

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-108-11

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 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 Systems Group of Deere & Company 1997 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Compressed Natural Gas (CNG)

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems and Special Features</u>
VJD8.1D9KARA (6081HFNO)	8.1	494	Charge Air Cooler Turbocharger Engine Control Module Oxygen Sensor

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake-horsepower-hour:

<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.2	15.5	5.0	0.10

The following are the certification exhaust emission values for this engine family in grams per brake-horsepower-hour:

<u>Engine Family</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VJD8.1D9KARA (6081HFNO)	0.5	2.0	2.5	0.05

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 2035 et seq.).

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DEERE & COMPANY

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

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 7th day of January 1997.

Ronald Summerfield
Mr. R. B. Summerfield, Chief
Mobile Source Operations Division

16.03.03 - VJD8.1D9KARA CARB SUPPLEMENTAL DATA SHEET

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1997 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer: Deere & Company

Engine Family: VJD8.1D9KARA

Displacement: 8.1 Liters

All Eng Codes in Eng Family: CA 49S 50S X Strokes/Cycle: 4 Valves/Cylinder: 2Ignition: Compression Compression with Glow Plug Spark XFuel Type(s): Dedicated X Flex-Fuel Dual Fuel Bi-Fuel Dicsel CNG X
LNG LPG M85 M100 Other (specify) _____Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94

Maximum Rated Power: 250 HP @ 2200 RPM Engine Configuration: I-6

Exhaust ECS (e.g., OC, BGR, PTOX, IFI, TC, CAC): EM, ~~EC~~, O2S, TC, CAC, ~~ECM~~

(Use abbreviations per SAE J1930 SEP91)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ / stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
6081HFNO 1A	250@2200	(84)	RE62535	SW00387		
6081HFNO 1B	250@2200	(84)	RE62535	SW00387		

Submitted: 1 October 1996 16.03.03-VJD8.1D9KARA