## **EXHAUST EMISSION DATA SHEET**

## **MQ POWER GENERATOR SET**

Model: DCA15SPXU4F



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

KUBOTA			Bore:	3.26	in	(83 mm)
						(92.4 mm)
					. ,	
		-			(1.499 liters)	
Naturally Aspirated, Indire	ct Injectio	on	Compression	Ratio		21.6:1
NCE DATA						
@ 1800 RPM (60 Hz) Ra	ted 24	1.8				
sumption (gal/Hr) Rated						
Gas Flow (cfm) Rated Lo	<b>bad</b> 10	)9				
emperature (°F)	10	005				
ted States EPA - M	obile C	off-Highway Tier 4	Limits -			11≤~<25 BHF
ria Pollutant	Emis	sion Requirements	Certifie	d Eng	ine E	missions
f Nitrogen as NO2)	N/A	gr/bhp-hr	N/A	gr/b	hp-hr	
rned Hydrocarbons)	N/A	gr/bhp-hr	N/A	gr/b	hp-hr	
mbined)	N/A	gr/bhp-hr	N/A	gr/b	hp-hr	
onoxide)	4.92	gr/bhp-hr	0.82	gr/b	hp-hr	
e Matter)	0.29	gr/bhp-hr	0.08	gr/b	hp-hr	
	N/A	gr/bhp-hr	N/A	gr/b	hp-hr	
ethane Hydrocarbons)						
thane Hydrocarbons)	5.59	gr/bhp-hr	4.47	gr/bl	hp-hr	
	5.59 BXL01.5F		4.47	gr/bl	np-hr	
imily: LKE		CC	4.47	gr/bl	np-hr	
mily: LKE	BXL01.5F	CC CC-025	4.47	gr/bl	np-hr	
	Naturally Aspirated, Indire NCE DATA @ 1800 RPM (60 Hz) Rat sumption (gal/Hr) Rated Gas Flow (cfm) Rated Lo emperature (°F) ted States EPA - M ria Pollutant f Nitrogen as NO2) urned Hydrocarbons) mbined) onoxide)	D1503 4-Cycle, In-Line, 3-Cylinder, Diesel Naturally Aspirated, Indirect Injection NCE DATA @ 1800 RPM (60 Hz) Rated 24 sumption (gal/Hr) Rated 0. Gas Flow (cfm) Rated Load 10 emperature (°F) 10 ted States EPA - Mobile O ria Pollutant Emis f Nitrogen as NO2) N/A Irrned Hydrocarbons) N/A nbined) N/A onoxide) 4.92	D1503 4-Cycle, In-Line, 3-Cylinder, Diesel Naturally Aspirated, Indirect Injection <b>NCE DATA</b> (@ 1800 RPM (60 Hz) Rated 24.8 sumption (gal/Hr) Rated 0.97 Gas Flow (cfm) Rated Load 109 emperature (°F) 1005 ted States EPA - Mobile Off-Highway Tier 4 ria Pollutant Emission Requirements f Nitrogen as NO2) N/A gr/bhp-hr mbined) N/A gr/bhp-hr N/A gr/bhp-hr N/A gr/bhp-hr	D1503       Stroke:         4-Cycle, In-Line, 3-Cylinder, Diesel       Displacement         Naturally Aspirated, Indirect Injection       Compression         MCE DATA       @ 1800 RPM (60 Hz) Rated       24.8         @ 1800 RPM (60 Hz) Rated       0.97         Gas Flow (cfm) Rated Load       109         emperature (°F)       1005         ted States EPA - Mobile Off-Highway Tier 4       Limits -         ria Pollutant       Emission Requirements       Certifie         f Nitrogen as NO2)       N/A       gr/bhp-hr       N/A         mined       N/A       gr/bhp-hr       N/A         N/A       gr/bhp-hr       N/A       N/A         onoxide)       4.92       gr/bhp-hr       0.82	D1503 Stroke: 3.63 4-Cycle, In-Line, 3-Cylinder, Diesel Displacement: 91 Naturally Aspirated, Indirect Injection Compression Ratios NCE DATA @ 1800 RPM (60 Hz) Rated 24.8 sumption (gal/Hr) Rated 0.97 Gas Flow (cfm) Rated Load 109 emperature (°F) 1005 ted States EPA - Mobile Off-Highway Tier 4 Limits - ria Pollutant Emission Requirements Certified Engl f Nitrogen as NO2) mend Hydrocarbons) N/A gr/bhp-hr N/A gr/b N/A gr/bhp-hr N/A gr/b	D1503       Stroke:       3.63       in.         4-Cycle, In-Line, 3-Cylinder, Diesel Naturally Aspirated, Indirect Injection       Displacement: 91       cid         Maturally Aspirated, Indirect Injection       Compression Ratio:         NCE DATA       0.97         Gas Flow (cfm) Rated Load       0.97         Gas Flow (cfm) Rated Load       109         emperature (°F)       1005         ted States EPA - Mobile Off-Highway Tier 4       Limits -         ria Pollutant       Emission Requirements       Certified Engine E         f Nitrogen as NO2)       N/A       gr/bhp-hr       N/A       gr/bhp-hr         N/A       gr/bhp-hr       N/A       gr/bhp-hr       N/A       gr/bhp-hr         nbined)       N/A       gr/bhp-hr       N/A       gr/bhp-hr         N/A       gr/bhp-hr       N/A       gr/bhp-hr

