

Liquid Combustion Technology, LLC

EXECUTIVE ORDER U-U-063-0189 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	ENGINE FAMILY		DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE		
2020		LLCTS.2231SN	208, 223	4-stroke, >80 cc - <225 cc		Gasoline		
DURABILITY HOURS		SP EMISSIO	ECIAL FEATURES & ON CONTROL SYST	EMS	TYPICAL EQUIPMENT APPLICATION			
125			EM		Snowblower, Ice Auger			
ENGINE MODELS (rated power in kilowatt, kW)		See Attachment						

The following are the 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).

*=not applicable	CO (g/kW-hr)	PM (g/kW-hr)		
STANDARD	549	*		
FAMILY EMISSION LEVEL	*	*		
CERTIFICATION LEVEL	422	*		

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).

BE IT FURTHER RESOLVED: That because the listed engine models shall be used exclusively in wintertime snowblower and/or ice auger products only (13 CCR Section 2403(b)(5)), the equipment is exempt from complying with 13 CCR, Chapter 15, Article 1 (evaporative emission requirements for off-road equipment).

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 1374 day of May 2020

Allen Lyons, Chief

Emissions Certification and Compliance Division

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Model Year: 2020

Manufacturer: Llquid Combustion Technology, LLC

Revised: 2/10/2020

Engine Family: LLCTS.2231SN

E.O. Number:

Issued:

Small Off-Road Engine Model Summary Form

Units for Table: kw

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
X	PWHK-E1 208	50-State	208	70/54mm	Fixed	4.1	3600	10.8 Nm	2900	EM
	PWHK-E1 223	50-State	223	70/58mm	fixed	4.3	3600	11.3 Nm	3600	EM