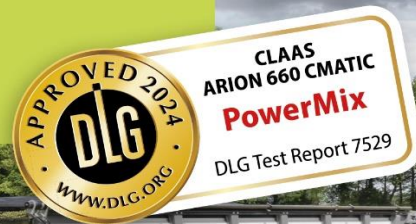


DLG Tractor Datasheet PowerMix

Performance and fuel consumption
during field and transport applications

CLAAS ARION 660 CMATIC

DLG Test Report 7529



Boost Standard

Rated power	143,9	129	kW
Maximum power	151	136	kW
According to	UNECE R 120		



Boost Standard

Rated power	122	109	kW
Maximum power	139	121	kW
According to	OECD Code 2		



Diesel AdBlue

Energy efficiency	276	8,6	g/kWh
Consumption per hectare	6,4	0,2	l/ha
Area output	6,5	ha/h	



Diesel AdBlue

Energy efficiency	358	9,2	g/kWh
Consumption per 100 kilometre per ton	4,1	0,1	l/100tkm
Haul capacity	852	tkm/h	

Measurement results overview

Power Take-Off (PTO) power according to OECD Code 2			Engine speed	Power Take- Off Power	Specific consumption		Diesel consump- tion	Ratio AdBlue to diesel
			min ⁻¹	kW	Diesel	AdBlue	l/h	Vol-%
					g/kWh			
Standard mode								
Rated power			2200	109	260	5,5	34	1,6
Maximum power			1900	121	238	6	35	1,9
Maximum torque			1300	94	236	10	26	3,3
Torque increase	46	%						
Drop in speed	41	%						
Overcapacity	12	kW						
Starting torque	133	%						
Boost mode								
Rated power			2200	122	254	6,4	36,9	1,9
Maximum power			1900	139	237	6,1	39,3	2,0
Maximum torque			1400	114	229	9,1	31,1	3,0
Torque increase	47	%						
Drop in speed	36	%						
Overpcapacity	17	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			2217	87	275	5,6	28,7	1,6
			1979		257	5,9	26,8	1,7
Savings in %					-6,5	0,0	-6,6	-4,9
40 % of standard rated power, instead of 90 % of rated speed only with 60 % of rated speed			1985	44	333	7,9	17,4	1,8
			1322		267	6,3	14,0	1,8
Savings in %					-19,8	-25,0	-19,5	-14,1

PowerMix - Field work	Engine speed	Delivered net power	Specific consumption		Consumption / hectare		Area output
	min ⁻¹	kW	Diesel g/kWh	AdBlue g/kWh	Diesel l/ha	AdBlue l/ha	ha/h
Heavy pulling work	1679	91	286	8,9	13,2	0,3	2,7
Medium pulling work	1358	69	283	9,9	8,1	0,2	3,3
Heavy PTO shaft work	1745	113	252	7,7	5,4	0,1	9,0
Medium PTO shaft work	1343	75	258	9,1	4,4	0,1	7,9
Light PTO shaft work	1377	48	290	7,8	2,4	0,0	10,2
Drawbar + PTO + Hydraulic work	1721	76	287	8,4	4,7	0,1	5,9
Overall result at field work			276	8,6	6,4	0,2	6,5

PowerMix - Transport work	Engine speed	Delivered net power	Specific consumption		Consumption per 100 km and per t		Transport power
	min ⁻¹	kW	Diesel g/kWh	AdBlue g/kWh	Diesel l/100tkm	AdBlue l/100tkm	tkm/h
Heavy transportwork	1874	94	341	8,4	6,7	0,1	568
Light transportwork at 40 km/h	1359	30	479	14,9	1,5	0,0	1136
Optional: light transportwork at 50 km/h	1487	39	485	14,2	1,6	0,0	1410
Optional: light transportwork at 60 km/h	-	-	-	-	-	-	-
Overall result transport work at 40 km/h			358	9,2	4,1	0,1	852

Technical data

Engine*			
Manufacturer		DPS	
Stage of exhaust emission		Stage V	
Rated engine speed		2200	min ⁻¹
Engine power according			
UNECE-R 120	Standard	Boost	
Rated power	129 kW	144	kW
Maximum power	136 kW	151	kW
at engine speed	2000 min ⁻¹	2000	min ⁻¹
Boost activation requirement			

PTO ON + traction, or transport from 15 kph

Exhaust aftertreatment device

Nitrous gaseous emission Selective Catalytic Reduction (SCR)

Particulate emission Diesel Particulate Filter (DPF), Diesel Oxidation Catalysator (DOC)

Time for regeneration (average) 30-35 min

Regeneration interval:

