

## **KOMATSU LIMITED**

EXECUTIVE ORDER U-R-005-0265 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	7KLXL078.AAA	78.0	Diesel	8000	
	FEATURES & EMISSION		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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)			OPACITY (%)				
			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	9.8	N/A	N/A	N/A	N/A	N/A
		CERT			8.8	1.0	0.15	17	5	24

**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 November 2006.

Annette Hebert, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

ATTACHMENT PG 10+1

U-R-005-0265

Manufacturer: Komatsu Limited

Engine category: Nonroad CI

EPA Engine Family: 7KLXL078.AAA

Mfr Family Name: A773

Process Code: New Submission

8. Fuel Rate: 9. Emission Control ibs/hr) @ peak torque Device Per SAE J1930	ose DDIECM TC.CAC				
e: peak	929	037	000	85	
6.Torque @ RPM (SEA Gross)	10585@1500	10157@1500	10585@1500	10157@150U	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	1205	1165	1205	1165	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	627	909	627	909	
3.BHP@RPM (SAE Gross)	3650@1900	3500@1900	3650@1900	3500@1900	
2.Engine Model	SSDA18V170	SSDA18V170	SSDA18V170	SSDA18V170	
1.Engine Code	2967:FH6400	2967:FR6302	8099:FR6400	8900:FR6302	