Fendt 828 Vario S4

Data sheet DLG PowerMix

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Test performed by
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Test No.

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Specifications

Engine

Manufacturer	**Deutz AG**		
Stage of emission	**IV**		
Exhaust aftertreatment device			
Nitrous gaseous emission	Selective Catalytic Reduction (SCR)		
Particulate matter emission	Passive regenerating CSF Diesel particulate filter (DPF)		
Time for regeneration DPF (average)	-**	min	
Time between regeneration:			
- maximum*	-**	h	
- under PowerMix conditions*	-**	h	
- checked	-**		
Exhaust gas recuperation	**Extern, cooled**		
Number of cylinders*	**6**		
Bore*	**101**	**mm**	
Stroke*	**126**	**mm**	
Displacement*	**6056**	**cm³**	
Rated speed	**2100**	**min⁻¹**	

Power* by 97/68 EC	**standard**		**boost**	
Rated power	211	kW	-	kW
Maximum power	211	kW	-	kW
at engine speed	1800	min⁻¹	-	min⁻¹
Loss of power during regeneration	-**			

Main fan		
Diameter	690	mm
Number of fan blades	9	

Transmission

Manufacturer	**AGCO Fendt**	
Type of construction	**continuous**	
Ranges	**2**	
Gears		
Forward	-	
Reverse	-	
Design speed	**60**	**km/h**

Power take off

Profile	**Form 1: 6 spline (1 ⅜")**			
Transmission ratio*				
Standard pto speed	540	540E	1000	1000E
Engine speed [min⁻¹]	-	-	1882	1579

Chassis

Front axle			
Manufacturer	Dana		
Type	Rigid axle, suspended		
Tires	**front**	**rear**	
Manufacturer	Michelin AXIOBIB	Michelin AXIOBIB	
Tire size	IF 600/70 R30	IF 710/70 R42	
Axle load	**front**	**rear**	**total**
Permissible*	6500 kg	10500 kg	14000 kg
Empty weight	3715 kg	5610 kg	9325 kg

Hydraulic

System*	**Pressure ans flow compensated**	
Supply of oil	**Separate hydraulic tank**	
Fluid type*	**HD SAE 10 W 40**	
Capacity*	**102**	**l**
Extractable*	**80**	**l**
Auxiliary valves		
Number	8	
Max. flowrate*	140	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	**4300 kg**	**6845 kg**
Ballast		
on frame	870 kg	950 kg
on axle	- kg	- kg
Axle load distribution	**39 %**	**61 %**
Tire pressure	**front**	**rear**
Field work	1,2 **bar**	1,2 **bar**
Transporttest	1 **bar**	1 **bar**

Remarks

* Manufacturer´s data

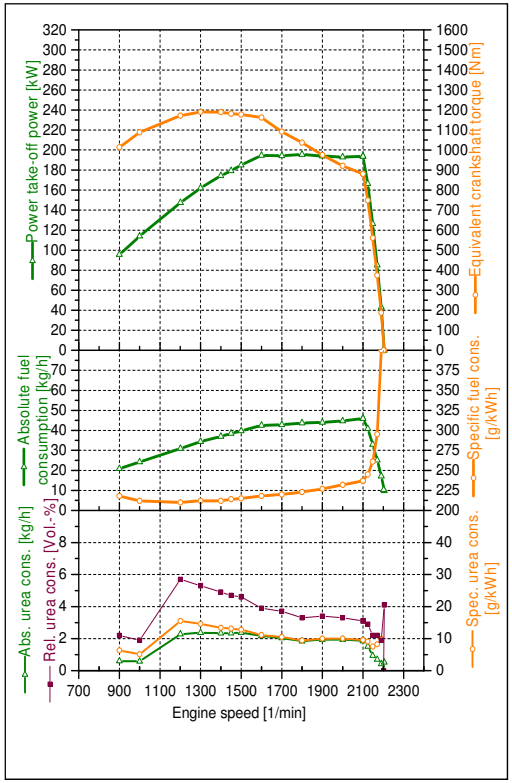
** Active regeneration Diesel Particulate Filter (DPF) - only stand still regeneration, no time between regeneration fixed

Results of measurement at pto dynamometer – standard

Full load		
Rated speed		
Pto power	193,6	kW
Absolute fuel consumption	45,9	kg/h
Specific fuel consumption	237	g/kWh
Specific urea consumption	10	g/kWh
Ratio urea to fuel	3,1	Vol-%
Maximum power		
Engine speed	1800	min^{-1}
Pto power	195,5	kW
Absolute fuel consumption	43,6	kg/h
Specific fuel consumption	223	g/kWh
Specific urea consumption	9	g/kWh
Ratio urea to fuel	3,3	Vol-%
Maximum torque		
Engine speed	1300	min^{-1}
Pto power	162,0	kW
Absolute fuel consumption	34,4	kg/h
Specific fuel consumption	212	g/kWh
Specific urea consumption	15	g/kWh
Ratio urea to fuel	5,3	Vol-%
1000 rpm at pto		
Engine speed	1882	min^{-1}
Pto power	193,8	kW
Absolute fuel consumption	43,8	kg/h
Specific fuel consumption	226	g/kWh
Specific urea consumption	10	g/kWh
Ratio urea to fuel	3,3	Vol-%

