



New Holland T6.175 Dynamic Command

Datasheet DLG PowerMix

Applicant

CNH Industrial Österreich GmbH
Steyrer Strasse 32
4300 St. Valentin
Austria
www.newholland.com

Test performed by

DLG e.V.
Test Center
Technology and Farm Inputs
Max-Eyth-Weg 1
64823 Groß-Umstadt
Germany
www.dlg.org

Test No.

2017-00432



September 2017
© DLG



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*			
	4		
Bore*			
	104	mm	
Stroke*			
	132	mm	
Displacement*			
	4485	cm ³	
Rated speed			
	2200	min ⁻¹	
Power by ECE R120			
	standard		boost
Rated power	107	kW	128 kW
Maximum power	114	kW	129 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	DCT		
Ranges			
	3		
Powershift gear			
	-		
Forward	24		
Reverse	24		
Design speed			
	50	km/h	

Power take off				
Profile	Form 1: 6 spline (1 3/8")			
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	Michelin MULTIBIB		Michelin MULTIBIB	
Tire size	480/65 R 28		600/65 R 38	
Axle load				
	front		rear	total
Permissible*	4900 kg		7300 kg	10500 kg
Empty weight	3040 kg		4040 kg	7080 kg
Hydraulic				
System*	Load Sensing CCLS (Pressure and Flow Compensated)			
Supply of oil	Common with transmission oil			
Fluid type*	MAT 3525			
Capacity*	78		l	
Extractable*	33		l	
Auxiliary valves				
Number	4			
Max. flowrate*	100		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)	Yes			
	-			
	-			

Test conditions

Axle load	front	rear
With ballast	3290 kg	5290 kg
Ballast		
on frame	550 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

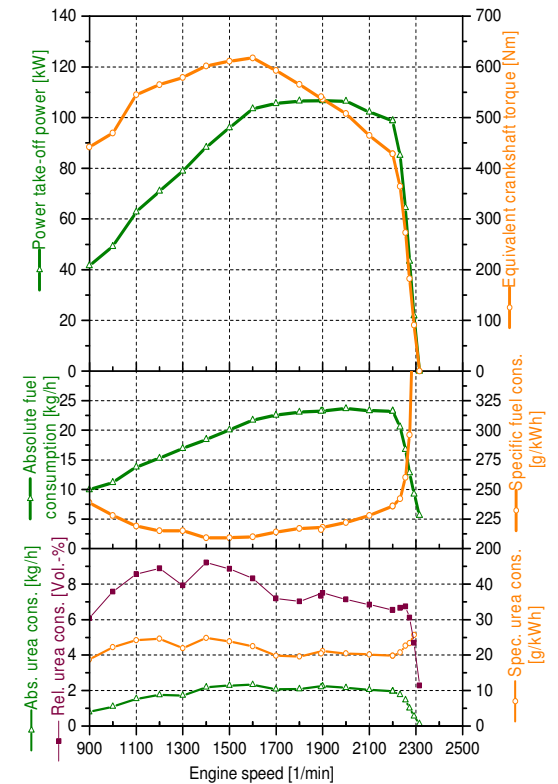
* Manufacturer's data

Results of measurement at pto dynamometer – standard

Full load	
Rated speed	
Pto power	98,7 kW
Absolute fuel consumption	23,3 kg/h
Specific fuel consumption	236 g/kWh
Specific urea consumption	19,8 g/kWh
Ratio urea to fuel	6,5 Vol-%
Maximum power	
Engine speed	1900 min ⁻¹
Pto power	106,6 kW
Absolute fuel consumption	23,3 kg/h
Specific fuel consumption	218 g/kWh
Specific urea consumption	21,1 g/kWh
Ratio urea to fuel	7,5 Vol-%
Maximum torque	
Engine speed	1600 min ⁻¹
Pto power	103,5 kW
Absolute fuel consumption	21,7 kg/h
Specific fuel consumption	210 g/kWh
Specific urea consumption	22,5 g/kWh
Ratio urea to fuel	8,3 Vol-%
1000 rpm at pto	
Engine speed	1893 min ⁻¹
Pto power	107,3 kW
Absolute fuel consumption	23,2 kg/h
Specific fuel consumption	216 g/kWh
Specific urea consumption	20,5 g/kWh
Ratio urea to fuel	7,3 Vol-%

Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	19,4 kg/h
Specific fuel consumption	245 g/kWh
Specific urea consumption	20,5 g/kWh
Ratio urea to fuel	6,5 Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	18,1 kg/h
Specific fuel consumption	229 g/kWh
Specific urea consumption	21,4 g/kWh
Ratio urea to fuel	7,3 Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	10,9 kg/h
Specific fuel consumption	277 g/kWh
Specific urea consumption	21,4 g/kWh
Ratio urea to fuel	6,0 Vol-%
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	9,4 kg/h
Specific fuel consumption	236 g/kWh
Specific urea consumption	20,6 g/kWh
Ratio urea to fuel	6,8 Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	12,9 kg/h
Specific fuel consumption	218 g/kWh
Specific urea consumption	19,2 g/kWh
Ratio urea to fuel	6,8 Vol-%

Graphical analysis



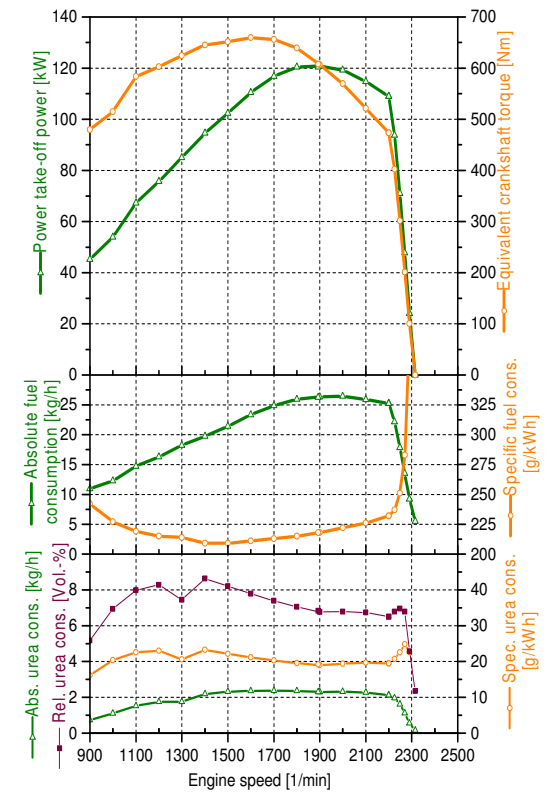
Torque rise	44 %
Engine speed drop	27 %
Pulling off torque	110 %

Results of measurement at pto dynamometer – boost

Full load	
Rated speed	
Pto power	109,1 kW
Absolute fuel consumption	25,3 kg/h
Specific fuel consumption	232 g/kWh
Specific urea consumption	19,4 g/kWh
Ratio urea to fuel	6,5 Vol-%
Maximum power	
Engine speed	1900 min ⁻¹
Pto power	120,7 kW
Absolute fuel consumption	26,3 kg/h
Spec. Fuel consumption	218 g/kWh
Spec. urea consumption	19,0 g/kWh
Ratio urea to fuel	6,8 Vol-%
Additional fuel consump. during regeneration	- kg
Additional fuel consump. turned-over**	- %
Spec. fuel consump. with regen. (calculated)	- g/kWh
Maximum torque	
Engine speed	1600 min ⁻¹
Pto power	110,5 kW
Absolute fuel consumption	23,4 kg/h
Spec. Fuel consumption	211 g/kWh
Spec. urea consumption	21,2 g/kWh
Ratio urea to fuel	7,8 Vol-%
1000 rpm at pto	
Engine speed	1893 min ⁻¹
Pto power	120,5 kW
Absolute fuel consumption	26,3 kg/h
Spec. Fuel consumption	218 g/kWh
Spec. urea consumption	19,2 g/kWh
Ratio urea to fuel	6,8 Vol-%

