

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	ECPXL27.0HXF	27.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Oxidation Catalyst, Engine Control Module, Exhaust Gas Recirculation			Loader, Pump, Off-road Haul Truck, Commercial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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
ELSE > 560 kW	Tier 4 Final	STD	0.19	3.5	N/A	3.5	0.04	N/A	N/A	N/A
		FEL	N/A	N/A	--	N/A	0.04	N/A	N/A	N/A
		CERT	0.04	3.1	--	0.1	0.04	--	--	--

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.

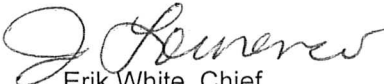
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has elected to comply with the more stringent set of standards in 13 CCR, Section 2423, Table 1b for Tier 4 engines

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 17th day of October 2013.


 Erik White, Chief
 Mobile Source Operations Division

Engine Model Summary Template

U-R-501-0492

10/7/2013

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
ECPXL27.0HXF	Cert Test 1	C27	653@2000	183	246	3207@1200	306	247	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	Cert Test 2	C27	787@2000	245	330	3200@1200	312	252	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	1 - 814/1800	C27	653@2000	183	246	3207@1200	306	247	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	2 - 814/1800	C27	653@2000	183	246	2778@1200	267	216	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	3 - 763/1800	C27	613@2000	172	231	3002@1200	290	234	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	4 - 763/1800	C27	613@2000	171	230	2573@1200	248	200	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	5 - 800/1800	C27	660@2000	184	247	2689@1200	263	212	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	6 - 875/1800	C27	725@2000	210	283	2947@1200	290	234	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	7 - 950/1800	C27	787@2000	245	330	3200@1200	312	252	DFI,TC,ECM,CAC,EGR,OC
ECPXL27.0HXF	8 - 950/1800	C27	787@2000	245	330	3200@1200	312	252	DFI,TC,ECM,CAC,EGR,OC