CLAAS AXION 850 Hexashift

Datasheet DLG PowerMix

Applicant
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Test performed by
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Test No.

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Specifications

Engine

Manufacturer	**FPT**		
Stage of emission	**IV**		
Exhaust aftertreatment device			
Nitrous gaseous emission**	Selective Catalytic Reduction (SCR)		
Particulate matter emission	-		
Time for regeneration DPF (average)	-**	min	
Time between regeneration:			
- maximum*	-**	h	
- under PowerMix conditions*	-**	h	
- checked	-**		
Exhaust gas recuperation	**-**		
Number of cylinders*	**6**		
Bore*	**104**	**mm**	
Stroke*	**132**	**mm**	
Displacement*	**6728**	**cm³**	
Rated speed	**2150**	**min^{-1}**	

Power by ISO TR 14396	**standard**		**boost**	
Rated power	184	kW	-	kW
Maximum power	194	kW	-	kW
at engine speed	1800	min^{-1}	-	min^{-1}
Loss of power during regeneration			-	

Main fan		
Diameter	690	mm
Number of fan blades	11	

Transmission

Manufacturer	**GIMA**	
Type of construction	**HEXASHIFT 24/24**	
Ranges	**4**	
Powershift gear	**6**	
Forward	24	
Reverse	24	
Design speed	**40**	**km/h**

Power take off

Profile	**Form 2: 21 tooth (1 ⅜")**			
Transmission ratio*				
Standard pto speed	540	540E	1000	1000E
Engine speed [min^{-1}]	1890	1524	1930	1595

Chassis

Front axle		
Manufacturer	DANA	
Type	Rigid axle, suspended	

Tires	**front**	**rear**
Manufacturer	Michelin AXIOBIB	Michelin AXIOBIB
Tire size	600/70 R30	710/70 R42

Axle load	**front**	**rear**	**total**
Permissible*	7000 kg	11500 kg	14000 kg
Empty weight	4510 kg	5865 kg	10375 kg

Hydraulic

System*	**Load Sensing PFC (Pressure and Flow Compensated)**	
Supply of oil	**Common with transmission oil**	
Fluid type*	**GIMA CMS M 1145**	
Capacity*	**103**	**l**
Extractable*	**40**	**l**
Auxiliary valves		
Number	6	
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 (disengageable)	**Yes**
	-
	-

Test conditions

Axle load	**front**	**rear**
With ballast	**5190 kg**	**7120 kg**
Ballast		
on frame	900 kg	1050 kg
on axle	- kg	- kg
Axle load distribution	**42 %**	**58 %**
Tire pressure	**front**	**rear**
	1,2 **bar**	1,2 **bar**

Remarks

* Manufacturer´s data

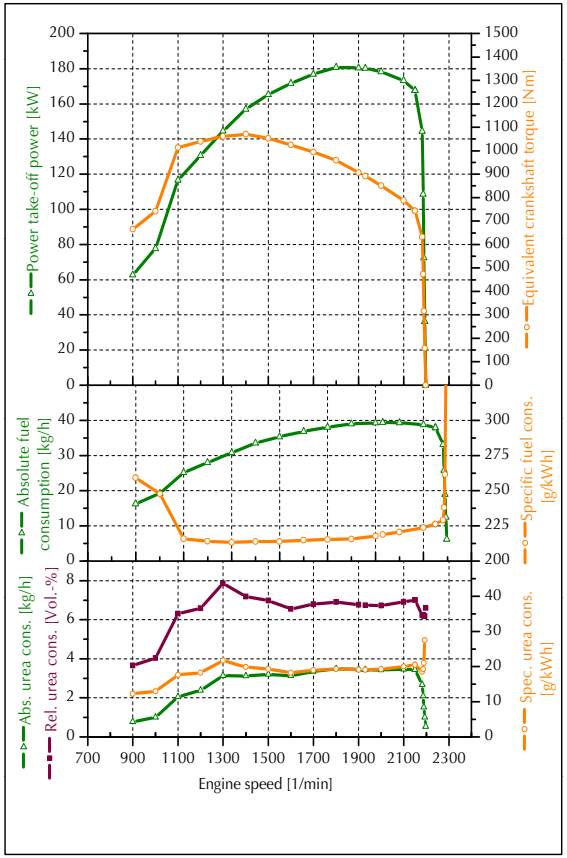
** No Diesel-Particulate-Filter (DPF)

Results of measurement at pto dynamometer – standard

Full load	
Rated speed	
Pto power	167,5 kW
Absolute fuel consumption	37,9 kg/h
Specific fuel consumption	226 g/kWh
Specific urea consumption	20,6 g/kWh
Ratio urea to fuel	7,0 Vol-%
Maximum power	
Engine speed	1800 min^{-1}
Pto power	180,8 kW
Absolute fuel consumption	39,0 kg/h
Specific fuel consumption	216 g/kWh
Specific urea consumption	19,3 g/kWh
Ratio urea to fuel	6,9 Vol-%
Maximum torque	
Engine speed	1400 min^{-1}
Pto power	156,9 kW
Absolute fuel consumption	33,6 kg/h
Specific fuel consumption	214 g/kWh
Specific urea consumption	19,9 g/kWh
Ratio urea to fuel	7,2 Vol-%
1000 rpm at pto	
Engine speed	1930 min^{-1}
Pto power	180,2 kW
Absolute fuel consumption	39,4 kg/h
Specific fuel consumption	219 g/kWh
Specific urea consumption	19,1 g/kWh
Ratio urea to fuel	6,7 Vol-%