Part load	
Full throttle, 80 % of power at rated speed	
Absolute fuel consumption	21,0 kg/h
Spec. Fuel consumption	240 g/kWh
Spec. urea consumption	20,8 g/kWh
Ratio urea to fuel	6,8 Vol-%
90 % of rated speed, 80 % of power at rated speed	
Absolute fuel consumption	19,7 kg/h
Spec. Fuel consumption	226 g/kWh
Spec. urea consumption	21,2 g/kWh
Ratio urea to fuel	7,3 Vol-%
90 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	11,7 kg/h
Spec. Fuel consumption	268 g/kWh
Spec. urea consumption	21,7 g/kWh
Ratio urea to fuel	6,3 Vol-%
Additional fuel consump. during regeneration	- kg
Additional fuel consumption turned-over**	- %
Spec. fuel consump. with regen. (calculated)***	- g/kWh
60 % of rated speed, 40 % of power at rated speed	
Absolute fuel consumption	10,1 kg/h
Spec. Fuel consumption	232 g/kWh
Spec. urea consumption	21,4 g/kWh
Ratio urea to fuel	7,2 Vol-%
60 % of rated speed, 60 % of power at rated speed	
Absolute fuel consumption	14,2 kg/h
Spec. Fuel consumption	216 g/kWh
Spec. urea consumption	20,3 g/kWh
Ratio urea to fuel	7,3 Vol-%
Additional fuel consump. during regeneration	- kg
Additional fuel consumption turned-over**	- %
Spec. fuel consump. with regen. (calculated)	- g/kWh

