



Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in 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 (liters)	FUEL TYPE	USEFUL LIFE (hours)
2018	JH3XL2.22NFV	2.216	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection, Engine Control Module, Oxidation Catalyst, Periodic Trap Oxidizer,			Loader, Tractor, Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug); and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 37	Tier 4 Final	STD	N/A	N/A	4.7	5.5	0.03	N/A	N/A	N/A
		CERT	--	--	4.7	0.3	0.01	--	--	--

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (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.**

Executed at El Monte, California on this 14<sup>th</sup> day of December 2017.

  
Annette Hebert, Chief  
Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT 1 OF 1

**Engine Model Summary Template**

U-R-026-0500

12/5/2017

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
JH3XL2.22NFV	EN42/2600	404F-22	42.1@2600	30.5	17.4	130.0@1800	32.1	12.7	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN46/2400	404F-22	45.7@2400	35.5	18.7	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN47/2600B	404F-22	47.4@2600	34.8	19.9	143.0@1800	35.9	14.2	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN48/2600	404F-22	47.9@2600	34.8	19.9	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN49/2800	404F-22	48.8@2800	35.7	21.9	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN49/3000	404F-22	48.8@3000	32.9	21.7	143.0@1800	35.9	14.2	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN33/1800	404F-22	32.6@1800	33.7	13.3	134.0@1500	34.3	11.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN42/2600	C2.2	42.1@2600	30.5	17.4	130.0@1800	32.1	12.7	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN46/2400	C2.2	45.7@2400	35.5	18.7	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN47/2600B	C2.2	47.4@2600	34.8	19.9	143.0@1800	35.9	14.2	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN48/2600	C2.2	47.9@2600	34.8	19.9	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN49/2800	C2.2	48.8@2800	35.7	21.9	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN49/3000	C2.2	48.8@3000	32.9	21.7	143.0@1800	35.9	14.2	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN33/1800	C2.2	32.6@1800	33.7	13.3	134.0@1500	34.3	11.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	4L30-26B	N844L-F	40.0@2600	28.6	16.3	130.0@1600	30.7	10.8	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	4L34-26B	N844L-F	46.0@2600	33.5	19.1	139.0@1600	35.1	12.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	4L35-28	N844L-F	47.3@2800	33.7	20.7	139.0@1800	35.7	14.1	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN44/2400	404F-22	44.0@2400	35.5	18.7	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX
JH3XL2.22NFV	EN44/2400	C2.2	44.0@2400	35.5	18.7	143.0@1800	36.3	14.3	EM, IFI, ECM, OC, PTOX