

SHANDONG HUASHENG ZHONGTIAN MACHINERY GROUP CO., LTD

EXECUTIVE ORDER U-U-118-0175 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-14-012;

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	FAMILY DISPLACEMENT ENGINE		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)			
2019	KSHS	S.0374GA	37	4-stroke, < 50 cc	Gasoline			
DURABILITY HOURS			SPECIAL FEATURES &		TYPICAL EQUIPMENT APPLICATION			
50			EM		Pump, Line Trimmer, Leaf Blower/Vacuum, Hedge Trimmer, Tiller, Ice Auger, Brushcutter, OEM Product			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment						

ABBREVIATIONS: EM=engine modification: TWC/OC=three-way/oxidizing catalysts WOTWC/WOOC=warm-up: TWC/OC O2S=oxygensensor HO2S=neated O2 EGR=exhaust gas recirculation AIR=secondary air injection STRI=multiport fuel injection STEI-sequential MFT TBT=irhtottle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler: 2(prefix)=parallel: (2)(suffix)=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	50	536	*	
FAMILY EMISSION LEVEL	*	*	•	
CERTIFICATION LEVEL	25	369	*	

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 February 2019.

*Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

ATTIMENT (1951 OF 1)

Model Year: Manufacturer:

2019

Engine Family: KSHSS.0374GA

Shandong Huasheng Zhongtian Machinery

Issued:

12/7/2018

Revised: E.O. Number: V 1 - 118 - 0175

Small Off-Road Engine Model Summary Form

Units for Table: kW

	47.	48.	49.	50.	51.	52.	53.	54.	55.	56.
Worst	Model	Sales	Displ	Bore/	Ignition	Max	Rated Speed	Rated	Torque Speed	Emiss
Case?	Designation	Code	(cc)	Stroke	Timing	Power	(RPM)	Torque	(RPM)	Control Sys
X	ET37V	50-State	37	39/31	27±3 BTDC	1.0	6000	1.7	5500	EM
	EX037	50-State	37	39/31	27±3 BTDC	1.0	6000	1.7	5500	EM

Page: 9