DLG Tractor Datasheet PowerMix

Performance and fuel consumption during field and transport applications

Case IH Puma 260 CVXDrive

DLG Test Report 7464



	Boost	Standard	
Rated power	207	191	kW
Maximum power	222	205	kW
According to	UNECE R 120		

	Boost	Standard	
Rated power	179	165	kW
Maximum power	202	186	kW
According to	OECD Code 2		

	Diesel	AdBlue	
Energy efficiency	249	30,4	g/kWh
Consumption per hectare	5,8	0,6	l/ha
Area output	9,5		ha/h

	Diesel	AdBlue	
Energy efficiency	382	43,0	g/kWh
Consumption per 100 kilometre per ton	4,4	0,4	l/100tkm
Haul capacity	957		tkm/h

Measurement results overview

Power Take-Off (PTO) power according to OECD Code 2			Engine speed	Power Take-Off Power	Specific consumption		Diesel consumption	Ratio AdBlue to diesel
					Diesel	AdBlue		
			min^{-1}	kW	g/kWh		l/h	Vol-%
Standard mode								
Rated power			2200	165	235	26,5	46,7	8,6
Maximum power			1800	186	220	25,0	49,2	8,7
Maximum torque			1201	135	217	26,0	35,1	9,2
Torque increase	50	%						
Drop in speed	45	%						
Overcapacity	21	kW						
Starting torque	109	%						
Boost mode								
Rated power			2200	179	234	27,3	50,2	8,9
Maximum power			1800	202	220	24,9	53,3	8,6
Maximum torque			1400	174	216	22,6	45,0	8,0
Torque increase	53	%						
Drop in speed	36	%						
Overpcapacity	23	kW						
Savings potential through speed reduction for the same power output								
80 % of standard rated power, instead of full throttle only at 90 % of rated speed			2253	143	244	26,0	42,3	8,1
			1978		227	25,7	39,5	8,6
Savings in %					**-7,0**	**0,0**	**-6,6**	**-4,9**
40 % of standard rated power, instead of 90 % of rated speed only with 60 % of rated speed			1978	72	263	29,5	22,8	8,6
			1316		228	26,8	19,7	9,0
Savings in %					**-13,3**	**-10,0**	**-13,6**	**-14,1**

PowerMix - Field work	Engine speed	Delivered net power	Specific consumption		Consumption / hectare		Area output
			Diesel	AdBlue	Diesel	AdBlue	
	min^{-1}	kW	g/kWh		l/ha		ha/h
Heavy pulling work	1662	137	264	31,6	12,2	1,2	4,1
Medium pulling work	1336	97	252	30,9	7,1	0,7	4,7
Heavy PTO shaft work	1695	160	230	27,4	5,6	0,5	11,6
Medium PTO shaft work	1413	119	236	30,4	3,6	0,4	13,3
Light PTO shaft work	1403	71	260	31,6	2,1	0,2	14,8
Drawbar + PTO + Hydraulic work	1565	116	255	30,9	4,1	0,4	8,7
Overall result at field work			**249**	**30,4**	**5,8**	**0,6**	**9,5**

PowerMix - Transport work	Engine speed	Delivered net power	Specific consumption		Consumption per 100 km and per t		Transport power
			Diesel	AdBlue	Diesel	AdBlue	
	min^{-1}	kW	g/kWh		l/100tkm		tkm/h
Heavy transportwork	1780	117	360	40	7,0	0,6	716
Light transportwork at 40 km/h	1281	33	528	64	1,7	0,2	1198
Optional: light transportwork at 50 km/h	1384	41	549	60	1,8	0,2	1484
Optional: light transportwork at 60 km/h	-	-	-	-	-	-	-
Overall result transport work at 40 km/h			**382**	**43**	**4,4**	**0,4**	**957**