- maximum 100 h

Replacement intervals -

Exhaust gas recuperation -

Exhaust-gas turbocharger Variable geometry turbo

Number of cylinders 6

Bore 107 mm

Stroke 127 mm

Displacement 6788 cm³

Main fan

Diameter 630 mm

Number of fan blades 11

Fan Type Vistronic

Tank volume

Diesel / AdBlue 285 / 370 l / 16 l

Transmission*

Manufacturer CLAAS

Type of construction CVT EQ220

Number of ranges -

Number of gears -

Forward 50 m/h to 50 km/h

Reverse 50 m/h to 25 km/h

Design speed 50 km/h

Chassis*

Front axle

Manufacturer DANA

Type planetary driven steering axle

Axle load front rear total

Unladen masses¹ 4233 kg 4234 kg 8467 kg

Permissible 5200 kg 9000 kg 12500 kg

Technically permissible 5200 kg 9000 kg 12500 kg

Dimensions*

Length w/o front linkage 4818 mm

Width 2550 mm

Height 3180 mm

Wheelbase 2820 mm

	Front	Rear
Distance hitch points to PTO shaft (lower links horizontal)	556 mm	664 mm

	Front	Rear
Distance axle to hitch points (lower links horizontal)	1490 mm	1139 mm

Turning circle 11500 mm

Rear PTO Shaft*

Profile 6 spline (1 3/4")

Transmission ratio

PTO mode	540	540E	1000	1000E
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Engine speed [min ⁻¹]	1980	1533	2030	1572
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Front PTO Shaft*

Profile 6 spline (1 3/4")

Transmission ratio

PTO mode	540	540E	1000	1000E
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Engine speed [min ⁻¹]	-	-	2000	-
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	front	rear
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Category	-	III
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Lifting force at the hitch points exerted through full range	- kN	8000 kN
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Hydraulic power*

System CCLS (Closed Center Load Sensing System)

Hydraulic oil common with transmission

Total capacity 110 l

Removable 52 l

Hydraulic flow

Maximum delivery	150	l/min
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Optional	110	l/min
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Max. flow at one rear remote	100	l/min
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Maximum pressure 200 bar

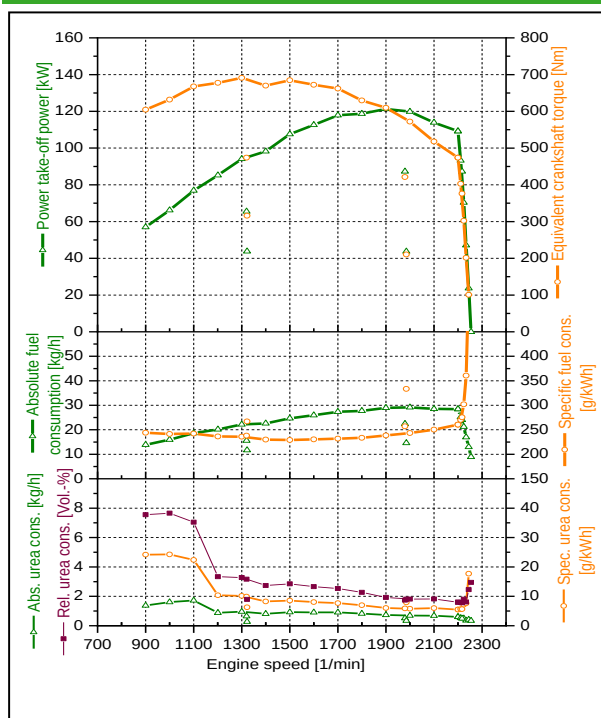
¹ not suspended front axle, front ballast carrier with 600 kg ballast, full fuel tank, tires 20.8R38 rear with 16.9R28 front



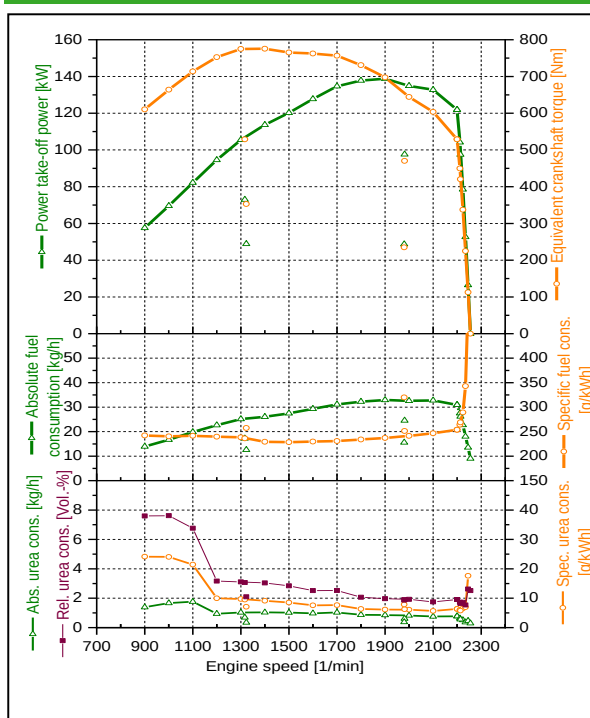
Power Take-Off Power according to OECD Code 2

