

**Report on test in accordance with
OECD STANDARD CODE I for the Official
Testing of Agricultural Tractor Performance**



Full Code

OECD No.

1378



**Agricultural Tractor
VALMET 8000 (4WD)**

Manufacturer

**VALMET TRACTORS INC.
SUOLAHTI, FINLAND**

This is a report on a tractor test in accordance with OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance (C(87)53(Final), Code I). It does not contain an evaluation of the tractor on practical work.

Duration of tests: April till June 1992

DLG-Testing Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-6114 Groß-Umstadt

This report has been approved by the OECD Co-Ordinating Centre (CEMAGREF, France) as being in accordance with the OECD STANDARD CODE.

Date of approval: 24th August 1992

OECD No. 1378
Full Code

In this report all performance characteristics are given corresponding to the International System of Units.

The reference to the former used Technical System of Units is given by the following relations:

Forces	1 kN	=	1000 N	=	102 kp
Powers			1 kW	=	1,36 PS
Pressures	1 MPa	=	10 bar	=	10,2 kp/cm ²
	100 kPa	=	1000 mbar	=	750,10 mm Hg

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VALMET 8000

Test No. 92-117

Tractor manufacturer: VALMET TRACTORS INC.,
SF 44200 SUOLAHTI

Location of tractor assembly: SUOLAHTI

Submitted for test by: Manufacturer

Selected by: Manufacturer with agreement by DLG

Place of running in: Valmet Tourula and Groß-Umstadt

Duration of running in: 100 hours

SPECIFICATION OF TRACTOR

Tractor

Make: VALMET

Trade name: 8000

Type: Wheel tractor, unit construction, four wheel driven

Serial no.: 655 932

1st serial no.: 655 932

Engine

Make: VALMET

Model: 620 D

Type: Watercooled 4-stroke Diesel-engine, naturally aspirated, direct injection

Serial no.: A 1995

Cylinders: 6, in line, bore 108 mm, stroke 120 mm, displacement 6593 cm³; compression ratio 16,5:1; replaceable, wet cylinder liners

Valves: Overhead

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- Fuel system:** BOSCH fuel supply pump;
BOSCH in-line injection pump
PES 6A 95D 320 RS 2806,
serial no.: 400 876 386
manufacturer's production setting of injection
pump: $50 \pm 2 \text{ mm}^3/\text{stroke}$ at full load and rated
speed, injection timing 23° before TDC;
STANADYNE multihole injection nozzles
NB 770 620, injection pressure 23 MPa; fuel
filter with water separator, replaceable
cartridge; capacity of fuel tank 158 dm^3
- Governor:** BOSCH centrifugal variable speed governor model
RSV 500 1100 AOC 2178-9R, governed range of
engine speed from 750 to 2360 rev/min,
rated engine speed 2225 rev/min
- Air cleaner:** VALMET
dry paper element filter, with cyclone
precleaner, replaceable cartridge with safety
element, maintenance indicator lamp;
air intake above engine hood
- Lubrication system:** Forced-feed by lubricating gear pump;
VALMET oil filter with replaceable cartridge in
full flow
- Cooling system:** Dual-circuit water cooling with impeller
pump, governed by thermostat,
overpressure relief valve set to $50 \pm 10 \text{ kPa}$;
fan with 6 blades, 483 mm dia;
water capacity 16 dm^3
- Exhaust system:** EBERSPÄCHER
absorption type silencer below engine hood,
200 mm dia, 250 mm long, vertical pipe,
mouth showing upwards, 2860 mm above ground
- Starting system:** Electrical;
LUCAS solenoid pre-engaged drive starter
motor 12V, 3 kW;
cold starting aid: flame glowplug in air intake
tube, automatic fuel excess and injection delay;
safety device: clutch pedal depressed
- Electrical system:** 12 Volt, negative earth;
MAGNETI MARELLI 3-phase alternator A 127-65,
870W;
1 lead acid battery, 158 Ah at 20 hours rating
- Running-time meter:** Electronic, counts real operating hours when
engine is running

