

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)
2013	DKHXL1.37SF2	0.686, 1.028, 1.371	Diesel	3000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Loaders, Tractor, Dozer, Pump, Compressor, Generator Set, 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 STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	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	--	--	6.6	3.2	0.24	5	4	8

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 26th day of February 2013.


 Annette Hebert, Chief
 Mobile Source Operations Division

Engine Model Summary Template

Attachment 1 of 2

U-R-060-0015
2-20-2013

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
DKHXL1.37SF2		KDW 702 (8.3kW@2400)	11.1@2400	18.0	4.8	25.8@1800	19.0	3.8	IDI
DKHXL1.37SF2		KDW 702 (9kW@2600)	12.1@2600	18.0	5.9	25.8@1800	19	3.8	IDI
DKHXL1.37SF2		KDW 702 (10.1@3000)	13.5@3000	18.0	5.9	25.8@2000	19.0	4.2	IDI
DKHXL1.37SF2		KDW 1003 (12.6@2400)	16.9@2400	18.0	7.1	39.8@1800	19.0	5.6	IDI
DKHXL1.37SF2		KDW 1003 (13.9@2600)	18.6@2600	18.0	7.7	39.8@1800	19.0	5.6	IDI
DKHXL1.37SF2		KDW 1003 (14.4kW@2700)	19.3@2700	18.0	8.0	39.8@1800	19.0	5.6	IDI
DKHXL1.37SF2		KDW 1003 (15kW@2850)	20.1@2850	18.0	8.5	39.4@1600	19.0	5.0	IDI
DKHXL1.37SF2		KDW 1003 (16kW@3000)	21.5@3000	18.8	9.3	40.5@2200	19.5	7.1	IDI
DKHXL1.37SF2		KDW 1003 (18kW@3600)	24.1@3600	18.0	10.7	40.5@2200	19.5	7.1	IDI
DKHXL1.37SF2		KDW1003 10.2kW@1800	13.7@1800	19.5	5.8	39.8@1800	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF2		KDW 1003 16.8kW@3000	22.8@3000	19.5	9.7	39.4@3000	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF2		KDW 1404 (14.1kW@1800)	18.9@1800	19.5	7.7	55.1@1800	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF2		LDW 702 (8.3kW@2400)	11.1@2400	18.0	4.8	25.8@1800	19.0	3.8	IDI
DKHXL1.37SF2		LDW 702 (9kW@2600)	12.1@2600	18.0	5.9	25.8@1800	19	3.8	IDI
DKHXL1.37SF2		LDW 702 (10.1@3000)	13.5@3000	18.0	5.9	25.8@2000	19.0	4.2	IDI

Engine Model Summary Template

Attachment 2 of 2

U-R-060-0015
2-20-2013

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
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