File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-48

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

DEERE POWER SYSTEMS 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 Systems Group of Deere & Company 1999 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 and Other OEM Products

Fuel Type: Diesel

Engine Family	Displacement Liters	Displacement Cubic Inches	Exhaust Emission Control Systems and Special Features
XJDXL12.5001 (650HA)	12.5	763	Turbocharger Charge Air Cooler Electronic 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):

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
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:

	Exhaust Emission (g/bhp-hr)				Smoke Opacity (%)		
Engine Family	THC	CO	NOx	PM	Accel	Lug	Peak
XJDXL12.5001 (650HA)	0.2	0.4	5.7	0.1	13	1	28

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 11th day of January 1999.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Deere Power Systems Group of Deere & Company**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **XJDXL12.5001**

Mfr Family Name: **650HA**

Process Code: **New Submission**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6125HF001A	6125H	510@2100	246@2100	175@2100	1729@1400	320@1400	151@1400	EM, ~~EC~~ TC, CAC, ECM
6125HRW01	6125H	359@2100	175@2100	124@2100	1242@1400	230@1400	108@1400	EM, ~~EC~~ TC, CAC, ECM
6125HRW02	6125H	425@2100	206@2100	146@2100	1467@1400	277@1400	129@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001B	6125H	425@2100	206@2100	146@2100	1329@1400	251@1400	116@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001C	6125H	425@2100	206@2100	146@2100	1435@1400	271@1400	126@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001D	6125H	451@2100	219@2100	155@2100	1521@1400	287@1400	133@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001E	6125H	475@2100	231@2100	164@2100	1603@1400	303@1400	140@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001F	6125H	500@2100	243@2100	173@2100	1689@1400	319@1400	148@1400	EM, ~~EC~~ TC, CAC, ECM
6125HZ001	6125H	374@2100	176@2100	125@2100	1282@1400	238@1400	129@1400	EM, ~~EC~~ TC, CAC, ECM
6125HZ002	6125H	449@2100	213@2100	151@2100	1502@1400	278@1400	157@1400	EM, ~~EC~~ TC, CAC, ECM
6125HF001G	6125H	563@1800	294@1800	178@1800	NA	NA	NA	EM, ~~EC~~ TC, CAC, ECM
6125HF001H	6125H	483@1800	237@1800	178@1800	NA	NA	NA	EM, ~~EC~~ TC, CAC, ECM

U-R-4-18