

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	DKHXL1.37SF1	0.686, 1.028, 1.371	Diesel	3000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Indirect Diesel Injection			Tractor, Dozer, Pump, Compressor, Generator Set	

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	--	--	5.0	5.2	0.23	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 26<sup>th</sup> day of February 2013.

  
 Annette Hebert, Chief  
 Mobile Source Operations Division

## Engine Model Summary Template

Attachment 1 of 2

U-R-060-0014  
3-29-2013

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
DKHXL1.37SF1		KDW/LDW 702	15.4@3600	18.0	7.1	25.1@2200	18.8	4.6	IDI
DKHXL1.37SF1		KDW/LDW 1404	24.0@2700	17.5	10.4	51.6@1600	19.0	6.7	IDI
DKHXL1.37SF1		KDW/LDW 702 (1800)	8.0@1800	18.5	3.7	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 702 (2600)	12.5@2600	18.5	5.3	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 702 (3600)	15.4@3600	18.0	7.1	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 1003 (1800)	12.7@1800	18.8	5.6	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 1003 (3600)	24.7@3600	18.8	11.2	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 1404 (1800)	18.2@1800	19.0	7.5	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
DKHXL1.37SF1		KDW/LDW 702 (2400)	10.5@2400	17.5	4.6	24.3@1800	18.3	3.6	IDI
DKHXL1.37SF1		KDW/LDW 702 (2600)	11.3@2600	17.5	5.0	24.3@1800	18.3	3.6	IDI
DKHXL1.37SF1		KDW/LDW 702 (3000)	12.9@3000	17.5	5.8	24.3@2000	18.3	3.6	IDI
DKHXL1.37SF1		KDW/LDW 1003 (2400)	15.8@2400	17	6.7	36.9@1800	18	5.3	IDI
DKHXL1.37SF1		KDW/LDW 1003 (2600)	17.2@2600	17	7.3	36.9@1800	18	5.3	IDI
DKHXL1.37SF1		KDW/LDW 1003 (2700)	17.8@2700	17	7.6	36.9@1800	18	5.3	IDI
DKHXL1.37SF1		KDW/LDW 1003 (2850)	18.8@2850	17	8.0	36.9@1600	18	4.8	IDI

# Engine Model Summary Template

Attachment 2 of 2

U-R-060-0014

3-29-2013

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
DKHXL1.37SF1		KDW/LDW 1003 (3000)	19.8@3000	17.5	8.7	36.9@2200	18.5	6.7	IDI
DKHXL1.37SF1		KDW/LDW 1003 (3600a)	23.7@3600	17.5	10.4	36.9@2200	18.5	6.7	IDI