EXECUTIVE ORDER U-R-022-0081 New Off-Road Compression-Ignition Engines

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)
2006	6PKXL04.4RJ1	4.4	Diesel	8000
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPL	
Direct Die	sel Injection, Turbocharg nd Smoke Puff Limiter (S	er, Charge Air Cooler ome Models)	Industrial Equipmen	nt

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	EMISSION				EXHAUST (g/kw-l	nr)		OF	ACITY (%	•)
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	СО	₽M	ACCEL	LUG	PEAK
75 ≤ KW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
		CERT		_	5.4	0.6	0.28	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 27 day of January 2006.

Mobile Source Operations Division

AFTACHMENT 10F1

Engine Model Summary Form

18-025-0081

Perkins Engines Company Ltd Manufacturer:

Nonroad CI Engine category:

EPA Engine Family: 6PKXL04.4RJ1

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

New Submission Process Code:

2.Engine Model	3.BHP@RPM (SAE Gross)	mn/stroke @ peak HP (for diesel only)	(lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	mr/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930
2177/2000	126.0 @ 2000	99.0	43.4	363.0 lbf ft @	109.0	33.8	
2176/2000	128.7 @ 2000	0.66	43.4	363.0 lbf ft @	109.0	33.8	SPL TAA DDI
2177/2200	127.4 @ 2200	0.76	47.3	363.0 lbf ft @	109.0	33.8	SPL TAA DDI
2176/2200	130.0 @ 2200	0.79	47.3	369.0 lbf ft@	109.0	33.8	SPL TAA DDI
2176/2100	129.4 @ 2100	98.0	45.6	369.0 lbf ft @	109.0	33.8	SPL TAA DDI
2170/2400	108.0 @ 2400	75.0	40.0	295.0 lbf ft @	87.0	27.0	SPL TAA DDI
2171/2400	105.3 @ 2400	75.0	40.0	289.0 lbf ft @	87.0	27.0	SPL TAA DDI
2170/2300	107.3 @ 2300	76.0	38.7	295.0 lbf ft @	87.0	27.0	SPL TAA DDI
2170/2200	106.6 @ 2200	77.0	37.5	295.0 lbf ft @	87.0	27.0	SPL TAA DDI
2172/2200	114.6 @ 2200	86.5	42.2	353.0 lbf ft @	106.5	33.0	SPL TAA DDI
2173/2200	112.0 @ 2200	86.5	42.2	347.5 lbf ft @	106.5	33.0	SPL TAA DDI
2174/2200	121.4 @ 2200	90.0	43.9	320.0 lbf ft @	96.5	30.0	SPL TAA DDI
2174/2300	122.0 @ 2300	89.0	45.4	320.0 lbf ft @	96.5	30.0	SPL TAA DDI
2175/2200	119.4 @ 2200	90.0	43.9	314.0 lbf ft @	96.5	30.0	SPL TAA DDI
2192/2200	119.4 @ 2200	92.5	45.0	368.0 lbf ft @	109.0	33.8	SPL TAA DDI
2193/2200	116.7 @ 2200	92.5	45.0	362.0 lbf ft @	109.0	33.8	SPL TAA DDI
2175/2300	119.4 @ 2300	89.0	45.4	314.0 lbf ft @	96.5	30.0	SPL TAA DDI
2428/1800	157.5 @ 1800	138.5	55.3				TAA DDI
2430/1800	126.0 @ 1800	110.5	44.1				TAA DDI
2171/2200	104.0 @ 2200	77.0	37.5	289 lbf ft @ 1400	87.0	27.0	SPL TAA DD!
2171/2300	104 6 @ 2300	77.0	37.5	289 lbf ft @ 1400	87.0	27.0	SPL TAA DDI