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State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-60  
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 1999

Typical Equipment Usage: Tractor

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
XJDXL08.1024 (450HC)	8.1	497	Charge Air Cooler Turbocharger

The engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values in grams per brake horsepower-hour (g/bhp-h) for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak values from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

	<u>Exhaust Emissions (g/bhp-h)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.5	0.7	4.6	0.2	10	3	18

BE IT FURTHER RESOLVED: That the listed engine models comply with "Exhaust Emission Standards and Test Procedures—Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels—1996 and Later Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 *et seq.*).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 10<sup>th</sup> day of January 2000.



R. B. Summerfield, Chief  
Mobile Source Operations Division

# Engine Model Summary Form

Manufacturer: Deere Power Systems Group of Deere & Company

Engine category: Nonroad CI

EPA Engine Family: XJDXL08.1024

Mfr Family Name: 450HC

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
6081HF001E	6081H	284@2200	137.9@2200	101.8@2200	873@1400	189.8@1400	89.2@1400	TC, CAC, EM
6081HRW06	6081H	193@2200	92@2200	67@2200	619@1400	120@1400	55@1400	TC, CAC, EM
6081HRW07	6081H	217@2200	106@2200	77@2200	712@1400	135@1400	62@1400	TC, CAC, EM
6081HRW08	6081H	241@2200	115@2200	84@2200	785@1200	157@1200	62@1200	TC, CAC, EM
6081HRW09	6081H	241@2200	115@2200	84@2200	785@1200	157@1200	62@1200	TC, CAC, EM
6081HRW10	6081H	193@2200	92@2200	67@2200	619@1400	120@1400	55@1400	TC, CAC, EM
6081HRW11	6081H	200@2200	95.4@2200	71@2200	659@1400	123@1400	58@1400	TC, CAC, EM
6081HRW12	6081H	200@2200	95.4@2200	71@2200	659@1400	123@1400	58@1400	TC, CAC, EM
6081HRW13	6081H	224@2200	106@2200	78@2200	737@1400	136@1400	64@1400	TC, CAC, EM
6081HRW14	6081H	224@2200	106@2200	78@2200	737@1400	136@1400	64@1400	TC, CAC, EM
6081HRW15	6081H	247@2200	116@2200	86@2200	813@1400	149.7@1400	71@1400	TC, CAC, EM
6081HRW16	6081H	247@2200	116@2200	86@2200	813@1400	149.7@1400	71@1400	TC, CAC, EM
6081HRW02	6081H	217@2200	106@2200	77@2200	712@1400	135@1400	62@1400	TC, CAC, EM