

DLG Tractor Datasheet PowerMix

Performance and fuel consumption during field and transport applications

John Deere 6R 185

DLG Test Report 7369



Boost Standard

Rated power	165	136	kW
Maximum power	172	150	kW
According to	ECE R 120		



Boost Standard

Rated power	141	112	kW
Maximum power	149	132	kW
According to	OECD Code 2		



Diesel AdBlue

Energy efficiency	269	10,7	g/kWh
Consumption per hectare	6,0	0,2	l/ha
Area output	7,7		ha/h



Diesel AdBlue

Energy efficiency	349	13,9	g/kWh
Consumption per 100 kilometre per tonne	4,0	0,1	l/100tkm
Haul capacity	970		tkm/h

Measurement results overview

Power Take-Off (PTO) power according to OECD Code 2	Engine speed min ⁻¹	Power Take- Off Power kW	Specific consumption		Diesel consump- tion l/h	Ratio AdBlue to diesel Vol-%
			Diesel	AdBlue		
			g/kWh			
Standard mode						
Rated power	2100	112	261	7,4	35,2	2,2
Maximum power	1700	132	236	9,4	37,5	3,0
Maximum torque	1400	112	234	11,1	31,4	3,6
Torque increase	49	%				
Drop in speed	33	%				
Overcapacity	20	kW				
Starting torque	136	%				
Boost mode						
Rated power	2100	141	247	10,0	42,0	3,1
Maximum power	1900	149	239	8,2	43,0	2,6
Maximum torque	1500	131	232	10,5	36,6	3,4
Torque increase	30	%				
Drop in speed	29	%				
Overpcapacity	8	kW				
Savings potential through speed reduction for the same power output						
80 % of standard rated power, instead of full throttle only at 90 % of rated speed	2172	90	276	7,0	29,8	1,9
	1889		262	6,9	28,3	2,0
Savings in %			-5,1		-5,1	
40 % of standard rated power, instead of 90 % of rated speed only with 60 % of rated speed	1889	45	335	6,8	18,1	1,6
	1260		269	8,3	14,5	2,4
Savings in %			-19,7		-19,7	

PowerMix - Field work	Engine speed min ⁻¹	Delivered net power kW	Specific consumption		Consumption / hectare		Area output ha/h
			Diesel	AdBlue	Diesel	AdBlue	
			g/kWh		l/ha		
Heavy pulling work	1509	102	267	11,0	12,5	0,4	3,0
Medium pulling work	1414	76	273	11,1	7,9	0,2	3,7
Heavy PTO shaft work	1745	126	254	9,4	5,4	0,1	10,1
Medium PTO shaft work	1491	92	255	11,4	3,7	0,1	10,9
Light PTO shaft work	1491	53	295	11,0	2,5	0,1	11,0
Drawbar + PTO + Hydraulic work	1647	92	275	10,5	3,9	0,1	7,8
Overall result at field work			269	10,7	6,0	0,2	7,7

PowerMix - Transport work	Engine speed min ⁻¹	Delivered net power kW	Specific consumption		Consumption / 100 kilometre / tonne		Transport power tkm/h
			Diesel	AdBlue	Diesel	AdBlue	
			g/kWh		l/100tkm		
Heavy transportwork	1791	106	327	13,1	6,4	0,2	646
Light transportwork at 40 km/h	1450	34	508	20,3	1,6	0,0	1294
Optional: light transportwork at 50 km/h	1770	42	537	16,9	1,7	0,0	1593
Optional: light transportwork at 60 km/h	-	-	-	-	-	-	-
Overall result transport work at 40 km/h			349	13,9	4,0	0,1	970

