

Komatsu Limited

EXECUTIVE ORDER U-R-005-0151 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	3KLXL15.2EC3	15.2	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
Engin	e Control Module, Direct Turbocharger, Charge	Diesel Injection, Air Cooler	Loader, Dozer, Generator and Ott	ner 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 POWER	EMISSION STANDARD			i	EXHAUST (g/kw-l	nr)		OF	PACITY (%	6)
CLASS	CATEGORY		нс	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			6.0	0.5	0.16	8	3	18

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 December 2002.

Allen Lyons, Chief

Mobile Source Operations Division

15-00-2-0121

Manufacturer: KOMATSULTD.

EPA Engine Family: 3KLXL15.2EC3

Manufacturer Family Name:

Process Code: New Submission.

SA6D140E-3

8.Fuel Rate: 9.Emission Confrol (lbs/hr)@peak forque Device Per SAE J1930 7.Fuel Rate: mm/stroke@peak t orque 6.Torque @ RPM (SEA Gross) 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) 3.BHP@RPM (SAE Gross) 2.Engine Model 1.Engine Code

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	W EM,EC W			1	198	333	560@1800	SA6D140E-3
7	EM,EC /	119	265	1193@1350	128	213	338@1800	D140E-3
Ť	EM,EC	104	251	1193@1250	126	200	338@1900	5D140E-3
T	EM,EC	001	216	1029@1400	127	183	330@2100	5D140E-3
₹,	DDZ, EM, EC, 70, CAC	121	271	1323@1400	144	242	410@1800	SA6D140E-3