

Same Virtus 120

Tractor Test No. 1987/13

APPLICANT

Same Deutz-Fahr Schweiz AG
Pfattstrasse 5
9536 Schwarzenbach

TRACTOR

Manufacturer: Same Deutz-Fahr GmbH
Model: Same Virtus 120
Approval certificate no.: 4SA2 71

SUSPENSION AND BRAKES

Central four-wheel drive with powershift transmission
Wet disc brake on front and rear axle
Automatic all-wheel activation
Spring-loaded parking brake

DRIVER PROTECTION

Integrated safety cab

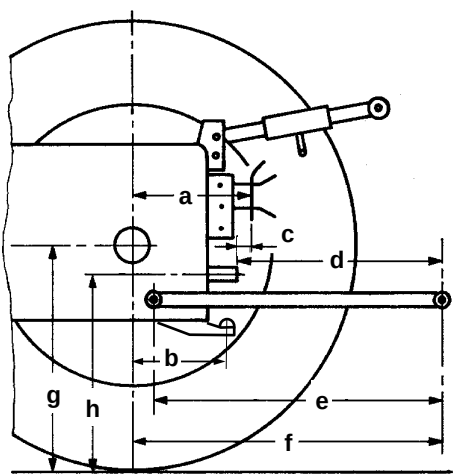


TYRES

	Track width:
front: 540/65 R24	1860 mm
rear: 600/65 R34	1790 mm

DIMENSIONS

Length:	— mm
With front mounting:	4850 mm
Front overhang from steering wheel:	2750 mm
Width:	2500 mm
Height:	2720 mm
Wheelbase:	2440 mm
Ground clearance:	400 mm
Turning diameter:	11,0 m (without four-wheel drive) 11,6 m (with four-wheel drive)



Rear

a: 630 mm
b: — mm
c: 160 mm
d: 610 mm
e: 860 mm
f: 1080 mm
g: 750 mm
h: 750 mm

Front

d: 520 mm
e: 720 mm
f: 1210 mm
g: 595 mm
h: 730 mm

TEST EQUIPMENT

- front 3-Point Hitch and PTO
- air-conditioning compressor

WEIGHT

in test equipment

Front:	2220 kg	43 %
Rear:	2970 kg	
Total:	5190 kg	

Permissible front axle load:	3500 kg
Permissible rear axle load:	5600 kg
Permissible total weight:	8000 kg

Payload:	2810 kg
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Towed weight, braked:	31 500 kg
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CAPACITIES

Fuel tank	168 l	
AdBlue tank	— l	
Engine oil	11 l	(change interval 500 h)
Gearbox and Hydraulic oil	52 l	(change interval 1000 h)

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ENGINE (Manufacturer's data)

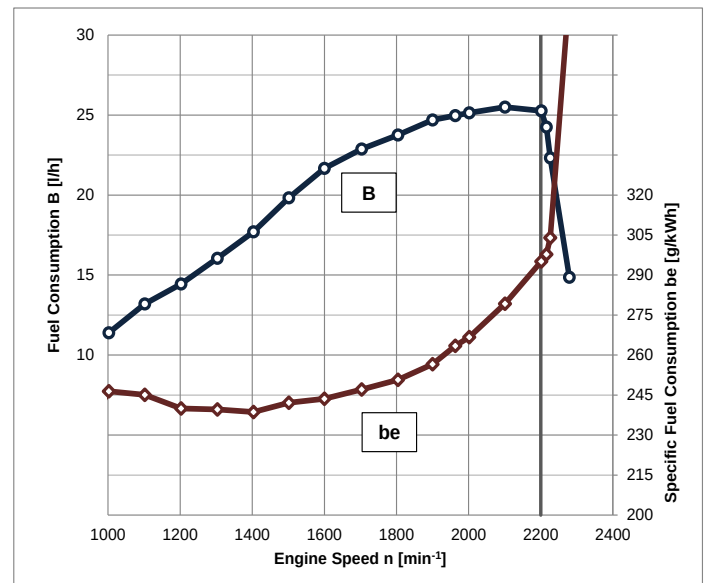
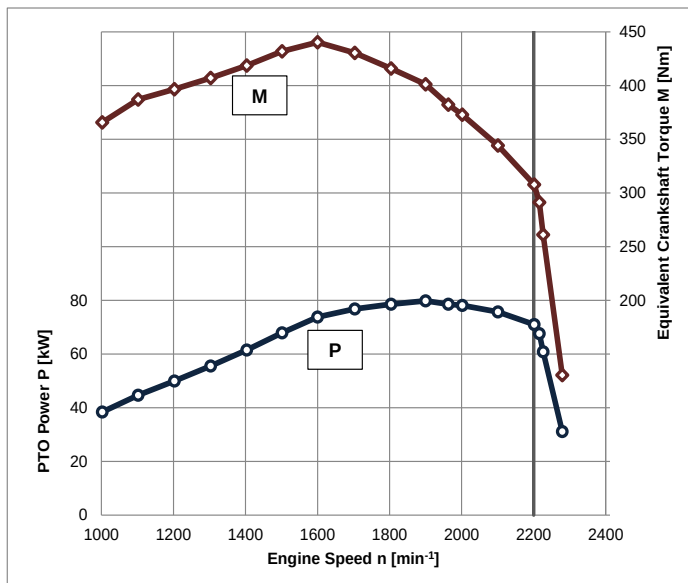
Manufacturer: Deutz
Model: TCD3.6L4
Injection: Diesel direct injection
CommonRail
Supercharging: Exhaust gas turbocharger and air-to-air intercooling
External cooled exhaust gas recirculation
Exhaust emission treatment: DOC

