

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

**IT IS ORDERED AND RESOLVED:** The engines and emission control systems produced by the manufacturer as described below are certified 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	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation
2024	RKHXL01.4SF1	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Indirect Diesel Injection (IDI)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kWh-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (\*).

Applicable Standard		Criteria			Smoke Opacity		
		NMHC+NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final kW < 19	STD	7.5	6.6	0.40	20	15	50
	FEL	*	*	*	*	*	*
	NTE	9.4	8.2	0.50	*	*	*

**BE IT FURTHER RESOLVED:** Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

**BE IT FURTHER RESOLVED:** That the manufacturer has elected to combine engines from the kW < 19 power categories into a single engine family. The listed engine models comply with the more stringent set of standards of the 8 ≤ kW < 19 power category in accordance with Section 1039.230(e) of the applicable California test procedures.

**BE IT FURTHER RESOLVED:** For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

**BE IT FURTHER RESOLVED:** The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed on this 22nd day of June 2023.



Robin U. Lang, Chief  
 Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-060-0099

Family: RKHXL01.4SF1

Date Applicable: 6/12/2023

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	Peak Torque - Fuel	Peak Torque - Fuel Units	OBD Status	OBD Fines (\$)	GHG	ECS #	Notes
KDW1003(1800Const)	N/A	N/A	I3	1.028	Liters	13.4	horsepower	1800	5.6	lb/hr	36.9	lb-ft	1800	5.6	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E524	N/A	N/A	I3	1.028	Liters	16.1	horsepower	2400	6.7	lb/hr	36.9	lb-ft	1800	5.3	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E526	N/A	N/A	I3	1.028	Liters	17.4	horsepower	2600	7.3	lb/hr	36.9	lb-ft	1800	5.3	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E527	N/A	N/A	I3	1.028	Liters	17.4	horsepower	2700	7.6	lb/hr	36.9	lb-ft	1800	5.3	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E530	N/A	N/A	I3	1.028	Liters	20.1	horsepower	3000	8.7	lb/hr	36.9	lb-ft	2200	6.7	lb/hr	N/A	N/A	N/A	1	IDI
KDW1003(3600 const)	N/A	N/A	I3	1.028	Liters	24.1	horsepower	3600	11.2	lb/hr	36.1	lb-ft	3600	11.2	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E536	N/A	N/A	I3	1.028	Liters	24.1	horsepower	3600	10.4	lb/hr	36.9	lb-ft	2600	7.9	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E536B	N/A	N/A	I3	1.028	Liters	24.1	horsepower	3600	10.4	lb/hr	36.9	lb-ft	2200	6.7	lb/hr	N/A	N/A	N/A	1	IDI
KDW1404(1800Const)	N/A	N/A	I4	1.371	Liters	17.4	horsepower	1800	7.5	lb/hr	50.9	lb-ft	1800	7.5	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(1800Const)	N/A	N/A	I2	0.686	Liters	8.0	horsepower	1800	3.7	lb/hr	23.6	lb-ft	1800	3.7	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(2400)	N/A	N/A	I2	0.686	Liters	10.7	horsepower	2400	4.6	lb/hr	24.3	lb-ft	1800	3.6	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(2600)	N/A	N/A	I2	0.686	Liters	10.7	horsepower	2600	5.0	lb/hr	24.3	lb-ft	1800	3.6	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(2600Const)	N/A	N/A	I2	0.686	Liters	12.1	horsepower	2600	5.3	lb/hr	25.1	lb-ft	2600	5.3	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(3000)	N/A	N/A	I2	0.686	Liters	13.4	horsepower	3000	5.8	lb/hr	24.3	lb-ft	2000	4.0	lb/hr	N/A	N/A	N/A	1	IDI
KDW 702E536	N/A	N/A	I2	0.686	Liters	16.1	horsepower	3600	7.1	lb/hr	25.1	lb-ft	2200	4.6	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(3600Const)	N/A	N/A	I2	0.686	Liters	16.1	horsepower	3600	7.1	lb/hr	22.9	lb-ft	3600	7.1	lb/hr	N/A	N/A	N/A	1	IDI
KDW702(2400Const)	N/A	N/A	I2	0.686	Liters	10.7	horsepower	2400	4.6	lb/hr	22.9	lb-ft	2400	4.6	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1003E534	N/A	N/A	I3	1.028	Liters	22.8	horsepower	3400	10.0	lb/hr	36.9	lb-ft	2600	7.9	lb/hr	N/A	N/A	N/A	1	IDI
KDW 702E533	N/A	N/A	I2	0.686	Liters	14.8	horsepower	3350	6.6	lb/hr	24.3	lb-ft	2600	5.2	lb/hr	N/A	N/A	N/A	1	IDI
KDW 1404E527A	N/A	N/A	I4	1.371	Liters	24.1	horsepower	2700	10.4	lb/hr	51.6	lb-ft	1600	6.7	lb/hr	N/A	N/A	N/A	1	IDI