CALIFORNIA AIR RESOURCES BOARD	KUBOTA CORPORATION	EXECUTIVE ORDER U-L-016-0124 New Off-Road Large Spark-Ignition Engines Above 19 Kilowatts

Pursuant to the authority vested in California Air Resources Board by the 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-14-012;

IT IS ORDERED AND RESOLVED: That the following new large spark-ignition engines and emission control systems produced by the manufacturer are certified for use in off-road equipment as described below. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY NAME	ENGINE DISPLACEMENT (liters)	FUEL TYPE
2019	KKBXB02.5HFA	2.5	Gasoline, LPG, CNG, Gasoline-LPG Dual Fuel, LPG-CNG Dual Fuel, Gasoline-LPG-CNG Multi-Fuel

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE
5000	Three-Way Catalytic Converter, Heated Oxygen Sensor (2), Multiport Fuel Injection (Gasoline), Gaseous Fuel Mixer (LPG, CNG)	Forklift, Aerial Lift, Sweeper, Compressor, Tractor/Tug

ENGINE MODELS (rated power in kilowatt, kW)	See Attachment

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) exhaust certification emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2433(b)(1)) and certification emission levels for this engine family in grams per kilowatt-hour (g/kW-hr). Engines within this engine family shall have closed crankcases in conformance with 13 CCR Section 2433(b)(3).

(g/kW-hr)	HC+NOx	CO
Exhaust Standards	0.8	20.6
Certification Levels	0.3	8.9

The following is the evaporative hydrocarbon emission standard (13 CCR Section 2433(b)(4)) and certification emission level for this engine family in grams per gallon of fuel tank capacity (g/gallon).

Evaporative Certification Method	HC Certification Level (g/gallon)	HC Certification Standard (g/gallon)
Design Based	N/A	0.2

BE IT FURTHER RESOLVED: That for the listed engines for the aforementioned model-year, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2433(c) (certification and test procedures), 13 CCR Section 2434 (emission control labels), and 13 CCR Sections 2435 and 2436 (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 7 day of November 2018.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

Attachment 1 of 1

Model Year: 2019 **Page:** 6
Manufacturer Name: KUBOTA Corporetion **Issued:**
Engine Family: KKBXB02.5HFA **Revised:**
OFF-ROAD LSI ENGINE SUPPLEMENTAL INFORMATION **E.O.#:** U-L-011-0124

S12. MODEL SUMMARY (Use an asterisk (*) to identify worst-case engine model used for certification testing.)

S13.	S14.	S15.			S16.	S17.	S18.	S19.	S20.
Engine Model	Engine Code	Sales Codes (Check ALL appropriate)			Eng. Displ. (Liters)	Rated Power (kW)	Rated Speed (RPM)	Peak Torque (N.M)	Peak Torque Speed (RPM)
		Calif. Only	49-State	50-State					
WG2503-G-ET	WG2503-G-ET01			X	2.491	43.10	2700	168.10	1800
WG2503-GL-ET	WG2503-GL-ET01			X	2.491	43.80	2700	172.40	1400
WG2503-GLN-ET*	WG2503-GLN-ET01			X	2.491	43.80	2700	172.40	1400
WG2503-L-ET	WG2503-L-ET01			X	2.491	43.80	2700	172.40	1400
WG2503-LN-ET	WG2503-LN-ET01			X	2.491	43.80	2700	172.40	1400
WG2503-N-ET	WG2503-N-ET01			X	2.491	40.70	2700	161.60	1200

WG2503-G-ET	is for Gasoline
WG2503-GL-ET	is for Gasoline and LPG
WG2503-GLN-ET	is for Gasoline and LPG and NG
WG2503-L-ET	is for LPG
WG2503-LN-ET	is for LPG and NG
WG2503-N-ET	is for NG