

Steyr 4120 Multi

Datasheet DLG PowerMix

Applicant
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Test performed by
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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			**Extern, cooled**	
Number of cylinders*			**4**	
Bore*			**99**	**mm**
Stroke*			**110**	**mm**
Displacement*			**3384**	**cm³**
Rated speed			**2200**	**min^{-1}**
Power by ECE-R 120	**standard**		**boost**	
Rated power	86	kW	-	kW
Maximum power	86	kW	-	kW
at engine speed	1900	min^{-1}	-	min^{-1}
Loss of power during regeneration			-	
Main fan				
Diameter			520	mm
Number of fan blades			10	

Transmission

Manufacturer	**ZF**	
Type of construction	**Semi Powershift 32x32**	
Ranges	**4**	
Powershift gear	**-**	
Forward	32	
Reverse	32	
Design speed	**40**	**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}]	1805	1542	1880	1606

Chassis

Front axle			
Manufacturer	CNH		
Type	Rigid axle, suspended		
Tires	**front**	**rear**	
Manufacturer	Mitas AC65	Mitas AC65	
Tire size	480/65 R24	540/65 R38	
Axle load	**front**	**rear**	**total**
Permissible*	3500 kg	5000 kg	8000 kg
Empty weight	2505 kg	2825 kg	5330 kg

Hydraulic

System*	**Pressure an flow compensated load sensing (CCLS) for electrical and mechanical control units**	
Supply of oil	**Seperate hydraulic tank**	
Fluid type*	**MAT 3525**	
Capacity*	**44**	**l**
Extractable*	**36**	**l**
Auxiliary valves		
Number	4	
Max. flowrate*	110	l/min
Max. pressure*	**205**	**bar**

Fitted options

Free return flow	**Yes**
Air condition	**Yes**
Air compressor	**Yes**
Front hydraulic power lift	**Yes**
Front pto (disengageable)	**No**
	-
	-

Test conditions

Axle load	**front**	**rear**
With ballast	**2490 kg**	**4140 kg**
Ballast		
on frame	450 kg	950 kg
on axle	- kg	- kg
Axle load distribution	**38 %**	**62 %**
Tire pressure	**front**	**rear**
Field work	1,2 **bar**	1,2 **bar**
Transporttest	1,6 **bar**	1,6 **bar**

Remarks

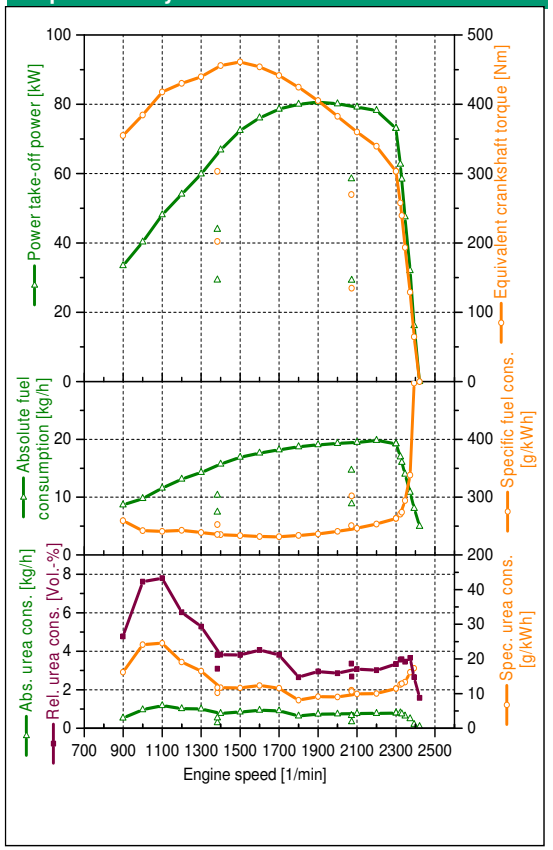
* Manufacturer´s data

Results of measurement at pto dynamometer – standard

Full load		
Rated speed		
Pto power	73,1	kW
Absolute fuel consumption	19,2	kg/h
Specific fuel consumption	263	g/kWh
Specific urea consumption	11,5	g/kWh
Ratio urea to fuel	3,3	Vol-%
Maximum power		
Engine speed	1900	min^{-1}
Pto power	80,6	kW
Absolute fuel consumption	19,1	kg/h
Specific fuel consumption	236	g/kWh
Specific urea consumption	9,1	g/kWh
Ratio urea to fuel	2,9	Vol-%
Maximum torque		
Engine speed	1500	min^{-1}
Pto power	72,4	kW
Absolute fuel consumption	16,9	kg/h
Specific fuel consumption	233	g/kWh
Specific urea consumption	11,6	g/kWh
Ratio urea to fuel	3,8	Vol-%
1000 rpm at pto		
Engine speed	1880	min^{-1}
Pto power	80,6	kW
Absolute fuel consumption	19,0	kg/h
Specific fuel consumption	236	g/kWh
Specific urea consumption	7,6	g/kWh
Ratio urea to fuel	2,5	Vol-%