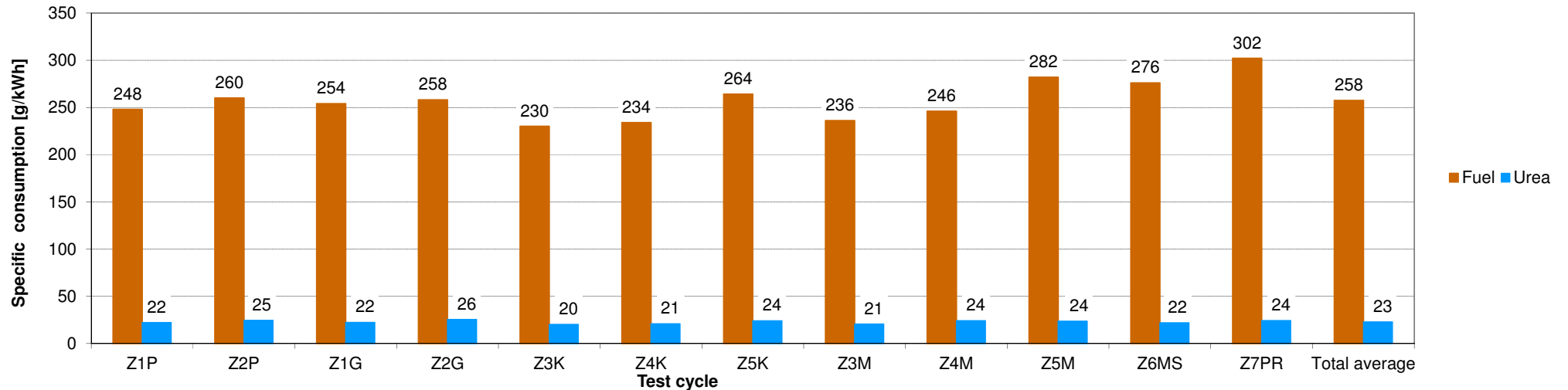
Graphical analysis



Torque rise	39 %
Engine speed drop	27 %

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

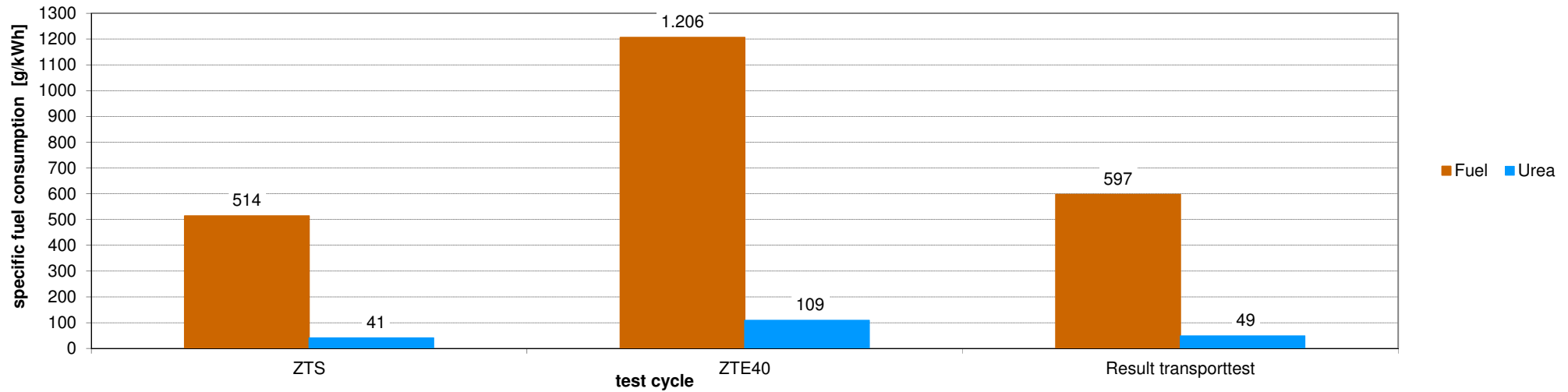
Results at DLG PowerMix - Field work



Load type	Test cycle		Engine speed [min ⁻¹]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption		Average values				
						[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	1623	7,5	81	20,0	24,2	248	22	6,8	No DPF	No DPF
	Plough 60 %	Z2P	1353	8,4	55	14,3	17,2	260	25	7,1	No DPF	No DPF
	Cultivator 100 %	Z1G	1733	9,5	86	21,6	26,0	254	22	6,7	No DPF	No DPF
	Cultivator 60%	Z2G	1450	11,0	62	15,8	19,0	258	26	7,5	No DPF	No DPF
Drawbar + PTO work	Rotary harrow 100 %	Z3K	1682	5,1	98	22,3	26,8	230	20	6,9	No DPF	No DPF
	Rotary harrow 70 %	Z4K	1461	6,1	73	16,8	20,3	234	21	6,9	No DPF	No DPF
	Rotary harrow 40 %	Z5K	1461	6,1	42	10,8	13,1	264	24	7,0	No DPF	No DPF
	Mower 100 %	Z3M	1665	13,0	96	22,6	27,3	236	21	6,8	No DPF	No DPF
	Mower 70 %	Z4M	1459	15,7	75	18,3	22,1	246	24	7,6	No DPF	No DPF
	Mower 40 %	Z5M	1461	15,7	43	12,0	14,6	282	24	6,4	No DPF	No DPF
Drawbar- + PTO + Hydraulic work	Manure spreader	Z6MS	1849	6,9	80	21,6	26,2	276	22	6,1	No DPF	No DPF
	Baler	Z7PR	1893	9,7	68	19,4	23,6	302	24	6,1	No DPF	No DPF
Total average DLG PowerMix								258	23	6,8	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	Engine speed [min ⁻¹]	Driving speed [km/h]	Total power [kW]	Absolute fuel consumption		Average values		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]
					[kg/h]	[l/h]	Specific fuel consumption [g/kWh]	Spec. urea cons. [g/kWh]				
Transportwork	only hill section ZTS	1925	32,9	51	26,3	31,4	514	41	6,2	No DPF	No DPF	
	flat section 40 km/h ZTE40	1540	40,2	10	12,0	14,4	1206	109	8,9	No DPF	No DPF	
Idle***	ZLL	846	-	-	1,4	1,6	-	-	-	-	-	
Result DLG-PowerMix - Transporttest flat section with 40 km/h (50 % ZTS : 40 % ZTE40 : 10 % ZLL)** *								597	49	6,2	No DPF	No 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	1921	50,1	14	16,9	20,2	1239	95	6,1	No DPF	No DPF	
	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)** *						608	48	6,1	No DPF	No DPF	
	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.