Technical data

Engine*		
Manufacturer	**FPT**	
Stage of exhaust emission	**V**	
Rated engine speed	**2200**	**min^{-1}**
Engine power according		
UNECE-R 120	**Standard**	**Boost**
Rated power	191 kW	207 kW
Maximum power	205 kW	222 kW
at engine speed	1800 min^{-1}	1800 min^{-1}
Boost activation requirement		
load at the power take-off/hydraulics and driving speed > 0,5 km/h or driving speed above 18 km/h		
Exhaust aftertreatment device		
Nitrous gaseous emission	Selective Catalytic Reduction (SCRoF)	
Particulate emission	Diesel Oxidation Catalysator (DOC)	
Time for regeneration (average)	50 min	
Regeneration interval:		
- maximum	750 h	
Replacement intervals	-	
Exhaust gas recuperation	**-**	
Exhaust-gas turbocharger	**1 variable geometry (VTG)**	
Number of cylinders	**6**	
Bore	**104**	**mm**
Stroke	**132**	**mm**
Displacement	**6728**	**cm³**
Main fan		
Diameter	620	mm
Number of fan blades	9	
Fan Type	Viscotronic (electronically controlled fan drive)	
Tank volume		
Diesel / AdBlue	470 l / 54 l	
Transmission*		
Manufacturer	**CNH**	
Type of construction	**CVT**	
Number of ranges	**4**	
Number of gears	**-**	
Forward	0,03 km/h bis 50km/h	
Reverse	0,03 km/h bis 35km/h	
Design speed	**50**	**km/h**
Chassis*		
Front axle		
Manufacturer	CNH	
Type	Rigid axle, suspended	

Axle load	**front**	**rear**	**total**
Unladen masses	4225 kg	6105 kg	10330 kg
Permissible	6750 kg	10000 kg	15000 kg[2]
Technically permissible	10400 kg[3]	10000 kg	- kg

Dimensions*		
Length w/o front linkage	**5195**	**mm**
Width	**2770**	**mm**
Height	**3365**	**mm**
Wheelbase	**2880**	**mm**
Distance hitch points to PTO shaft (lower links horizontal)	**Front** 620 mm	**Rear** 655 mm
Distance axle to hitch points (lower links horizontal)	**Front** 1300 mm	**Rear** 1300 mm
Turning circle	**13850**	**mm**

Rear PTO Shaft*				
Profile				**6 spline (1 ⅜")**
Transmission ratio				
PTO mode	540	540E	1000	1000E
Engine speed [min^{-1}]	1929	1598	1912	1582

Front PTO Shaft*				
Profile				**6 spline (1 ⅜")**
Transmission ratio				
PTO mode	540	540E	1000	1000E
Engine speed [min^{-1}]	-	-	1900	-

Hydraulic power lift*	front	rear
Category	3N	3N/3
Lifting force at the hitch points exerted through full range	34,9 kN	88,1 kN

Hydraulic power*		
System	**CCLS (Closed Center Load Sensing System)**	
Hydraulic oil	**Common with transmission**	
Total capacity	**110**	**l**
Removable	**51**	**l**
Hydraulic flow		
Maximum delivery	170	l/min
Optional	150	l/min
Max. flow at one rear remote	145	l/min
Maximum pressure	**205**	**bar**

