CASE IH MAXXUM 130 SPS

Datasheet DLG PowerMix

Applicant
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Test performed by
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Test No.

2012-360



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Specifications

Engine

Manufacturer		**FPT**	
Stage of emission		**III B**	
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*		**4**	
Bore*	**104**		**mm**
Stroke*	**132**		**mm**
Displacement*	**4485**		**cm³**
Rated speed	**2200**		**min^{-1}**

Power by ISO TR 14396	**standard**	**boost**
Rated power	96 kW	110 kW
Maximum power	105 kW	120 kW
at engine speed	1800 min^{-1}	1800 min^{-1}
Loss of power during regeneration	-**	

Main fan			
Diameter	550	mm	
Number of fan blades	9		

Transmission

Manufacturer		**CNH**	
Type of construction		**Semi-Powershift (SPS)**	
Ranges		**2**	
Gears			
Forward	17		
Reverse	16		
Design speed	**50**	**km/h**	

Power take off

Profile			**Form 3: 20 tooth (1 ¾")**	
Transmission ratio*				
Standard pto speed	540	540E	1000	1000E
Engine speed [min^{-1}]	-	1592	1893	1621

Chassis

Front axle			
Manufacturer		CNH	
Type		Rigid axle, suspended	
Tires	**front**	**rear**	
Manufacturer	Trelleborg TM800	Trelleborg TM800	
Tire size	480/65R28	600/65R38	

Axle load	**front**	**rear**	**total**
Permissible*	4700 kg	7300 kg	9000 kg
Empty weight	2480 kg	3245 kg	5725 kg

Hydraulic

System*	**Load Sensing PFC (Pressure and Flow Compensated)**	
Supply of oil	**Common with transmission oil**	
Fluid type*	**CIH AXCELA NEXPLORE 10W-30 (MAT 3525)**	
Capacity*	**78**	**l**
Extractable*	**33**	**l**
Auxiliary valves		
Number	3	
Max. flowrate*	113	l/min
Max. pressure*	**210**	**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	**3070 kg**	**4880 kg**
Ballast		
on frame	1200 kg	1025 kg
on axle	- kg	- kg
Axle load distribution	**39 %**	**61 %**
Tire pressure	**front**	**rear**
	1,2 **bar**	1,2 **bar**

Remarks

* Manufacturer´s data

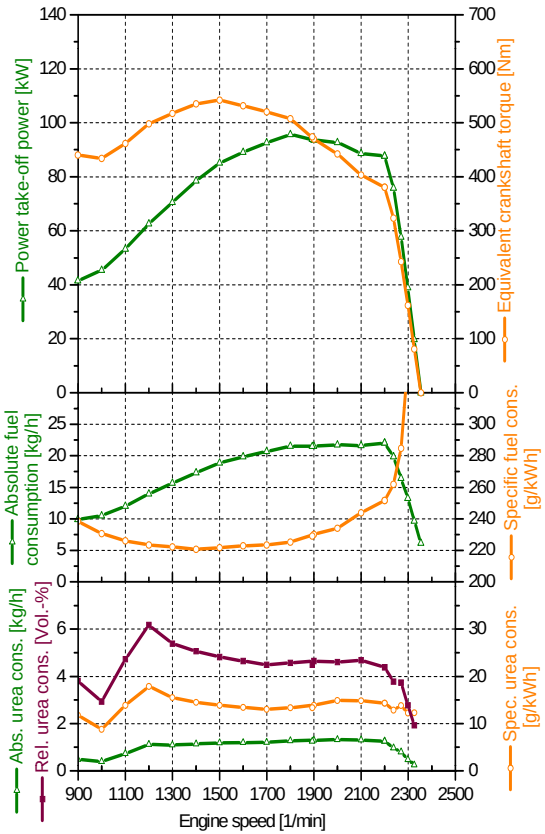
** No Diesel-Particulate-Filter (DPF)

Results of measurement at pto dynamometer – standard

Full load	
Rated speed	
Pto power	87,7 kW
Absolute fuel consumption	22,1 kg/h
Specific fuel consumption	252 g/kWh
Specific urea consumption	14,3 g/kWh
Ratio urea to fuel	4,4 Vol-%
Maximum power	
Engine speed	1800 min^{-1}
Pto power	95,6 kW
Absolute fuel consumption	21,5 kg/h
Specific fuel consumption	225 g/kWh
Specific urea consumption	13,4 g/kWh
Ratio urea to fuel	4,6 Vol-%
Maximum torque	
Engine speed	1500 min^{-1}
Pto power	85,1 kW
Absolute fuel consumption	18,9 kg/h
Specific fuel consumption	222 g/kWh
Specific urea consumption	13,9 g/kWh
Ratio urea to fuel	4,8 Vol-%
1000 rpm at pto	
Engine speed	1893 min^{-1}
Pto power	93,9 kW
Absolute fuel consumption	21,5 kg/h
Specific fuel consumption	229 g/kWh
Specific urea consumption	13,4 g/kWh
Ratio urea to fuel	4,5 Vol-%

Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	18,8 kg/h
Specific fuel consumption	268 g/kWh
Specific urea consumption	13,2 g/kWh
Ratio urea to fuel	3,8 Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	17,1 kg/h
Specific fuel consumption	245 g/kWh
Specific urea consumption	14,5 g/kWh
Ratio urea to fuel	4,6 Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	10,7 kg/h
Specific fuel consumption	305 g/kWh
Specific urea consumption	12,6 g/kWh
Ratio urea to fuel	3,2 Vol-%
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	8,7 kg/h
Specific fuel consumption	248 g/kWh
Specific urea consumption	14,3 g/kWh
Ratio urea to fuel	4,4 Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	12,0 kg/h
Specific fuel consumption	228 g/kWh
Specific urea consumption	14,0 g/kWh
Ratio urea to fuel	4,8 Vol-%

Graphical analysis



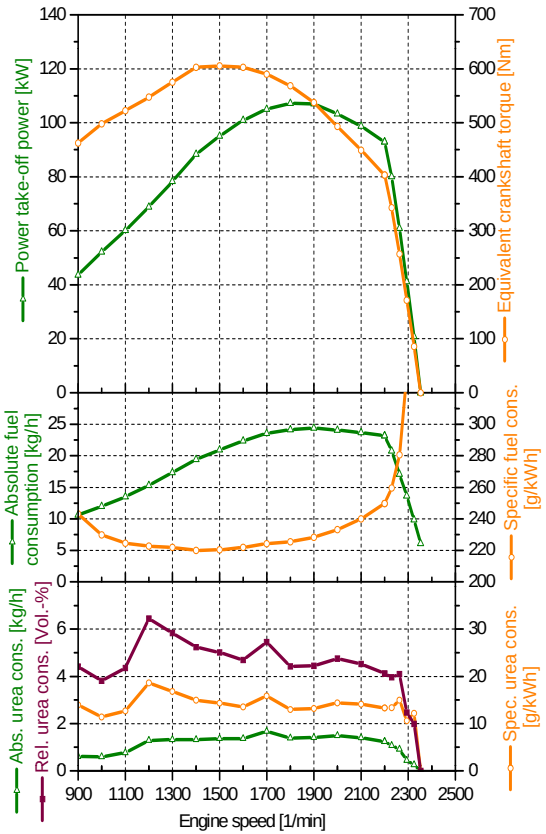
Torque rise	42 %
Engine speed drop	32 %
Pulling off torque	114 %

Results of measurement at pto dynamometer – boost

Full load		
Rated speed		
Pto power	92,9	kW
Absolute fuel consumption	23,2	kg/h
Specific fuel consumption	250	g/kWh
Specific urea consumption	18,0	g/kWh
Ratio urea to fuel	6,1	Vol-%
Maximum power		
Engine speed	1800	min^{-1}
Pto power	107,2	kW
Absolute fuel consumption	24,2	kg/h
Spec. Fuel consumption	225	g/kWh
Spec. urea consumption	13,0	g/kWh
Ratio urea to fuel	4,4	Vol-%
Additional fuel consump. during regeneration	-*	kg
Additional fuel consump. turned-over**	-*	%
Calculated spec. fuel consump. with reg.	-*	g/kWh
Maximum torque		
Engine speed	1500	min^{-1}
Pto power	95,0	kW
Absolute fuel consumption	21,0	kg/h
Spec. Fuel consumption	220	g/kWh
Spec. urea consumption	14,3	g/kWh
Ratio urea to fuel	5,0	Vol-%
1000 rpm at pto		
Engine speed	1893	min^{-1}
Pto power	106,8	kW
Absolute fuel consumption	24,3	kg/h
Spec. Fuel consumption	228	g/kWh
Spec. urea consumption	18,0	g/kWh
Ratio urea to fuel	6,1	Vol-%

