

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)
2010	AJDXL04.5111	4.5	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Mechanical Direct Injection, Turbocharger, Smoke Puff Limiter, Charge Air Cooler			Tractor, Pump, Compressor, Generator Set, Other Industrial Equipment	

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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		FEL	--	--	--	--	0.35	--	--	--
		CERT	--	--	4.0	0.9	0.30	19	4	35

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.

Executed at El Monte, California on this 23rd day of December 2009.

M. Hebert FOR AGM

Annette Hebert, Chief
 Mobile Source Operations Division

Date: 12/09/09

Engine Model Summary Form

Manufacturer: John Deere Power Systems
Engine category: Nonroad CI
EPA Engine Family: AJDXL04.5111
Mfr Family Name: 350HAE
Process Code: New Submission

EO#: U-R-004-03P8

attachment 1 of 1

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /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 ³ /stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
4045HF280A	4045H	99.24@2200	76.80@2200	38.01@2200	294.99@1600	91.8@1600	33.07@1600	EM SPL DFI
4045HF280B	4045H	99.24@2400	72.50@2400	39.16@2400	289.18@1600	83.9@1600	30.21@1600	EM SPL DFI
4045HF280C	4045H	99.24@2200	75.40@2200	37.20@2200	280.24@1600	87.4@1600	31.44@1600	EM SPL DFI
4045HF280D	4045H	99.24@1800	90.00@1800	36.51@1800				EM SPL DFI
4045HFS80	4045H	99.24@1800	90.00@1800	36.51@1800	N/A	N/A	N/A	EM SPL DFI
4045HLV52	4045H	95.89@2200	76.20@2200	37.70@2200	274.34@1600	90.1@1600	32.41@1600	EM SPL DFI
4045HLV53	4045H	85.16@2200	67.30@2200	33.29@2200	244.11@1600	78.1@1600	28.09@1600	EM SPL DFI
4045HL286A	4045H	89.85@2200	74.80@2200	35.50@2200	275.08@1600	89.3@1600	31.75@1600	EM SPL DFI
4045HL286B	4045H	80.47@2200	66.80@2200	32.01@2200	249.27@1600	80@1600	28.18@1600	EM SPL DFI
4045HL286D	4045H	99.24@2200	79.20@2200	39.25@2200	287.62@1600	91.8@1600	33.07@1600	EM SPL DFI

TC, CAC,
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