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Transmission to wheels

- Clutch:** F&S
dry single disc clutch 330 WGSZX,
disc diameter 330 mm, mechanical operated;
VOITH TURBO 390TD VA,
fluid clutch, only acting on travel drive
- Gear box:** VALMET GL 300
synchronized speed change gear with 4 speeds;
range gear with 2 synchronized ranges (M,H) and
1 collar shifted range (LL),
synchronized forward-reverse shuttle gear;
power shifted range gear with 2 speeds (Hi, Lo),
electro-hydraulically shifted by switch on speed
gear lever;
totally 24 forward and 24 reverse speeds,
3 levers, 1 switch;
pressurized lubrication, oil cooler in front of
water cooler
- Rear axle and
final drives:** VALMET
bevel gear drive;
wet multiplate differential lock, electro-
hydraulically actuated by switch;
planetary final drives
- Front axle and
final drives:** SIGE
CS 17 SD 01;
wet multiplate clutch, central shaft, electro-
hydraulically actuated by switch on range gear
lever, bevel gear drive, bevel gear differential
with automatic limited slip type lock;
planetary final drives

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Total ratios and speeds

Range		Gear	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed at rated engine speed 2225 rev/min km/h *)	
			Forward	Reverse	Forward	Reverse
LL	Lo	1	778,22	759,39	0,84	0,86
		2	545,86	532,65	1,20	1,23
		3	388,45	379,05	1,68	1,72
		4	274,77	268,12	2,38	2,44
	Hi	1	619,58	604,59	1,05	1,08
		2	434,59	424,07	1,50	1,54
		3	309,27	301,78	2,11	2,17
		4	218,76	213,46	2,99	3,06
M	Lo	1	184,01	179,56	3,55	3,64
		2	129,07	125,95	5,06	5,19
		3	91,85	89,63	7,12	7,29
		4	64,96	63,40	10,06	10,31
	Hi	1	146,50	142,96	4,46	4,57
		2	102,76	100,27	6,36	6,52
		3	73,73	71,36	8,94	9,16
		4	51,73	50,47	12,63	12,95
H	Lo	1	58,98	57,55	11,08	11,36
		2	41,37	40,36	15,80	16,19
		3	29,44	28,72	22,20	22,75
		4	20,82	20,31	31,39	32,16
	Hi	1	46,95	45,82	13,92	14,26
		2	32,93	32,13	19,84	20,34
		3	23,44	22,87	27,88	28,58
		4	16,58	16,18	39,42	40,40

*) calculated with the radius index (ISO 4251/1-1984) 795 mm
and 2,0 % slip of fluid clutch

Number of revolutions of front wheels for one revolution of rear
wheels: 1,38

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Power take-off

Main p.t.o.:

Independent;
 wet multiplate clutch, electro-hydraulically
 operated by switch on p.t.o. speed selector
 lever;
 1 shaft at tractor's rear,
 p.t.o. speed preselectable by lever;
 35 mm dia, 6 splines, ISO 500-1979 type 1;
 745 mm above ground, in tractor's median plane,
 420 mm behind rear wheel centre;
 sense of rotation clockwise (viewed from
 tractor's rear)

p.t.o. type	p.t.o. speed rev/min	engine speed rev/min	p.t.o. transmission ratio engine speed/ p.t.o. speed	power restriction kW
1000	1000 1070	2080 2225	2,0800	-
540	540 641	1874 2225	3,4706	-

Front p.t.o.: Optionally available, not fitted

Proportional to

ground speed p.t.o.: Driven by rear axle drive,
 sense of rotation clockwise at forward movement,
 travel distance per
 p.t.o. revolution: 0,1608 m
 number of p.t.o. revolutions per
 rear wheel revolution: 31,06