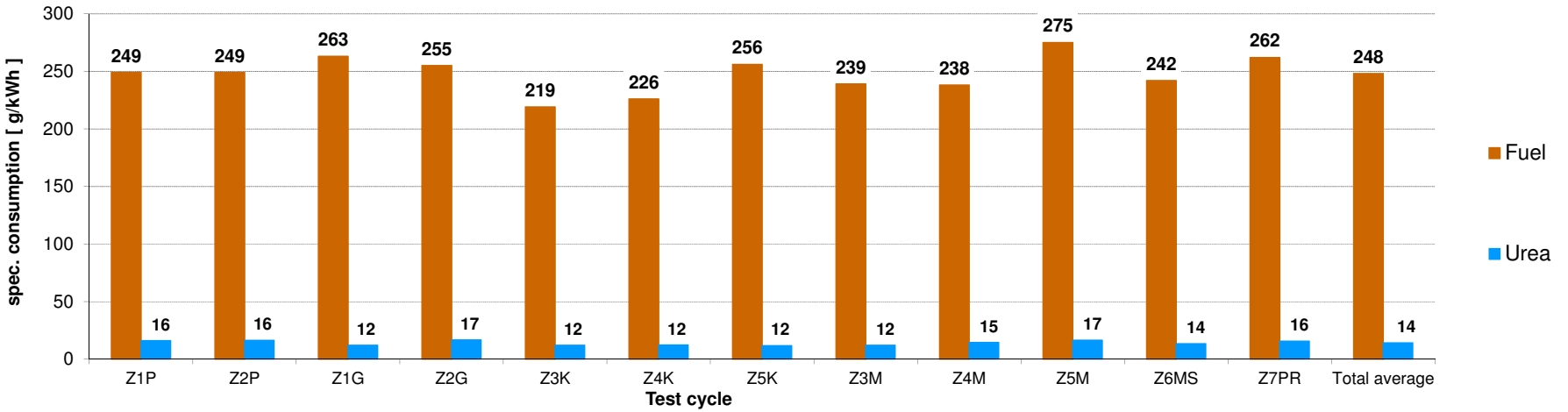
Part load		
Full throttle, 80 % of power at rated speed		
Absolute fuel consumption	38,5	kg/h
Specific fuel consumption	248	g/kWh
Specific urea consumption	8	g/kWh
Ratio urea to fuel	2,4	Vol-%
90 % of rated speed, 80 % of power at rated speed		
Absolute fuel consumption	35,7	kg/h
Specific fuel consumption	230	g/kWh
Specific urea consumption	9	g/kWh
Ratio urea to fuel	3,0	Vol-%
90 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	20,7	kg/h
Specific fuel consumption	267	g/kWh
Specific urea consumption	8	g/kWh
Ratio urea to fuel	2,4	Vol-%
60 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	17,3	kg/h
Specific fuel consumption	223	g/kWh
Specific urea consumption	13	g/kWh
Ratio urea to fuel	4,3	Vol-%
60 % of rated speed, 60 % of power at rated speed		
Absolute fuel consumption	24,5	kg/h
Specific fuel consumption	210	g/kWh
Specific urea consumption	17	g/kWh
Ratio urea to fuel	6,0	Vol-%

