California Environmental Protection Agency AIR RESOURCES BOARD	CNH UK LIMITED	EXECUTIVE ORDER U-R-008-0104 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 engines and emission control systems 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)
2011	BNHXL04.5DAB	4.5	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Mechanical Diesel Injection, Turbocharger, Charge Air Cooler, and Smoke Puff Limiter	Loader, Tractor, and Generator Set

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
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT	--	--	4.2	1.1	0.26	13	7	20

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 26 day of October 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Template

Attachment
10/13/2010

Engine Family	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
BNHXL04.5DAB	445TA/MNK	F4GE9484F*J /F4CE9484F*J	99 @ 2200	78	N/A	305 @ 1320	99	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNB	F4GE9484P*J	99 @ 2100	85	N/A	305 @ 1260	95	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNC	F4GE9484C*J	97 @ 2200	77	N/A	299 @ 1320	97	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MND	F4CE9484M*J	95 @ 2300	75	N/A	288 @ 1380	92	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNE	F4CE9487N*J	94 @ 2500	70	N/A	277 @ 1500	86	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNF	F4CE9487M*J	87 @ 2500	65	N/A	258 @ 1500	80	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNG	F4CE9484N*J	84 @ 2300	67	N/A	260 @ 1380	84	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNJ	F4CE9484A*J	75 @ 2300	61	N/A	229 @ 1380	73	N/A	DDI SPL CAC TC
BNHXL04.5DAB	445TA/MNL	F4CE9487A*J	99 @ 2500	72	N/A	284 @ 1500	90	N/A	DDI SPL CAC TC

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