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Power lift

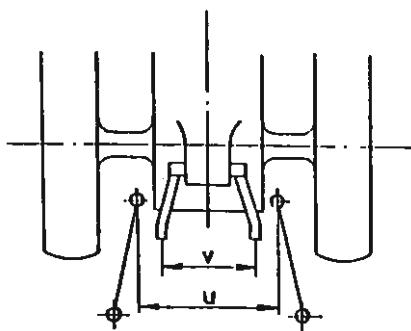
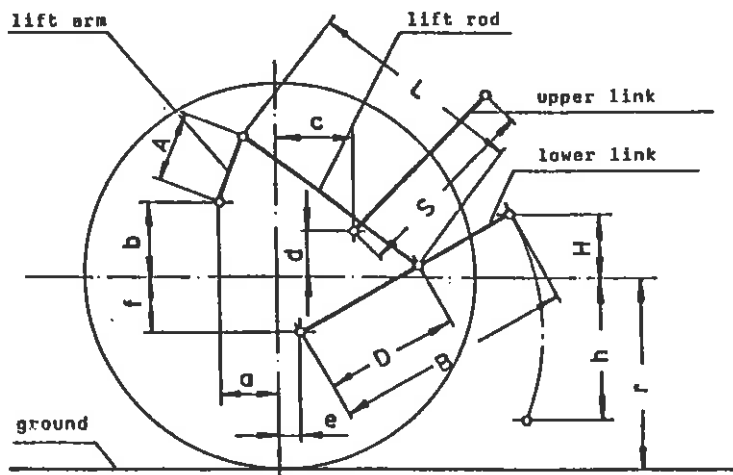
- Hydraulic system:** Open centre system,
2 gear type pumps, gear driven by engine;
max. working pressure 19,0-0,5 MPa,
max. delivery 70 l/min;
oil filter in full flow
- Power lift:** Electronic-hydraulic power lift,
BOSCH EHR, disintegrated construction,
draft-, position- and intermixable control,
floating position, lowering throttle, lower link
sensing; electronic lifting height limitation;
- 2 single acting cylinders,
bore 80 mm dia, stroke 185 mm,
cylinder safety valve set to 20 MPa
- Remote circuit:** 2 double acting additional valves, 4 couplings
at rear of tractor and 1 low-pressure return
line;
oil reservoir in common with gear box, maximum
volume of oil available to external cylinders
15 dm³ resp. 30 dm³ with increased oil level

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Three-point linkage
at rear:

Category 2 acc. to ISO 730/1-1990,
extendable lower links fitted to tested tractor,
optionally available WALTERSCHEID quick couplers



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Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p. 23)

Rear tyres	*) radius index	(r)	795
Front tyres	*) radius index	(r')	590
Length of lift arms		(A)	350
Length of lower links		(B)	900
Distance of lift arm pivot points from rear axle centre	horizontal	(a)	-118
	vertical	(b)	282
Horizontal distance between lower link pivot points		(u)	610
Horizontal distance between lift arm end points		(v)	597
Length of upper link		(S)	595 to 795, <u>690</u>
Distance of upper link pivot point from rear axle centre	horizontal	(c)	<u>422</u> , 432, 442
	vertical	(d)	<u>163</u> , 238, 313
Distance of lower link pivot point from rear axle centre	horizontal	(e)	190
	vertical	(f)	255
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	<u>430</u> , 390, 350
Length of lift rods		(L)	570 to 720, <u>665</u>

Height of lower link hitch points relative to rear wheels' centre line (situated 795 mm above ground), these data are valid for unloaded power lift:

Length of lift rods	(L)	570	<u>665</u>	720
Linkage distance of lift rods	(D)	430	<u>430</u>	430
Lowest position	(h)	405	595	795
Highest position	(H)	205	105	-45
Transport position	(H')	205	105	-45

*) Assuming r resp. r' = tyre dynamic radius index of ISO 4251/1-1984

Pull attachment

Swinging drawbar:	Shiftable in longitudinal direction,	
	height above ground	410 mm
	pivot point behind rear wheel axis	254 mm
	hitch point	
	below rear wheel axis	385 mm
	behind rear wheel axis	670, 820 mm
	below p.t.o. shaft end	335 mm
	behind p.t.o. shaft end	250, 400 mm
	with fully retracted swinging drawbar:	
	hitch point laterally swingable	
Trailer hitch:	to both sides about	220 mm each
	max. vertical permissible load	40 kN
	diameter of pin hole	36 mm
	ROCKINGER A7835/00, non automatical,	
	one-hand quick adjustment for height;	
	diameter of hitch pin	30 mm
	hitch point	
	above ground 590, 670, 780, 820, 870, 920 mm	
	below rear wheel axis	205, 125, 15 mm
	above rear wheel axis	25, 75, 125 mm
Holed drawbar:	below p.t.o. shaft end	35, 75, 125, 175 mm
	above p.t.o. shaft end	155, 75 mm
	behind p.t.o. shaft end	220 mm
	max. vertical permissible load	16 kN
	Optionally available, not fitted	
Towing hitch:	At front of tractor,	
	height above ground	850 mm
Trailer hitch hook:	Combined with swinging drawbar,	
	to be raised by power lift	
	hitch hook diameter	47 mm
	height above ground	500 mm
	distance of hitch point from	
	rear wheel axis, horizontally	490 mm
	p.t.o. shaft end	
	vertically	245 mm
	horizontally	70 mm
	max. vertical permissible load	53 kN



