

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-19

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>
VJD7.6R6DBRA (400HA)	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>
VJD7.6R6DBRA (400HA)	0.3	1.2	5.9	0.2	16	10	21

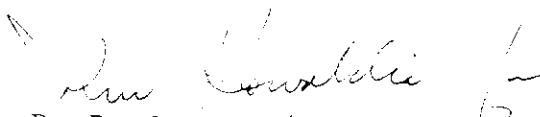
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

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

Manufacturer: Deere Power Systems Group of Deere & Company

EPA Engine Family: VJD7.6R6DBRA

Manufacturer Family Name: 400HA

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								
6076HF030A		287 @ 2200	133 @ 2200	99 @ 2200	881 @ 1400	167 @ 1400	79 @ 1400	TC, CAC, EM
6076HF030B		275 @ 2200	128 @ 2200	95 @ 2200	859 @ 1400	161 @ 1400	76 @ 1400	TC, CAC, EM
6076HF030C		275 @ 2200	128 @ 2200	95 @ 200	853 @ 1400	161 @ 1400	76 @ 1400	TC, CAC, EM
6076HH034		264 @ 2200	121 @ 2200	90 @ 2200	819 @ 1600	154 @ 1600	83 @ 1600	TC, CAC, EM
6076HH035		219 @ 2200	102 @ 2200	76 @ 2200	687 @ 1600	131 @ 1600	71 @ 1600	TC, CAC, EM
6076HH036		239 @ 2200	110 @ 2200	82 @ 2200	744 @ 1600	141 @ 1600	76 @ 1600	TC, CAC, EM
6076HH033		239 @ 2200	110 @ 2200	82 @ 2200	744 @ 1600	141 @ 1600	76 @ 1600	TC, CAC, EM
6076HRW32		256 @ 2100	124 @ 2100	88 @ 2100	853 @ 1400	162 @ 1400	76 @ 1400	TC, CAC, EM
6076HRW33		193 @ 2200	91 @ 2200	67 @ 2200	619 @ 1400	119 @ 1400	56 @ 1400	TC, CAC, EM
6076HRW34		217 @ 2200	101 @ 2200	75 @ 2200	693 @ 1300	133 @ 1300	56 @ 1300	TC, CAC, EM
6076HRW35		241 @ 2200	110 @ 2200	82 @ 2200	764 @ 1300	147 @ 1300	64 @ 1300	TC, CAC, EM

B. Federal Codes

C. California Codes