California Environmental Protection Agency AIR RESOURCES BOARD	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0212 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)
2005	5KLXL11.0DD5	11.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module	Dump Truck

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
130 ≤ kW < 225	Tier 2	STD	N/A	N/A	6.6	3.5	0.20	20	15	50
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	--	--	5.9	0.7	0.15	7	2	19

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 29TH day of November 2004.

Allen Lyons, Chief
Mobile Source Operations Division

ATTACHMENT Pg 1 of 1

LARGE ENGINE MODEL SUMMARY

04/12/8

U-R-005-0212

Manufacturer: KOMATSU LTD.

Process Code: Running Change

EPA Engine Family: 5KLXL11.0DD5

Manufacturer Family Name: SAA6D125E-3

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
2C07	SAA6D125E-3	335@2000	173	116	1157@1400	221	103	DDI, EM,ECM, TC, CAC
2C10	SAA6D125E-3	274@2000	143	96	938@1400	185	87	EM,EC
2C11	SAA6D125E-3	283@2000	149	100	974@1400	190	89	EM,EC
2C13	SAA6D125E-3	347@1850	188	115	1011@1400	199	92	EM,EC
2C14	SAA6D125E-3	301@2000	158	106	1003@1400	199	93	EM,EC
2C15	SAA6D125E-3	347@1850	188	115	1011@1400	199	92	EM,EC