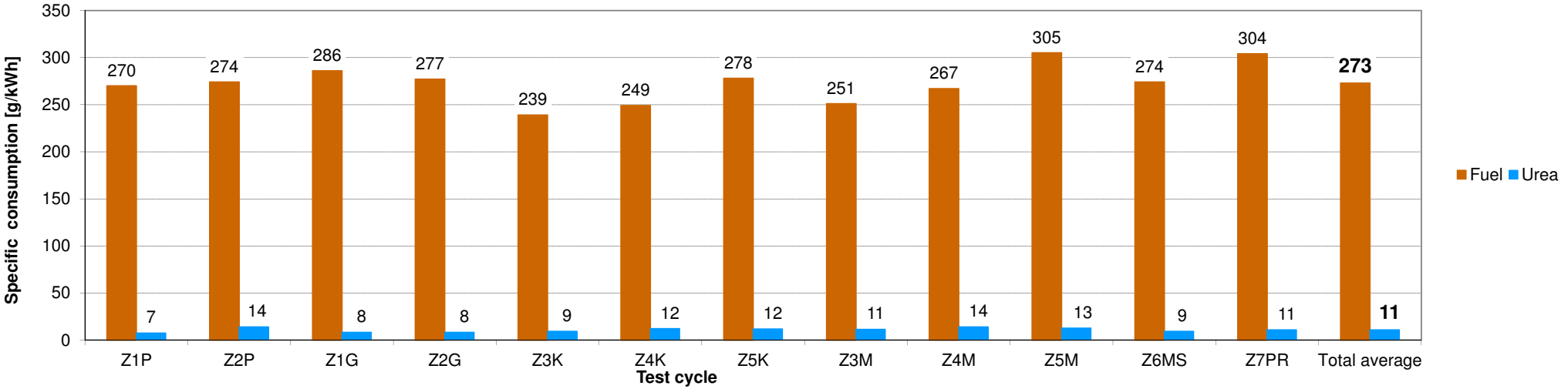
Part load		
Full throttle, 80 % of power at rated speed		
Absolute fuel consumption	16,0	kg/h
Specific fuel consumption	274	g/kWh
Specific urea consumption	12,9	g/kWh
Ratio urea to fuel	3,6	Vol-%
90 % of rated speed, 80 % of power at rated speed		
Absolute fuel consumption	14,7	kg/h
Specific fuel consumption	251	g/kWh
Specific urea consumption	11,0	g/kWh
Ratio urea to fuel	3,4	Vol-%
90 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	8,8	kg/h
Specific fuel consumption	302	g/kWh
Specific urea consumption	10,6	g/kWh
Ratio urea to fuel	2,7	Vol-%
60 % of rated speed, 40 % of power at rated speed		
Absolute fuel consumption	7,4	kg/h
Specific fuel consumption	253	g/kWh
Specific urea consumption	10,2	g/kWh
Ratio urea to fuel	3,1	Vol-%
60 % of rated speed, 60 % of power at rated speed		
Absolute fuel consumption	10,3	kg/h
Specific fuel consumption	235	g/kWh
Specific urea consumption	11,7	g/kWh
Ratio urea to fuel	3,8	Vol-%

