

Liquid Combustion Technology, LLC

EXECUTIVE ORDER U-U-063-0197

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) ENGINI		E CLASS	FUEL TYPE		
2020	ı	LLCTS.4202SN	369, 414, 420	4-stroke, <u>></u> 225 cc		Gasoline		
DURABILITY HOURS			ECIAL FEATURES & ON CONTROL SYST		TYPICAL EQUIPMENT APPLICATION			
250			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	346	*			

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 on this 4th day of August 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

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Model Year: 2020

Manufacturer: Llquid Combustion Technology, LLC Revised:

Engine Family: LLCTS.4202SN E.O. Number:

Small Off-Road Engine Model Summary Form

Issued:

Units for Table: kw

4/29/2020

	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
X	PWHK-E1 414	50-State	414	90/65	fixed	8.4	3600	22.3Nm	3600	EM
	PWHK-E1 420	50-State	420	90/66	fixed	9.5	3600	25.1Nm	3600	EM
	PWHK-E1 369	50-State	369	85/65	fixed	8.3	3600	22.0Nm	3600	EM