Technical data

Engine*				
Manufacturer	John Deere			
Stage of exhaust emission	V			
Rated engine speed	2100 min ⁻¹			
Engine power according				
UNECE-R 120	Standard	Boost		
Rated power	136 kW	165 kW		
Maximum power	150 kW	172 kW		
at engine speed	1900 min ⁻¹	1900 min ⁻¹		
Boost activation requirement				
Driving speed above 15 km/h				
Load at power take-off and driving speed > 0.5 km/h				
Hydraulic-IPM				
Exhaust aftertreatment device				
Nitrous gaseous emission	Selective Catalytic Reduction (SCR)			
Particulate emission	DPF / DOC			
Time for regeneration (average)	30-35	min		
Regeneration interval:				
- maximum	100	h		
Replacement intervals	-			
Exhaust gas recuperation		externally cooled		
Exhaust-gas turbocharger		variable geometry		
Number of cylinders	6			
Bore	107	mm		
Stroke	127	mm		
Displacement	6788	cm ³		
Main fan				
Diameter	600	mm		
Number of fan blades	9			
Fan Type	E-Visco fan			
Tank volume				
Diesel / AdBlue	322 l	/	16 l	
Transmission*				
Manufacturer	ZF			
Type of construction	infinitely variable transmission			
Number of ranges	-			
Number of gears	-			
Forward	-			
Reverse	-			
Design speed	50	km/h		
Chassis*				
Front axle				
Manufacturer	Dana			
Type	spring-mounted rigid TLS axle			
Axle load		front	rear	total
Unladen masses	3248 kg	4872 kg	8120 kg	
Permissible	5580 kg	8270 kg	11750 kg	
Technically permissible	- kg	- kg	- kg	

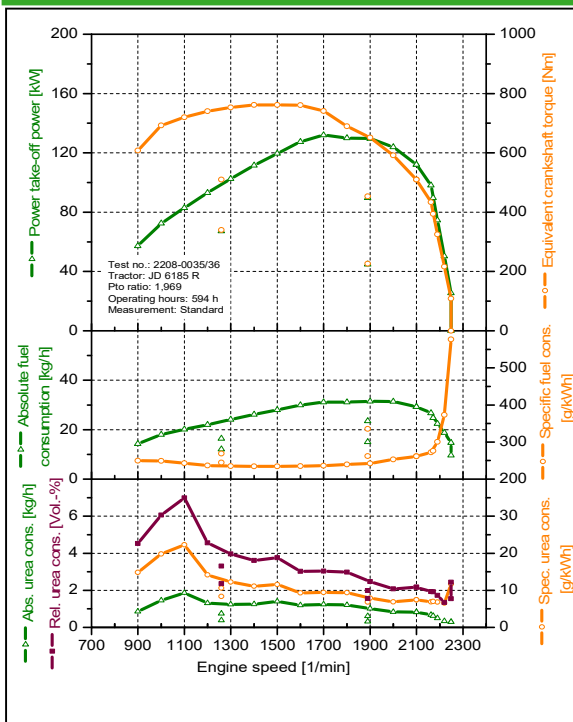
Dimensions*				
Length w/o front linkage	4930	mm		
Width	2730	mm		
Height	2950	mm		
Wheelbase	2765	mm		
Distance hitch points to PTO shaft (lower links horizontal)	Front	Rear		
	526 mm	628 mm		
Distance axle to hitch points (lower links horizontal)	Front	Rear		
	1413 mm	1213 mm		
Turning circle	- mm			
Rear PTO Shaft*				
Profile	6 spline (1 3/8")			
Transmission ratio				
PTO mode	540	540E	1000	1000E
Engine speed [min ⁻¹]	-	1567	1970	1657
Front PTO Shaft*				
Profile	-			
Transmission ratio*				
PTO mode	540	540E	1000	1000E
Engine speed [min ⁻¹]	-	-	-	-
Hydraulic power lift*		front	rear	
Category	2	3		
Lifting force at the hitch points exerted through full range	32,4 kN	46,6 kN		
Hydraulic power*				
System	PFC System (Closed Center Load Sensing System)			
Hydraulic oil				
Total capacity	184 l			
Removable	45 l			
Hydraulic flow				
Maximum delivery	155 l/min			
Optional	- l/min			
Max. flow at one rear remote	120 l/min			
Maximum pressure	204 bar			