* Manufacturer data

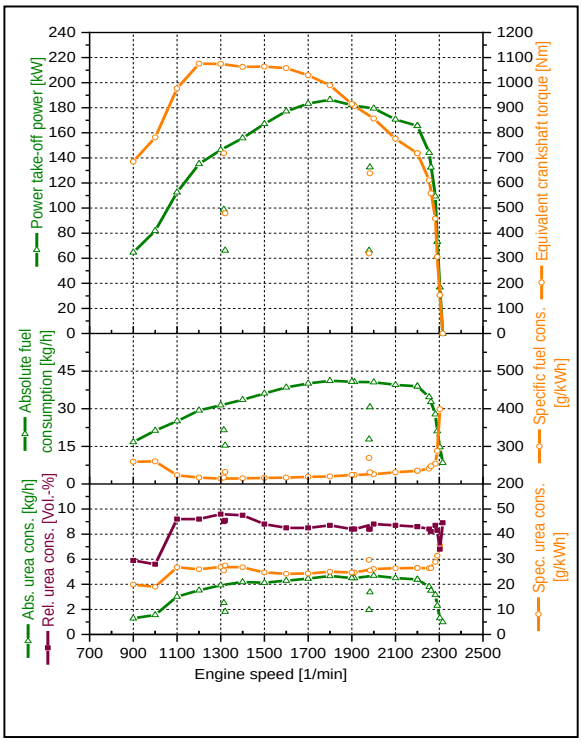
[2] up to 50 km/h

[3] up to 8 km/h during use of front loader

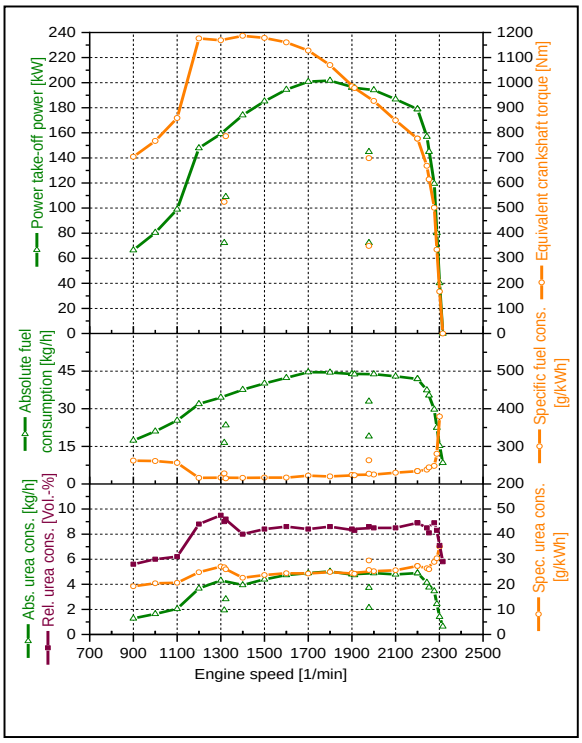
Power Take-Off Power according to OECD Code 2

Measuring point	Engine speed	PTO power	Equiv. Torque	Absolute consumption				Ratio AdBlue to fuel	Specific consumption	
				fuel		AdBlue			fuel	AdBlue
	1/min	kW	Nm	kg/h	l/h	Kg/h	l/h	Vol-%	g/kWh	
Rated power										
Boost	2200	179	777	41,9	50,2	4,9	4,5	8,9	234	27,3
Standard	2200	165	718	38,9	46,7	4,4	4,0	8,6	235	26,5
Maximum power										
Boost	1800	202	1070	44,5	53,3	5,0	4,6	8,6	220	24,9
Standard	1800	186	989	41,1	49,2	4,7	4,3	8,7	220	25,0
Maximum torque										
Boost	1400	174	1187	37,6	45,0	3,9	3,6	8,0	216	22,6
Standard	1201	135	1076	29,3	35,1	3,5	3,2	9,2	217	26,0
1000 PTO shaft rotation										
Boost	1912	196	979	43,8	52,4	4,7	4,3	8,3	223	24,2
Standard	1912	182	907	40,7	48,7	4,5	4,1	8,4	224	24,7
Part loads at full throttle										
80 % of boost rated pw.	2253	145	615	35,3	42,3	3,8	3,4	8,1	244	26,0
80 % of standard rated pw.	2262	132	559	32,7	39,2	3,5	3,2	8,2	247	26,4
Part loads with governor control set to 90 % of rated engine speed										
80 % of boost rated pw.	1978	145	699	32,9	39,5	3,7	3,4	8,6	227	25,7
80 % of standard rated pw.	1983	133	639	30,7	36,7	3,4	3,1	8,4	231	25,5
40 % of boost rated pw.	1978	72	349	19,0	22,8	2,1	2,0	8,6	263	29,5
40 % of standard rated pw.	1979	66	319	17,8	21,3	2,0	1,8	8,4	269	29,7
Part loads with governor control set to 60 % of rated engine speed										
60 % of boost rated pw.	1323	109	786	23,5	28,1	2,8	2,6	9,2	215	26,0
60 % of standard rated pw.	1314	99	718	21,5	25,7	2,5	2,3	9,0	217	25,5
40 % of boost rated pw.	1316	72	525	16,5	19,7	1,9	1,8	9,0	228	26,8
40 % of standard rated pw.	1320	66	479	15,4	18,4	1,8	1,7	9,1	232	27,5

