State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-42

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 1998 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: Loader, Tractor, Generator Set, and Other OEM Products

Fuel Type: Diesel

Engine Family	Displacements in Liters	Exhaust Emission Control Systems and Special Features
WJDXL08.1007 (450HA)	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):

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
WJDXL08.1007 (450HA)	0.4	1.0	6.0	0.2	12	4	18

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 17th day of February 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

11/13/97

LARGE ENGINE MO_ _L SUMMARY

Manufacturer: Deere Power Systems Group of Deere & Company

Process Code: New Submission

EPA Engine Family: WJDXL08.1007

Manufacturer Family Name: 450HA

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
6081HF001A		300@2200	139@2200	103@2200	1024@1200	191@1200	77@1200	TC, CAC,EM
6081HF001C		300@2200	139@2200	103@2200	959@1400	172@1400	81@1400	TC, CAC,EM
6081HF001B		322@1800	175@1800	106@1800	N/A	N/A	N/A	TC, CAC,EM
6081HRW01		268@2200	122@2200	90@2200	871@1200	170@1200	69@1200	TC, CAC,EM
6081HRW06		193@2200	92@2200	67@2200	619@1400	120@1400	55@1400	TC, CAC,EM
6081HRW07		217@2200	106@2200	77@2200	712@1400	135@1400	62@1400	TC, CAC,EM
6081HRW08		241@2200	115@2200	84@2200	785@1200	157@1200	62@1200	TC, CAC,EM
6081HRW10		200@2200	95@2200	69@2200	641@1400	124@1400	57@1400	TC, CAC,EM
6081HRW02		223@2200	109@2200	79@2200	730@1400	138@1400	64@1400	TC, CAC,EM
6081HRW09		247@2200	118@2200	86@2200	805@1200	161@1200	64@1200	TC, CAC,EM
6081HRW03		275@2200	125@2200	93@2200	892@1200	175@1200	71@1200	TC, CAC,EM
6081HZ004		300@2100	145@2100	101@2100	960@1500	180@1500	89@1500	TC, CAC,EM
6081HDW04		182@2200	94@2200	69@2200	841@1000	164@1000	55@1000	TC, CAC,EM
6081HDW03		165@2000	92@2000	61@2000	705@1000	137@1000	45@1000	TC, CAC,EM
6081HDW01		216@2000	120@2000	79.1@2000	875@900	185@900	55.1@900	TC, CAC,EM
6081HRW05		266@2100	130@2100	90@2100	900@1200	181@1200	72@1200	TC, CAC,EM
6081HH001		221@2200	105@2200	76.7@2200	690@1600	134@1600	70.8@1600	TC, CAC,EM
6081HH004		324@2200	152@2200	110.2@2200	1010@1600	185@1600	98.1@1600	TC, CAC,EM
6081HH006		276@2200	128@2200	93.5@2200	860@1600	163@1600	86.0@1600	TC, CAC,EM
6081HH002		241@2200	114@2200	82.7@2200	750@1600	145@1600	76.7@1600	TC, CAC,EM
6081HH003		276@2200	128@2200	93.5@2200	860@1600	163@1600	86@1600	TC, CAC,EM
6081HH007		245@2200	115@2200	84@2200	760@1600	147@1600	77.7@1600	TC,CAC,EM
6081HH005		324@2200	152@2200	110.2@2200	1010@1600	185@1600	98.1@1600	TC,CAC,EM
6081HN001		300@2200	140@2200	101.6@2200	900@1600	164@1600	86.9@1600	TC,CAC,EM
6081HDW05		192@2200	97@2200	71.6@2200	954@1100	186@1100	68.3@1100	TC,CAC,EM
6081HDW06		212@2200	107@2200	78.9@2200	954@1100	186@1100	68.3@1100	TC,CAC,EM
6081HDW07		192@2200	97@2200	71.6@2200	954@1100	186@1100	68.3@1100	TC,CAC,EM
6081HT001		250@2000	133@2000	88.1@2000	922@1200	175@1200	69.3@1200	TC,CAC,EM
6081HN003		324@2200	152@2200	110.2@2200	1010@1600	185@1600	98.1@1600	TC,CAC,EM

U-2-4-97