

Maturing nicely

The latest generation Fendt 200 Vario tractor has come a very long way from its relatively low frills beginnings way back in 2009. We've been giving the 77kW/105hp range-topper, the 211 Vario model, some serious on-test stick ... to see exactly what it's made of.

Even though the core elements such as the stepless transmission and axles are the same as on the 211S we tested in the 10/2020 issue, under the newly shaped bonnet of the latest 200 series there's more going on to get the 3.3-litre, three-cyl AgcoPower motor to reach Stage V. In addition to the DOC system, it now has an SCR unit plus a particulate filter, while EGR is no longer required. The engine also benefits from hydraulic tappets, because readjusting the valves became harder as there was less space under the hood.

Fendt sent us the biggest tractor in the five-model range, the 77kW/105hp (rated power at ECE R-120) 211 Vario; the smallest is the 207 Vario. On the subject of power, the 211 is the only model within the range to feature Dynamic Performance (DP), adding a useful 10hp. Unlike other boost systems, this is not only on offer during pto work and operations over a certain speed; instead it kicks in for each ancillary (such as air-con, air compressor, hydraulic pump or fan) when the tractor is working at full load.

Speaking of the engine cooling fan, Fendt lists the Hägele reversible fan as an option. Even though it retails for just under £3,000, it is a worthwhile consideration, not just for keeping the cooling pack clear but also the fuel savings ... as we discovered in our 7/2021 test.

Good on power, good on fuel

We were keen to see what effect the stricter emission standard would have on the 211's performance and fuel consumption. On the dyno, just under 98hp of the 105hp arrived at the pto stub, and at a maximum speed of 1,700rpm a healthy 110hp of the maximum 124hp engine output made it back to the tail end. Compared to the old model, this highlights the full impact of the Dynamic Performance boost. And it didn't affect the power curve. A torque increase of almost 43% with just a 29% drop in revs as well as a 125% start-off torque are all top notch results.

Surely this extra performance means more diesel – not the case here, with 265g/kWh at rated speed and only 243g/kWh at maximum power (compared with 287 and 268g/kWh before). So, the new 211 is significantly better. However, if you take into account the extra AdBlue use of 31.1g/kWh and 22.6g/kWh, the advantage starts to fade.

285g/kWh Powermix score

The Powermix results, in particular, emphasise the new 211's economy. It sits at around the average of the tractors tested so far in all types of work – a good result for a tractor in this power bracket. All in all, the Powermix result of 285g/kWh (+27g/kWh of AdBlue) is only 2% more than the average for all the tractors we've tested.

Stepless to 40km/hr

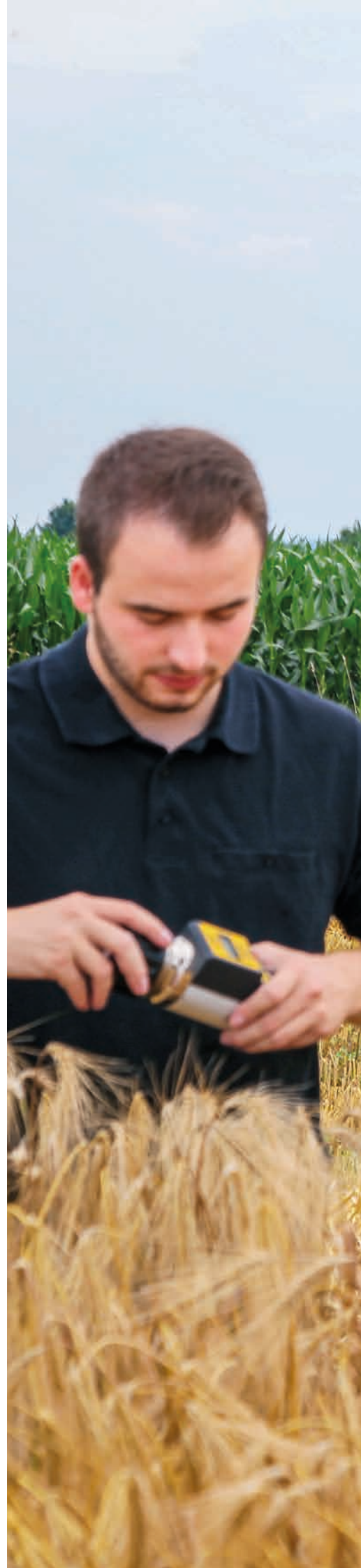
The Fendt's diesel consumption also improved in transport work, albeit the drop from 487g/kWh to 416g/kWh is slightly spoiled by 38g/kWh of AdBlue. With a measured drawbar power of 71.7kW/97.5hp and consumption of just 276g/kWh, it proves that the ML75 Vario transmission is efficient and, unlike the larger models, there's no range change to complete. Downside is that the top speed is 40km/hr but reached at 1,550rpm. Drivers will miss the option of 50km/hr travel.

