DLG Tractor Datasheet PowerMix

Performance and fuel consumption during field and transport applications

Steyr Profi 4145 S-Control 8

DLG Test Report 6798



	Boost	Standard	
Rated power	128	107	kW
Maximum power	129	114	kW
According to	UNECE R 120		

	Boost	Standard	
Rated power	109	99	kW
Maximum power	121	107	kW
According to	OECD Code 2		

	Diesel	AdBlue	
Energy efficiency	257	21	g/kWh
Consumption per hectare	6,0	0,4	l/ha
Area output	5,7		ha/h

	Diesel	AdBlue	
Energy efficiency	478	36	g/kWh
Consumption per 100 kilometre per tonne	4,3	0,3	l/100km/t
Haul capacity	684		tkm/h

Measurement results overview

Power Take-Off (PTO) power according to OECD Code 2			Engine speed	Power Take-Off Power	Specific consumption		Diesel consump-tion	Ratio AdBlue to diesel
					Diesel	AdBlue		
			min^{-1}	kW	g/kWh		l/h	Vol-%
Standard mode								
Rated power			2200	99	236	20	27,8	6,5
Maximum power			1900	107	218	21	27,8	7,5
Maximum torque			1600	104	210	23	25,9	8,3
Torque increase	44	%						
Drop in speed	27	%						
Overcapacity	8	kW						
Starting torque	110	%						
Boost mode								
Rated power			2200	109	232	19	30,2	6,5
Maximum power			1900	121	218	19	31,5	6,8
Maximum torque			1600	111	211	21	27,9	7,8
Torque increase	39	%						
Drop in speed	27	%						
Overpcapacity	12	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			2240	79	245	21	23,1	6,5
			1981		229	21	21,6	7,3
Savings in %					**-7**	**4**	**-7**	**12**
40 % of standard rated power, instead of 90 % of rated speed only with 60 % of rated speed			1978	39	277	21	13,1	6,0
			1322		236	21	11,2	6,8
Savings in %					**-15**	**-4**	**-14**	**13**

PowerMix - Field work	Engine speed	Delivered net power	Specific consumption		Consumption / hectare		Area output
			Diesel	AdBlue	Diesel	AdBlue	
	min^{-1}	kW	g/kWh		l/ha		ha/h
Heavy pulling work	1713	76	265	21	12,4	0,8	2,2
Medium pulling work	1492	61	266	20	7,7	0,5	2,9
Heavy PTO shaft work	1639	92	234	20	6,0	0,4	6,5
Medium PTO shaft work	1458	72	241	21	3,6	0,2	7,8
Light PTO shaft work	1459	43	275	22	2,3	0,1	8,7
Drawbar + PTO + Hydraulic work	1717	71	264	23	3,9	0,3	5,8
Overall result at field work			**257**	**21**	**6,0**	**0,4**	**5,7**

PowerMix - Transport work	Engine speed	Delivered net power	Specific consumption		Consumption / 100 kilometre / tonne		Transport power
			Diesel	AdBlue	Diesel	AdBlue	
	min^{-1}	kW	g/kWh		l/100km/t		tkm/h
Heavy transportwork	1956	70	347	30	6,9	0,4	424
Light transportwork at 40 km/h	1603	26	609	42	1,8	0,1	945
Optional: light transportwork at 50 km/h	2048	36	622	40	2,1	0,1	1216
Optional: light transportwork at 60 km/h	-	-	-	-	-	-	-
Overall result transport work at 40 km/h			**478**	**36**	**4,3**	**0,3**	**684**

