KAWASAKI HEAVY INDUSTRIES, LTD.

EXECUTIVE ORDER U-U-004-0825
New Off-Road Small Spark-Ignition
Engines at or Below 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-19-095;

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

MODEL YEAR	ENGI	NE FAMILY	DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)		
2020	LKAX	S.6032CE 603 4-stroke, ≥225 cc			225 cc	Gasoline		
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
1000		EM			Riding Mower, Tractor, Commercial Turf, Other			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment						
EGR=exhaus	t gas recirc	ulation AIR=seco	ondary air injection PAIR=p	pulsed AIR MFI=mu	Iti port fuel injec	varm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S ction SFI=sequential MFI TBI=throttle body fuel injection (x)=in series ECM=engine control module		

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx), carbon monoxide (CO), and particulate matter (PM) emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2403(b)), 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 Section 1054.115(a) of the "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines," adopted October 25, 2012.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)	
STANDARD	8.0	549	*	
FAMILY EMISSION LEVEL	8.7	*	*	
CERTIFICATION LEVEL	7.1	233	*	

BE IT FURTHER RESOLVED: That the family emission level(s) (FELs), as applicable, is an emission limit declared by the manufacturer for use in the averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2403(e)(1) and 2407(a).

BE IT FURTHER RESOLVED: That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2404 (emission control labels) and 13 CCR Sections 2405 and 2406 (emission control system warranty).

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

Quarterly reports of engines produced in this engine family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter.

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 _______ day of December 2019.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment 1 of 1

Model Year: Manufacturer: 2020

KAWASAKI HEAVY INDUSTRIES,LTD.

Engine Family: LKAXS. 6032CE

Issued: Revised:

E.O. Number: V-V-004-08)5

Small Off-Road Engine Model Summary Form

								Units for Table: kW		
[47.	48.	49.	50.	51.	52.	53.	54.	55.	56.
Worst Case ?	Model Designation	Sales Code	Displ (cc)	Bore/ Stroke	Ignition Timing	Max Power	Rated Speed (RPM)	Rated Torque	Torque Speed (RPM)	Emiss Control Sys
Х	FX481V	50-State	603	73.0/72.0	20BTDC @3000RPM	10.1	3600	37.0	2000	EM
	FX541V	50-State	603	73.0/72.0	20BTDC @3000RPM	11.4	3600	39.1	2200	EM
	FX600∨	50-State	603	73.0/72.0	20BTDC @3000RPM	12.7	3600	40.9	2400	ЕМ
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