

## **KOHLER COMPANY**

EXECUTIVE ORDER U-R-060-0077
New Off-Road

New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California 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-19-095;

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)					
2021	MKHXL.442ACF	0.44	Diesel	3000					
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Mecha	anical Direct Injection, I Catalyst	Diesel Oxidation	Compressor, Generator Set						

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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				EXHAUST (g/kw-l	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
kW < 8	Tier 4 Final	STD	N/A	N/A	7.5	8.0	0.60	N/A	N/A	N/A
		CERT			6.1	1.1	0.59			

**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).

**BE IT FURTHER RESOLVED:** That certification to the standards in 13 CCR 2423(b)(1)(A) -Table 1b listed above has been permitted pursuant to Endnote 2 of the same table.

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 on this <u>30th</u> day of December 2020.

Allen Lyons, Chief

**Emissions Certification and Compliance Division** 

Attachment: Engine Models

EO #: U-R-060-0077

Family: MKHXL.442ACF

Attachment Last Revised: 12/17/2020

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque -	- Peak Torque				
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD	GHG	Special	Notes
KD15 440 DOC (Dual Speed)	N/A	N/A	l1	0.441	Liters	8.6	horsepower	3600	3.7	lb/hr	12.5	lb-ft	3600	3.7	lb/hr	N/A	N/A		DDI, DOC
KD15 440 DOC (Fixed Speed)	N/A	N/A	l1	0.441	Liters	8.6	horsepower	3600	3.7	lb/hr	12.5	lb-ft	3600	3.7	lb/hr	N/A	N/A		DDI, DOC
VD1E 2E0 DOC	N/A	N/A	l1	0.349	Liters	6.7	horsepower	3600	2.7	lb/hr	9.6	lb-ft	3600	2.7	lb/hr	N/A	N/A		DDI, DOC
																			_
																+			_