

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-2-108  
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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1999 model-year Fuji Heavy Industries, Ltd. 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: XFJXV02.5HEG Displacement: 2.5 Liters (150 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Three Way Catalytic Converters (two)  
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:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
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 gases (NMOG) reflect application of a 0.98 RAF for 1999 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.057	2.0	0.1	0.001	4.9
100,000	0.060	2.3	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 vehicle manufacturer is certifying the listed vehicle models to the "California Refueling Emission Standards and Test Procedures for 1998 and Subsequent Model Motor Vehicles," Title 13, California Code of Regulations, Section 1978, and the listed vehicle models comply with those standards.

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).

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 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 "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.).

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 27<sup>th</sup> day of April 1998.



R. B. Summerfield, Chief  
Mobile Source Operations Division

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Fuji Heavy Industries Ltd. Exh Eng Fam: XFIXV02.5HEG Evap Fam: XFIXR01251BB  
 All Engine Codes in Engine Family: CA  49S\_\_\_ 50S\_\_\_ AB965\_\_\_ ORVR: YES  NO\_\_\_  
 Exh Std: CA Tier-1\_\_\_ TLEV  LEV\_\_\_ ULEV\_\_\_ SULEV\_\_\_ US EPA Tier-1\_\_\_  
 Veh Class(es): PC  LDT1\_\_\_ LDT2\_\_\_ MDV1\_\_\_ MDV2\_\_\_ MDV3\_\_\_ MDV4\_\_\_ MDV5\_\_\_  
 Single Cert Std for Multi-Class Eng Fam: \_\_\_\_\_ (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)  
 Fuel Type(s): Dedicated  Flex-Fuel\_\_\_ Dual-Fuel\_\_\_ Bi-Fuel\_\_\_ Gasoline  Diesel\_\_\_  
 CNG\_\_\_ LNG\_\_\_ LPG\_\_\_ M85\_\_\_ Other (specify)\_\_\_\_\_  
 Exh Emiss Test Fuel(s): Indo\_\_\_ CBG  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   
 Service Accum: Std AMA  Mod AMA\_\_\_ Mfr ADP\_\_\_ Other (specify)\_\_\_\_\_  
 NMOG Test Procedure: N/A\_\_\_ Std  Equip\_\_\_ R/L Test Proc: SHED\_\_\_ Pt Source   
 Engine Configuration: 00 Displacement: \_\_\_\_\_ / 2.5 Liters \_\_\_\_\_ / 150 Cubic Inches  
 Valves per Cylinder: 4 Rated HP: \_\_\_\_\_ 165 @ \_\_\_\_\_ 5600 RPM  
 Engine: Front  Mid\_\_\_ Rear\_\_\_ Drive: FWD\_\_\_ RWD\_\_\_ 4WD-FT  4WD-PT\_\_\_  
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): HO2S(2), TWC(2), SEI

(use abbreviations per SAE J1930 JUN93)

Engine Code (CA/49ST/50ST)	Vehicle Models	Trans. A-Auto M-Man.	ETW	DPA	Ignition (ECM/PCM) Part No.	Catalytic Converter Part No.
X2.5TMA (CA)	FORESTER 5D AWD BASE	M-5	3500 (3375)#	11.0	Electronic Control Unit: Fuji's Part No. 22611AE860	Fuji's Part No. Front: 20805AB210 Rear: 20805AB220
	FORESTER 5D AWD L		3500			
	FORESTER 5D AWD S			9.9		
X2.5TAA (CA)	FORESTER 5D AWD L	A-4	3500	11.0		
	FORESTER 5D AWD S			9.9		
X2.5TMA (CA)	IMPREZA 2D AWD RS	M-5	3125	8.1	Electronic Control Unit: Fuji's Part No. 22611AE550	
X2.5TAA (CA)	IMPREZA 2D AWD RS	A-4	3250 (3125)#	7.5		

#The model is tested at higher ETW in accordance with 40 CFR 86.094-26(a)(2).