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Steering

DANFOSS ORBITROL A80
hydrostatic steering, fed by gear type pump from
oil of gearbox, working pressure 14,0+1,0 MPa,
1 integrated steering cylinder of symmetrical
design, 65 mm bore, 32 mm steering rod,
260 mm stroke, acting on steering levers

Brakes

Service brake:

VALMET
pedal operated muscle power brake with hydraulic
transmission, own oil reservoir,
acting on rear axle shafts,
oil immersed multi-disc brakes with 5 discs per
half shafts, 222 mm dia,
automatic engaging of front wheel drive when
brake is actuated

Parking brake:

Mechanical
coupled to service brake, operated by lever with
ratchet

Steering brake:

Divided pedal of service brake,
for normal use locked together

Wheels

Front:

Driving and steering, 2 pneumatics

Rear:

Driving, 2 pneumatics

Wheelbase:

2558 mm

Track width:

Front adjustable in 7 steps from
1510 to 1870 mm,
rear adjustable in 6 steps from
1520 to 1960 mm,
offset lug type rims at front and at rear

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Possible tyres sizes:

Tyre sizes	
at front	at rear
13.6 - 24	14.9 - 38 16.9 - 34 18.4 - 34
14.9 - 24	18.4 - 34 16.9 - 38
17.5 R 24	620/75 R 30
12.4 - 24 IND	16.9 - 34
13.6 - 24 FOR	18.4 - 34 FOR

Protective structure

VALMET T 888/2

OECD-tested safety cab with integrated safety frame, approval no. CSS 0164/11
cab antivibration mounted on tractor by silent blocks, 2 doors, 2 steps each,
485 and 780 mm above ground,
driver's platform 1095 mm above ground,
side windows, rear window and roof hatch tiltable;
combined heating/ventilation system with cooling-water heat exchanger and 3-step blower incorporated in front part of roof,
air intake at left side of cab roof,
air outlet jets in the roof;
air conditioner optionally available, not fitted

Noise reduction materials:

Roof:	molded, phenolic-resinbonded cotton fleece covered	8 mm
Side walls:		
left side	foam with plastic coating	10 mm
right side	molded plastic cover	4 mm
Floor:	ribbed rubber mat	5 mm
Control panel:	partly foam	20 mm

Driver's seat GRAMMER LS 95 H1/90
upholstered seat with back rest and arm rest at
left hand side; air suspension, shock absorber;
height of unloaded seat above driver's platform
in 2 steps adjustable from 500 mm to 530 mm,
560 mm, longitudinal adjustment 230 mm;
additional longitudinal suspension, lockable

Passenger's seat at left mudguard

Lighting Electrical, 12 Volt, acc. to German legislation

	Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlights	1100	160x100	260
Side lights	1770	80x60	690
Rearlights	1760	80x60	788
Reflectors			
1st pair	1155	175x40	875
2nd pair	770	80 dia	530

TEST CONDITIONSOverall dimensions

	Length mm	Width mm	Height at top of	
			safety cab mm	exhaust silencer mm
unballasted	4740	2170	2720	2860
ballasted	5610	2290	2720	2860

Ground clearance: 355 mm below swinging drawbar

Tractor mass

		without driver kg	with driver kg
Without ballast: Mass	front	2025	2035
	rear	2535	2600
	total	4560	4635
With ballast: Mass	front	3295	3300
	rear	3480	3550
	total	6775	6850

Ballast:

Front ballast	1 frame and 20 front end weights	830 kg
Rear ballast	8 wheel weights water in the tyres	576 kg 809 kg