Bore/stroke: 98 / 120 mm
Cylinders / capacity: 4 / 3621 cm³
Cooling: Water, viscous fan

Rated power: 85 kW (116 PS) EG 97/68

Rated engine speed: 2200 min⁻¹
Exhaust stage: IIIB

POWER TAKE-OFF MEASUREMENT



Measurement conditions:

- air temperature 21 °C
- relative atmospheric humidity 39 %
- atmospheric pressure 962 mbar



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Full load test values

	Speed [min ⁻¹]		Power		Fuel consumption		AdBlue consumption	
	Engine	PTO	kW	HP	Specific [g/kWh]	Absolute [l/h]	Specific [g/kWh]	Absolute [l/h]
Rated power	2200	1122	71,0	96,5	295	25,3		
Maximum power	1900	969	80,6	109,6	254	24,7		
Normal speed PTO	1960	1000	78,6	106,9	264	25,0		

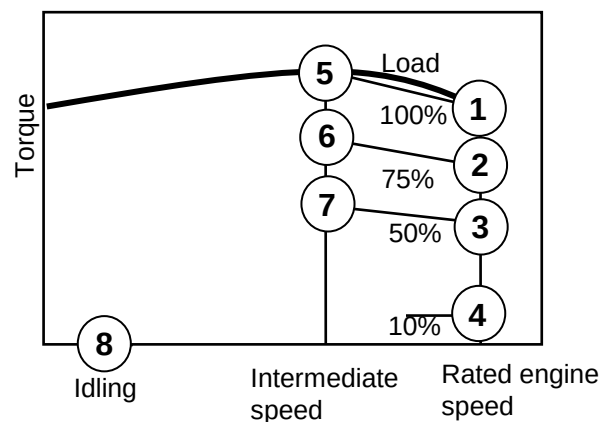
Max. torque: 440 Nm at 1600 min⁻¹
 Torque increase: 43 % at 27 % speed drop
 Starting torque: 119 %
 Idling speed: 847 min⁻¹
 Cutoff speed: 2326 min⁻¹

Partial load values

Fuel consumption with 42,5 % partial load at normal PTO speed

PTO shaft Fuel
 1000 min⁻¹: 309 g/kWh, 12,4 l/h
 1000E min⁻¹: 272 g/kWh, 10,9 l/h

In characteristic diagram



Measuring point	Fuel consumption		AdBlue consumption	
	Specific [g/kWh]	Absolute [l/h]	Specific [g/kWh]	Absolute [l/h]
1	295	25,3		
2	314	20,2		
3	348	14,9		
4	873	7,4		
5	244	21,7		
6	247	16,5		
7	260	11,6		
8	-	1,3		

EMISSIONS

Exhaust gas emissions

▪ Black smoke 0,15 SZ (BOSCH)

Emissions according to ISO 8178-4, C1

▪ Hydrocarbons HC 0,02 g/kWh*
 ▪ Nitrogen oxides NOx 3,26 g/kWh*
 ▪ Carbon monoxide CO 0,02 g/kWh*
 ▪ Particulate number Pn 8,3E13 #/kWh*
 ▪ Cycle consumption Fuel 300 g/kWh* (14,9 l/h)

Noise level

▪ Noise level at driver's ear: 73,0 dB(A)
 ▪ Passing noise: 82,0 dB(A)

