

PERKINS ENGINES COMPANY LTD.

EXECUTIVE ORDER U-R-022-0074 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	5PKXL06.6PJ1	6.6	Diesel	8000						
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION							
Direct Dies	sel Injection, Turbocharg and Engine Control	er, Charge Air Cooler 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				XHAUST (g/kw-l		OPACITY (%)				
	STANDARD CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
75 <u><</u> KW<130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50	
130 <u><</u> KW<225	Tier 2	STD	N/A	N/A	6.6	3.5	0.20	20	15	50	
~		CERT		-	3.6	1.8	0.15	16	11	21	

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

____ day of September 2005.

Allen Jons, Chief

Mobile Source Operations Division

| Engine Model Summary Form

ATTACHMENT 10F1

Manufacturer: Perkins Engines Co. Ltd.

Engine category: Nonroad CI

EPA Engine Family: 5PKXL06.6PJ1

4-8-022-0074

Mfr Family Name: PERKINS 1106D-E66TA AND CATERPILLAR

Process Code: New Submission

9.Emission Control Device Per SAE J1930	ECM DDI TAA	ECM DDI TAA	<u> </u>	ECM DDI TAA		ECM DDI TAA	ā	ECM DDI TAA	ECM DDI TAA	ECM DDI TAA					
8.Fuel Rate: (lbs/hr)@peak torque	6.07	72.0	66.3	67.2	55.2	0.69	52.9	63.1	8.09	64.4	8.09	60.3	0.69	0.69	62.6
7.Fuel Rate: mm/stroke@peak torque	154	146	144	146	112	150	115	137	132	140	132	131	150	150	136
6.Torque @ RPM (SEA Gross)	774	701	702	725	513	656	592	687	643	693	630	646	723	653	653
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	94.0	89.7	102.0	86.1	72.3	94.0	68.7	79.6	76.0	86.0	65.1	66.4	73.7	8.68	73.9
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	130	124	141	119		130	92	110	105	130	66	101	112	130	107
3.BHP@RPM (SAE Gross)	249@2200	237@2200	275@2200	225@2200	174@2500	188@2200	182@2200	213@2200	196@2200	231@2000	171@2000	177@2000	197@2000	172@2100	194@2100
2.Engine Model	2636/2200	2640/2200	2642/2200	2478/2200	2544/2500	2548/2200	2550/2200	2554/2200	2558/2200	2596/2000	2674/2000	2784/2000	2788/2000	2884/2100	2886/2100
1.Engine Code	4-	2	က	4	ιΩ	9	7	8	6	10	1	12	13	14	15