

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-53

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 by Sections 43000.5, 43013 and 43018 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 Deere Power Systems Group of Deere & Company 1999 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Loader, Tractor, Dozer, Pump, Compressor, Generator Set, and Other OEM Products

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>	
XJDXL08.1008 (450AA)	8.1	494	Turbocharger Charge Air Cooler

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

<u>Exhaust Emissions (g/bhp-hr)</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>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

<u>Engine Family</u>	<u>Exhaust Emission (g/bhp-hr)</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>
XJDXL08.1008 (450AA)	0.5	1.2	6.5	0.2	14	6	21

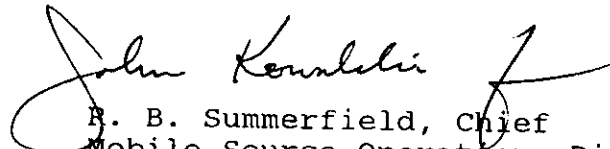
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "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, Section 2425 et seq.).

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

Executed at El Monte, California this 11<sup>th</sup> day of January 1999.

  
 R. B. Summerfield, Chief  
 Mobile Source Operations Division

# Engine Model Summary Form

21-R-4-513

**Manufacturer:** Deere Power Systems Group of Deere & Company  
**Engine category:** Nonroad Over 50 Hp  
**EPA Engine Family:** XJDXL08.1008  
**Mfr Family Name:** 450AA  
**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
6081AF001A	6081A	275@2200	134@2200	98@2200	919@1400	191@1400	76@1400	TC, CAC, EM
6081AF001B	6081A	251@2200	120@2200	89@2200	784@1400	151@1400	71@1400	TC, CAC, EM
6081AF001E	6081A	275@2200	131@2200	97@2200	835@1400	159@1400	75@1400	TC, CAC, EM
6081AF001F	6081A	251@2200	120@2200	89@2200	784@1400	151@1400	71@1400	TC, CAC, EM
6081AT001	6081A	190@2100	106@2100	75@2100	786@1000	155@1000	52@1000	TC, CAC, EM
6081AF001G	6081A	225@2200	111@2200	82@2200	762@1400	148@1400	70@1400	TC, CAC, EM
6081AT002	6081A	181@2100	95@2100	66@2100	608@1400	119@1400	55@1400	TC, CAC, EM
6081AN001	6081A	249@2200	120@2200	89@2200	785@1400	151@1400	71@1400	TC, CAC, EM
6081AF001H	6081A	200@2200	100@2200	73@2200	683@1300	139@1300	64@1300	TC, CAC, EM
6081AF001I	6081A	251@2200	122@2200	90@2200	796@1400	151@1400	71@1400	TC, CAC, EM
6081AF001C	6081A	251@1800	138@1800	84@1800	N/A	N/A	N/A	TC, CAC, EM
6081AF001D	6081A	300@1800	169@1800	103@1800	N/A	N/A	N/A	TC, CAC, EM