

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-22

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEERE POWER SYSTEM GROUP OF DEERE & COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 System Group of Deere & Company 1997 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Tractor, Loader, Dozer, Pump, Compressor, Gen Set

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacements in Liters</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD6.8R6DBRC (350TA)	6.8/4.5	Turbocharger

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 total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

<u>Exhaust Emissions (g/bhp-hr)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

<u>Engine Family</u>	<u>Exhaust Emission (g/bhp-hr)</u>				<u>Smoke Opacity ( % )</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
VJD6.8R6DBRC (350TA)	0.3	0.7	5.4	0.2	8	7	18

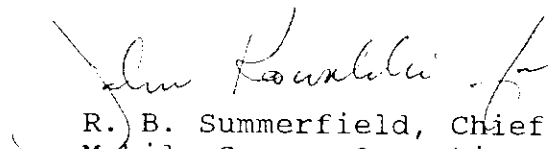
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle 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, Section 2425 et seq.).

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

Executed at El Monte, California this 23<sup>rd</sup> day of December 1996.

  
 R. B. Summerfield, Chief  
 Mobile Source Operations Division

# LARGE ENGINE MODEL SUMMARY

Manufacturer: Deere Power Systems Group of Deere & Company

EPA Engine Family: VJD6.8R6DBRC

Manufacturer Family Name: 350TA

Engine Code	Engine Model	BHP @ RPM (SAE Gross)	Fuel Rate: mm <sup>3</sup> /stroke @ peak HP (for diesels only)	Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Torque @ RPM (SEA Gross)	Fuel Rate: mm <sup>3</sup> /stroke @ peak torque	Fuel Rate: (lbs/hr) @ peak torque	Emission Control Device Per SAE J1930
A. 50 State Codes								
4045TF150C		100@1800	88@1800	35@1800	NA	NA	NA	EM, TC
4045TE050		100@2500	69@2500	38@2500	275@1400	83@1400	26@1400	EM, TC
4045TF150B		100@2500	69@2500	38@2500	275@1400	83@1400	26@1400	EM, TC
4045TN050		106@2200	78@2200	38@2200	291@1400	88@1400	27@1400	EM, TC
4045TF250B		113@1800	100@1800	40@1800	NA	NA	NA	EM, TC
4045TDW50		114@2200	83@2200	40@2200	328@1400	101@1400	31@1400	EM, TC
4045TF150A		115@2500	77@2500	43@2200	291@1400	91@1400	28@1400	EM, TC
4045TF250A		125@2400	87@2400	46@2400	328@1400	101@1400	31@1400	EM, TC
6068TRW50		118@2100	60@2100	42@2100	384@1300	76@1300	33@1300	EM, TC
6068TT050		123@2200	61@2200	44@2200	383@1400	76@1400	35@1400	EM, TC
6068TF15051		126@2200	62@2200	45@2200	400@1300	80@1300	34@1300	EM, TC
6068TF15054		126@2200	62@2200	45@2200	400@1300	80@1300	34@1300	EM, TC
6068TRW51		129@2100	66@2100	46@2100	419@1300	84@1300	36@1300	EM, TC
6068TDW50		138@2100	70@2100	48@2100	446@1400	90@1400	42@1400	EM, TC
6068TRW52		141@2100	72@2100	50@2100	458@1300	92@1300	40@1300	EM, TC
6068TDW56		143@2100	73@2100	51@2100	431@1400	87@1400	40@1400	EM, TC
6068TF150C		150@1800	86@1800	51@1800	NA	NA	NA	EM, TC
6068TF150B		155@2500	70@2500	58@2500	425@1200	86@1200	34@1200	EM, TC
6068TN051		157@2200	76@2200	55@2200	431@1400	86@1400	40@1400	EM, TC
6068TF250C		166@1800	95@1800	56@1800	NA	NA	NA	EM, TC
6068TF150A		170@2500	78@2500	64@2500	446@1200	92@1200	37@1200	EM, TC
6068TN050		185@2400	86@2400	68@2400	483@1400	100@1400	46@1400	EM, TC
6068TF250B		185@2400	86@2400	68@2400	483@1400	100@1400	46@1400	EM, TC
6068TF250A		194@2400	90@2400	71@2400	507@1400	104@1400	48@1400	EM, TC