

ENGINE DISTRIBUTORS, INC.

EXECUTIVE ORDER U-L-034-0043 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	KEDIB01.5TSG	1.5	Gasoline, LPG, CNG, Gasoline-LPG Dual Fuel, Gasoline-CNG Dual Fuel		
DURABILIT HOURS	Y SPEC	IAL FEATURES & CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE		
5000	Heate Sequential Mu	ay Catalytic Converter, ed Oxygen Sensor, Iltiport Fuel Injection (Gas), Fuel Mixer (LPG, CNG)	Forklift, Aerial Lift, Generator, Compressor, Pump, Other Industrial Equipment		
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	СО		
Exhaust Standards	0.8	20.6		
Certification Levels	0.5	2.5		

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.

Knnette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Attachment 1 of 1

Model Year:	2019	Page:	5of 13
Manufacturer Name:	Engine Distributors, Inc. (EDI)	Issued:	08/07/2018
Engine Family:	KEDIB01.5TSG	Revised:	
OFF-ROAD LSI ENGINE	SUPPLEMENTAL INFORMATION	FO#: 1/-	1-034-006

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

S13. Engine Model	S14. Engine Code	S15. Sales Codes (Check ALL appropriate)		S16. Eng. Displ.	S17. Rated Power	S18. Rated Speed	S19. Peak Torque	S20. Peak Torque	
		Calif. Only	49- State	50- State	(Liters)	(kW)	(RPM)	(N-m)	Speed (RPM)
TSG415-DF*	TSG415-DF			Х	1.5L	42.0	3600	111	3600
TSG415- GAS	TSG415- GAS			х	1.5L	41.0	3600	109	2600
TSG415- LPG	TSG415- LPG			х	1.5L	42.0	3600	111	3600
TSG415-LPV	TSG415-LPV			х	1.5L	42.0	3600	111	3600
TSG415-NG*	TSG415-NG			Х	1.5L	39.0	3600	103	3600
TSG415- CNG	TSG415- CNG			х	1.5L	39.0	3600	103	3600
TSG415GAS CNG	TSG415GAS CNG			х	1.5L	40.1	3600	109	2600