

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-81  
Relating to Certification of New Off-Road Compression-Ignition Engines

DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY

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:

Model Year: 2001

Typical Equipment Usage: Loader and tractor

Fuel Type: Diesel

	Engine		
	Displacement	Useful Life	Emission Control Systems
<u>Engine Family</u>	<u>(liters)</u>	<u>(hours)</u>	<u>and Special Features</u>
1JDXL04.5025	4.5	8000	Direct Diesel Injection

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 for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

Engine Power Rating (kw)	Emission Standard Category		Exhaust Emissions (g/kw-hr)					Smoke Opacity (%)		
			HC	NOx	NMHC+NOx	CO	PM	Accel	Lug	Peak
37≤KW<130	Tier 1	Standard	N/A	9.2	N/A	N/A	N/A	20	15	50
		FEL	N/A	8.6	N/A	N/A	N/A	N/A	N/A	N/A
		Certification	--	7.2	--	--	--	3	6	6

BE IT FURTHER RESOLVED: That the above-described certification is subject to the following terms, limitations and conditions:

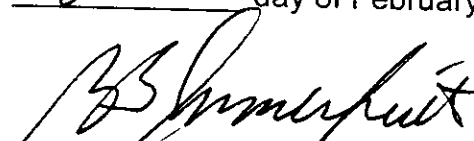
The above family emission limit(s) (FELs) is an emission level declared by the manufacturer to serve for the averaging, banking and trading program and in lieu of an emission standard for certification. It represents the emission standard applicable to this engine family that must be applied when determining compliance of any model within this engine family pursuant to 13 CCR Section 2423(b)(2).

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition 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 and 2426).

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

Executed at El Monte, California this 6<sup>th</sup> day of February 2001.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

# Engine Model Summary Form

E# U-2-1 81

Manufacturer: Deere Power Systems Group of Deere & Company  
 Engine category: Nonroad CI  
 EPA Engine Family: 1JDXL04.5025  
 Mfr Family Name: 350DB  
 Process Code: New Submission

ATTACHMENT

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
4045DT050	4045D	78@2200	<sup>KW</sup> 58 60@2200	29@2200	230@1200	72@1200	19@1200	DOF EM
4045DT055	4045D	78@2200	58 60@2200	29@2200	230@1200	72@1200	19@1200	EM
4045DLV51	4045D	81@2400	60 58@2400	31@2400	223@1100	71@1100	17@1100	EM
4045DT056	4045D	78@2200	58 60@2200	29@2200	230@1200	72@1200	19@1200	↓ EM

EPA cert: JDX-NR4-01-17