* Manufacturer data

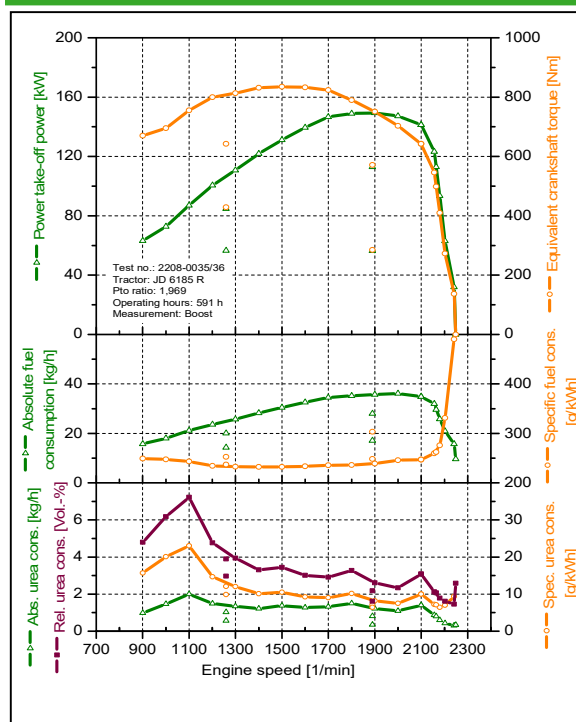
Power Take-Off Power according to OECD Code 2

Measuring point	Engine speed 1/min	PTO power kW	Equiv. Torque Nm	Absolute consumption				Ratio AdBlue to fuel Vol-%	specific consumption	
				fuel		AdBlue			fuel g/kWh	AdBlue g/kWh
				kg/h	l/h	Kg/h	l/h			
Rated power										
Boost	2100	141	642	34,9	42,0	1,4	1,3	3,1	247	10,0
Standard	2100	112	510	29,3	35,2	0,8	0,8	2,2	261	7,4
Maximum power										
Boost	1900	149	751	35,7	43,0	1,2	1,1	2,6	239	8,2
Standard	1700	132	741	31,2	37,5	1,2	1,1	3,0	236	9,4
Maximum torque										
Boost	1500	131	835	30,5	36,6	1,4	1,3	3,4	232	10,5
Standard	1400	112	761	26,2	31,4	1,3	1,1	3,6	234	11,1
1000 PTO shaft rotation										
Boost	1969	148	718	36,0	43,3	1,1	1,0	2,4	244	7,5
Standard	1969	125	608	31,2	37,6	0,9	0,8	2,2	249	7,1
Part loads at full throttle										
80 % of boost rated pw.	2165	113	498	29,6	35,6	0,8	0,7	2,1	262	7,1
80 % of standard rated pw.	2172	90	394	24,8	29,8	0,6	0,6	1,9	276	7,0
Part loads with governor control set to 90 % of rated engine speed										
80 % of boost rated pw.	1889	113	571	28,1	33,7	0,8	0,7	2,2	248	7,1
80 % of standard rated pw.	1889	90	454	23,5	28,3	0,6	0,6	2,0	262	6,9
40 % of boost rated pw.	1889	56	285	17,1	20,6	0,4	0,3	1,6	303	6,4
40 % of standard rated pw.	1889	45	227	15,0	18,1	0,3	0,3	1,6	335	6,8
Part loads with governor control set to 60 % of rated engine speed										
60 % of boost rated pw.	1260	85	642	20,1	24,1	1,0	0,9	3,9	237	12,1
60 % of standard rated pw.	1260	67	510	16,5	19,8	0,7	0,7	3,3	244	10,6
40 % of boost rated pw.	1260	57	429	14,3	17,2	0,6	0,5	3,0	253	9,9
40 % of standard rated pw.	1260	45	340	12,1	14,5	0,4	0,3	2,4	269	8,3

