

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-14

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: Agricultural Tractor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD10.RJDBRA (550HA)	10.5 (644)	Turbocharger Charge Air Cooler Engine Control Module

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>
VJD10.RJDBRA (550HA)	0.2	0.9	5.3	0.1	17	4	35

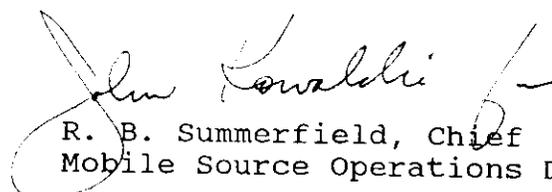
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

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: VJD10.RJDBRA

Manufacturer Family Name: 550HA

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								
6105HF001A		389@2100	193@2100	134@2100	1313@1400	252@1400	117@1400	EM,EC,TC,CAC
6105HRW01		316@2100	154@2100	109@2100	1067@1400	202@1400	95@1400	EM,EC,TC,CAC
6105HF001B		322@2100	159@2100	111@2100	1006@1400	192@1400	89@1400	EM,EC,TC,CAC
6105HF001C		350@2100	174@2100	121@2100	1181@1400	228@1400	106@1400	EM,EC,TC,CAC
6105HF001D		375@2100	187@2100	130@2100	1221@1400	233@1400	112@1400	EM,EC,TC,CAC

B. Federal Codes

C. California Codes