Tyres and track widths specifications

	Front	Rear
Tyres:	MICHELIN BIB X	MICHELIN BIB X
Dimensions	14.9 R 24	16.9 R 38
Type	radial	radial
Ply rating/load index	-/136	-/141
Speed index	A8	A8
Maximum load	1700 kg	2575 kg
at inflation pressure	160 kPa	160 kPa
at travelling speed	40 km/h	40 km/h
Radius index	590 mm	795 mm
Rims:	W 12x24	DW 14x38
Chosen track width:	1665 mm	1720 mm
Technically permissible axle load:	3300 kg	5000 kg

Technically permissible total weight: 6850 kg

Oils and lubrication

Capacity and change interval:

	Capacity dm ³	Oil change h	Filter change h
Engine	16	200	200
Gear box, hydraulic system, steering, rear axle, rear final drives	43	800	400
front final drives	2x1	800	-
Front axle drive	8	800	-

Specifications:

	Recommended	Used during test
Engine oil used in: Engine Type: Viscosity: Winter Summer Classification:	Engine oil SAE 10W/30 SAE 50W/20 SAE 10W/30 API-CD	NESTE DELTA TRACTOR SUPER SAE 10W/30 API-CD
Transmission oil used in: Transmission, hydraulic system, steering, rear axle Type: Viscosity: Classification: used in: front axle Type: Viscosity: Classification:	Gear oil SAE 10W/30 API GL-4 Hypoid gear oil SAE 80W/90 API GL-5	NESTE DELTA TRACTOR SUPER SAE 10W/30 API GL-4 TEXACO HYPOID SAE 80W/90 API GL-5

Grease: Multi purpose grease
 number of lubrication points 29

Fuel

Type: ARAL-Diesel-fuel in conformity with DIN 51601
Density at 15°C: 0,826 g/cm³ at p.t.o. test
 0,835 g/cm³ at drawbar power test

COMPULSORY TESTS

1. MAIN POWER TAKE OFF PERFORMANCE (1000 rev/min)

Date of tests: 14th April 1992
 Location of tests: DLG-Testing Station Groß-Umstadt
 Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption specific kg/h	specific q/kWh	Specific energy kWh/l
Maximum power						
1.1	At 2-hour test					
66,1	2001	962	19,23	15,89	240	3,44
1.2	At rated speed					
65,0	2225	1070	20,01	16,53	254	3,25
1.3	At standard p.t.o. speed					
65,2	2080	1000	19,29	15,94	244	3,38
1.4	Part loads, the governor hand lever in the position corresponding to maximum power at full load (curve a)					
1.4.1	the torque corresponding to maximum power at rated speed					
65,0	2225	1070	20,01	16,53	254	3,25
1.4.2	85% of the torque obtained in 1.4.1					
56,0	2254	1083	17,83	14,73	263	3,14
1.4.3	75% of the torque defined in 1.4.2					
42,7	2291	1101	14,74	12,18	285	2,90
1.4.4	50% of the torque defined in 1.4.2					
28,8	2318	1114	11,85	9,79	340	2,43
1.4.5	25% of the torque defined in 1.4.2					
14,6	2346	1128	9,01	7,44	509	1,62
1.4.6	unloaded					
-	2356	1133	6,50	5,37	-	-

Power kW	Engine rev/min	Speed	P.t.o. rev/min	Fuel consumption		specific g/kWh	Specific energy kWh/l
		hourly l/h		kg/h			
1.5 Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)							
1.5.1 the torque corresponding to maximum power							
65,2	2080	1000	19,29	15,94	244	3,38	
1.5.2 85% of the torque obtained in 1.5.1							
56,6	2123	1021	17,35	14,33	253	3,26	
1.5.3 75% of the torque defined in 1.5.2							
43,1	2156	1036	14,15	11,69	271	3,04	
1.5.4 50% of the torque defined in 1.5.2							
29,1	2185	1051	11,24	9,29	319	2,59	
1.5.5 25% of the torque defined in 1.5.2							
14,6	2198	1057	8,43	6,96	475	1,74	
1.5.6 unloaded							
-	2225	1070	5,84	4,82	-	-	

