Komatsu Limited

EXECUTIVE ORDER U-R-005-0172

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	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2004	4KLXL0359AAB	5.9	Diesel	8000		
SPECIAL	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION			
Direct Die	sel Injection, Turbocharg	er, Charge Air Cooler	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		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
		CERT			5.2	0.6	0.16	12	3	37

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 Jons, Chief

Mobile Source Operations Division

Engine Model Summary Form Attachmend 1 of

Komatsu Manufacturer:

Nonroad Over 50 HP Engine category:

4KLXL0359AAB EPA Engine Family:

U-R-005-0172

G403 Mír Family Name:

New Submission Process Code:

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6.Torque @ RPM (SEA Gross)	585@1300	353@1300	196@150C	353@1450	44@1600	548@1500
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4.Fuel Rate: mm/stroke @ peak HP (for diesel only)						
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3.BHP@RPM (SAE Gross)	73@2200	115@2300	171@2000	0	22@2250	67@2000
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2.Engine Model	SAA6D102E-2	SAA6D102E-2	SAMODIONES	SA6D102E-2	SAGD TOZE-2	SAA6D102E-2
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I.Engine Code	236,FH90870	276;FH9923	2674 FIRBBOS	30019H31305		3438;FR91299
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