Graphical analysis



Torque rise	35 %
Engine speed drop	38 %
Pulling off torque	124 %

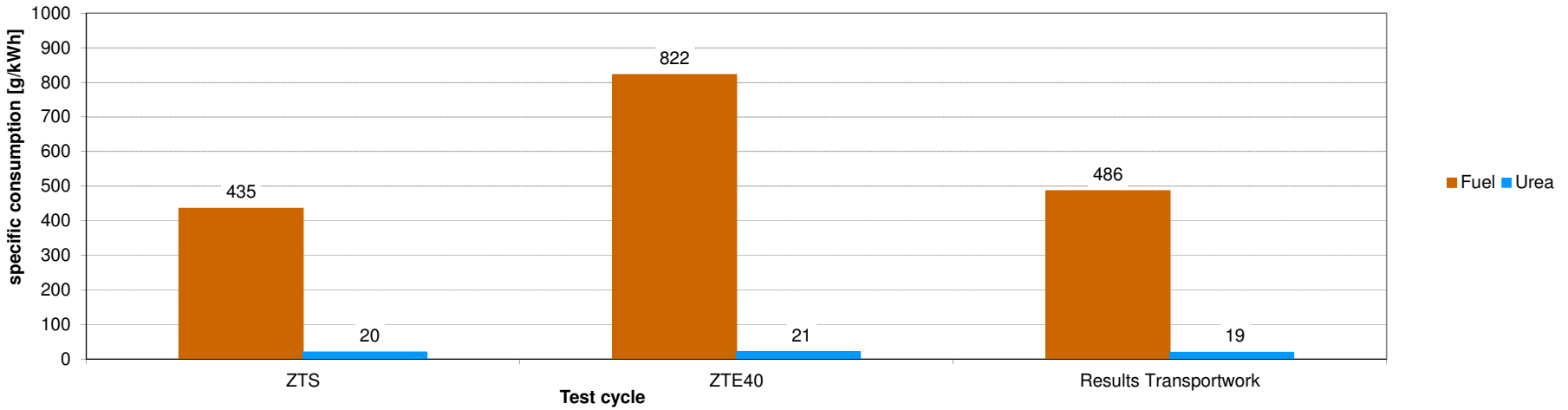
Results at DLG PowerMix - Field work



Load cycle	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	1307	6,7	130	32,4	39,2	249	16	4,9	*)	*)
	Plough 60 %	Z2P	1350	8,7	104	25,9	31,5	249	16	5,0	*)	*)
	Cultivator 100 %	Z1G	1684	9,4	157	40,9	49,3	263	12	3,5	*)	*)
	Cultivator 60%	Z2G	1254	11,1	114	28,9	34,9	255	17	4,9	*)	*)
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1333	4,4	146	31,6	38,3	219	12	4,1	*)	*)
	Rotary harrow 70 %	Z4K	1381	5,8	114	25,3	30,9	226	12	4,1	*)	*)
	Rotary harrow 40 %	Z5K	1401	5,8	66	16,5	20,2	256	12	3,5	*)	*)
	Mower 100 %	Z3M	1589	14,7	158	37,9	46,3	239	12	3,8	*)	*)
	Mower 70 %	Z4M	1373	15,5	118	28,1	34,4	238	15	4,6	*)	*)
	Mower 40 %	Z5M	1397	15,6	69	18,7	22,9	275	17	4,5	*)	*)
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1504	6,6	126	30,0	36,7	242	14	4,2	*)	*)
	Baler	Z7PR	1522	9,7	108	27,0	33,1	262	16	4,5	*)	*)
Total average DLG PowerMix - Field work								**248**	**14**	**4,3**	***)**	***)**

* No activ regenerating diesel-particel-filter (DPF)

Results DLG-PowerMix - Transport work



Load type	Test cycle		Engine speed	Driving speed	Total power	Absolute fuel consumption		Average values Specific fuel consumption	Spec. urea cons.	Ratio urea to fuel	Relative additional fuel for DPF regeneration**	Calculated spec. Fuel cons. with DPF regeneration**
			[min^{-1}]	[km/h]	[kW]	[kg/h]	[l/h]	[g/kWh]	[g/kWh]	[Vol-%]	[%]	[g/kWh]
Transportwork	only hill section	ZTS	1755	42,1	96	41,7	49,8	435	20	3,4	*)	*)
	flat section 40 km/h	ZTE40	1474	41,0	16	12,8	15,2	822	21	1,5	*)	*)
Idle * **		ZLL	796	-	-	2,4	2,6	-	-	-	-	-
Result DLG-PowerMix - Transporttest flat section with 40 km/h (50 % ZTS : 40 % ZTE40 : 10 % ZLL) ****								**486**	**19**	**3,1**	***)**	***)**

Optional tests (e.g. ZTS with reduced (R) engine speed, flat section with additional speed settings)												
Transportwork	only hill section	ZTSR	-	-	-	-	-	-	-	-	*)	*)
	flat section 50 km/h	ZTE50	1418	51,0	21	16,4	19,6	772	40	3,1	*)	*)
	flat section 60 km/h	ZTE60	1589	60,8	28	22,0	26,3	791	55	4,2	*)	*)
Optional results based on	**hill section with reduced engine speed ZTSR (50 % ZTSR : 40 % ZTE40 : 10 % ZLL)** ****							**-**	**-**	**-**	***)**	***)**
	flat section with 50 km/h ZTE50 (50 % ZTS : 40 % ZTE50 : 10 % ZLL) ****							**483**	**21**	**3,4**	***)**	***)**
	flat section with 60 km/h ZTE60 (50 % ZTS : 40 % ZTE60 : 10 % ZLL) ****							**489**	**23**	**3,6**	***)**	***)**

* No activ regenerating diesel-particel-filter (DPF)

** Relation of additional fuel consumption caused by regeneration to conventional fuel consumption within two regeneration cycles; calculated for the maximum regeneration interval (see technical data - engine)

** * 70 % in parking position w/o driver, 30 % w/ inserted drive position and w/ driver, e.g. waiting at traffic lights

** ** single results are weighted as follows: 50 % ZTS, 40 % ZTE und 10 % ZLL
The fuel consumption in cycle ZLL is taken into the final result by a calculation based on the real measured fuel consumption during the test.