KUKJE MACHINERY CO.

EXECUTIVE ORDER U-R-046-0030 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)			
2009	9KMCL1.05A34	1.058					
	FEATURES & EMISSION (TYPICAL EQUIPMENT APPLICATION				
	Indirect Diesel Inje	ction	Crane, Loader, Tractor, Dozer, Pump	o, 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 STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS			нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 4 Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
·		CERT			6.4	1.4	0.37	10	9	10

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 January 2009

Annette Hebert, Chief

Mobile Source Operations Division

Anken Release Bummary Form

4-R-046-0030

Manufacturer: Kukje Machinery Co., EPA Mnfr:1700

Engine category: Nonroad CI

EPA Engine Family: 9KMCL1.05A34

Mfr Family Name: A1000N1

Process Code: New Submission

8.Fuel Rate: 9.Emission Control (tbs/hr)@peak torque Device Per SAE J1930 IDIEM IDI EM は感じまい は、大変 7.5 7.0 mm/stroke@peak 能主義。然而以意 7.Fuel Rate: 22.7 25.0 torque は多くなけ 6. Torque @ RPM 47.5@2000 49.3@1700 (SEA Gross) mm/stroke @ peak HP (lbs/hr) @ peak HP (for diesels only) 8.6 5.Fuel Rate: 9.5 **海影戏的** 21.3 (for diesel only) THE STATE OF THE S 4.Fuel Rate: 22.3 1960年第二日 1967年 N 3.BHP@RPM (SAE Gross) 22@2800 21@2600 2. Engine Model A1000N1 A1000N2 · · 1.Engine Code N/N Ϋ́