No load maximum engine speed: 2356 rev/min

Equivalent flywheel torque at rated engine speed: 279 Nm

Equivalent flywheel torque at 2-hour test: 315 Nm

Maximum equivalent flywheel torque: 366 Nm at 1499 rev/min of the engine

Mean atmospheric conditions

temperature	20 °C
pressure	100 kPa
rel. humidity	32 %

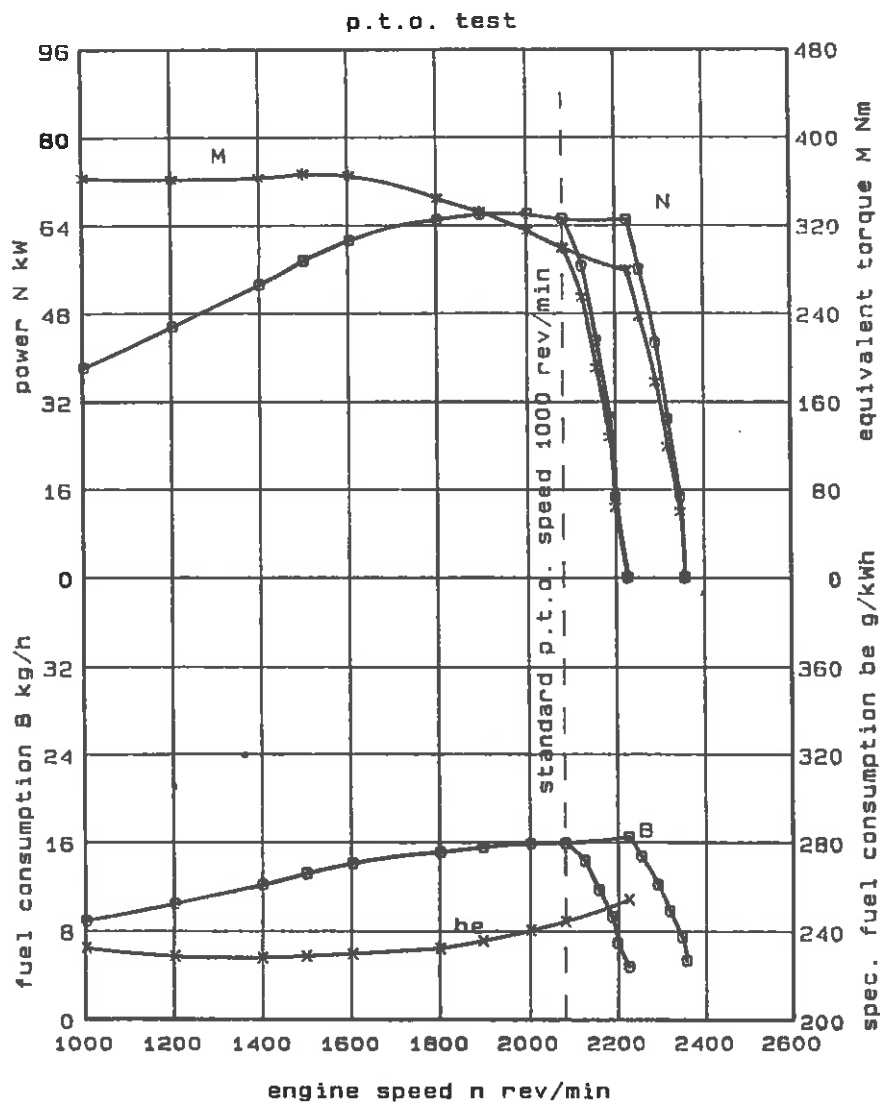
Maximum temperatures

coolant	82 °C
oil	81 °C
fuel	25 °C
air intake	25 °C

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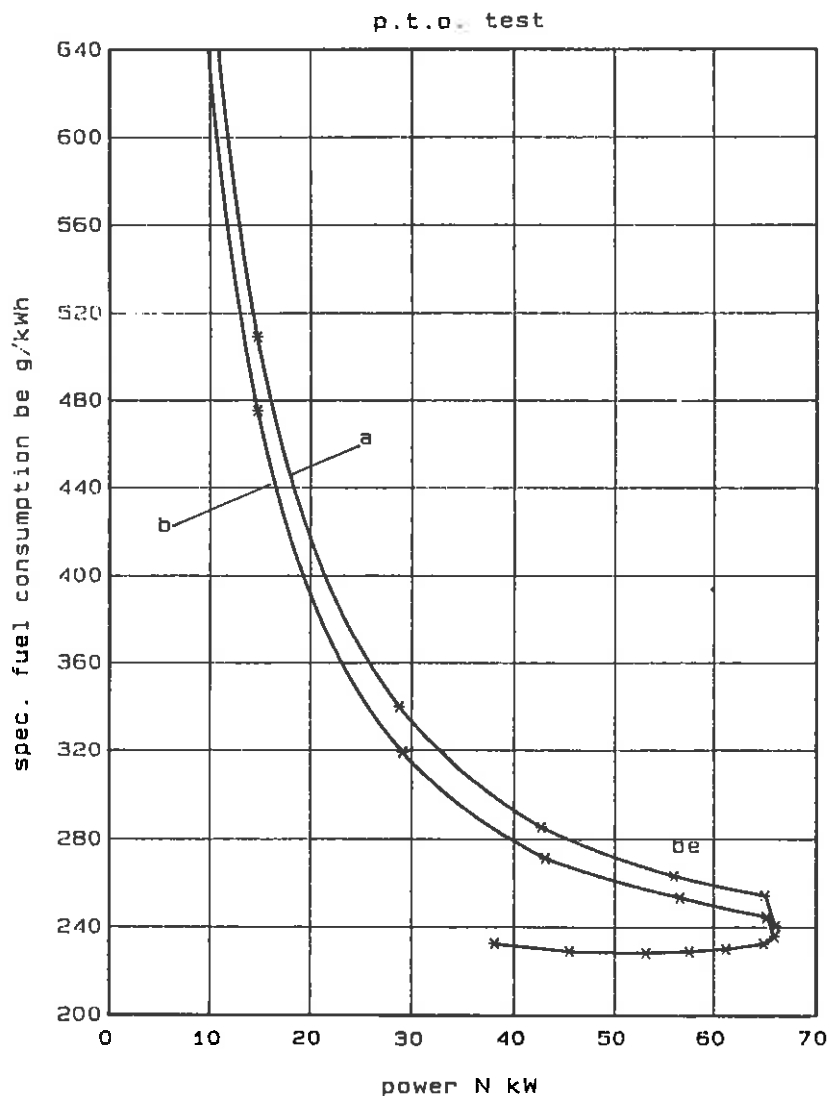
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2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 21st May 1992

2.1 Hydraulic power test

Sustained pressure with relief valve open

18,7 MPa

Pump delivery rate at minimum pressure

66,4 l/min

	Hydraulic power kW	Flow rate l/min	Pressure MPa	Oil temperature °C
At 90% of the actual relief valve setting	16,4	58,7	16,8	65
At max. power	17,0	57,3	17,8	65

Tapping point used for test: At rear of tractor

2.2 Power lift test

Main linkage dimensions see on page

	At the hitch point	On the frame
Height of lower hitch points above ground in down position	200 mm	
Vertical movement without lifting forces with lifting forces	700 mm 680 mm	912 mm 866 mm