KEEPING IT BRIEF

The performance and fuel consumption results are very good.

The hydraulics are also very good, but lift power needs improving.

The new multi-function armrest with the joystick is standard

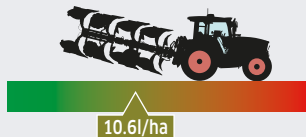
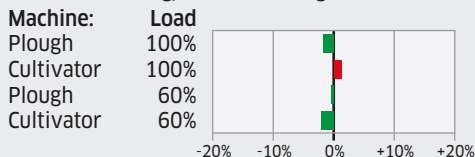




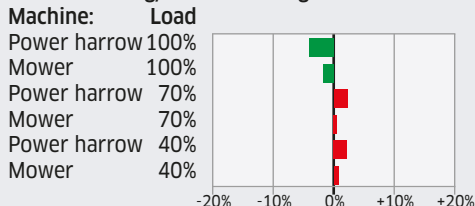
FENDT 211 VARIO

FUEL CONSUMPTION IN FIELD WORK

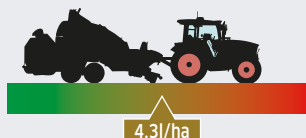
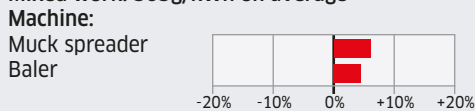
Draft work: 282g/kWh on average



Pto work: 281g/kWh on average



Mixed work: 303g/kWh on average



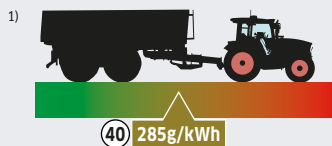
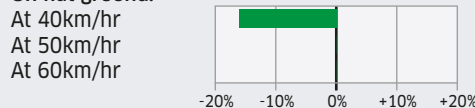
Powermix:

AdBlue: 9.3%

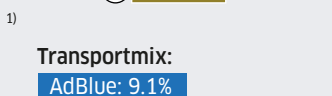
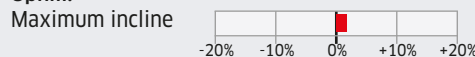


FUEL CONSUMPTION IN TRANSPORT WORK

On flat ground:



Uphill:



Transportmix:

AdBlue: 9.1%

Fendt's 211 Vario is much more economical than its predecessor and, compared to all of the tractors tested up to now, it delivers average results for nearly all types of work. However, the AdBlue consumption of around 27g/kWh is higher than on most other tractors we have looked at.

The 211 also scores with a very well-tuned engine/gearbox, with the stepless transmission controls now set up like on the bigger tractors using Fendt One. We couldn't see a reason, though, for the sliders for the hand throttle and pedal speed range to be hidden under a flap in the armrest.

Not many of our testers noticed that the 200's armrest isn't attached to the seat – it's part of the side console. We once again raise the issue of why Fendt is sticking to an active switchover between the accelerator pedal and driving on the stick. A head scratcher.