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-%		
Rated power										
Boost	2200	121,9	529	30,9	36,9	0,8	0,7	1,9	254	6,4
Standard	2200	109,2	474	28,4	33,9	0,6	0,5	1,6	260	5,5
Maximum power										
Boost	1900	138,8	698	32,9	39,3	0,9	0,8	2,0	237	6,1
Standard	1900	121,3	610	28,9	34,5	0,7	0,7	1,9	238	6,0
Maximum torque										
Boost	1400	113,7	775	26,1	31,1	1,0	1,0	3,0	229	9,1
Standard	1300	94,1	691	22,2	26,5	1,0	0,9	3,3	236	10,2
1000 PTO shaft rotation										
Boost	2031	134,5	632	32,6	39,0	0,9	0,8	2,0	243	6,5
Standard	2030	118,2	556	29,0	34,6	0,7	0,7	1,9	245	6,2
Part loads at full throttle										
80 % of boost rated pw.	2214	97,5	420	26,2	31,3	0,6	0,5	1,6	269	5,8
80 % of standard rated pw.	2217	87,3	376	24,0	28,7	0,5	0,5	1,6	275	5,6
Part loads with governor control set to 90 % of rated engine speed										
80 % of boost rated pw.	1981	97,6	470	24,5	29,3	0,6	0,6	1,9	251	6,3
80 % of standard rated pw.	1979	87,3	421	22,4	26,8	0,5	0,5	1,7	257	5,9
40 % of boost rated pw.	1980	48,7	235	15,6	18,6	0,4	0,4	1,9	320	7,9
40 % of standard rated pw.	1985	43,7	210	14,6	17,4	0,4	0,3	1,8	333	7,9
Part loads with governor control set to 60 % of rated engine speed										
60 % of boost rated pw.	1317	72,9	529	17,2	20,6	0,7	0,6	3,1	236	9,5
60 % of standard rated pw.	1320	65,5	474	15,6	18,6	0,7	0,6	3,2	238	9,9
40 % of boost rated pw.	1323	48,9	353	12,6	15,0	0,4	0,3	2,1	257	7,1
40 % of standard rated pw.	1322	43,8	316	11,7	14,0	0,3	0,3	1,8	267	6,3

Standard



Boost



PowerMix - performance and fuel consumption during field and transport applications

Performance and fuel consumption during exemplary field work		Engine speed	Driving speed	Deliver-ed 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	1560	7,2	88,5	25,0	29,8	2,7	283	9,9
Z1G	cultivator, disc harrow	1797	9,2	93,3	27,0	32,2	2,1	289	7,9
Z2P	mech. seed drill, planter	1274	8,6	64,2	18,3	21,8	2,6	285	9,5
Z2G	stubble working, seed bed combination	1442	11,6	74,3	20,9	24,9	2,9	281	10,2
Z3K	milling, rotary harrows seeding combination	1748	5,5	112,5	27,8	33,1	2,4	247	7,6
Z3M	cut 1. step, cultivator-rotary harrows-seeding combination	1743	14,0	114,3	29,4	35,0	2,3	257	7,7
Z4K	pneumatic seeding drill, milling as plant care, mulch	1341	4,4	74,0	18,7	22,3	2,6	252	8,8
Z4M	cut 2. step, direct seeding machine	1345	12,6	76,4	20,1	24,0	2,7	263	9,4
Z5K	plant protector, mineral fertiliser, tedder, swather	1374	6,0	46,9	13,2	15,8	1,9	282	7,2
Z5M	cut 3. step, airseeder	1379	15,9	49,8	14,8	17,7	2,2	297	8,4
Z6MS	self-loading wagon, manure spreading	1477	4,4	75,2	20,1	24,0	2,7	267	9,3
Z7PR	high pressure baler, round baler or square baler	1965	9,4	75,8	23,2	27,7	1,8	307	7,4
								276	8,6

Performance and fuel consumption during exemplary transport work		Engine speed	Driving speed	Deliver-ed 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)	1874	20	94,0	32,0	38,2	1,9	341	8,4
ZTE40	Transportwork at flat section with 40 km/h	1359	40	29,9	14,3	17,1	2,0	479	14,9
ZTE50	Transportwork at flat section with 50 km/h	1487	49	39,2	19,0	22,7	2,1	485	14,2
ZTE60	Transportwork at flat section with 60 km/h	-	-	-	-	-	-	-	-
	Idle	650	-	-	1,4	1,8	-	-	-
Overall result transport work at 40 km/h								358	9,2

Test conditions

Tires	front	rear
Manufacturer	Nokian Soil King	Nokian Soil King
Tire size	VF 540/65 R30	VF 650/65 R42
Fitted options		
Free return flow		yes
Air condition		yes
Air compressor		yes
Front hydraulic power lift		no
Front PTO (disengageable)		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	704	0	4360	50	4382	50	8742	1,2	1,2	-	-
Medium pulling work	0	0	3365	42	4672	58	8037	1,2	1,2	-	-
Heavy PTO shaft work	0	0	3365	42	4672	58	8037	1,2	1,2	1000	-
Medium PTO shaft work	0	0	3365	42	4672	58	8037	1,2	1,2	1000E	-
Light PTO shaft work	0	0	3365	42	4672	58	8037	1,2	1,2	1000E	-
Drawbar+PTO+Hydraulic work	0	0	3365	42	4672	58	8037	1,2	1,2	1000E/1000	-
Performance and fuel consumption during exemplary transport work											
Transport work	0	0	3365	42	4672	58	8037	1,6	1,6	-	-

Applicant

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<https://www.dlg.org/powermix>