Part load		
Full throttle, 80 % of power at rated speed		
Absolute fuel consumption	19,7	kg/h
Spec. Fuel consumption	265	g/kWh
Spec. urea consumption	13,2	g/kWh
Ratio urea to fuel	3,9	Vol-%
90 % of rated speed, 80 % of power at rated speed		
Absolute fuel consumption	18,1	kg/h
Spec. Fuel consumption	243	g/kWh
Spec. urea consumption	15,1	g/kWh
Ratio urea to fuel	4,8	Vol-%
90 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	11,1	kg/h
Spec. Fuel consumption	298	g/kWh
Spec. urea consumption	14,1	g/kWh
Ratio urea to fuel	3,6	Vol-%
Additional fuel consump. during regeneration	-*	kg
Additional fuel consumption turned-over**	-*	%
Calculated spec. fuel consump. with reg.	-*	g/kWh
60 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	9,3	kg/h
Spec. Fuel consumption	250	g/kWh
Spec. urea consumption	14,8	g/kWh
Ratio urea to fuel	4,5	Vol-%
60 % of rated speed, 60 % of power at rated speed		
Absolute fuel consumption	12,6	kg/h
Spec. Fuel consumption	226	g/kWh
Spec. urea consumption	14,7	g/kWh
Ratio urea to fuel	5,0	Vol-%
Additional fuel consump. during regeneration	-*	kg
Additional fuel consumption turned-over**	-*	%
Calculated spec. fuel consump. with reg.	-*	g/kWh

Graphical analysis

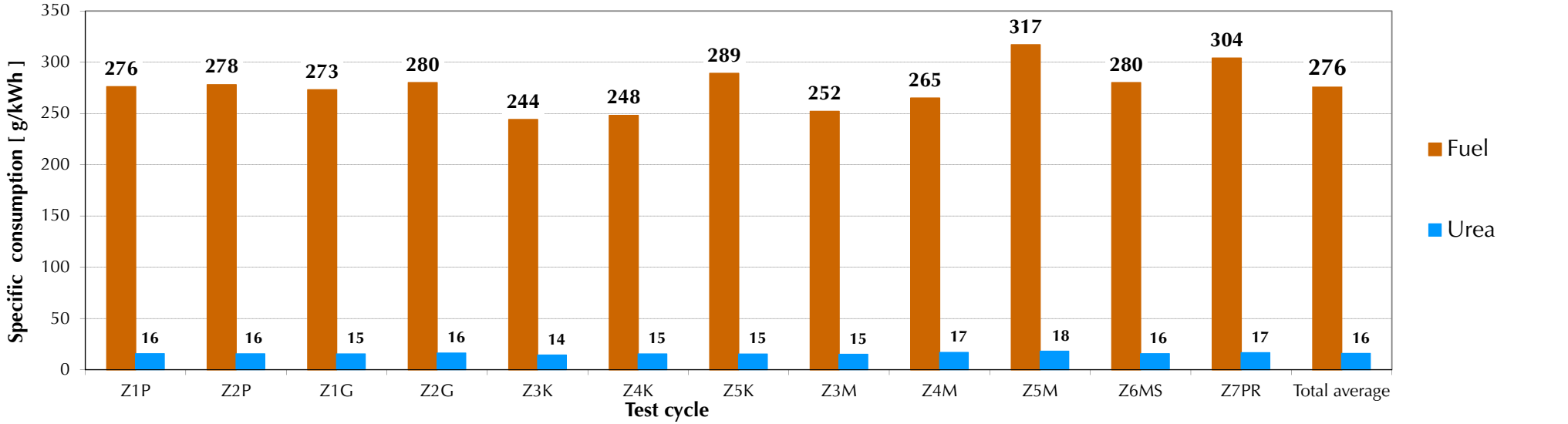


Torque rise	50 %
Engine speed drop	32 %

* No Diesel particulate filter

** 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



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	1834	7,4	72	19,8	24,0	276	16	4,3	No DPF	No DPF
	Plough 60 %	Z2P	1448	8,7	51	14,2	17,2	278	16	4,3	No DPF	No DPF
	Cultivator 100 %	Z1G	1775	9,4	76	20,6	24,9	273	15	4,3	No DPF	No DPF
	Cultivator 60%	Z2G	1581	11,6	58	16,2	19,6	280	16	4,4	No DPF	No DPF
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1636	5,1	86	20,4	24,8	244	14	4,5	No DPF	No DPF
	Rotary harrow 70 %	Z4K	1372	6,1	62	15,2	18,5	248	15	4,7	No DPF	No DPF
	Rotary harrow 40 %	Z5K	1414	6,3	37	10,4	12,7	289	15	4,0	No DPF	No DPF
	Mower 100 %	Z3M	1668	13,8	86	21,6	26,3	252	15	4,5	No DPF	No DPF
	Mower 70 %	Z4M	1444	16,9	68	17,9	21,8	265	17	4,8	No DPF	No DPF
	Mower 40 %	Z5M	1451	17,1	39	12,3	14,9	317	18	4,3	No DPF	No DPF
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1813	6,5	70	19,1	23,0	280	16	4,3	No DPF	No DPF
	Baler	Z7PR	1834	9,2	58	16,8	20,3	304	17	4,2	No DPF	No DPF
Total average DLG PowerMix								**276**	**16**	**4,4**	**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)