Standard



Boost



PowerMix - performance and fuel consumption during field and transport applications

Performance and fuel consumption during exemplary field work		Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
								Diesel	AdBlue
		1/min	km/h	kW	kg/h	l/h	Vol-%	g/kWh	
Z1P	ploughing, heavy tine cultivator	1599	7,1	132	34,8	41,5	9,4	263	31,3
Z1G	cultivator, disc harrow	1725	9,0	141	37,2	44,2	9,8	264	31,8
Z2P	mech. seed drill, planter	1314	8,5	97	24,3	28,9	9,8	251	31,6
Z2G	stubble working, seed bed combination	1359	10,2	97	24,6	29,3	9,6	253	30,3
Z3K	milling, rotary harrows seeding combination	1697	4,7	160	35,8	42,6	9,7	223	26,4
Z3M	cut 1. step, cultivator-rotary harrows-seeding combination	1694	12,5	161	38,0	45,1	9,7	236	28,4
Z4K	pneumatic seeding drill, milling as plant care, mulch	1411	5,5	117	26,7	31,7	10,5	227	29,8
Z4M	cut 2. step, direct seeding machine	1415	14,2	120	29,3	34,8	10,2	244	31,0
Z5K	plant protector, mineral fertiliser, tedder, swather	1420	6,0	69	17,4	20,6	9,3	250	29,8
Z5M	cut 3. step, airseeder	1386	15,9	72	19,5	23,3	9,6	270	33,3
Z6MS	self-loading wagon, manure spreading	1566	5,4	122	30,3	36,0	9,8	248	31,2
Z7PR	high pressure baler, round baler or square baler	1563	8,3	110	28,7	34,1	9,1	261	30,5
								249	**30,4**

Performance and fuel consumption during exemplary transport work		Engine speed	Driving speed	Delivered net power	Diesel consumption		Ratio AdBlue to diesel	Specific consumption	
								Diesel	AdBlue
		min^{-1}	km/h	kW	kg/h	l/h	Vol-%	g/kWh	
ZTB	Transportwork at full load (uphill)	1780	24	117	42,2	50,1	9,0	360	40,2
ZTE40	Transportwork at flat section with 40 km/h	1281	40	33	17,2	20,5	9,5	528	64,2
ZTE50	Transportwork at flat section with 50 km/h	1384	50	41	22,4	26,6	8,7	549	60,1
ZTE60	Transportwork at flat section with 60 km/h	-	-	-	-	-	-	-	-
	Idle	650	-	-	1,8	2,1	-	-	-
Overall result transport work at 40 km/h								**382**	**43,0**

Test conditions

Tires	front	rear
Manufacturer	Michelin EvoBib VF	Michelin EvoBib VF
Tire size	600/70 R30	710/70R42
Fitted options		
Free return flow		**yes**
Air condition		**yes**
Air compressor		**yes**
Front hydraulic power lift		**yes**
Front PTO		**no**
		-
		-

PowerMix	Ballast		Axle load distribution				Gross weight	Tire pressure		PTO mode	Boost power available
	front	rear	front		rear			front	rear		
	kg	kg	kg	%	kg	%	kg	bar	bar	1000/1000E	yes/no
Performance and fuel consumption during exemplary field work											
Heavy pulling work	1300	2185	5665	41	8150	59	13815	1,2	1,2	-	-
Medium pulling work	0	0	4225	41	6105	59	10330	1,2	1,2	-	-
Heavy PTO shaft work	0	0	4225	41	6105	59	10330	1,2	1,2	1000	-
Medium PTO shaft work	0	0	4225	41	6105	59	10330	1,2	1,2	1000E	-
Light PTO shaft work	0	0	4225	41	6105	59	10330	1,2	1,2	1000E	-
Drawbar+PTO+Hydraulic work	0	0	4225	41	6105	59	10330	1,2	1,2	1000E	-
Performance and fuel consumption during exemplary transport work											
Transport work	0	0	4225	41	6105	59	10330	1,6	1,6	-	-

Applicant

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