KUKJE MACHINERY CO.

EXECUTIVE ORDER U-R-046-0036 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	9KMCL2.28A41	2.286	Diesel					
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION					
Indirect Diesel Injection, Turbocharger			Crane, Loader, Tractor, Dozer, Pump, Compressor 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			E	EXHAUST (g/kw-l	OPACITY (%)				
	STANDARD CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT			4.1	1.5	0.24	8	9	16

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

Engine Model Summary Form

Kukje Machinery Co., EPA Mnfr:1700 Manufacturer:

Nonroad CI Engine category: EPA Engine Family: 9KMCL2.28A41

A2300T1 Mfr Family Name:

New Submission Process Code:

30	4				and the second						
9.Emission Contro levice Per SAE J19	IDI,EM,TC	IDI,EM,TC		 and the state of t		To the second se					
8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930	16.1	16.2	West control of the c		in the state of the second						
mm/stroke@peak torque (lb	44.7	45.7									
6.Torque @ RPM (SEA Gross)	134.2@1600	132.4@1600									
(lbs/hr) @ peak HP (for diesels only)	24.8	23.5									
mm/stroke @ peak HP (for diesel only)	39.4	40.7								A STATE OF THE STA	
3.BHP@RPM (SAE Gross)	60@2800	55@2600	пинопинати								
2.Engine Model	A2300T1	A2300T2									***************************************
1.Engine Code	N/A	N/A					AND AND THE PARTY OF THE PARTY	-			