

## KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0244 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)	
2006	6KLXL0409AAB	6.7	Diesel	8000	
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION		
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Modules			Loader, Tractor, Dozer, Pump and 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		нс	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT			3.6	1.6	0.17	6	2	14

**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

ZZND

day of November 2005.

Allen Lyons, Chief

Mobile Source Operations Division

## Engine Model Summary Form ATACHNENT Po (of)

U-R-005-0244

Komatsu Ltd. Manufacturer:

Engine category: Nonroad CI
EPA Engine Family. 6KLXL0409AAB

Mfr Family Name: A313

**New Submission** Process Code:

. 190					
8.Fuel Rate: 9.Emisslon Control lbs/hr)@peak torque Device Per SAE J1930	AG A	ک څ	ָ בְּ	2	
9.Emission Control evice Per SAE J193	76.4 Dy, EOM, TC, CAC	ECM, IC, CAC		EUM, IC, UAC	*
nissio e Per		- L E 3	- F	- 2	
9.Er Devic		ਜ਼ [	ב ב ב	נ	
l enb	县			>	
kate: ak tor	T (	<b>)</b>	, ,		
8.Fuel Rate: hr)@peak tor	92	0.07	5 1	2(./	
8.l bs/hr)					
_					
7.Fuel Rate: nm/stroke@peak torque	_	43	<u>.</u> .	4	
7.Fuel Rate: n/stroke@pe torque	121	14	15	114	
7.F mm/s					
				2000	
RPM ss)	200	694@1450	200	522@1500	
Forque @ RP (SEA Gross)	730@1500	<u>@</u>	548@1500	<u>@</u>	
6.Torque @ RPM (SEA Gross)	730	769	24	252	
5.Fuel Rate: (bs/hr) @ peak HP (for diesels only)					
al Rat 2) pea sels o	108.8	75.3	73.9	9.79	
5.Fuel Rate: bs/hr) @ peak HF (for diesels only)	1	7	7	မ	
•					
. 뜻 (S					
Rate: @ pea	59	106	107	100	
4.Fuel Rate: n/stroke @ peak (for diesel only)	129	-	_	Ŧ.	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)					
3.BHP@RPM (SAE Gross)	275@2500	2100	200@2050	2000	
.BHP@RPM (SAE Gross)	5@2	2@2	0@5	9	
3.B (S)	27	19	20	8	
	7E-1	7E-1	7E-1	7E-1	
	010	D10	D.10	D10	
	AA6	SAA6D107E-1 192@2100	AA6	AA6	
	S	1	S	ဟ	
	8611;FR91421 SAA6D107E-1	8610;FR91441	8610,FR91629 SAA6D107E-1	8466;FR91351 SAA6D107E-1 180@2000	
	R9.1	R91	R91	<b>R91</b>	
		10,F	101	66;F	
	98	8	.98	24	