

KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0272 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)		
2007	7KLXL23.2FD6	23.2	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Direct Dies Exhaust	el Injection, Turbocharg Gas Recirculation, Eng	er, Charge Air Cooler, ine Control Module	Loader, 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 (%)		
			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
225 <u><</u> kW < 560	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT			3.7	0.4	0.11	12	5	23

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 2006.

Annette Hebert, Chief

Mobile Source Operations Division

LARGE ENGINE MODEL JUMMARY

81/6/90

U-R-005-0272

Manufacturer: KOMATSU LTD.

Process Code: New Submission

	8.Fuel Rate: 9.Emission Control lbs/hr)@peak torque · Device Per SAE J1930		EM.TC.CAC,EGR.DFI,ECM	EM.TC.CAC.EGR.DFI,ECM	EM.TC.CAC.EGR.DFI.ECM	[913@1000 363 121 EM,TC.CAC,EGR,DFI,ECM
	8.Fuel Rate: (lbs/hr)@peak torque		233	200	193	121
SAA6D170E-5	7.Fuel Rate: mm/stroke@peak t orque		498	458		363
Manufacturer Family Name:	6.Torque @ RPM (SEA Gross)	ŧ	;	2231@1300	2228@1300	1913@1000
Manufacturer	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		268	247	215	961
	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	adeologo por e de estado de como de estado de como de estado de es	401	408	357	SAA6D170E-5 531@1800 325 196 1913@1000 363 121 EM.TC.CAC.EGR.DFI.ECM
2FD6	3.BHP@RPM (SAE Gross)	***************************************	740@2000	690@1800	606@1800	531@1800
y: 7KLXL23.2FD6	2.Engine Model		SAA6D170F-5 740@2000 401	SAA6D170E-5	SAA6D170E-5	SAA6D170E-5
EPA Engine Family:	1.Engine Code 2.Engine Model		3001	3002	3003	