



John Deere 6125R AutoQuad

Datasheet DLG PowerMix

Applicant

John Deere Werke Mannheim
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Test performed by

DLG e.V.
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Specifications

Engine		
Manufacturer	John Deere Power Systems	
Stage of emission	III B	
Exhaust aftertreatment device		
Nitrous gaseous emission	-	
Particulate matter emission	Active regenerating Diesel particulate filter (DPF)	
Time for regeneration DPF (average)	35	min
Time between regeneration:		
- maximum*	100	h
- under PowerMix conditions*	100	h
- checked	Manufacturer's data	
Exhaust gas recuperation		
Extern, cooled		
Number of cylinders*		
4		
Bore*	106,5	mm
Stroke*	127	mm
Displacement*	4530	cm ³
Rated speed	2100	min ⁻¹
Power by	97/68 EC	
	standard	boost
Rated power	92 kW	107 kW
Maximum power	101 kW	110 kW
at engine speed	1900 min ⁻¹	1900 min ⁻¹
Loss of power during regeneration	no loss of power	
Main fan		
Diameter	600	mm
Number of fan blades	9	
Transmission		
Manufacturer	John Deere	
Type of construction	Auto Quad	
Ranges	6	
Gears		
Forward	24	
Reverse	24	
Design speed	50	km/h

Power take off				
Profile				
Form 1: 6 spline (1 3/4")				
Transmission ratio*				
Standard pto speed	540	540E	1000	1000E
Engine speed [min ⁻¹]	1967	1496	1962	-
Chassis				
Front axle				
Manufacturer				
Dana				
Type				
Rigid axle, suspended				
Tires	front	rear		
Manufacturer	Continental AC 65		Continental AC 65	
Tire size	480/65 R28		600/65R38	
Axle load	front	rear	total	
Permissible*	4800 kg	7000 kg	9500 kg	
Empty weight	2150 kg	3320 kg	5470 kg	
Hydraulic				
System*				
Load Sensing PFC (Pressure and Flow Compensated)				
Supply of oil				
Common with transmission oil				
Fluid type*				
JDM J20 C/D				
Capacity*				
73 l				
Extractable*				
32 l				
Auxiliary valves				
Number				
3				
Max. flowrate*				
110 l/min				
Max. pressure*				
200 bar				
Fitted options				
Free return flow				
Yes				
Air condition				
Yes				
Air compressor				
Yes				
Front hydraulic power lift				
Yes				
Front pto				
No				
-				
-				

Test conditions

Axle load	front	rear
With ballast	3530 kg	4755 kg
Ballast		
on frame	900 kg	950 kg
on axle	- kg	- kg
Axle load distribution	43 %	57 %
Tire pressure		
	front	rear
	1,2 bar	1,2 bar

Remarks

Optional:
Form 3: 20 tooth (1 3/4")

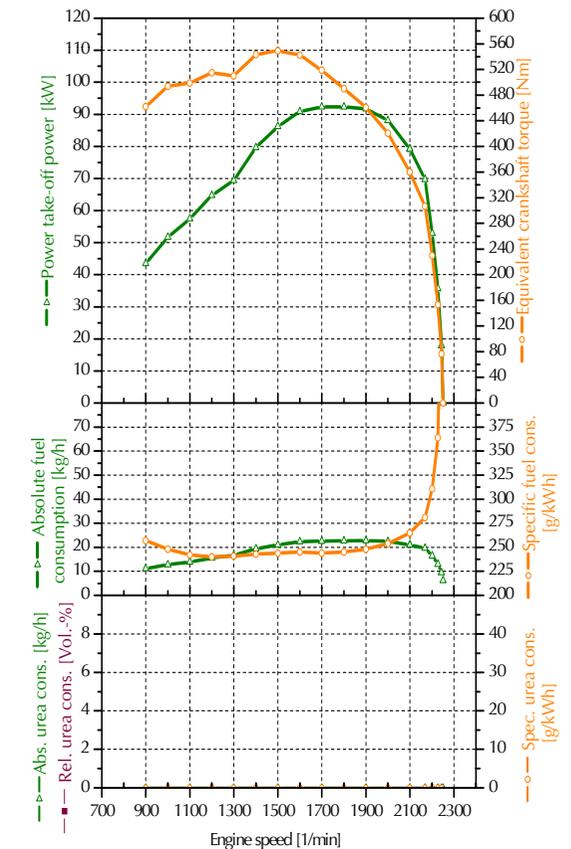
* Manufacturer's data

Results of measurement at pto dynamometer – standard

Full load	
Rated speed	
Pto power	79,2 kW
Absolute fuel consumption	21,0 kg/h
Specific fuel consumption	265 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Maximum power	
Engine speed	1700 min ⁻¹
Pto power	92,4 kW
Absolute fuel consumption	22,6 kg/h
Specific fuel consumption	244 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Maximum torque	
Engine speed	1500 min ⁻¹
Pto power	86,3 kW
Absolute fuel consumption	21,0 kg/h
Specific fuel consumption	244 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
1000 rpm at pto	
Engine speed	1962 min ⁻¹
Pto power	89,9 kW
Absolute fuel consumption	22,6 kg/h
Specific fuel consumption	252 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%

Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	18,3 kg/h
Specific fuel consumption	289 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	17,0 kg/h
Specific fuel consumption	268 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	10,7 kg/h
Specific fuel consumption	338 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	8,4 kg/h
Specific fuel consumption	266 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	11,7 kg/h
Specific fuel consumption	245 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%

Graphical analysis



Torque rise	52 %
Engine speed drop	29 %
Pulling off torque	137 %

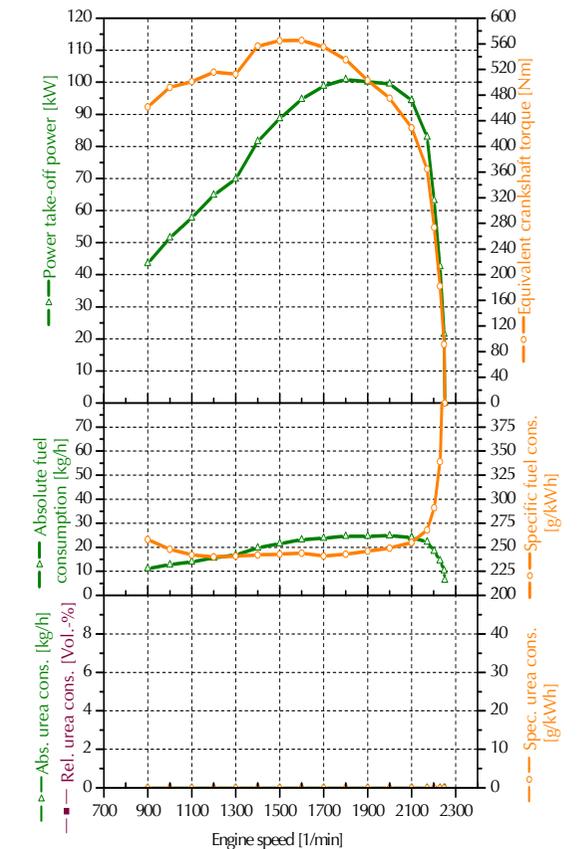
* No Selectiv catalytic reduction

Results of measurement at pto dynamometer – boost

Full load	
Rated speed	
Pto power	94,4 kW
Absolute fuel consumption	24,1 kg/h
Specific fuel consumption	255 g/kWh
Specific urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Maximum power	
Engine speed	1800 min ⁻¹
Pto power	100,9 kW
Absolute fuel consumption	24,6 kg/h
Spec. Fuel consumption	243 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Additional fuel consump. during regeneration	1,3 kg
Additional fuel consump. turned-over**	0,1 %
Calculated spec. fuel consump. with reg.	243 g/kWh
Maximum torque	
Engine speed	1600 min ⁻¹
Pto power	94,7 kW
Absolute fuel consumption	23,1 kg/h
Spec. Fuel consumption	244 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
1000 rpm at pto	
Engine speed	1962 min ⁻¹
Pto power	99,9 kW
Absolute fuel consumption	24,7 kg/h
Spec. Fuel consumption	248 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%

Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	20,7 kg/h
Spec. Fuel consumption	275 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	19,6 kg/h
Spec. Fuel consumption	259 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	11,9 kg/h
Spec. Fuel consumption	315 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Additional fuel consump. during regeneration	1,4 kg
Additional fuel consumption turned-over**	0,1 %
Calculated spec. fuel consump. with reg.	315 g/kWh
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	9,7 kg/h
Spec. Fuel consumption	257 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	13,7 kg/h
Spec. Fuel consumption	241 g/kWh
Spec. urea consumption	-* g/kWh
Ratio urea to fuel	-* Vol-%
Additional fuel consump. during regeneration	1,7 kg
Additional fuel consumption turned-over**	0,1 %
Calculated spec. fuel consump. with reg.	241 g/kWh

