

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-20

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, Tractor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement in Liters</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD8.1R6DBRC (450TA)	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>
VJD8.1R6DBRC (450TA)	0.6	1.6	6.2	0.2	12	11	17


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 23<sup>rd</sup> day of December 1996.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

# LARGE ENGINE MODEL SUMMARY

Deere Equipment

Manufacturer: Deere Power Systems Group of Deere & Company

EPA Engine Family: VJD8.1R6DBRC

Manufacturer Family Name: 450TA

Engine Code	Engine Model	BHP @ RPM (SAE Gross)	Fuel Rate: mm <sup>3</sup> /stroke @ peak HP (for diesel only)	Fuel Rate: (lb/hr) @ peak HP (for diesels only)	Torque @ RPM (SEA Gross)	Fuel Rate: mm <sup>3</sup> /stroke @ peak torque	Fuel Rate: (lb/hr) @ peak torque	Emission Control Device Per SAE J1830
6081TF001A		217 @ 2200	109 @ 2200	80 @ 2200	678 @ 1200	147 @ 1200	59 @ 1200	EM, TC
6081TF001B		200 @ 2200	101 @ 2200	74 @ 2200	623 @ 1300	130 @ 1300	56 @ 1300	EM, TC
6081TF001C		211 @ 1800	127 @ 1800	76 @ 1800	NA	NA	NA	EM, TC
6081TRW01		161 @ 2100	84 @ 2100	58 @ 2100	563 @ 1440	114 @ 1400	52 @ 1400	EM, TC
6081TRW02		181 @ 2100	95 @ 2100	65 @ 2100	637 @ 1400	125 @ 1400	57 @ 1400	EM, TC

A. State Codes

B. Federal Codes

C. California Codes