

 AIR RESOURCES BOARD	Komatsu Limited	EXECUTIVE ORDER U-R-005-0149
		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	3KLXL15.2EE3	15.2	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			Dozer 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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			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	--	--	5.4	0.6	0.16	7	3	17

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 9TH day of December 2002.


 Allen Lyons, Chief
 Mobile Source Operations Division

ATTACHMENT Pg 1 of 1
LARGE ENGINE MODEL SUMMARY

03/2/11

U-R-005-0149

Manufacturer: KOMATSU LTD. _____ Process Code: Running Change _____

EPA Engine Family: 3KLXL15.2EE3 _____ Manufacturer Family Name: SDA6D140E-3 _____

3.BHP@RPM (SAE Gross) _____ 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) _____ 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) _____ 6.Torque @ RPM (SEA Gross) _____ 7.Fuel Rate: mm/stroke@peak torque _____ 8.Fuel Rate: (lbs/hr)@peak torque _____ 9.Emission Control Device Per SAE J1930 _____

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
2C09	SDA6D140E-3	446@2000	240	159	1468@1400	279	129	CA, C, D, E, EM, EC, H, T, S
2C11	SDA6D140E-3	493@2000	272	181	1700@1400	328	153	CA, C, D, E, EM, EC, H, T, S