Strates targe to the states	CERTIFICATE	ODEL YEAR	MITY	ON AGENCY	OFFICE OF TRANSI AND AIR QUA ANN ARBOR, MICH	ALITY
Certificate Issued To: Kub (U.S. 1 Certificate Number: LKBX	Manufacturer or Importer)	Effective Da 08/22/2019 Expiration D 12/31/2020	9 Pate:		r, Division Director Ince Division	Issue Date: 08/22/2019 Revision Date: N/A
Model Year: 2020 Manufacturer Type: Origin: Engine Family: LKBXL01.5	-		Emissio Fuel Ty After T	Stationary Indicator: Mobile ons Power Category: 8<=kW< pe: Diesel reatment Devices: No After T er Treatment Devices: Engine	19 Treatment Devices Installed	
issued with respect to the test of required by 40 CFR Part 1039 This certificate of conformity of documentation required by 40 It is a term of this certificate th warrant or court order may lea	Clean Air Act (42 U.S.C. section 7547) and 40 CFR P engines which have been found to conform to applicab and produced in the stated model year. covers only those new compression-ignition engines w CFR Part 1039 and which are produced during the manufacturer shall consent to all inspections de d to revocation or suspension of this certificate for re- er reasons specified in 40 CFR Part 1039.	ole requirements and which conform in all odel year stated on t escribed in 40 CFR 1	l which rep material r this certifie 1068 and a	present the following engines, l espects to the design specificat cate of the said manufacturer, a uthorized in a warrant or court	by engine family, more fully describent tions that applied to those engines des as defined in 40 CFR Part 1039. order. Failure to comply with the rec	d in the documentation cribed in the quirements of such a

ENTAL PROTECTO

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.

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	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2020	LKBXL01.5FCC	1.500	Diesel	3000		
SPECIAL I	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION			
Indirect Diesel Injection			Generator Set, Light Tower, Welder, Wood Chipper			

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 8 ≤ kW < 19	EMISSION			1	EXHAUST (g/kw-h	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
	$3 \le kW < 19$	Tier 4 Final	STD	N/A	N/A	7.5	6.6	0.40	N/A	N/A
		CERT			6.0	1.1	0.11		-	

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  $21^{3}$ 

day of August 2019.

Allen Lyons, Chief Emissions Certification and Compliance Division

			Engi	ne Model Su	Immary Form	n	E0#1	J-R-025-0869
Mfr Family Name:	KUBOTA Corporation Nonroad CI LKBXL01.5FCC N/A		Attachment		page 1		Date: 8/8/2019	
Process Code: 1.Engine Code	New Submission 2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (Ibs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (Ibs/hr)@peak torque	9. Emission Control Device Per SAE J1930
D1503-M-BG-EF01	D1503-M-BG-EF	24.4@1800	33.8	10.2	71.2@1800	33.8	10.2	EM, IFI
D1503-M-BG-EF01e	D1503-M-BG-EF	24.4@1800	33.8	10.2	71.2@1800	33.8	10.2	EM, IFI
D1503-M-BG-EF02e	D1503-M-BG-EF	24.1@1800	33.7	10.2	70.4@1800	33.7	10.2	EM, IFI
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and the second	and the second							