California Environmental Protection Agency AIR RESOURCES BOARD	DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY	EXECUTIVE ORDER U-R-004-0102-1 New Off-Road Compression-Ignition Engines
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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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2002	2JDXL04.5042	4.5	Diesel	8000
SPECIAL	FEATURES & EMISSION		TYPICAL EQUIPMENT	APPLICATION
Direct D	Diesel Injection, Electron Turbocharge		Dozer, Loaders,	Tractor

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION			1	EXHAUST (g/kw-ł	רר)		OF	PACITY (%	6)
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	со	РМ	ACCEL	LUG	PEAK
37 <u>&lt;</u> kW <75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		FEL	-	7.3	-	-	0.36	-	-	-
		CERT	-	5.2	-	-	0.31	5	3	11

**BE IT FURTHER RESOLVED**: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

**BE IT FURTHER RESOLVED**: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

This Executive Order hereby supersedes Executive Order U-R-004-0102 dated December 28, 2001.

Executed at El Monte, California on this \_29\_\_\_\_ day of August 2002.

Allen Lyons, Chief Mobile Source Operations Division

**Engine Model Summary Form** 

ED#U-R-004-102-1 Attachment 1 of 1

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Deere Power Systems Group of Deere & Engine category: Nonroad Cl EPAEngine Family: 2JDXL04.5042 Manufacturer:

Mfr Family Name: 350TD

New Submission Process Code:

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28.862200 233.0461400 7461400 25.1361400 EMTC   28.8662200 249.2661400 747.761400 25.1361400 EMTC   31.9762200 251.8061400 84.261400 25.1361400 EMTC   33.6262200 251.8061400 84.261400 25.1361400 EMTC   33.6262200 251.8061400 84.261400 26.45661400 EMTC   33.526200 251.8061400 84.261400 28.13661400 EMTC   35.4962700 251.8061400 84.261400 25.7961400 EMTC   35.276290 256.3661400 35.64661400 EMTC   35.2762350 256.3661400 95.61400 25.7961400 EMTC   38.1462200 288.0561500 95.61500 31.0861500 EMTC   38.1462200 288.0561500 95.61500 31.0861500 EMTC	2.Engine Model	3.BHP@RPM (SAE Gross) ( <b>K</b>	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: 9.Emission Control (tbs/hr)@peak torque Device Per SAE J1930	9.Emission Control evice Per SAE J1930
31.08@2200 <sup>2</sup> 249.26@1400 79.7@1400 25.13@1400   31.97@2200 261.80@1400 84.2@1400 28.13@1400   33.62@2200 275.81@1400 89.4@1400 28.13@1400   31.97@2200 261.80@1400 84.2@1400 28.13@1400   31.97@2200 261.80@1400 84.2@1400 28.46@1400   31.97@2200 261.80@1400 84.2@1400 28.46@1400   35.49@2200 260.59@1400 84.2@1400 25.79@1400   35.49@2200 287.61@1400 85.61400 28.26[400   35.49@2200 288.05@1500 93.5@1400 28.25@1400   38.14@2200 288.05@1500 95.@1500 31.08@1500   38.14@2200 288.05@1500 95.@1500 31.08@1500	75.10@2200	2 3	<u> 39.24 @ 2000 74 / 5.00 @ 2500 / 5.10 @ 2200 / 58.60 @ 200 / 58.60 @ 200 / 58.60 @ 200 / 58.60 @ 2200 / 58.60 / 58.60 / 58.60 / 58.60 / 58.60 / 58.60 / 58.60 @ 2200 / 58.60 / </u>	33.99 @ 2500 28.88 @ 2200	233.04 @ 1400	74@1400	41.69 @ 1200 23.37 @ 1400	EMTC
31.57@2200 251.60@1400 89.4@1400 28.13@1400   33.62@2200 261.80@1400 84.2@1400 26.46@1400   35.49@2200 287.61@1400 94.2@1400 25.53@1400   35.27@2350 250.59@1400 85.01400 25.79@1400   35.27@2350 276.99@1400 93.5@1400 28.22@1400   35.27@2350 276.99@1400 93.5@1400 28.22@1400   38.14@2200 288.05@1500 95@1500 31.08@1500   38.14@2200 288.05@1500 95@1500 31.08@1500	80.46@2200		62.70@2200 54.90@2200	31.08@2200 31.07@2200	249.26@1400	79.7@1400	25.13@1400	EM TC
31.97@2200 261.80@1400 84.2@1400 26.46@1400   35.49@2200 287.61@1400 94.2@1400 29.65@1400   32.63@2350 250.59@1400 85@1400 25.79@1400   35.14@2200 288.05@1500 93.5@1400 28.22@1400   38.14@2200 288.05@1500 95@1500 31.08@1500   38.14@2200 288.05@1500 95@1500 31.08@1500	88.51@2200		67.90@2200	33.62@2200	275.81@1400	89.4@1400	28.13@1400	EMTC
35.49@2200 287.61@1400 94.2@1400 29.65@1400   32.63@2350 250.59@1400 93.5@1400 28.22@1400   35.27@2350 276.99@1400 93.5@1400 28.22@1400   35.27@2350 288.05@1500 95@1500 31.08@1500   38.14@2200 288.05@1500 95@1500 35.01500	84.48@2200		64.80@2200	31.97@2200	261.80@1400	84.2@1400	26.46@1400	EM TC
32.63@2350 250.59@1400 85@1400 25.79@1400   35.27@2330 276.99@1400 93.5@1400 28.22@1400   38.14@2200 288.05@1500 95@1500 31.08@1500   38.14@2200 288.05@1500 95@1500 31.08@1500	92.53@2200	1.5	68.50@2200	35.49@2200	287.61@1400	94.2@1400	29.65@1400	EMTC
35.27@2350 276.99@1400 93.5@1400 28.22@1400   38.14@2200 288.05@1500 95@1500 31.08@1500   38.14@2200 288.05@1500 95@1500 31.08@1500	80.46@2350		54.20@2350	32.63@2350	250.59@1400	85@1400	25.79@1400	EMTC
38.14@2200 288.05@1500 95@1500 31.08@1500	90.52@2350		69.60@2350	35.27@2350	276.99@1400	93.5@1400	28.22@1400	EMTC
	100.31@2200 75 79.80@2200		79.80@2200	38.14@2200	288.05@1500	95@1500	31.08@1500	EMTC