Komatsu Limited

EXECUTIVE ORDER U-R-005-0145 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 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 YEAR ENGINE FAMILY		DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)			
2003	3KLXL11.0DD3	11.0	Diesel	8000			
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION				
Direct Dies	sel Injection, Turbocharg	er, Charge Air Cooler	Generator and Other Industrial Equipment				

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 STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS			HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
225 ≤ KW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT			5.9	0.9	0.16	16	3	31

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 November 2002.

Allen Lyons, Chief

Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

02/11/19

U-R-005-0145

Manufacturer: KOMATSULTD.

EPA Engine Family:

3KLXL11.0DD3

4.Fuel Rate:

mm/stroke @ peak HP (for diesel only)

3.BHP@RPM (SAE Gross)

2.Engine Model

1.Engine Code

Manufacturer Family Name:

Process Code: Running Change

6.Torque @ RPM (SEA Gross) (lbs/hr) @ peak HP (for diesels only) 5.Fuel Rate:

SAA6D125E-2

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930

7.Fuel Rate: mm/stroke@peak t orque

250 EW EW 77 99 1 91 183 914@1500 694@1400 113 98 167 258 129 322@2050 431@1800 234@2000 SAA6D125E-2 SAA6D125E-2 SAA6D125E-3

2C01 2G01

2C08