

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-93
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: Tractor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Emission Control Systems and Special Features</u>
1JDXL12.5035 (650HD)	12.5	8000	Electronic Control Module 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):

<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>					<u>Smoke Opacity (%)</u>		
			<u>HC</u>	<u>NOx</u>	<u>NMHC+NOx</u>	<u>CO</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
225≤KW<450	Tier 2	Standard	N/A	N/A	6.4	3.5	0.20	20	15	50
		Certification	--	--	6.2	0.7	0.15	13	3	25

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

Attachment (1 of 3)

EO# U-R-4-93

Manufacturer: Deere Power Systems Group of Deere & Company
 Engine category: Nonroad CI
 EPA Engine Family: 1JDXL12.5035
 Mfr Family Name: 650HD
 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
6125HF070A	6125H	504@2100	<i>kw</i> 248@2100	175@2100	1844@1400	369@1400	196@1400	TC,CAC,ECM

Engine Model Summary Form

ED# U-R-U-93

Manufacturer: **Deere Power Systems Group of Deere & Company**
 Engine category: **Nonroad CI**
 EPA Engine Family: **1JDXL12.5035**
 Mfr Family Name: **650HD**
 Process Code: **Running Change**

Attachment (2 of 3)

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
6125HDW01	6125H	283@2000	146@2000	99@2000	1013@1500	202@1500	102@1500	EM, EC, CAC, TC
6125HF070B	6125H	300@2100	150@2100	106@2100	1014@1500	202@1500	102@1500	EM, EC, CAC,
6125HF070C	6125H	325@2100	152@2100	108@2100	1098@1500	218@1500	110@1500	EM, EC, CAC,
6125HF070D	6125H	350@2100	164@2100	116@2100	1181@1500	233@1500	118@1500	EM, EC, CAC,
6125HF070E	6125H	375@2100	176@2100	125@2100	1268@1500	249@1500	126@1500	EM, EC, CAC,
6125HF070F	6125H	400@2100	189@2100	134@2100	1349@1500	265@1500	134@1500	EM, EC, CAC,
6125HF070G	6125H	425@2100	200@2100	142@2100	1329@1500	281@1500	142@1500	EM, EC, CAC,
6125HF070H	6125H	451@2100	212@2100	150@2100	1521@1500	303@1500	153@1500	EM, EC, CAC,
6125HF070I	6125H	475@2100	224@2100	159@2100	1603@1500	321@1500	162@1500	EM, EC, CAC,
6125HF070J	6125H	500@2100	236@2100	167@2100	1689@1500	341@1500	173@1500	EM, EC, CAC,
6125HF070K	6125H	442@1800	242@1800	147@1800	NA	NA	NA	EM, EC, CAC,
6125HF070L	6125H	483@1800	268@1800	163@1800	NA	NA	NA	EM, EC, CAC,
6125HF070M	6125H	563@1800	328@1800	199@1800	NA	NA	NA	EM, EC, CAC,
6125HF070N	6125H	617@1800	376@1800	228@1800	NA	NA	NA	EM, EC, CAC,
6125HRW05	6125H	310@2100	156@2100	110@2100	1091@1575	221@1575	117@1575	EM, EC, TC,
*6125HRW06	6125H	359@2100	171@2100	121@2100	1227@1575	246@1575	131@1575	EM, EC, CAC,
*6125HRW07	6125H	396@2100	188@2100	133@2100	1350@1575	271@1575	144@1575	EM, EC, CAC,
*6125HRW08	6125H	425@2100	204@2100	144@2100	1467@1575	290@1575	154@1575	EM, EC, CAC,
*6125HRW09	6125H	488@2100	224@2100	159@2100	1614@1575	320@1575	170@1575	EM, EC, CAC,
6125HT001	6125H	354@1800	196@1800	119@1800	1360@1300	251@1300	110@1300	EM, EC, CAC,
6125HZ004	6125H	488@2200	218@2200	162@2200	1410@1600	225@1600	121@1600	EM, EC, CAC, ✓

* removed and corrected by R/c 12/19/00

New models per R/c dated 12/04/00

Engine Model Summary Form

ED# U-R-4-93.

Manufacturer: Deere Power Systems Group of Deere & Company
 Engine category: Nonroad CI
 EPA Engine Family: 1JDXL12.5035
 Mfr Family Name: 650HD
 Process Code: Correction

Attachment (30 of 3)

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	
6125HRW07	6125H	359@2100	EW 269	171@2100	121@2100	1227@1575	246@1575	131@1575	EM, EC, CAC, TC
6125HRW06	6125H	396@2100	297	188@2100	133@2100	1350@1575	271@1575	144@1575	EM, EC, CAC,
6125HRW09	6125H	425@2100	319	204@2100	144@2100	1467@1575	290@1575	154@1575	EM, EC, CAC,
6125HRW08	6125H	468@2100	351	224@2100	159@2100	1614@1575	320@1575	170@1575	EM, EC, CAC, ✓

EPA cert. NO: JDX-NR7-01-01

Rp 12/19/00 Added models.

Engine Model Summary Form

Manufacturer: Deere Power Systems Group of Deere & Company

Engine category: Nonroad CI

EPA Engine Family: 1JDXL12.5035

Mfr Family Name: 650HD

Process Code: Running Change

EO# U-R-4-93

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
6125HRW10	6125H	331@2100	159@2100	112@2100	1143@1575	230@1575	122@1575	EM, EC, TC,
6125HRW13	6125H	421@2100	200@2100	142@2100	1451@1575	281@1575	149@1575	EM, EC, TC,
6125HRW14	6125H	477@2100	230@2100	163@2100	1650@1575	323@1575	172@1575	EM, EC, TC,
6125HRW15	6125H	504@2100	241@2100	171@2100	1741@1575	338@1575	179@1575	EM, EC, TC,