Plenty of oil, short on lift

Before we get to the 200's updated cab, a few sentences about the hydraulics and linkage. Our first buyer recommendation is to order Fendt's optional swash plate pump (a £1,983 extra). Then the 211 is not only equipped with load-sensing, but the DLG also measured a maximum oil flow of 101.6l/min and almost 30kW of actual hydraulic power.

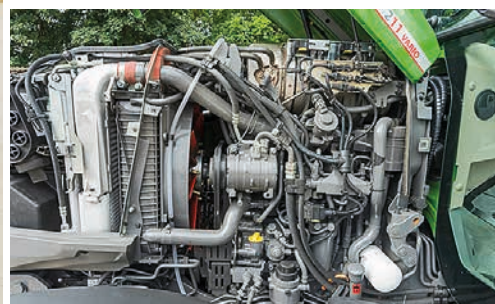
Similarly impressive is the separate hydraulic circuit and the 35l oil reserve, although you can only have four spools, one of which can now be positioned at the front. The yellow and blue spools are still used to control the loader, so if you wish to use them at the rear whilst the loader is still connected, the only solution is to go for shut-off valves to isolate the implement up front.

The spec improves when it comes to adjusting the 211's spools. For example, you can choose whether a timer is activated immediately or whether proportional control is possible up to the notch when operating the finger-tip spool controls.

Not much has changed with the linkage – we already criticised the less than 3,500daN of continuous lift force in the last test; this is not enough for heavier attachments. Apart from that, there are only positives to report: it doesn't matter whether it's the tried and test stabilisers; the ability to fix the link arms in any position using a shut-off valve; or the completely new control set-up ... it's all great and welcome stuff.



The air filter is easy to access, the radiator less so ...



... which, if you're the operator, makes the reversible fan a worthwhile option (£2,854).



The new cab is quieter and gets the Fendt One operating set-up.



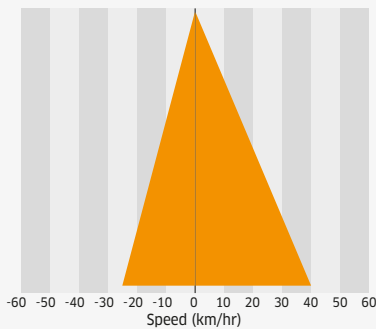
The dash display has great graphics, but they're partially covered by the chunky steering wheel.

SPEED RATIOS

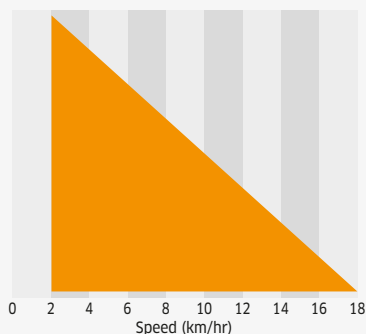
The ML75 box works seamlessly from 0.02km/hr to 40km/hr with just one driving range. Powershuttle controls can be found on the left and right.



Stepless forward/reverse



Stepless from 4-12km/hr



Simplicity is no longer an option on the 200 series. If you are not deterred, the excellent array of controls allow you to do pretty much everything. Photos: Stefan Tovornik, Hubert Wilmer.

New controls...

This brings us to the new cab, the 'new' part referring to the roof that's now identical to the one on the Valtra G series (profi 3/2022). Also in residence are the Fendt One controls, with the firm's latest multi-function armrest and big joystick bringing the 200 on a par with its more powerful siblings. Gone are the days of the user-friendly ELC control panel, which was highly praised in our last test, and the option of ordering mechanical spools. Looking at it from another perspective, this means that all mechanical sticks and levers that could transmit noise and vibrations into the cab have been eliminated, resulting in a low 73.5dB(A) result. And, as mentioned, timer and flow control are now standard features for every single spool. As far as the linkage control is concerned, once you have fathomed