Technical data

Engine				
Manufacturer			**FPT**	
Stage of exhaust emission			**IV**	
Rated engine speed			**2200**	**min^{-1}**
Engine power according				
UNECE-R 120	**Standard**		**Boost**	
Rated power	107	kW	128	kW
Maximum power	114	kW	129	kW
at engine speed	1800	min^{-1}	1800	min^{-1}
Boost activation requirement				
Load at the power take-off and driving speed > 0,5 km/h or driving speed above 20 km/h				
Exhaust aftertreatment device				
Nitrous gaseous emission*			Selective Catalytic Reduction (SCR)	
Particulate emission			-	
Time for regeneration (average)			-	min
Regeneration interval:				
- maximum*			-	h
Replacement intervals			none	
Exhaust gas recuperation			**none**	
Exhaust-gas turbocharger			**1 with fixed geometry**	
Number of cylinders			**4**	
Bore*			**104**	**mm**
Stroke*			**132**	**mm**
Displacement*			**4485**	**cm³**
Main fan				
Diameter			550	mm
Number of fan blades			9	
Fan Type	Visctronic (electronically controlled fan drive)			
Tank volume				
Diesel / AdBlue	198 l	/	31 l	

Transmission				
Manufacturer			**CNH**	
Type of construction			**Dual clutch transmission**	
Number of ranges			**3**	
Number of gears				
Forward			8	
Reverse			8	
Design speed			**50**	**km/h**

Chassis				
Front axle				
Manufacturer			CNH	
Type			Rigid axle, suspended	
Axle load	**front**		**rear**	**total**
Unladen masses	3040	kg	4040 kg	7080 kg
Permissible*	4900	kg	7300 kg	10500 kg
Technically permissible*	4900	kg	7300 kg	10500 kg

Dimensions				
Length w/o front linkage*			**4556**	**mm**
Width*			**2840**	**mm**
Height*			**3005**	**mm**
Wheelbase*			**2642**	**mm**
Distance hitch points to PTO shaft (lower links horizontal)*	**Front**		**Rear**	
	715	**mm**	**625**	**mm**
Distance axle to hitch points (lower links horizontal)*	**Front**		**Rear**	
	851	**mm**	**1188**	**mm**
Turning circle*			**12700**	**mm**

Rear PTO Shaft				
Profile				**6 spline (1 ⅜")**
Transmission ratio*				
PTO mode	540	540E	1000	1000E
Engine speed [min^{-1}]	-	1592	1893	1621

Front PTO Shaft				
Profile				**6 spline (1 ⅜")**
Transmission ratio*				
PTO mode	540	540E	1000	1000E
Engine speed [min^{-1}]	-	-	1893	-

Hydraulic power lift				
	front		**rear**	
Category	II or IIIN		III	
Lifting force at the hitch points exerted through full range	2511	daN	5778	daN

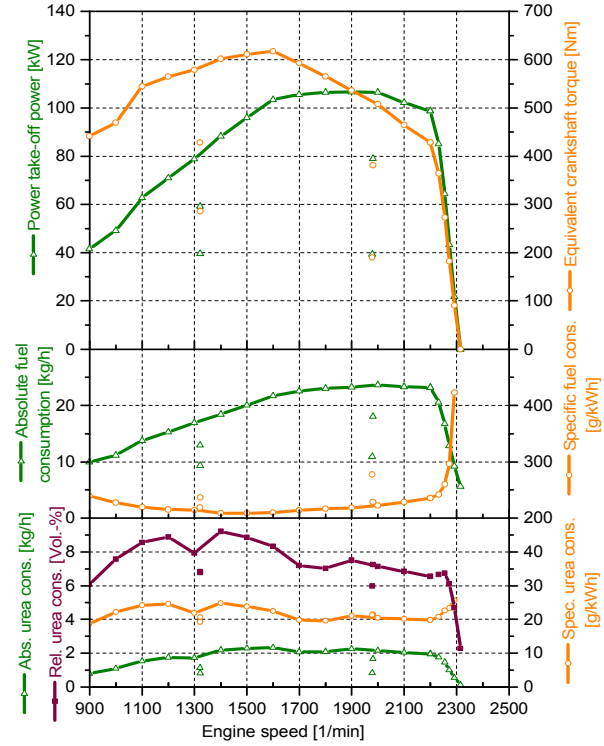
Hydraulic power			
System*	**CCLS (Closed Centre Load Sensing System)**		
Hydraulic oil	**Common with transmission**		
Total capacity*	**78**	**l**	
Removable*	**38**	**l**	
Hydraulic flow			
Maximum pump delivery*	125	l/min	
Optional*	-	l/min	
Max. flow at one rear remote*	93	l/min	
Maximum pressure*	**205 ±5**	**bar**	

