California Environmental Protection Agency

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 engines and emission control systems 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)		
2012	CKHXL.851425	0.851	Diesel	3000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
	Mechanical Direct Ir	njection	Pump, Compressor, Generator Set, 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 STANDARD CATEGORY			E	EXHAUST (g/kw-h	OPACITY (%)				
			НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
8 <u><</u> kW< 19	Tier 4 - Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT			7.1	5.3	0.28	8	7	19

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.

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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 2011.

Fore Annette Hebert, Chief Mobile Source Operations Division

Engine Model Summary Template

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Attachment 1 ab1

U-R-060-0002 12-12-2011

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: (Ibs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (Ibs/hr)@peak torque	9.Emission Control Device Per SAE J193	
CKHXL.851425		KD425-2	18.8@3600	20.0	7.98	30.2@2200	22.0	5.36	ем 🗅	>D
CKHXL.851425		25LD425	18.8@3600	20.0	7.98	30.2@2200	22.0	5.36	EM	
CKHXL.851425		MD191E	18.8@3600	20.0	7.98	30.2@2200	22.0	5. 36	EM	Serve Sector Microsoft Marcola
CKHXL.851425		KD425-2-GE	18.8@3600	20.0	7.98	FIXED SPEED	FIXED SPEED	FIXED SPEED	EM	
CKHXL.851425		25LD425-GE	18.8@3600	20.0	7.98	FIXED SPEED	FIXED SPEED	FIXED SPEED	EM	
CKHXL.851425	ana ang ina ang ing ing ing ing ing ing ing ing ing i	MD191E-GE	18.8 <u>@</u> 3600	20.0	7.98	FIXED SPEED	FIXED SPEED	FIXED SPEED	EM	$\underline{\mathbf{A}}$