Max. corrected force exerted through full range	41,6 kN	27,2 kN
Corresponding pressure	16,8 MPa	
Moment about rear axle	-	46,2 kNm
Max. tilt angle of mast from vertical	-	14 °

Lifting heights relative to horizontal lower links

mm	-422	-340	-300	-200	-100	0	+100	+200	+300	+340	+400	+444
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Lifting forces at hitch points, corrected to 16,8 MPa

kN	41,9	41,9	41,6	41,9	42,1	42,3	42,3	42,5	42,5	-	-
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Lifting forces at standard frame, corrected to 16,8 MPa

kN	36,5	-	34,7	34,0	33,3	32,4	31,3	30,6	29,5	-	27,7	27,2
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VALMET 8000

3 DRAWBAR PERFORMANCE

Date of tests: 28th April to 13th May 1992

Type of track: Concrete

Gear	Driving speed	Power	Drawbar pull	Engine speed	Slip of wheels
	km/h	kW	kN	rev/min	%

3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)
height of drawbar above ground 390 mm

1 M Hi	3.64	49.2	48.7	2244	15.0
2 M Lo	3.86	52.1	48.6	2109	15.0
2 M Hi	5.06	53.7	38.2	1999	6.2
3 M Lo	5.71	54.4	34.3	2001	5.4
3 M Hi	7.25	53.6	26.6	1997	3.6
4 M Lo	8.22	53.5	23.4	2001	3.4
1 H Lo	9.07	53.6	21.3	2000	2.8
4 M Hi	10.41	52.5	18.2	2001	2.6