* Manufacturer data

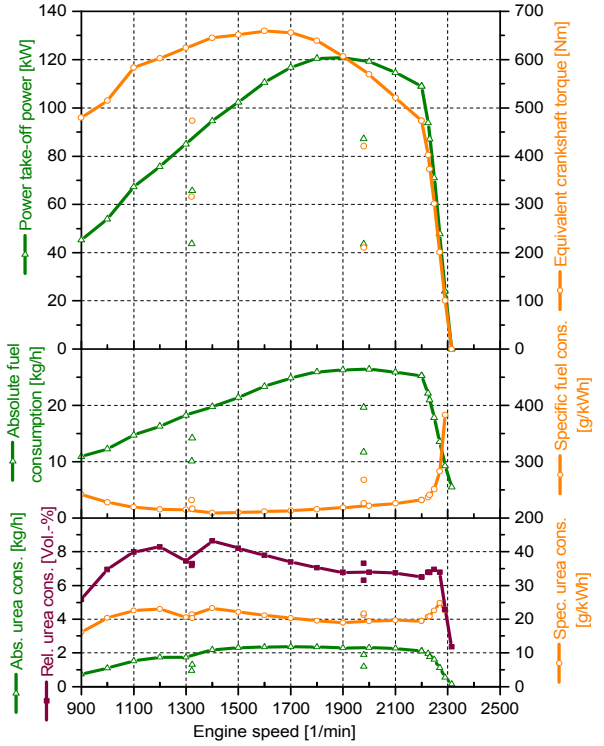
Power Take-Off Power according to OECD Code 2

Measuring point	Engine speed	PTO power	Equiv. Torque	Absolute consumption				Ratio AdBlue to fuel	specific consumption	
				fuel		AdBlue			fuel	AdBlue
	1/min	kW	Nm	kg/h	l/h	Kg/h	l/h	Vol-%	g/kWh	
Rated power										
Boost	2200	109	473	25,3	30,2	2,1	2,0	6,5	232	19
Standard	2200	99	428	23,3	27,8	2,0	1,8	6,5	236	20
Maximum power										
Boost	1900	121	607	26,3	31,5	2,3	2,1	6,8	218	19
Standard	1900	107	536	23,3	27,8	2,3	2,1	7,5	218	21
Maximum torque										
Boost	1600	111	660	23,4	27,9	2,4	2,2	7,8	211	21
Standard	1600	104	618	21,7	25,9	2,3	2,2	8,3	210	23
1000 PTO shaft rotation										
Boost	1000	54	515	12,3	14,6	1,1	1,0	6,9	227	20
Standard	1000	49	470	11,2	13,4	1,1	1,0	7,6	228	22
Part loads at full throttle										
80 % of boost rated pw.	2231	87	373	21,0	25,0	1,8	1,7	6,8	240	21
80 % of standard rated pw.	2240	79	337	19,4	23,1	1,6	1,5	6,5	245	21
Part loads with governor control set to 90 % of rated engine speed										
80 % of boost rated pw.	1979	87	421	19,7	23,5	1,9	1,7	7,3	226	21
80 % of standard rated pw.	1981	79	381	18,1	21,6	1,7	1,6	7,3	229	21
40 % of boost rated pw.	1979	44	210	11,7	13,9	1,2	0,9	6,3	268	22
40 % of standard rated pw.	1978	39	190	10,9	13,1	0,8	0,8	6,0	277	21
Part loads with governor control set to 60 % of rated engine speed										
60 % of boost rated pw.	1324	66	473	14,2	17,0	1,3	1,2	7,3	216	20
60 % of standard rated pw.	1321	59	428	12,9	15,5	1,1	1,1	6,8	218	19
40 % of boost rated pw.	1322	44	316	10,1	12,1	0,9	0,9	7,2	232	21
40 % of standard rated pw.	1322	40	286	9,4	11,2	0,8	0,8	6,8	236	21

