

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-21

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: Tractor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement in Liters</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD7.6R6DBRB (400AA)	7.6	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>
VJD7.6R6DBRB (400AA)	0.4	2.7	6.1	0.2	14	13	25

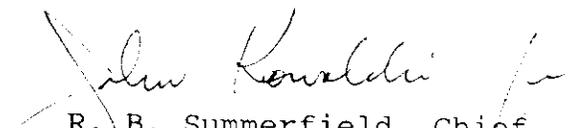
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

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

Form 13-1 (10/1/81)

Manufacturer: Deere Power Systems Group of Deere & Company

EPA Engine Family: VJD7.6R6DBRB

Manufacturer Family Name:

400AA

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 (SEA Gross)	Fuel Rate: mm ³ /stroke @ peak torque	Fuel Rate: (lbs/hr) @ peak torque	Emission Control Device Per SAE J1830
6076AF030A		261 @ 2200	124 @ 2200	92 @ 2200	826 @ 1400	163 @ 1400	77 @ 1400	EM, TC, CAC
6076AF030B		256 @ 2200	121 @ 2200	90 @ 2200	800 @ 1400	157 @ 1400	74 @ 1400	EM, TC, CAC
6076AF030C		225 @ 2200	107 @ 2200	80 @ 2200	706 @ 1400	139 @ 1400	65 @ 1400	EM, TC, CAC
6076AN031		256 @ 2200	121 @ 2200	90 @ 2200	800 @ 1400	157 @ 1400	74 @ 1400	EM, TC, CAC
6076ADW31		188 @ 2200	98 @ 2200	73 @ 2200	636 @ 1200	139 @ 1200	50 @ 1200	EM, TC, CAC
6076AT030		232 @ 2200	128 @ 2200	85 @ 2200	796 @ 1200	160 @ 1200	63 @ 1200	EM, TC, CAC

A. 50 State Codes

B. Federal Codes

C. California Codes