

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-82
Relating to Certification of New Off-Road Compression-Ignition Engines

DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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 compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

Typical Equipment Usage: Other Industrial Equipment

Fuel Type: Diesel

	Engine		
	Displacement	Useful Life	Emission Control Systems
<u>Engine Family</u>	<u>(liters)</u>	<u>(hours)</u>	<u>and Special Features</u>
1JDXL06.8012 (350HA)	4.5 and 6.8	8000	Direct Diesel Injection 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 exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

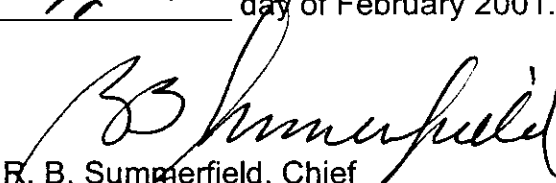
Engine Power Rating (kw)	Emission Standard Category		Exhaust Emissions (g/kw-hr)					Smoke Opacity (%)		
			HC	NOx	NMHC+NOx	CO	PM	Accel	Lug	Peak
37≤KW<130	Tier 1	Standard	N/A	9.2	N/A	N/A	N/A	20	15	50
		Certification	--	7.9	--	--	--	14	6	37
130≤KW<225	Tier 1	Standard	1.3	9.2	N/A	11.4	0.54	20	15	50
		Certification	0.3	7.9	--	0.9	0.27	14	6	37

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition 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, Sections 2425 and 2426).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 22nd day of February 2001.


R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

ED# U-R-4-82

Manufacturer: **Deere Power Systems Group of Deere & Company**
 Engine category: **Nonroad CI**
 EPA Engine Family: **1JDXL06.8012**
 Mfr Family Name: **350HA**
 Process Code: **New Submission**

ATTACHMENT

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
6068HF150A	6068H	220@2400	164 97@2400	77@2400	589@1400	113@1400	52@1400	DDI, EM, TC, CAC
4045HF150A	4045H	140@2400	104 92@2400	49@2400	366@1400	106@1400	33@1400	DDI, EM, TC, CAC
6068HF150B	6068H	210@2400	157 92@2400	73@2400	570@1400	108@1400	50@1400	DDI, EM, TC, CAC
6068HF150C	6068H	192@2200	143 90@2200	66@2200	553@1300	106@1300	45@1300	DDI, EM, TC, CAC
4045HF150B	4045H	127@1800	95 107@1800	43@1800	NA	NA	NA	DDI, EM, TC, CAC
6068HH052	6068H	192@2200	143 90@2200	66@2200	553@1400	106.5@1400	51@1400	DDI, EM, TC, CAC
4045HF150C	4045H	165@1800	123 143@1800	58@1800	NA	NA	NA	DDI, EM, TC, CAC
6068HF150D/158	6068H	251@1800	187 141.5@1800	86@1800	NA	NA	NA	DDI, EM, TC, CAC
* 4045HF152	4045H	140@2400	104 92@2400	49@2400	366@1400	106@1400	33@1400	DDI, EM, TC, CAC
4045HF150D	4045H	149@1800	111 133.5@1800	53@1800	NA	NA	NA	DDI, EM, TC, CAC
6068HF150E	6068H	223@1800	166 130.5@1800	78@1800	NA	NA	NA	DDI, EM, TC, CAC
6068HF150F	6068H	282@1800	210 160@1800	97@1800	NA	NA	NA	DDI, EM, TC, CAC

EPA Cert: JDX-NR6-01-08

* removed per R/C dated 12/19/00

Engine Model Summary Form

Manufacturer: Deere Power Systems Group of Deere & Company
 Engine category: Nonroad CI
 EPA Engine Family: 1JDXL06.8012
 Mfr Family Name: 350HA
 Process Code: Running Change

EDH U-R-4-82

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
4045HL070	4045H	113@2300	77.5@2300	39@2300	342@1500	99.3@1500	32@1500	EM, TC, CAC
4045HL071	4045H	115@2300	78.4@2300	39@2300	247@1500	100@1500	33@1500	EM, TC, CAC
4045HL072	4045H	103@2300	72.5@2300	36@2300	317@1400	92@1400	30@1400	EM, TC, CAC
4045HL073	4045H	100@2300	70.5@2300	35@2300	305@1400	90.5@1400	29@1400	EM, TC, CAC
4045HLA70	4045H	103@2300	74.6@2300	37@2300	319@1500	90.7@1500	30@1500	EM, TC, CAC
4045HLA71	4045H	100@2300	73@2300	37@2300	305@1500	90@1500	29@1500	EM, TC, CAC
4045HLA72	4045H	113@2300	79@2300	39@2300	342@1500	99.7@1500	32@1500	EM, TC, CAC
4045HLA73	4045H	123@2300	86.3@2300	43@2300	342@1500	99.4@1500	32@1500	EM, TC, CAC
6068HLA70	6068H	129@2300	62.3@2300	47@2300	393@1500	76.2@1500	37@1500	EM, TC, CAC
6068HLA71	6068H	139@2100	72.1@2100	50@2100	465@1400	95@1400	42@1400	EM, TC, CAC
6068HLA72	6068H	155@2100	77.8@2100	53@2100	516@1500	99@1500	48@1500	EM, TC, CAC
6068HLA73	6068H	166@2100	83@2100	57@2100	516@1400	99.3@1400	49@1400	EM, TC, CAC