Graphical analysis



Torque rise	52 %
Engine speed drop	32 %
Pulling off torque	127 %

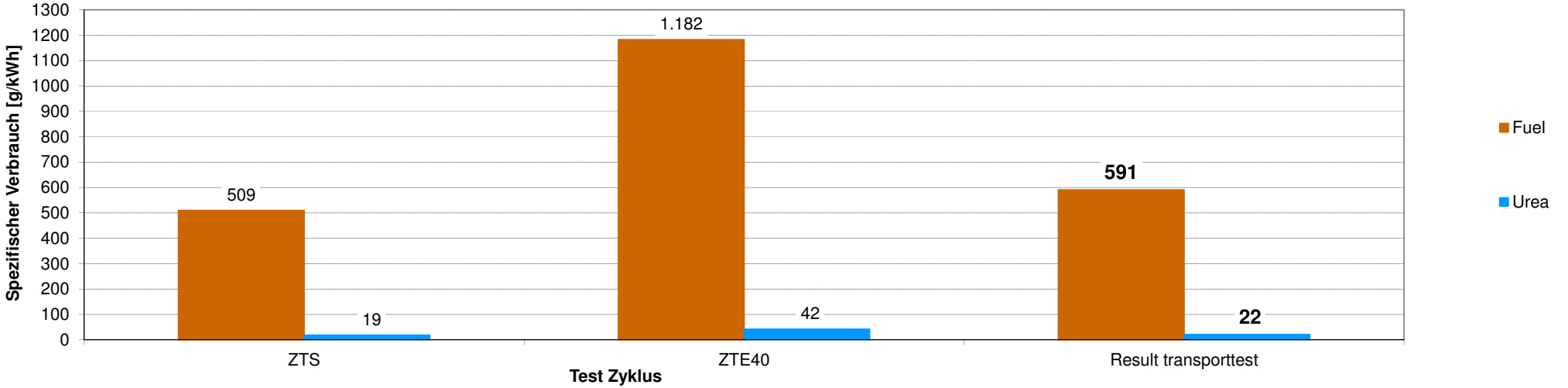
Results at DLG PowerMix - Field work



Load type	Test cycle		Average values: Engine speed [min^{-1}]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption [kg/h]	[l/h]	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	1843	7,8	64	17,1	20,6	270	7	2,1	No DPF	No DPF
	Plough 60 %	Z2P	1502	8,5	42	11,5	13,9	274	14	3,9	No DPF	No DPF
	Cultivator 100 %	Z1G	1915	9,1	61	17,2	20,7	286	8	2,3	No DPF	No DPF
	Cultivator 60%	Z2G	1672	11,4	48	13,1	15,3	277	8	2,6	No DPF	No DPF
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1632	5,4	65	15,4	18,6	239	9	3,0	No DPF	No DPF
	Rotary harrow 70 %	Z4K	1400	5,8	47	11,5	13,9	249	12	3,8	No DPF	No DPF
	Rotary harrow 40 %	Z5K	1422	5,9	27	7,4	9,0	278	12	3,3	No DPF	No DPF
	Mower 100 %	Z3M	1609	14,1	64	15,9	19,3	251	11	3,5	No DPF	No DPF
	Mower 70 %	Z4M	1390	15,8	49	13,0	15,7	267	14	4,0	No DPF	No DPF
	Mower 40 %	Z5M	1422	16,3	28	8,4	10,2	305	13	3,2	No DPF	No DPF
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1835	7,1	54	14,6	17,7	274	9	2,6	No DPF	No DPF
	Baler	Z7PR	1843	10,6	46	13,2	16,0	304	11	2,7	No DPF	No DPF
Total average DLG PowerMix								**273**	**11**	**3,1**	**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)

Results at DLG-PowerMix - Transport test



Load type	Test cycle		Average values: Engine speed [min⁻¹]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption [kg/h]	Absolute fuel consumption [l/h]	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]
Transportwork	only hill section	ZTS	1731	32,0	34	17,4	20,9	509	19	2,9	kein DPF	kein DPF
	flat section 40 km/h	ZTE40	1691	40,4	7	8,2	9,9	1182	42	2,9	kein DPF	kein DPF
Idle * **		ZLL	849	-	-	1,0	1,0	-	-	-	kein DPF	kein DPF
Result DLG-PowerMix - Transporttest flat section with 40 km/h (50 % ZTS : 40 % ZTE40 : 10 % ZLL) ***								**591**	**22**	**2,8**	**kein DPF**	**kein DPF**

Optional tests (e.g. ZTS with reduced (-R) engine speed, flat section with additional speed settings (-50, -60))												
Transportwork	only hill section	ZTSR	-	-	-	-	-	-	-	-	-	-
	flat section 50 km/h	ZTE50	-	-	-	-	-	-	-	-	-	-
	flat section 60 km/h	ZTE60	-	-	-	-	-	-	-	-	-	-
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) ***							**-**	**-**	**-**	**-**	**-**
	flat section with 60 km/h ZTE60 (50 % ZTS : 40 % ZTE60 : 10 % ZLL) ***							**-**	**-**	**-**	**-**	**-**

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

** 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)

*** Results are calculated for a distance of 10 km. 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.