

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	ECPXL18.1HTF	18.1	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Oxidation Catalyst, Engine Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst			Loader, Tractor	

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
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.04	0.11	--	0.01	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 19<sup>th</sup> day of August 2013.

Erik White, Chief  
 Mobile Source Operations Division

Engine Model Summary Template

U-R-001-0482

1/7/2014 R/C

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
ECPXL18.1HTF	Cert Test 1	C18	552@1900	336	215	2248@1300	431	189	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	1	C18	552@1900	336	215	2248@1300	431	189	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	2	C18	552@1900	336	215	2248@1300	431	189	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	3	C18	527@1700	321	184	2201@1200	413	167	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	4	C18	574@2000	306	206	1983@1300	379	166	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	5	C18	598@2000	321	216	2069@1300	396	173	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	6	C18	629@2000	343	230	2173@1300	418	183	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	7	C18	570@1900	330	211	2200@1200	412	166	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	8	C18	460@1800	271	166	1823@1250	347	146	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX
ECPXL18.1HTF	9	C18	543@1900	315	201	1817@1400	344	162	DFI,TC,ECM,CAC,EGR,PTOX, OC,SCR-U,AMOX