California Environmental Protection Agency AIR RESOURCES BOARD	PERKINS ENGINES COMPANY LTD.	EXECUTIVE ORDER U-R-022-0082 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	6PKXL04.4RK1	4.4	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control Module	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 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
		CERT	--	--	5.9	0.5	0.22	5	6	6

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 11TH day of January 2006.

Allen Lyons, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Form

UR-022-0082

Manufacturer: **Perkins Engines Company Ltd**

Engine category: **Nonroad CI**

EPA Engine Family: **6PKXL04.4RK1**

Mfr Family Name: **1104C-E44TA OR CATERPILLAR 3054**

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
50 States								
1	2307/2200	137.4 @ 2200	96.2	45.7	363.0 lbf ft @	107.0	33.3	ECM DDI TAA
2	2306/2200	130.0 @ 2200	96.2	45.7	368.7 lbf ft @	107.0	33.3	ECM DDI TAA
3	2298/2200	123.3 @ 2200	92.0	44.7	332.0 lbf ft @	96.5	29.8	ECM DDI TAA
4	2441/2200	139.5 @ 2200	105.0	51.0	377.6 lbf ft @	112.0	34.6	ECM DDI TAA
5	2440/2200	142.1 @ 2200	105.0	51.0	383.5 lbf ft @	112.0	34.6	ECM DDI TAA
6	2304/2000	128.7 @ 2000	102.0	45.0	368.7 lbf ft @	109.0	33.7	ECM DDI TAA
7	2290/2200	110.0 @ 2200	80.8	39.3	343.0 lbf ft @	102.0	31.5	ECM DDI TAA
8	2291/2200	107.3 @ 2200	80.8	39.3	337.0 lbf ft @	102.0	31.5	ECM DDI TAA
9	2292/2200	119.4 @ 2200	88.4	42.9	370.3 lbf ft @	109.0	33.7	ECM DDI TAA
10	2293/2200	116.7 @ 2200	88.4	42.9	364.4 lbf ft @	109.0	33.7	ECM DDI TAA
11	2294/2200	114.7 @ 2200	84.3	40.9	353.3 lbf ft @	109.0	33.7	ECM DDI TAA
12	2295/2200	112.0 @ 2200	84.3	40.9	347.4 lbf ft @	109.0	33.7	ECM DDI TAA
13	2296/2150	116.0 @ 2150	84.3	40.0	315.7 lbf ft @	94.0	29.0	ECM DDI TAA
14	2297/2150	114.0 @ 2150	84.3	40.0	309.8 lbf ft @	94.0	29.0	ECM DDI TAA
15	2300/2000	122.0 @ 2000	98.5	43.5	368.7 lbf ft @	110.0	34.0	ECM DDI TAA
16	2301/2000	119.4 @ 2000	98.5	43.5	363.0 lbf ft @	110.0	34.0	ECM DDI TAA
17	2302/2200	123.4 @ 2200	91.7	44.6	368.7lbf ft @	109.0	33.7	ECM DDI TAA
18	2303/2200	120.7 @ 2200	91.7	44.6	363.0 lbf ft @	109.0	33.7	ECM DDI TAA
19	2304/2000	128.7 @ 2000	102.0	45.0	368.7lbf ft @	109.0	33.7	ECM DDI TAA
20	2305/2000	126.0 @ 2000	102.0	45.0	363.0 lbf ft @	109.0	33.7	ECM DDI TAA
21	2378/2200	142.1 @ 2200	103.0	50.0	368.7lbf ft @	109.0	33.7	ECM DDI TAA
22	2379/2200	139.5 @ 2200	103.0	50.0	363.0 lbf ft @	109.0	33.7	ECM DDI TAA
23	2380/2200	114.7 @ 2200	86.5	42.0	368.7lbf ft @	110.0	34.0	ECM DDI TAA
24	2410/2200	122.0 @ 2200	89.5	43.5	368.7lbf ft @	107.0	33.3	ECM DDI TAA
25	2411/2200	119.5 @ 2200	89.5	43.5	363.0 lbf ft @	107.0	33.3	ECM DDI TAA