. 16114AA170		
	AC4 (GL-10) (7.0/7.7) AG4 (GL) (6.8/7.5) AN4 (DL) (7.5/8.2)		2750	Electronic Control Unit: Fuji's Part No. 22611AA391			
	ACS (8.3/9.1)		2875 (2750)#				
	AN4 (GL, GL-10) (7.5/8.2) AG5 (8.1/8.9)		2875				
	AN5 (8.5/9.4)		3000				

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.  
 #The model is tested at higher ETW in accordance with 40 CFR 86.084-26(a)(2).

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Passenger Cars x Light-Duty Trucks \_\_\_\_\_ Medium-Duty Vehicles \_\_\_\_\_ Gas x Diesel \_\_\_\_\_

Manufacturer Fuji Heavy Industries Ltd. Engine Family JFJ1.8V5HCV4

Liter (CID) 1.8 Liters (109) Eng. Type HO4

Emission Control Sys. (Special Features) OS, OC(1), TWC(1), (EFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment)  (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) EEC Part No.	Fuel System EFI Part No.	EGR Valve Part No.	Catalyst Part No.
J1.8V5CVMM	AX4 (DL) (6.2/6.8)	M5	2750 (2625)#	Distributor: Hitachi: D4P86-03  Fuji's Part No. 22100AA440	Injector: JECS 0448  Fuji's Part No. 16600AA010	None	Fuji's Part No. Front: 20805AA071 Rear: 20805AA150
	AX4 (GL) (6.2/6.8)		2750				
	AX7 (7.4/8.1)		3000 (2875)#				
J1.8V5CVMA	AX4 (6.2/6.8)	A4	2750	Electronic Control Unit: Fuji's Part No. 22611AA520			
	AX7 (7.4/8.1)		3000				
J1.8V5CVMA	AX4 (6.2/6.8)		2875				
J1.8V5CVMAA	AX4 (6.2/6.8)		2875				

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.  
#The model is tested at higher ETW in accordance with 40 CFR 86.084-26(a)(2).

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