

Komatsu Limited

EXECUTIVE ORDER U-R-005-0170 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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems 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 YEAR			FUEL TYPE	USEFUL LIFE (hours)			
2004	4KLXL0275AAD	4.5	Diesel	8000			
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION				
	Direct Diesel Injec	etion	Crane, Loader, Tractor, Dozer, Pump, Compressor				

The engine models and codes are attached.

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		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
· · · · · · · · · · · · · · · · · · ·	<u> </u>		N/A	N/A	7.2	2.4	0.30	4	6	6

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 September 2003.

Allen Lyons, Chief

Mobile Source Operations Division

Attachment 1 of 1

Engine Model Summary Form

Manufacturer: Komatsu

Engine category: Nonroad Over 50 HP

U-K-005-0170

EPA Engine Family: 4KLXL0275AAD

Mfr Family Name: A851

Process Code: New Submission

9.Emission Control re Device Per SAE J1930	DDI, EM DDI, EM
8.Fuel Rate: (lbs/hr)@peak torque [20,2 20,2
7.Fuel Rate: mm/stroke@peak torque	69 22 5 02
6. Torque @ RPM (SEA Gross)	216@1300_ 216@1300
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	33.1 35.4
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	67
3.8HP@RPM (SAE Gross)	1 80@2200 80@2500
2.Engine Model	4D102E-2 4D102E-2
1.Engine Code	8454;FR91173 8454;FR91172