* With reference to PTO power



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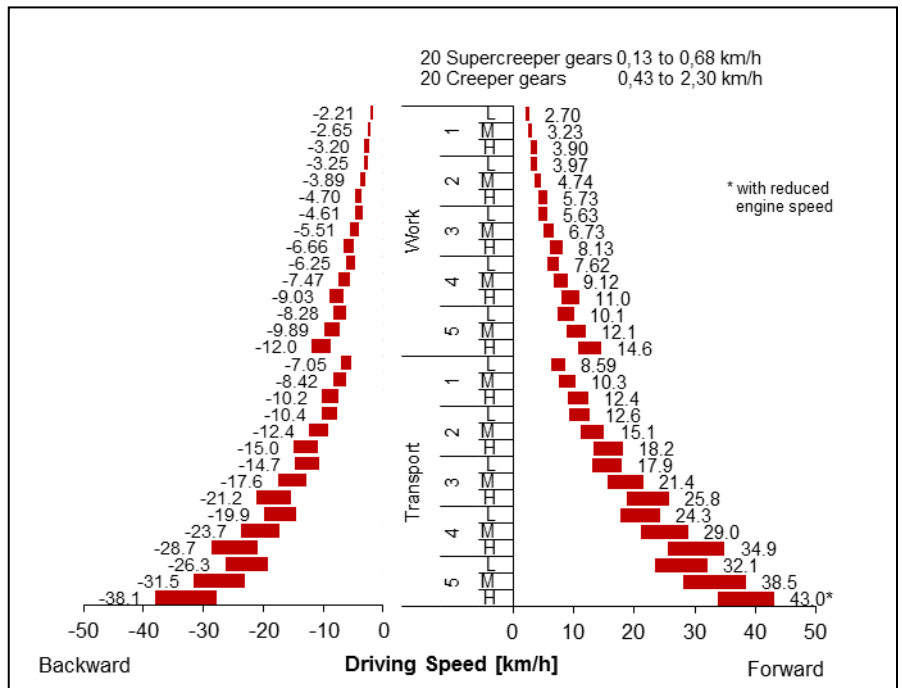
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TRANSMISSION

Travel gear

- 60 forward and 60 reverse gears
- Wet multi-disc clutch
- 4 groups
- 5 gears
- 3 powershift stages
- Powershift reverse gearbox

Driving speed at rated engine speed
(tyre radius $r = 775$ mm)



PTO transmission

Rear

- Wet multi-plate clutch, electro-hydraulic engagement

Front

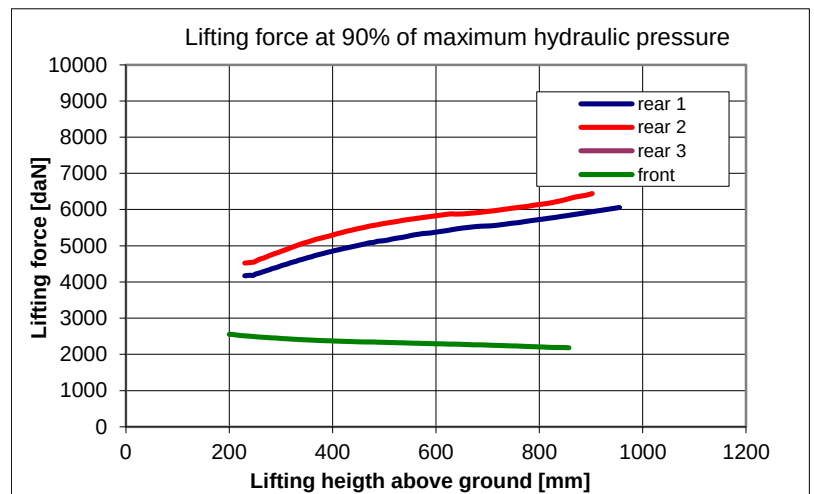
- Wet multi-plate clutch, electro-hydraulic engagement

	Rear						Front
PTO shaft	430	540	540E	1000	1000 E	Ground speed	1000
Engine speed	-	1973	1654	1960	1643	-	1950

HYDRAULICS

Remote hydraulics

- max. oil pressure: 195,3 bar
- max. flow rate : 56,3 l/min
- flow rate: 53,4 l/min at 166,0 bar
- max. hydraulic power: 15,3 kW (52,6 l/min and 174,2 bar)
- max. flow rate through a single coupler: 56,3 l/min
- max. quantity of oil taken: 25 l



3-Point Hitch

Rear

3-Point Hitch, category: II
Control hydraulics via lower link, (EHR)

Front

3-Point Hitch, category: II

		Lifting force at 90% pressure		
Measurement		Lifting movement	Continuous	Maximum
Rear	Lower link, short	725 mm	4170 daN	6055 daN
	Lower link, medium	672 mm	4520 daN	6445 daN
	Lower link, long			
Front		657 mm (200 mm to 857 mm)	2180 daN	2560 daN

Explanatory notes on tractor test at:
www.traktorentest.ch



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