Standard mode



Boost mode



PowerMix - performance and fuel consumption during field and transport applications

Performance and fuel consumption during exemplary field work	Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
	1/min	km/h	kW	kg/h	l/h	Vol-%	Diesel	AdBlue
							g/kWh	
Z1P ploughing, heavy tine cultivator	1413	7,3	98	25,9	31,0	3,2	264	11,0
Z1G cultivator, disc harrow	1605	9,6	107	28,8	34,4	3,1	269	11,0
Z2P mech. seed drill, planter	1483	8,9	72	20,0	24,0	3,0	278	11,1
Z2G stubble working, seed bed combination	1345	11,7	80	21,5	25,8	3,1	268	11,1
Z3K milling, rotary harrows seeding combination	1752	5,8	125	31,3	37,4	2,7	250	8,9
Z3M cut 1. step, cultivator-rotary harrows-seeding combination	1737	14,5	126	32,4	38,8	2,9	257	9,8
Z4K pneumatic seeding drill, milling as plant care, mulch	1491	6,0	90	22,4	26,8	3,4	249	11,3
Z4M cut 2. step, direct seeding machine	1491	15,8	94	24,5	29,3	3,4	260	11,5
Z5K plant protector, mineral fertiliser, tedder, swather	1491	6,0	51	14,8	17,8	2,7	288	10,3
Z5M cut 3. step, airseeder	1491	15,9	54	16,3	19,5	3,0	301	11,8
Z6MS self-loading wagon, manure spreading	1644	6,7	100	26,6	31,9	3,0	266	10,5
Z7PR high pressure baler, round baler or square baler	1651	9,9	85	24,0	28,7	2,8	283	10,4
							269	10,7

Performance and fuel consumption during exemplary transport work	Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
	min ⁻¹	km/h	kW	kg/h	l/h	Vol-%	Diesel	AdBlue
							g/kWh	
ZTB Transportwork at full load (uphill)	1791	21	106	34,7	41,6	3,1	327	13,1
ZTE40 Transportwork at flat section with 40 km/h	1450	41	34	17,3	20,7	2,9	508	20,3
ZTE50 Transportwork at flat section with 50 km/h	1770	51	42	22,5	26,9	2,3	537	16,9
ZTE60 Transportwork at flat section with 60 km/h	-	-	-	-	-	-	-	-
Idle	850	-	-	2,2	2,8	-	-	-
							349	13,9

Test conditions

Tires	front	rear
Manufacturer	Michelin AXIOBIB 2	Michelin AXIOBIB 2
Tire size	VF 600/60 R30	VF 710/60 R42
Fitted options		
Free return flow		yes
Air condition		yes
Air compressor		yes
Front hydraulic power lift		yes
Front PTO (disengageable)		no
		-
		-

PowerMix	Ballast		Axle load distribution				Gross weight kg	Tire pressure		PTO mode 1000/1000E	Boost power available yes/no
	front	rear	front	rear		front		rear			
	kg	kg	kg	%	kg	%		bar	bar		
Performance and fuel consumption during exemplary field work											
heavy drawbar work	900	500	4755	49	5020	51	9775	1,2	1,2	-	-
medium havy drawbar w.	0	0	3395	41	4980	59	8375	1,2	1,2	-	-
heavy PTO work	0	0	3395	41	4980	59	8375	1,2	1,2	1000	-
medium heavy PTO work	0	0	3395	41	4980	59	8375	1,2	1,2	1000E	-
light PTO work	0	0	3395	41	4980	59	8375	1,2	1,2	1000E	-
Drawbar + PTO + hyd.	0	0	3395	41	4980	59	8375	1,2	1,2	1000E	-
Performance and fuel consumption during exemplary transport work											
Transport work	0	0	3395	41	4980	59	8375	1,6	1,6	-	-

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