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	
								Diesel	AdBlue
		1/min	km/h	kW	kg/h	l/h	Vol-%	g/kWh	
Z1P	ploughing, heavy tine cultivator	1649	6,9	75	19,6	23,6	6,6	263	22
Z1G	cultivator, disc harrow	1776	8,5	77	20,3	24,5	5,9	266	20
Z2P	mech. seed drill, planter	1427	8,6	57	15,2	18,3	5,8	268	20
Z2G	stubble working, seed bed combination	1558	11,6	65	17,2	20,7	5,9	264	20
Z3K	milling, rotary harrows seeding combination	1586	4,1	89	20,1	24,1	6,4	226	19
Z3M	cut 1. step, cultivator-rotary harrows-seeding combination	1692	12,0	95	23,0	27,7	6,5	241	20
Z4K	pneumatic seeding drill, milling as plant care, mulch	1458	6,0	73	16,9	20,4	6,4	233	20
Z4M	cut 2. step, direct seeding machine	1458	13,5	71	17,6	21,2	6,9	249	23
Z5K	plant protector, mineral fertiliser, tedder, swather	1458	6,0	42	10,9	13,1	6,0	261	20
Z5M	cut 3. step, airseeder	1460	15,5	43	12,5	15,0	6,3	288	24
Z6MS	self-loading wagon, manure spreading	1621	6,1	77	19,2	23,1	7,0	249	23
Z7PR	high pressure baler, round baler or square baler	1812	9,2	65	18,1	21,8	6,1	279	22
								257	**21**

Performance and fuel consumption during exemplary transport work		Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
								Diesel	AdBlue
		min^{-1}	km/h	kW	kg/h	l/h	Vol-%	g/kWh	
ZTB	Transportwork at full load (uphill)	1956	18	70	24,1	29,0	0,0	347	30
ZTE40	Transportwork at flat section with 40 km/h	1603	39	26	14,2	17,1	0,0	609	42
ZTE50	Transportwork at flat section with 50 km/h	2048	50	36	21,0	25,3	0,0	622	40
ZTE60	Transportwork at flat section with 60 km/h	-	-	-	-	-	-	-	-
	Idle	860	-	-	1,5	-	-	-	-
								478	**36**

Test conditions

Tires	front	rear
Manufacturer	Michelin MULTIBIB	Michelin MULTIBIB
Tire size	480/65 R 28	600/65 R 38
Fitted options		
Free return flow		**yes**
Air condition		**yes**
Air compressor		**yes**
Front hydraulic power lift		**yes**
Front PTO (disengageable)		**yes**
		-
		-

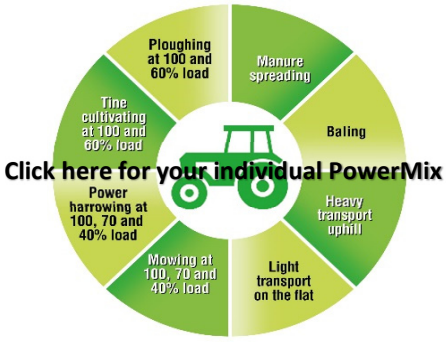
PowerMix	Ballast		Axle load distribution				Gross weight	Tire pressure		PTO mode	Boost power available
	front	rear	front		rear			front	rear		
	kg	kg	kg	%	kg	%	kg	bar	bar	1000/1000E	Yes/No
Performance and fuel consumption during exemplary field work											
heavy drawbar work	550	950	3290	38	5290	62	8580	1,2	1,2	-	no*
medium havy drawbar w.	0	0	3040	35	4040	47	7080	1,2	1,2	-	no*
heavy PTO work	0	0	3040	35	4040	47	7080	1,2	1,2	1000	yes
medium heavy PTO work	0	0	3040	35	4040	47	7080	1,2	1,2	1000E	yes
light PTO work	0	0	3040	35	4040	47	7080	1,2	1,2	1000E	yes
Drawbar + PTO + hyd.	0	0	3040	35	4040	47	7080	1,2	1,2	1000E	yes
Performance and fuel consumption during exemplary transport work											
Transport work	0	0	3040	35	4040	47	7080	1,6	1,6	-	yes

Applicant

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* see description Boost activation requirements in the technical data