

KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0302 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)			
2008	8KLXL050.AAC	50.0	Diesel	8000			
	FEATURES & EMISSION	CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION			
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			Mine Truck				

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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 STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER		Į	HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
kW > 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		FEL	N/A	N/A	N/A	N/A	0.17	N/A	N/A	N/A
		CERT			5.9	1.7	0.09	15	4	21

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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 2007.

Annette Hebert, Chief

Mobile Source Operations Division

Manufacturer: Komatsu Ltd

Engine category: Nonroad CI

EPA Engine Family: 8KLXL050.AAC

Do

Mfr Family Name: C283

Process Code: New Submission

9.Emission Control B Device Per SAE J1930	PDD) EGW, TG, CA	-DDI, ECM, TC,	"DDI,ECM,TC,	
8.Fuel Rate: (lbs/hr) @ peak torque	089	284 747	376	
7.Fuel Rate: mm/stroke@peak torque		433 3 82	398	
6.Torque @ RPM (SEA Gross)	6514@1500	5041.01300	3861@1400	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	608	522	435	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	70.		358	
3.BHP@RPM (SAE Gross)	2800@1900	1500 de 1 300	1260@1800	
1.Engine Code 2.Engine Model	8524:FH6545 SSDA16V159E 2800@1900	2762 FR6809 SDA16V159E-2 1560 @ 300	2758:FR6630 SDA12V159E-2 1260@1800	
1.Engine Code	8524 FR6545	2762.FR6869	2758:FR6630	