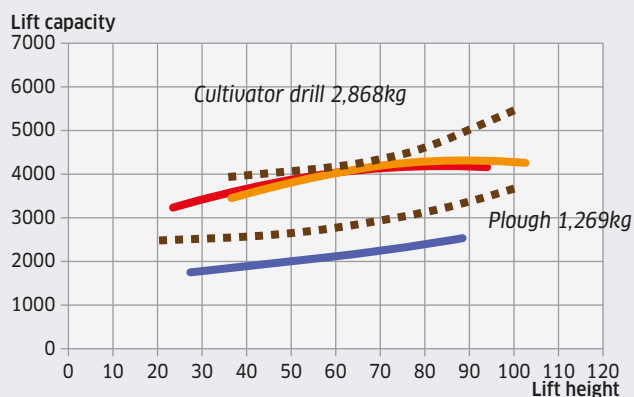
the system, it gives you many more options: for instance, setting two working depths.

... with endless opportunities

There is also a new 'dashboard' – a 10-inch display integrated into the reach- and rake-adjustable steering column with a brilliant screen and logical layout. The only annoyance is that the dash sits behind the steering wheel so it's somewhat concealed, and it's also not a touch screen. However, those who order the Profi level of specification get an additional 12-inch touch terminal on the end of the 211's armrest. GPS navigation can be shown on the dash display.

With six configurable tiles, the header and footer as well as the hot-key icons for direct access to the phone, radio, air-con etc., some users who drove the old 200 may be initially

LIFT POWER AND LIFT REQUIREMENT



Fendt 211 Vario: The lift power is not sufficient to hoist a 2.9t cultivator drill. However, a near 1.3t plough isn't an issue.

- Long lift arms: continuous 3,492daN, 70.5cm lift range
- Short lift arms: continuous 3,726daN, 66.0cm lift range
- Front linkage: continuous 1,890daN; 61.10cm lift range

overwhelmed by the options presented to them. The same applies to the joystick with more than 15 buttons, scroll wheel, etc. This means that even Fendt's smallest models now fall into the 'high-tech' category, although the 'offboard' Fendt One options such as the possibility to plan settings/orders from the office computer or tablet to the tractor are still very limited ... for now.

Basic seat, brilliant joystick

Even though Fendt says that the driver's seat has been improved, the short and limited adjustment on the chair doesn't really marry up with the price tag.

The optional 3L secondary joystick, which in addition to controlling a loader and direction of travel, can now be assigned ISObus functions. And continuing its loader-friendly credentials there is a large glass roof panel in the new cab. Thankfully air-conditioning is standard on UK spec tractors, the Germans charging €200 for this. Also available today, although only as a £2,474 cost option and perhaps not relevant to everyone, is Fendt's TI Headland feature, which can be programmed to do a full headland sequence including the turn using the automatic steering.

Higher payload, higher price

For some potential buyers the height of the new 211 Vario (whether with or without cab suspension) could be a cause to knock it off the shopping list: at 264cm (on 540/65 R34 rear tyres), it's 9cm taller (increasing to +14cm with the GPS antenna in place) than its 200 predecessor.



The back-end of the 211 Vario boasts plenty of hydraulic power, but it does lack some lift arm muscle.

Fendt also increased the wheelbase by 5cm, but this hasn't impacted the tractor's agility – 8.75m with the 440/65 R24 tyres on a 173 track width – a superb result. With an unladen weight of 4,720kg for the test machine, and the increased permissible gross weight of 7.5t, the latest range has a payload of nearly 2.8t – a commendable stat for a tractor in this power bracket.

Lastly the prices. The entry-level 211 starts at £110,469, with 'Profi Setting 2' adding £7,729; this includes the 3L joystick, with another £2,792 needed for the TouchTerminal. The optional front linkage is £3,310 and front axle suspension £5,597. This pushes the total figure for our test tractor to £123,493

Summary

Even Fendt's smallest tractor range is now a high-tech machine. The previous 200 model

already had a stepless transmission, but the newcomer adds electronic spool valves and of course the firm's Fendt One control system complete with the larger joystick as standard – good news if you're after a well kitted-out tractor. The only detail that needs sorting is properly integrated ISObus wiring.