Graphical analysis

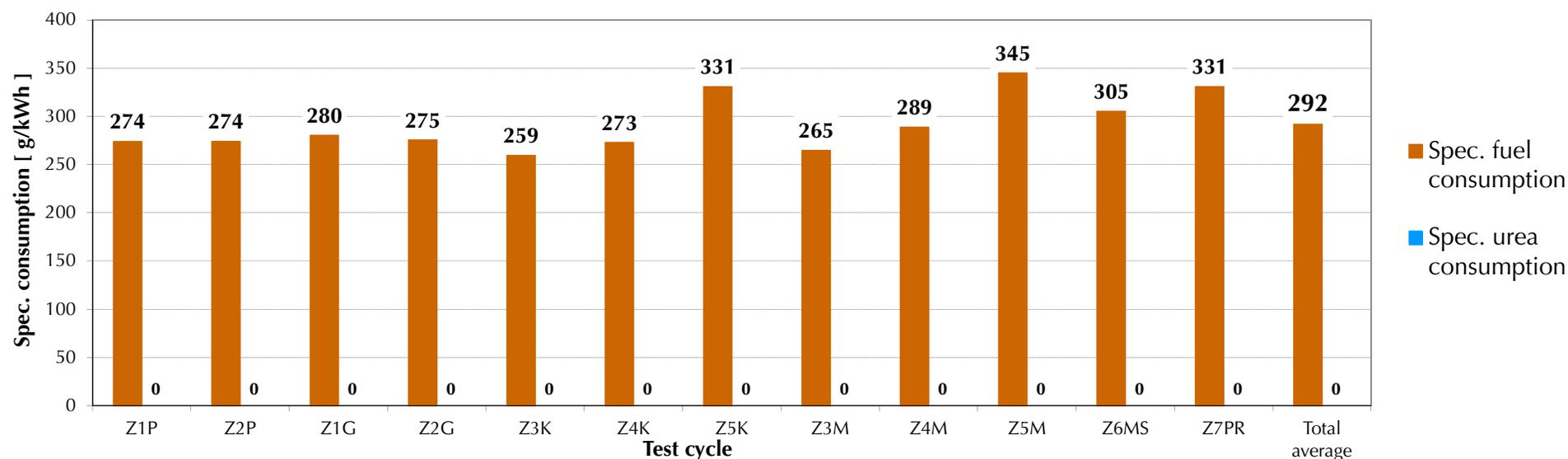


Torque rise	32 %
Engine speed drop	24 %

* No Selectiv catalytic reduction

** Ratio of additional fuel for regeneration to total fuel consumption during two regenerations; calculated with maximum operating hours during regeneration (see Specification-Engine)

Results at DLG PowerMix



Belastungsart	Test cycle		Engine speed [min ⁻¹]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption		Average values				
						[kg/h]	[l/h]	Specific fuel consumption [g/kWh]	Spec. urea cons. [g/kWh]	Ratio urea to fuel [Vol-%]	Relative additional fuel for DPF regeneration** [%]	Calculated spec. Fuel cons. with DPF regeneration** [g/kWh]
Drawbar work	Plough 100 %	Z1P	1760	8,1	76	20,8	24,9	274	-*	-*	0,1	274
	Plough 60 %	Z2P	1222	8,2	47	12,8	15,3	274	-*	-*	0,1	274
	Cultivator 100 %	Z1G	1833	9,8	77	21,2	25,4	280	-*	-*	0,1	280
	Cultivator 60%	Z2G	1155	10,2	47	12,9	15,5	275	-*	-*	0,1	275
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1727	5,9	83	21,3	25,6	259	-*	-*	0,1	259
	Rotary harrow 70 %	Z4K	1715	5,9	59	15,8	18,9	272	-*	-*	0,1	273
	Rotary harrow 40 %	Z5K	1770	6,1	34	11,1	13,3	330	-*	-*	0,1	331
	Mower 100 %	Z3M	1716	13,9	82	21,8	26,2	264	-*	-*	0,1	265
	Mower 70 %	Z4M	1731	15,9	62	17,7	21,4	288	-*	-*	0,1	289
Mower 40 %	Z5M	1735	16,0	36	12,1	14,6	344	-*	-*	0,1	345	
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1948	6,7	67	19,9	23,7	305	-*	-*	0,1	305
	Baler	Z7PR	1956	9,7	57	17,7	21,2	330	-*	-*	0,1	331
Total average DLG PowerMix								291	-*	-*	0,1	292

* No Selectiv catalytic reduction

** Ratio of additional fuel for regeneration to total fuel consumption during two regenerations; calculated with maximum operating hours during regeneration (see Specification-Engine)