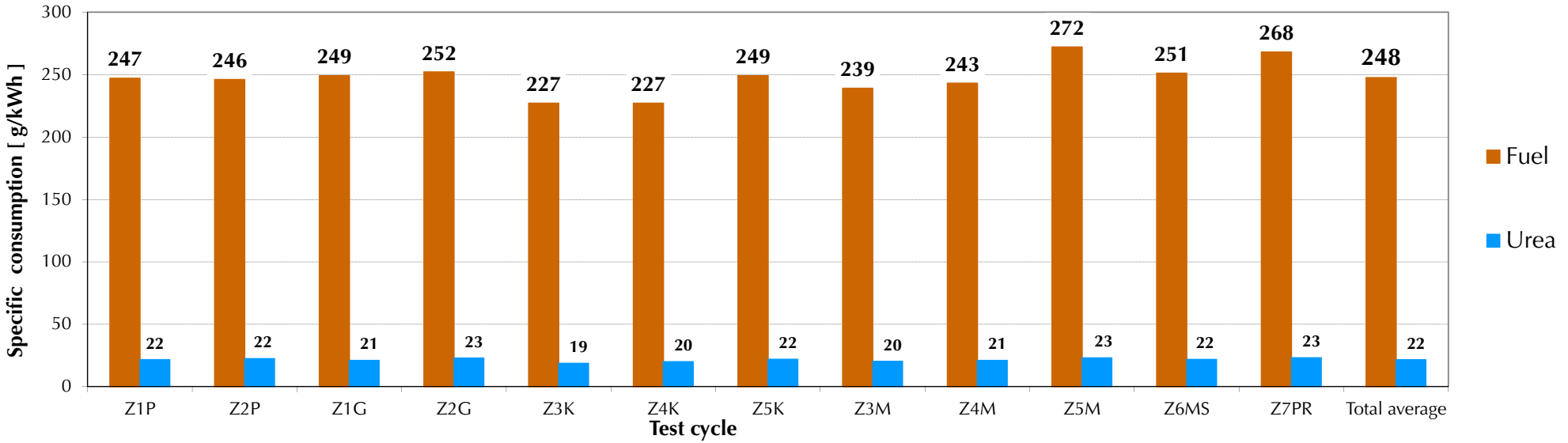
Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	31,0 kg/h
Specific fuel consumption	232 g/kWh
Specific urea consumption	20,3 g/kWh
Ratio urea to fuel	6,8 Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	29,8 kg/h
Specific fuel consumption	222 g/kWh
Specific urea consumption	19,3 g/kWh
Ratio urea to fuel	6,7 Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	16,8 kg/h
Specific fuel consumption	251 g/kWh
Specific urea consumption	21,7 g/kWh
Ratio urea to fuel	6,7 Vol-%
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	15,0 kg/h
Specific fuel consumption	223 g/kWh
Specific urea consumption	20,1 g/kWh
Ratio urea to fuel	7,0 Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	21,6 kg/h
Specific fuel consumption	214 g/kWh
Specific urea consumption	21,1 g/kWh
Ratio urea to fuel	7,6 Vol-%

Graphical analysis



Torque rise	44 %
Engine speed drop	35 %
Pulling off torque	100 %

Results at DLG PowerMix



Load type	Test cycle		Engine speed [min^{-1}]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption [kg/h]	[l/h]	Average values 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	1407	7,1	128	31,4	37,8	247	22	6,7	No DPF	No DPF
	Plough 60 %	Z2P	1312	8,5	95	23,2	27,9	246	22	7,0	No DPF	No DPF
	Cultivator 100 %	Z1G	1801	9,6	148	36,5	43,8	249	21	6,5	No DPF	No DPF
	Cultivator 60%	Z2G	1357	10,6	100	25,0	30,1	252	23	7,0	No DPF	No DPF
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1663	5,6	148	33,1	39,9	227	19	6,3	No DPF	No DPF
	Rotary harrow 70 %	Z4K	1424	5,5	106	23,8	28,8	227	20	6,8	No DPF	No DPF
	Rotary harrow 40 %	Z5K	1433	5,5	61	14,9	18,1	249	22	6,7	No DPF	No DPF
	Mower 100 %	Z3M	1636	14,7	148	35,2	42,8	239	20	6,4	No DPF	No DPF
	Mower 70 %	Z4M	1421	15,1	110	26,8	32,5	243	21	6,6	No DPF	No DPF
	Mower 40 %	Z5M	1431	15,2	63	17,1	20,8	272	23	6,5	No DPF	No DPF
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1513	6,0	112	27,6	33,6	251	22	6,6	No DPF	No DPF
	Baler	Z7PR	1548	10,2	101	26,2	31,9	268	23	6,6	No DPF	No DPF
Total average DLG PowerMix								**248**	**22**	**6,6**	**No DPF**	**No DPF**

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