

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-2-54
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 1989 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>
KFJ1.8V5HCV5	1.8 (109)	Exhaust Gas Recirculation Oxygen Sensor Three-Way Catalyst Oxidation Catalyst (Central Fuel Injection) (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	0.4

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	4.1	0.3

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 27th day of May, 1988.



K. D. Drachand, Chief
Mobile Source Division

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Manufacturer Fuji Heavy Industries Ltd. Engine Family KFJ1.8V5HCV5
 Evaporative Family KU Engine Type H04
 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, EPFI, MPFI, SFI,
 DID, DIP, HOS, OS
 nV-nVenturi Carburetor
 VV-Variable Venturi Carburetor

Exhaust Emissions Control System

AIP-Air Injection - Pump
 AIV-Air Injection - Valve
 EGR-Exhaust Gas Recirculation
 EIC-Electronic Injection Control (Diesel Only)
 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
 TWC-Three-Way Catalyst
 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

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

Engine: Front x Mid. _____ Rear _____
 Drive: FWD x RWD _____ 4WD Full Time _____ 4WD Part Time x

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Passenger Cars x Light-Duty Trucks _____ Medium-Duty Vehicles _____ Gas x Diesel _____

Manufacturer Fuji Heavy Industries Ltd. Engine Family KFJ1.8V5HCV5

Liter (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) EI, ESAC Part No.	Fuel System CFI, OS Part No.	EGR Valve Part No.	Catalyst Part No.
K1.8V5CVSM	AC4 (DL) (7.0/7.7)	M5	2625 (2500) †	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.	Fuji's Part No.	Fuji's Part No.	20805AA120
	AG4 (6.8/7.5)			22100AA440	16114AA170	14710AA241	20805AA150
	AN4 (DL) (7.5/8.2)		2750 (2625) †	Electronic Control Unit: Fuji's Part No.			
	AN4 (GL) (7.5/8.2)		2750	22611AA394			
	AC5 (8.3/9.1)						
	AG5 (8.1/8.9)		2875 (2750) †				
	AN5 (DL) (8.5/9.4)		2875				
	AN5 (GL) (8.5/9.4)		3000 (2875) †				
AK4 (GL) (7.7/8.5)	2750						
AK5 (GL) (8.8/9.7)	3000 (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).

Date of Issue April 29, 1988 Revisions: 003-7/1/'88
006-10/17/'88
009-12/14/'88

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

Manufacturer Fuji Heavy Industries Ltd. Engine Family KFJ1.8V5HCV5

Liter (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) EI, ESAC Part No.	Fuel System CFI, OS Part No.	EGR Valve Part No.	Catalyst Part No.
K1.8V5CVSMA	AC4 (7.0/7.7) AG4 (DL) (6.8/7.5)	M5	2625	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Hitachi: APDQ72-3	Fuji's Part No. Front: 20805AA120 Rear: 20805AA150
	AG4 (GL) (6.8/7.5) AN4 (DL) (7.5/8.2)		2750	Fuji's Part No. 22100AA440	Fuji's Part No. 16114AA170	Fuji's Part No. 14170AA241	
	AN4 (GL) (7.5/8.2) AC5 (8.3/9.1)		2875 (2750) †	Electronic Control Unit: Fuji's Part No. 22611AA394			
	AG5 (8.1/8.9) AN5 (DL) (8.5/9.4)		2875				
	AN5 (GL) (8.5/9.4)		3000				
	AK4 (GL) (7.7/8.5)		2875 (2750) †				
	AK5 (GL) (8.8/9.7)		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.

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Passenger Cars Light-Duty Trucks _____ Medium-Duty Vehicles _____ Gas Diesel _____

Manufacturer Fuji Heavy Industries Ltd. Engine Family KP1.8V5HCV5

Liter (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) EI, ESAC Part No.	Fuel System CFI, OS Part No.	EGR Valve Part No.	Catalyst Part No.
K1.8V5CV8A	AC4 (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
	AG4 (GL) (6.8/7.5)		2750 (2625) #	Fuji's Part No. 22100AA440	Fuji's Part No. 16114AA170		
	AN4 (7.5/8.2)		2750	Electronic Control Unit: Fuji's Part No. 22611AA394			
	AC5 (8.3/9.1) AG5 (8.1/8.9)		2875				
	AN5 (8.5/9.4)		3000 (2875) #				
	AK4 (GL) (7.7/8.5)		2750				
	AK5 (GL) (8.8/9.7)		3000 (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.

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Passenger Cars Light-Duty Trucks _____ Medium-Duty Vehicles _____ Gas Diesel _____
 Manufacturer Fuji Heavy Industries Ltd. Engine Family KFJ1.8V5HCV5
 Liter (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) EI, ESAC Part No.	Fuel System CFI, OS Part No.	EGR Valve Part No.	Catalyst Part No.
K1.8V5CVSAA	AC4 (DL) (7.0/7.7)	A3	2625	Distributor: Hitachi D4P86-03	Injector: Hitachi RFB42-2	Atsugi AEY78-14	Fuji's Part No.
	AC4 (GL) (7.0/7.7)		2750 (2625) †	Fuji's Part No. 22100AA440	Fuji's Part No. 16114AA170	Fuji's Part No. 14710AA251	Front: 20805AA120
	AG4 (DL) (6.8/7.5)						Rear: 20805AA150
	AC4 (GL-10) (7.0/7.7)		2750	Electronic Control Unit: Fuji's Part No. 22611AA394			
	AG4 (GL) (6.8/7.5)						
	AN4 (DL) (7.5/8.2)		2875				
	AN4 (GL, GL-10) (7.5/8.2)						
	AC5 (8.3/9.1) AG5 (8.1/8.9)						
	AN5 (8.5/9.4)		3000				
AK4 (GL, GL-10) (7.7/8.5)							
AK5 (GL) (8.8/9.7)							

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.

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Date of Issue April 29, 1988 Revisions: 003-7/1/'88
 006-10/17/'88
 009-12/14/'88