EXECUTIVE ORDER U-R-018-0023 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-45-9;

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)			
2001	1LHAL9.96ARA	6.6 and 10.0	Diesel	8000			
SPECIAL I	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION Crane, Loader, Dozer, Compressor				
Direct Diese	el Injection, Turbocharge	er, Smoke Puff Limiter					
ENGINE MODELS (rated power in kilowatts, kw)	Please see attachment						

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	EMISSION STANDARD		EXHAUST (g/kw-hr)					OPACITY (%)		
CLASS	CATEGORY		HC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
130 <u><</u> KW < 225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
75 <u><</u> KW<130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	0.2	6.4		0.5	0.06	9	- 15	30

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

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R. B. Summerfield, Chief

Mobile Source Operations Division

HILL AMENI

Engine Model S nmary Form

U-R- 8-002

Manufacturer:

LIEBHERR MACHINES BULLE SA

Engine category:

Nonroad CI

EPA Engine Family: 1LHAL9.96ARA

Mfr Family Name: NA

Process Code:

New Submission- Running Change 9/18/01

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
NA	© UD926TI-E 2∜// D926TI-E	294@2000	152@294	NA 💮	915@1300	∮ ¹ /175@915 ⅓	MARKE NAMES	SPL TC CAC
// // NA // // // (I		240@1800	134@240	NA	811@1100-130	152@811	NA	SPL, TEMCAC,
A. S. A. M. L. S.	D926TI-E	:::272@2000	143@272	NA *	863@12004130	*/M:201@863	CONATE NATE OF THE	WSPL/REMCAC//
NA	D926TI-E	294@1800	165@294	NA	959@1200-130	188@959	NA	SPL, TEMCAC,
ANA ANA		327@1800 \$	/ / 191@327	'NA	1121@1150	(v),215@1121	A STANS	SPLIREMOACI
NA	D926TI-E	256@2000	133@256	NA	811@1100	155@811	NA	· 医克里特氏 医二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基
A NA	D924TI-E states	174@1800	150@174 + 1	'NA	553@1300-1404	4/158@553 / ##	NA NA NA	SPL, PEMCAC,
NA	D924TI-E	204@1800	173@204	NA	664@1200-140	192@664	A SALES OF THE PROPERTY OF THE PARTY OF THE	SPL/REMCAC
NA SELEC	D924TI-E-/4	185@2000	146@185	o che NA 🗀 race	568@1200-140		NA	SPL, FRYCAC,
NA	D924TI-E	192@2000	149@192	NA	601@1200-130	(1:162@568)	James INA 1	SPL:FRMCAC.
NA	D926TI-Errs	41200@1800	116@200	NA HEE	675@1300	173@601	NA	SPL, PEMCAC,
NA	D924TI-E	173@2000	143@173	NA		125@675	NA HILL	SPL/PEMCAC/
NA 30% 80	D924TI-E/%%	· 197@2000	162@197	NA L	555@1200	167@555	NA	SPL, TOMCAC,
NA	D926TI-E	244@2000	128@244	(1) - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	637@1200	2 192@637 ₄	NA +	SPL, POYCAC,"
* NAVEUT HE	∴D926TI-E:##	#300@2000*	720@244 7:161@300	NA	798@1300	149@798	NA	SPL, POYCAC,
			sating moon as	NA P	4974@1200-130	184@974	A LA PENA LISTA DA	SPL. FROMOACIST M
	NO CASSINE				y y			RPM
<u> </u>	atte natural	115 Shown	for emissi	n (ertific	ation Proc	esc onth	HOWALL KITCHE	ratsk allengt
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			273	* 12 Sec. 25 (2) Tab. (3) (4)				