California Environmental Protection Agency

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)
2009	9KBXL02.4HAD	2.434	Diesel	8000
	FEATURES & EMISSION			PLICATION
in	direct Diesel Injection, To Smoke Puff Limiter (Son	urbocharger, ne Models)	Tractor, Other Industrial E	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	EMISSION			E	XHAUST (g/kW-l	nr)		O	PACITY (%	6)
POWER CLASS	STANDARD CATEGORY		HC ·	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
37 <u>≤</u> kW < 56	Tier 4 Interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT			3.6	1.0	0.22	6	2	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 _____24th day December 2008.

Raphael Surnoring

Annette Hebert, Chief Mobile Source Operations Division

Engine Model Summary Form

KUBOTA Corporation 9KBXL02.4HAD Nonroad Cl Mfr Family Name: N/A EPA Engine Famly. Engine category: Manufacturer:

New Submission

Process Code:

Attachnient

P. I of

U-R-025-0396

Varo-M-FTD1 Varo-M-FT 4 ² / ₂ 61.002700 48.4 29.2 128.80(1800 48.5 19.5 EM T/N) Varo-M-FTD2 Varo-M-FT 59.002700 48.9 28.3 125.40(1600 45.7 16.3 EM P/ Varo-M-FTD2 Varo-M-FT 59.002700 48.9 15.0 EM P/ Varo-M-FTD3 Varo-M-FT 4 ² 51.0022600 41.8 24.3 123.00(1600 44.8 16.0 EM SPL Varo-M-FTD3 Varo-M-FT 51.0022700 41.8 24.3 123.00(1600 44.8 16.0 EM SPL Varo-M-FTD3 Varo-M-FT 51.0022700 41.5 24.4 122.70(1600 44.7 16.0 EM SPL Varo-M-FTD3 Varo-M-FT 59.0022700 41.5 24.4 122.70(1600 44.7 16.0 EM SPL Varo-M-FTD3 Varo-M-FT 59.0022700 41.5 2.5 120.70(1600 44.7 16.0 EM SPL Varo-M-FTD3 Varo-M-FT 59.0022700 41.5 25.3 120.70(1600 42.7 17.1 EM SPL Varo-M-FTD3 Varo-M-FT 55.9022600 41.5 25.3 120.70(1600 42.1 17.1 EM SPL Varo-M-FTD3 Varo-M-FT 55.9022600 41.5 2.5 120.70(1600 42.1 16.9 EM Varo-M-FTD3 Varo-M-FT 56.9022700 41.5 2.5 120.70(1600 42.1 16.9 EM Varo-M-FT 56.902700 41.5 2.5 120.70(1600 42.1 16.9 EM Varo-M-FT 56.902700 41.5 2.5 120.70(1600 42.1 16.9 EM Varo-M-FT 56.902700 41.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 4.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16	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	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930
V2403-M1-ET 59.0@2700 46.9 28.3 125.4@1600 45.7 16.3 V2403-M1-ET 58.0@2700 46.9 28.3 123.0@1600 45.7 16.3 V2403-M1-ET 51.0@2600 41.8 24.3 123.0@1600 44.8 16.0 V2403-M1-ET 51.0@2200 41.8 24.3 123.0@1600 44.8 16.0 V2403-M1-ET 51.0@2200 41.8 24.3 123.0@1600 44.7 16.0 V2403-M1-ET 51.0@2200 40.5 24.4 122.7@1600 44.7 16.0 V2403-M1-ET 51.0@2200 40.5 24.4 122.7@1600 44.7 16.0 V2403-M1-ET 55.9@2600 43.5 26.7 12.13@1800 42.1 16.0 V2403-M1-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9	V2403-M-T-ET01	V2403-M-T-ET45	61.0@2700	48.4	29.2	128.8@1800	48.5	2.61	EW
V2403-Mi-Ter 59.0@2700 46.9 28.3 125.4@1600 45.7 16.3 V2403-Mi-Ter 51.0@2600 41.8 24.3 123.0@1600 44.8 16.0 V2403-Mi-Ter 51.0@2600 41.8 24.3 123.0@1600 44.8 16.0 V2403-Mi-Ter 51.0@2200 40.5 24.4 122.7@1600 44.7 16.0 V2403-Mi-Ter 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-Mi-Ter 51.0@2700 43.5 25.3 120.7@1800 42.1 16.0 V2403-Mi-Ter 55.9@22000 43.5 25.3 120.7@1800 42.1 16.0 V2403-Mi-Ter 55.9@22000 43.5 25.3 120.7@1800 42.1 16.9 V2403-Mi-Ter 55.9@22000 43.5 25.5 120.7@1800 42.1 16.9 V2403-Mi-Ter 55.9@22000 43.5 25.5 120.7@1800 42.1 16.9 V2403-Mi-Ter 55.9@22000 43.5 25.3 120.7@1800 42.1 16.9 V2403-Mi-Ter 55.9@22000 43.5 25.5 120.7@1800 42.1 16.9	V2403-M-T-ET02		59.0@2700	46.9	28.3	125.4@1600	45.7	16.3.	EM
V2403-MT-ET S ^K 51.0@2600 41.8 24.3 123.0@1600 44.8 16.0 V2403-MT-ET Km 51.0@2500 41.8 24.3 123.0@1600 44.7 16.0 V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.0 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.0	/2403-M-T-ET02b	V2403-M-T-ET	59.0@2700	46.9	28.3	125.4@1600	45.7	16,3	EM,SPL
V2403-MT-ET V2 51.0@2500 41.8 24.3 123.0@1600 44.8 16.0 V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 55.9@2600 43.5 26.7 121.8@1800 42.1 16.0 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9	/2403-M-T-ET03	V2403-M-T-ET 38.	51.0@2600	41.8	24.3	123.0@1600	44.8	16.0	EM
V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 59.0@2700 43.5 26.7 121.8@1800 42.5 17.1 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9	2403-M-T-ET03b	V2403-M-T-ET KW	51.0@2600	41.8	24.3	123.0@1600	44.8	16.0	EM,SPL
V2403-MT-ET 51.0@2700 40.5 24.4 122.7@1600 44.7 16.0 V2403-MT-ET 59.0@2700 44.2 26.7 121.8@1800 42.5 17.1 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9 V2403-MT-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9	/2403-M-T-ET04	V2403-M-T-ET	51.0@2700	40.5	24.4	122.7@1600	44.7	16.0	EN
V2403-M-T-ET 59.0@2700 44.2 26.7 121.8@1800 42.5 17.1 V2403-M-T-ET 55.9@2600 43.5 25.3 120.7@1800 42.1 16.9	2403-M-T-ET04b	V2403-M-T-ET	51.0@2700	40.5	24.4	122.7@1600	44.7	16.0	EM,SPL
V2403-M-TET 55.3@2600 43.5 25.3 120.7@1800 42.1 16.9	/2403-M-T-ET05	V2403-M-T-ET	59.0@2700	44.2	26.7	121.8@1800	42.5	17.1	EM,SPL
	2403-M-T-ET06	V2403-M-T-ET	55.9@2600	43.5	25.3	120.7@1800	42.1	16.9	E
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