EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET





The engine used in this generator set is certified to comply with United States EPA Tier 4 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Manufacturer:KUBOTABore:3.07 in.(78 mm)Model:D1105Stroke:3.09 in.(78.4 mm)Type:4-Cycle, In-Line, 3-Cylinder, DieselDisplacement: 68.53 cid (1.123 liters)

Aspiration: Naturally Aspirated, Indirect Injection Compression Ratio: 24:1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) Rated 16.6
Load Fuel Consumption (gal/Hr) Rated 0.70
Load Exhaust Gas Flow (cfm) Rated Load 66
Exhaust Gas Temperature (°F) 752

United States EPA - Mobile Off-Highway Tier 4 Limits -

11 ≤ ~ < 25 BHP

Criteria Pollutant	Emis	ssion Requirements	NTE Engine Emissions		
NOx (Oxides of Nitrogen as NO2)	N/A	gr/bhp-hr	N/A	gr/bhp-hr	
HC (Total Unburned Hydrocarbons)	N/A	gr/bhp-hr	N/A	gr/bhp-hr	
NOx + HC (Combined)	N/A	gr/bhp-hr	N/A	gr/bhp-hr	
CO (Carbon Monoxide)	4.92	gr/bhp-hr	6.11	gr/bhp-hr	
PM (Particulate Matter)	0.29	gr/bhp-hr	0.37	gr/bhp-hr	
NMHC (Non-Methane Hydrocarbons)	N/A	gr/bhp-hr	N/A	gr/bhp-hr	
NMHC + NOx	5.59	gr/bhp-hr	7.00	gr/bhp-hr	

EPA Engine Family: RKBXL01.5BCC

EPA Certificate of Conformance: RKBXL01.5BCC-009

ARB Executive Order: U-R-025-1102

Effective Date: Model Year 2024

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

Data And Specifications Subject To Change Without Notice Date: 5/22/2024



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2024 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Kubota Corporation

(U.S. Manufacturer or Importer)

Certificate Number: RKBXL01.5BCC-009

 $\frac{\textbf{Effective Date:}}{10/03/2023}$

Expiration Date: 12/31/2024

Issue Date: 10/03/2023

Revision Date: N/A

Model Year: 2024

Manufacturer Type: Original Engine Manufacturer

Engine Family: RKBXL01.5BCC

Mobile/Stationary Indicator: Both Emissions Power Category: 8<=kW<19

Fuel Type: Diesel

After Treatment Devices: No After Treatment Devices Installed **Non-after Treatment Devices:** Engine Design Modification

Byron J. Bunker, Division Director

Compliance Division

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Parts 60 and 1039, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Parts 60 and 1039 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 60 and 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 60 and 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 60 and 1039. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 60 and 1039.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



KUBOTA CORPORATION

EXECUTIVE ORDER: U-R-025-1102 New Off-Road Compression-Ignition Engines Page 1 of 1

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	RKBXL01.5BCC	Diesel	Dedicated	Diesel	Constant Speed

Emission Control Systems	Special Features
[1]: Indirect Fuel Injection (IFI)	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 kilowatthour (g/kWh-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

		Crit	Smoke Opacity				
Applicable Standard		NMHC+NOx	СО	PM	ACL	LUG	PEAK
	STD	7.5	6.6	0.40	*	*	*
Tier 4 Final 8 ≤ kW < 19	FEL	*	*	*	*	*	*
0 = 100	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: 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 2nd day of October 2023.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RKBXL01.5BCC EO Number: U-R-025-1102 Date Applicable: 09/19/2023

					Peak Power			Peak Torque					
Model	Code	Trim	Config	Displacement	Power	Speed	Fueling	Torque	Speed	Fueling	ECS Num	GHG	Notes
	-	-	-	L	kW	rpm	mm3/stroke	N-m	rpm	mm3/stroke	-	-	-
D1105-BG-EF	D1105-BG-EF01	N/A	13	1.3	12.4	1800	23.6	65.8	1800	23.6	1	N/A	
V1505-BG-EF	V1505-BG-EF01	N/A	14	1.5	17.6	1800	25	93.4	1800	25	1	N/A	
V1505-BG-EF	V1505-BG-EF02	N/A	14	1.5	16.2	1800	22.9	85.9	1800	22.9	1	N/A	