California Environmental Protection Agency AIR RESOURCES BOARD	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0377 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)
2011	BKLXL0409AAC	6.7	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct 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), 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
75 ≤ kW < 130	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
		FEL	N/A	N/A	N/A	N/A	0.24	N/A	N/A	N/A
		CERT	--	--	3.4	1.8	0.14	6	2	10

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 23 day of November 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 1

U-R-005-0377

11-9-2010

Engine Model Summary Template

Engine Family	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
BKLXL0409AAC	0426;FR91850	SAA6D107E-1	173@1800	105	64	644@1300	136	59.6	ECM TC CAC DDI
BKLXL0409AAC	1586;FR91446	SAA6D107E-1	173@1800	105	64	644@1300	136	59.6	ECM TC CAC
BKLXL0409AAC	1586;FR91443	SAA6D107E-1	167@2000	77	51.7	548@1500	118	59.6	ECM TC CAC
BKLXL0409AAC	1586;FR92050	SAA6D107E-1	173@2200	89	66.1	435@1600	89	48.1	ECM TC CAC
BKLXL0409AAC	1584;FR91350	SAA6D107E-1	155@2000	85	57.2	460@1500	102	51.4	ECM TC CAC
BKLXL0409AAC	1584;FR91444	SAA6D107E-1	140@2000	80	53.7	463@1400	98	46.5	ECM TC CAC
BKLXL0409AAC	1584;FR91438	SAA6D107E-1	133@2200	71	52.8	430@1450	92	45.1	ECM TC CAC
BKLXL0409AAC	1584;FR92420	SAA6D107E-1	155@2000	85	57.2	460@1500	102	51.4	ECM TC CAC
BKLXL0409AAC	3068;FR91442	SAA6D107E-1	171@2000	94	63.5	496@1500	104	52.6	ECM TC CAC