Those wanting a simpler tractor may find the Power specification a bit over the top for a yard machine. Apart from that, the tractor is almost 10cm taller than the old S model and there is no real improvement in the lift power. Comfort, output and fuel economy, though, are beyond reproach.

As ever, there is the Fendt premium price tag. At almost £123,493 for the test spec tractor (without a front loader, auto-steer or the like) it is an eye-watering figure for a tractor that peaks at 125hp.

Hubert Wilmer

FURTHER DETAILS FROM OUR FIELD TEST

This is not a summary of overall assessments but a list of positive and less positive details.

POSITIVE

- ➕ Rear wiper motor not in the field of vision
- ➕ Toolbox on the steps
- ➕ Suspension control for the front linkage
- ➕ Optional ground speed pto



The cab has good suspension.



Each lift rod has a useful scale.



Linkage, a spool and the pto can all be operated from the ground.

NEGATIVE

- ➖ The grip handle on the handbrake lever is too short
- ➖ Folding the passenger seat is awkward
- ➖ Horizontal oil filters are no longer up to date



Orange peel skin: The paintwork could be improved.



The ISO bus wiring is routed separately.



Don't spill it! The AdBlue filler is on the bonnet.



Width: 217cm; Length: 451cm; Height: 264cm

FENDT 211 VARIO

Technical data

ENGINE: 77kW/105hp (to ECE-R 120) Rated output at 2,100rpm; water-cooled three-cylinder AgcoPower 33LFTN with 3.3-litre engine, Stage V with DPF, DOC and SCR catalyst; 125-litre fuel tank, 20-litre AdBlue tank

TRANSMISSION: Constantly variable transmission ML 75 with a travel range of 0.02-40 km/hr, 25km/hr in reverse, powershuttle, TMS control, cruise control

BRAKES: Wet annular piston brake on rear wheels, hydraulically actuated, all-wheel drive, mechanical handbrake, air brakes

ELECTRICS: 12V, 100Ah battery; 120amps alternator; starter 3.2kW/4.4hp

LINKAGE: Cat. II; ELC with lower linkage control, suspension, automatic stabilisers, front linkage optional

HYDRAULICS: Standard tandem gear pump with 42 + 33l/min, swash plate pump with 71 + 33l/min in test specification, 200 bar, up to four spools with timed and flow control; separate oil circuit, 34 litres of available oil

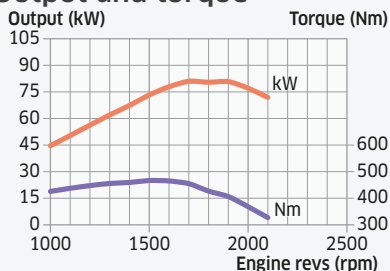
PTO: 540/540E/1,000 (optional ground speed pto), 1 3/8in, 6 splines, electrohydraulic engagement, factory-installed front pto

AXLES AND RUNNING GEAR: Planetary axle with multi-plate differential locks, electro-hydraulic engagement as for front axle; tested tyres 440/65 R 24 at front, 540/65 R 34 at rear

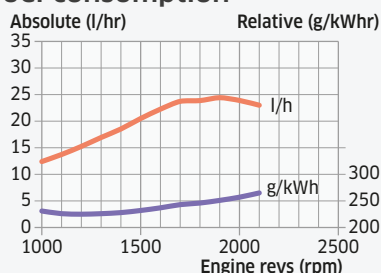
SERVICE AND MAINTENANCE: 10 litres of engine oil (oil change intervals: 500hrs), 30 litres of transmission oil (2,000hrs), 39 litres of hydraulic oil (1,000hrs), 12.5-litre cooling system

PRICES: Base spec £110,469 (pricing excl. VAT); test specification "Profi+" £119,480 with front linkage (£3,310), front-axle suspension (£5,597) etc.

