

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 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)
2004	4CPXL14.6MRW	14.6	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Smoke Puff Limiter			Loader and Industrial 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
225<KW<450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		FEL	N/A	N/A	9.5	N/A	0.38	NA	N/A	N/A
		CERT	--	--	7.5	0.4	0.29	20	8	30

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 10TH day of December 2003.



Allen Lyons, Chief
 Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT 1 OF 1

UR-001-0230

Manufacturer: CATERPILLAR INC.
 Engine category: Nonroad Over 50 Hp
 EPA Engine Family: 4CPXL14.6MRW
 Mfr Family Name: NA
 Process Code: New Submission

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
1-Cert	3406	485 @ 2100	nominal values. 258	Due to product- ion engine avgs. 181.9	1680 @ 1400	these fuel rates 332	may change. 156.2	EM, DI, TC, SPL, CAe
2	3406	328 @ 2100	245 kW	127.8	1215 @ 1200	243	98.1	EM, DI, TC, SPL,
3	3406	500 @ 2100	372 kW	180.0	1600 @ 1400	310	146.0	EM, DI, TC, SPL,
4	3406	500 @ 2100	255	180.0	1600 @ 1400	310	146.0	EM, DI, TC, SPL,
5	3406	335 @ 2100	176	124.3	1140 @ 1200	239	96.4	EM, DI, TC, SPL,

Note: Peak HP and Peak Torque fuel rates are nominal values. Due to product- ion engine avgs. these fuel rates may change.