



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)
2002	2PKXL04.4RJ1	4.4	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Smoke Puff Limiter			Tractor and Industrial Equipment	

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
75≤KW<130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	--	5.2	--	--	--	9	3	16

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 7th day of October 2002.

Allen Lyons, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Form

Manufacturer: Perkins Engines Company Ltd

Engine category: Nonroad CI

EPA Engine Family: 2PKXL04.4RJ1

Mfr Family Name: 1104C-44TA AND CATERPILLAR 3054

Process Code: New Submission

U-R-022-0035

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	2177/2000	126.0 @ 2000	99.0	43.4	363 lbf ft @	109.0	33.8	SPL TAA DDI
2	2176/2000	128.7 @ 2200	99.0	43.4	369 lbf ft @	109.0	33.8	SPL TAA DDI
3	2177/2200	127.4 @ 2200	97.0	47.3	363 lbf ft @	109.0	33.8	SPL TAA DDI
4	2176/2200	130.0 @ 2200	97.0	47.3	369 lbf ft @	109.0	33.8	SPL TAA DDI
5	2176/2100	129.4 @ 2100	98.0	45.6	369 lbf ft @	109.0	33.8	SPL TAA DDI
6	2170/2400	108.0 @ 2400	75.0	40.0	295 lbf ft @	87.0	27.0	SPL TAA DDI
7	2171/2400	105.3 @ 2400	75.0	40.0	289 lbf ft @	87.0	27.0	SPL TAA DDI
8	2170/2300	107.3 @ 2300	76.0	38.7	295 lbf ft @	87.0	27.0	SPL TAA DDI
9	2170/2200	106.6 @ 2200	77.0	37.5	295 lbf ft @	87.0	27.0	SPL TAA DDI
10	2172/2200	114.6 @ 2200	86.5	42.2	353 lbf ft @	106.5	33.0	SPL TAA DDI
11	2173/2200	112.0 @ 2200	86.5	42.2	347.5 lbf ft @	106.5	33.0	SPL TAA DDI
12	2174/2200	121.4 @ 2200	90.0	43.9	320.0 lbf ft @	96.5	30.0	SPL TAA DDI
13	2174/2300	122.0 @ 2300	89.0	45.4	320.0 lbf ft @	96.5	30.0	SPL TAA DDI
14	2175/2200	119.4 @ 2200	90.0	43.9	314.0 lbf ft @	96.5	30	SPL TAA DDI
15	2192/2200	119.4 @ 2200	92.5	45.0	368.0 lbf ft @	109.0	33.8	SPL TAA DDI
16	2193/2200	116.7 @ 2200	92.5	45.0	362 lbf ft @	109.0	33.8	SPL TAA DDI

50 States