Output and torque



Fuel consumption



Results from test station

PTO OUTPUT
Maximum at 1,700rpm 81.0kW
At rated speed 71.9kW

FUEL CONSUMPTION
At max output 243+22.6g/kWh
Rated speed 265+31.1g/kWh
Absolute max/at rated speed 23.7/23.0l/hr

TORQUE
Max 467Nm (1,500rpm)
Torque rise/speed drop 42.7/29%
Start-off torque 125%

TRANSMISSION
No. of gears in 4-12km/hr range Stepless

REAR LIFT CAPACITIES (90% max oil press, corr.)
Bottom/middle/top 3,492/4,338/4,491daN
Lift range under load 70.5cm (23.4 to 93.9cm)

FRONT LIFT CAPACITIES (90% max oil press, corr.)
Bottom/middle/top 1,890/2,262/2,736daN
Lift range under load 61.1cm (27.3 to 88.4cm)

HYDRAULIC OUTPUT
Operating pressure 216 bar
Maximum flow 101.6l/min
Output 29.3kW (97.8l/min, 180 bar)

DRAWBAR POWER
Max 71.7kW at 1,700rpm 276g/kWh
At rated speed 61.0kW 300g/kWh

NOISE LEVEL (under load at driver's ear)
Cab closed 73.5dB(A)

BRAKING
Maximum mean deceleration 4.5m/s²
Pedal force 35.2daN

TURNING CIRCLE
4WD disengaged 8.75m

TEST WEIGHT
Front/rear axle 1,850/2,870kg
GVWR 4,720/7,500kg
Max GVW Axle load (front/rear) 3,400/5,300kg
Payload 2,780kg
Power-weight ratio 56kg/kW

DIMENSIONS
Wheelbase 237cm
Track width front/rear 173/166cm
Ground clearance 43.5cm

Fuel consumption at typical performance

APPLICATION	Output	Speed rating	g/kWh	l/hr
Standard pto shaft 540	100%	1,906	251	24.4
Economy speed pto 540E	100%	1,455	232	20.5
Standard speed pto 1,000	100%	1,890	250	24.3
Economy pto 1,000E	100%	-	-	-
Engine in top speed range	80%	MAX	269	18.7
High output	80%	90%	255	17.7
Transport work	40%	90%	296	10.3
Low output, 1/2 speed	40%	60%	241	8.4
High output, 1/2 speed	60%	60%	227	11.8

Test assessment

ENGINE
Performance characteristics
Fuel consumption
Pto output/drawbar power

Good performance characteristics, good fuel economy, especially in transport work; drawbar power/pto output better than on the predecessor

TRANSMISSION
Gearbox ratios/functions
Shifting
Clutch, throttle
Pto

Continuously variable transmission with very good engine-gearbox control; Fendt One operator interface further perfected; three pto speeds

CHASSIS
Steering
Four-wheel drive and diff lock
Hand- and footbrake
Front axle-/cab suspension
Weight and payload

Very good steering and small turning circle, reasonable kerb weight, average payload, good brakes

LINKAGE/HYDRAULICS
Lift power and lift height
Operation
Hydraulic output
Spool valves
Hydraulic couplers

Lift power below average, hydraulic output above average; operation and spools exemplary, but max of four spools

CAB
Space and comfort
Visibility
Heating/ventilation
Noise level
Electrics
Build quality
Maintenance

Space, comfort and visibility are ok, noise level is average, very good armrest and terminals

ABILITY					
Basic standards					
Average standards					
High standards					
Field work					
Grassland work					
Transport work					
Loader work					
ON-FARM PRICE	LOW			HIGH	
£80,000 with loader					

Grading:
 very good, good, average,
 below average, poor
Individual marks are merely excerpts from our assessments and do not necessarily result in a mathematically conclusive overall mark.

