

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-02-003;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engines and emission control systems 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)
2014	EPKXL04.4MK1	4.4	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Continuous Trap Oxidizer			Cranes, Loaders, Tractor, Dozer, Pump, Compressor, Generator Set	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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 (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Interim Tier 4 / ALT NOx	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		FEL	N/A	N/A	N/A	N/A	0.01	N/A	N/A	N/A
		CERT	0.01	2.6	--	0.1	0.003	--	--	--

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005 and last amended October 25, 2012.

**BE IT FURTHER RESOLVED:** That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any 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 2423 and 2427.

**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 18<sup>th</sup> day of December 2013.

Erik White, Chief  
 Mobile Source Operations Division

Attachment 1 of 2

**Engine Model Summary Template**

U-R-022-0191

12-11-'13

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
EPKXL04.4MK1	Cert Test 1	3584/2200	148@2200	111.6	54	413@1400	126.2	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	1	3584/2200	148@2200	111.6	54	413@1400	126.2	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	2	3638/2200	142@2200	108.9	53	413@1400	125.8	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	3	3636/2200	137@2200	105.4	51	413@1400	126.2	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	4	3632/2200	131@2200	101.7	49	391@1400	119.6	37	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	5	3640/2200	124@2200	96.8	47	391@1400	120.6	37	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	6	3644/2200	122@2200	95.2	46	369@1400	113.6	35	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	7	3648/2200	115@2200	91.5	44	369@1400	114	35	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	8	3634/2200	110@2200	84.8	41	332@1400	101.8	31	DDI TAA ECM DOC CTOX EGR EPR

Attachment 2 of 2

**Engine Model Summary Template**

U-R-022-0191  
12-11-'13

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
EPKXL04.4MK1	9	3656/2200	100@2200	77.3	31	332@1400	101.8	31	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	10	3658/2200	94@2200	73.6	28	295@1400	89.9	28	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	11	3654/2200	88@2200	70	26	274@1400	83.8	26	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	12	3630/1950	121@1950	89.7	34	361@1400	110.7	34	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	13	3662/1800	95@1800	85.1	29	305@1350	93.4	29	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	Cert Test 14	3792/1800	109@1800	98.1	39	319@1800	98.1	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	14	3792/1800	109@1800	98.1	39	319@1800	98.1	39	DDI TAA ECM DOC CTOX EGR EPR
EPKXL04.4MK1	15	3660/2200	83@2200	65.0	31	256@1400	79.8	24	DDI TAA ECM DOC CTOX EGR EPR

TAA = TC + CAC