

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-16

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEERE POWER SYSTEM 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 System Group of Deere & Company 1997 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: Generator Set

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement in Liters</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD8.1R6DBRB (450AA)	8.1	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>
VJD8.1R6DBRB (450AA)	0.5	1.2	6.5	0.2	14	6	21

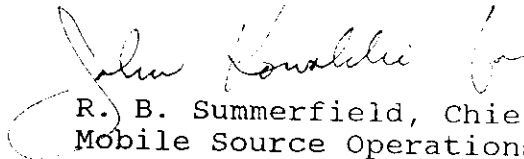
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

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 23rd day of December 1996.


 R. B. Summerfield, Chief
 Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

Draft Edition

Designated by: Power Systems Group of Deere & Company

EP Engine Family: **VJD81 RBDRB**
VJD81 R6DRB

Manufacturer Family Name: **450AA**

Engine Code	Engine Model	BHP @ RPM (SAE Gross)	Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Torque @ RPM (SAE Gross)	Fuel Rate: mm ³ /stroke @ peak torque	Fuel Rate: (lbs/hr) @ peak torque	Emission Control Device Per SAE J1930
A. 50 State Codes:								
6081AF000		275@2200	131@2200	97@2200	835@1400	159@1400	75@1400	TC, CAC, EM
6081AF001		251@2200	120@2200	89@2200	784@1400	151@1400	71@1400	TC, CAC, EM
6081AF001C		251@1800	138@1800	84@1800	NA	NA	NA	TC, CAC, EM
6081AF001D		300@1800	169@1800	103@1800	NA	NA	NA	TC, CAC, EM
6081AF001E		275@2200	131@2200	97@2200	835@1400	159@1400	75@1400	TC, CAC, EM
6081AF001F		251@2200	120@2200	89@2200	784@1400	151@1400	71@1400	TC, CAC, EM
6081AF001		190@2100	106@2100	75@2100	783@1000	155@1000	52@1000	TC, CAC, EM
6081AF001G		225@2200	111@2200	82@2200	762@1400	148@1400	70@1400	TC, CAC, EM
6081AF002		181@2100	95@2100	66@2100	608@1400	119@1400	55@1400	TC, CAC, EM

B. Federal Codes:

C. California Codes: