California Environmental Protection Agency AIR RESOURCES BOARD	PERKINS ENGINES COMPANY LTD.	EXECUTIVE ORDER U-R-022-0075 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)
2005	5PKXL06.6PJ2	6.6	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control Module	Crane, Loader, Tractor, Dozer, Pump, Compressor and Generator

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	--	--	3.8	3.9	0.23	16	6	31

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 28TH day of September 2005.

Allen Lyons, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Form

U-R-022-0075

Manufacturer: **Perkins Engines Co. Ltd.**

Engine category: **Nonroad CI**

EPA Engine Family: **5PKXL06.6PJ2**

Mfr Family Name: **PERKINS 1106D-E66TA AND CATERPILLAR**

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	2660/1800	174@1800	110	65.1	631	132	60.8	ECM DDI TAA
2	2526/2200	122@2200	85	48.9	354	130	59.8	ECM DDI TAA
3	2598/2100	163@2100	91	62.8	489	106	49.0	ECM DDI TAA
4	2536/2200	128@2200	85	61.5	433	130	59.8	ECM DDI TAA
5	2540/2200	156@2200	86	62.5	504	110	50.6	ECM DDI TAA
6	2952/2200	174@2100	91	62.8	513	109	50.2	ECM DDI TAA
7	2656/2000	121@2000	71	49.2	409	90	41.4	ECM DDI TAA
8	2658/2000	131@2000	85	61.5	450	130	59.8	ECM DDI TAA
9	2662/2000	168@2000	99	65.7	524	110	47.0	ECM DDI TAA
10	2664/1800	166@1800	104	61.8	579	123	56.6	ECM DDI TAA
11	2666/2000	173@2000	98	66.7	553	109	50.2	ECM DDI TAA
12	2714/2100	131@2100	85	58.7	496	130	59.8	ECM DDI TAA
13	2718/2100	151@2100	86	61.2	547	118	54.3	ECM DDI TAA
14	2772/2000	152@2000	93	61.2	551	119	47.0	ECM DDI TAA
15	2774/2000	147@2000	86	56.6	531	114	45.0	ECM DDI TAA
16	2776/2000	142@2000	85	55.9	511	108	42.6	ECM DDI TAA
17	2778/2000	157@2000	95	62.5	570	121	47.7	ECM DDI TAA
18	2780/2000	162@2000	93	61.2	590	125	49.3	ECM DDI TAA
19	2782/2000	172@2000	99	65.1	627	128	58.9	ECM DDI TAA
20	2786/2000	167@2000	96	63.1	610	129	50.9	ECM DDI TAA
21	2962/2200	131@2000	85	55.9	496 lbf.ft@1400r	130	59.8	ECM DDI TAA