Three tractors in comparison

This is a comparison of three similar hp tractors that have been tested by profi in past magazines



Tractor Test report in issue		Fendt 211 S Vario profi 8/2022	Lindner Lintrac 90 profi 4/2019	Case IH Luxxum 120 profi 1/2018
Engine	Rated output	77kW/105hp (ECE-R 120)	75kW/102hp (97/68 EC)	86kW/117hp (ECE-R 120)
No. of cylinders/capacity		3/3.3l/V	4/3.4l/IIIB (Tier 4 interim)	4/3.4l/IV (Tier 4 Final)
Max pto output		81.0kW (1,700rpm)	65.7kW (2,000rpm)/no boost	80.6kW (1,900rpm)/no boost
At rated engine speed		71.9kW (2,100rpm)	62.6kW (2,200rpm)	78.2kW (2,200rpm)
Manufacturer/model		AgcoPower/33LFTN	Perkins/854E-E34TA	FiatPowerTrain/F5C
Fuel and AdBlue consumption				
Specific at max power		243 + 22.6g/kWh	259 + 0.0g/kWh	236 + 9.1g/kWh
Specific at rated speed		265 + 31.1g/kWh	274 + 0.0g/kWh	253 + 10.0g/kWh
Absolute at max power		23.7l/hr	20.3l/hr	22.7l/hr
Average Powermix + AdBlue rates		285 + 26.8g/kWh	340 + 0.0g/kWh	273 + 10.9g/kWh
Max torque		467Nm (1,500rpm)	371Nm (1,400rpm)/no boost	461Nm (1,500rpm)
Torque rise ...		43%	36%	52%
... as speed drops by		29%	36%	35%
Fuel/AdBlue tank capacity		125/20 litres	80/0 litres	150 + 14 litres
Transmission	No. of gears	Stepless	Stepless	32/32
Powershift steps		Stepless	Stepless	Four steps
Gear shifts		Stepless	Stepless	Four
No. of ranges		Stepless	Stepless	Two ranges
Pto speeds		540/540E/1,000	430/540/540E/1,000	540/540E/1,000/1,000E
No. of gears in 4-12km/hr range		Stepless	Stepless	13
Rear linkage	Control system	ELC with top link control	ELC with top link control	ELC with draft link control
Lift force bottom/middle/top		3,492/4,338/4,491daN	3,501/3,771/3,519daN	4,176/4,662/4,851daN
Lift range		70.5cm	62.8cm	61.7cm
Hydraulics	Operating pressure	216 bar	197 bar	200 bar
Max oil flow		101.6l/min	89.1l/min	113.2l/min
Max hydraulic output		29.3kW	25.0kW	31.0kW
Oil reserve		34 litres	25 litres	36 litres
Drawbar power	Max	71.7kW	53.9kW	66.2kW
At fuel consumption		276g/kWh	315g/kWh	274g/kWh
Noise level	Cab closed	73.5dB(A)	69.9dB(A)	74.4dB(A)
Brakes	Max mean deceleration	4.5m/s ²	4.6m/s ²	5.0m/s ²
Pedal force		35.2daN	30.0daN	46.5daN
Turning circle	4WD disengaged	8.75m	7.85/8.15m (with 4-wheel steer)	10.70m
Test weight		4,720kg	4,390kg	5,210kg
Front axle		1,850kg (39%)	1,950kg (44%)	2,260kg (43%)
Rear axle		2,870kg (61%)	2,440kg (56%)	2,950kg (57%)
Permissible GVWR		7,500kg	6,400/6,800kg	8,000kg
Payload		2,780kg	2,010/2,410kg	2,790kg
Power-weight ratio		56kg/kW	59kg/kW	61kg/kW
List price (excl VAT): (Manufacturer information)		£110,469 (as at June 2022)	€72,000 (as at February 2019)	£61,701 (as at November 2017)