EXECUTIVE ORDER U-R-029-0002 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

| MODEL<br>YEAR   | ENGINE FAMILY       | DISPLACEMENT (liters) | FUEL TYPE          | USEFUL LIFE<br>(hours) |
|---|---------------------|-----------------------|--------------------|------------------------|
| 2002  | 2FJXL.4122DA        | 0.412                 | Diesel             | 3000                   |
| SPECIAL I   | FEATURES & EMISSION | CONTROL SYSTEMS       | TYPICAL EQUIPMENT  | APPLICATION            |
|   | Direct Diesel Inje  | ction                 | Pump, Gener        | ator                   |
| ENGINE<br>MODELS<br>(rated<br>power in<br>kilowatts,<br>kw) |                     | DY41 (6.5)            | (w), DY41 (6.2 kw) |                        |

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

| RATED          | EMISSION          |      |     | E   | XHAUST (g/kw-h | nr) |     | OF    | ACITY (% | 6)   |
|----------------|-------------------|------|-----|-----|----------------|-----|-----|-------|----------|------|
| POWER<br>CLASS | STANDARD CATEGORY |      | нс  | NOx | NMHC+NOx       | co  | PM  | ACCEL | LUG      | PEAK |
| KW < 8         | Tier 1            | STD  | N/A | N/A | 10.5           | 8.0 | 1.0 | N/A   | N/A      | N/A  |
| ·····          |                   | CERT |     |     | 9.0            | 6.3 | 0.7 |       |          |      |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

\_ day of July 200

R. B. Summerfield, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer: FUJI HEAVY INDUSTRIES LTD.

Engine category: Nonroad CI

2FJXL.4122DA

U-R-029-0002

EPA Engine Family:

Mfr Family Name:

Process Code: New Submission

|               |                | •                               | 4.Fuel Rate:       | 5.Fuel Rate:                     |              |   |                       |                      |
|---------------|----------------|---------------------------------|--------------------|----------------------------------|--------------|---|-----------------------|----------------------|
|               |                | 3.Rated HP@RPM                  | mn²/stroke@peak HP | (lbs/hr)@peak HP                 | 6.Torque@RPM | 7.Fuel Rale:                              | 8.Fuel Rate:          | 9.Emission Control   |
| 1.Engine Code | 2.Engine Model | (SAE Gross)                     | (for diesels only) | (for diesels only)               | (SAE Gross)  | (Ibs/In/)@peak torque Device Per SAE J19: | (fbs/ln/)@peak forque | Device Per SAE J1930 |
| DY410Y1       | DY41           | 8.75@3000 <b>6 .5 Kw</b> 21.786 |                    | 3.713                            | 15.91@2200   | 3.713 15.91@2200 21.88 2.682 DDI          | 2.682                 | DDI                  |
| DY410Y2       | DY41           | 8.38@3600 6-2 kw 19.436         |                    | 3.908 14.90@2200 19.17 2.349 DDI | 14.90@2200   | 19.17                                     | 2.349                 | DDI                  |

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