3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)
height of drawbar above ground 390 mm

1 LL Lo	0.72	12.6	62.8	2334	15.0
1 LL Hi	0.91	15.8	62.9	2330	15.1
2 LL Lo	1.02	17.8	63.2	2323	15.0
2 LL Hi	1.27	22.4	63.2	2300	15.0
3 LL Lo	1.42	24.8	63.0	2292	15.0
3 LL Hi	1.77	30.9	62.9	2282	15.0
4 LL Lo	2.13	37.3	62.9	2260	15.0
4 LL Hi	2.44	42.7	63.0	2244	15.0
1 M Lo	2.78	48.8	63.2	2144	15.0
1 M Hi	3.47	53.2	55.2	1997	8.2
2 M Lo	4.03	54.0	48.3	1999	6.1
2 M Hi	5.13	55.7	39.1	1997	4.7
3 M Lo	5.78	54.5	33.9	2001	4.0
3 M Hi	7.37	53.3	26.0	2005	3.0
4 M Lo	8.30	51.9	22.5	2001	2.6
1 H Lo	9.19	51.8	20.3	2005	2.4
4 M Hi	10.45	50.9	17.6	1995	2.0

3.3.1 FIVE-HOUR-TEST at 75% of pull at maximum power in
gear 3 M Lo

3 M Lo	6.64	47.0	25.5	2257	3.0
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3.3.2 FIVE-HOUR-TEST at pull corresponding to 15% wheel slip
in test 3.2

1 M Lo	2.61	45.9	63.2	2080	-
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Oil consumption during ten hours duration of tests 3.3.1
and 3.3.2: 8 g/h

Tyre size front 14.9 R 24 and rear: 16.9 R 38

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures			Atmospheric conditions		
		Fuel °C	Coolant °C	Engine oil °C	Tempe- rature °C	Relative humidity %	Pressure kPa

tyre inflation pressure: 80 kPa at front 80 at rear

339	2.46	30	79	65	12	85	99.6
327	2.55	28	75	65	12	88	99.6
295	2.83	38	80	65	12	90	99.6
295	2.83	38	77	68	16	80	99.6
296	2.82	44	77	68	17	70	99.8
300	2.78	44	80	70	18	70	99.8
296	2.82	44	80	70	18	70	99.8
303	2.76	44	80	70	18	70	99.8

tyre inflation pressure: 150 kPa at front, 80 kPa at rear

683	1.22	34	80	70	22	76	101.0
575	1.45	34	80	70	20	78	101.0
552	1.51	34	80	70	20	78	101.0
461	1.81	37	80	69	21	65	100.8
446	1.87	36	80	65	21	65	100.8
402	2.07	35	80	65	20	65	100.8
378	2.21	35	80	65	20	65	100.8
368	2.27	34	80	65	20	65	100.8
337	2.48	33	80	66	17	78	100.8
301	2.77	30	80	65	17	80	100.8
295	2.82	30	80	65	16	80	100.8
287	2.91	31	80	65	16	82	100.8
293	2.85	25	80	65	16	85	100.8
298	2.80	35	82	70	20	65	99.4
309	2.70	35	82	70	20	63	99.4
307	2.72	35	82	70	21	63	99.4
312	2.67	36	82	70	21	63	99.4

332	2.51	25	80	79	28	55	100.8
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-	-	33	80	79	23	60	100.8
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Test 3.3.2 was carried out with additional ballast of 540 kg, the figures not quoted are therefore irrelevant

4 TURNING AREA AND TURNING CIRCLE (front wheel drive disengaged)

	With brakes*)		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning area	4,71	4,76	6,63	6,60
Radius of turning circle	4,44	4,49	6,36	6,33

*) Front wheel drive is automatically engaged when using steering brake

5 LOCATION OF CENTRE OF GRAVITY

Height above ground	972 mm
Distance forward from rear axle centre	1124 mm
Distance from tractor's median plane, to the left	1 mm

6 MEASUREMENT OF EXTERNAL NOISE LEVEL
(front wheel drive disengaged)

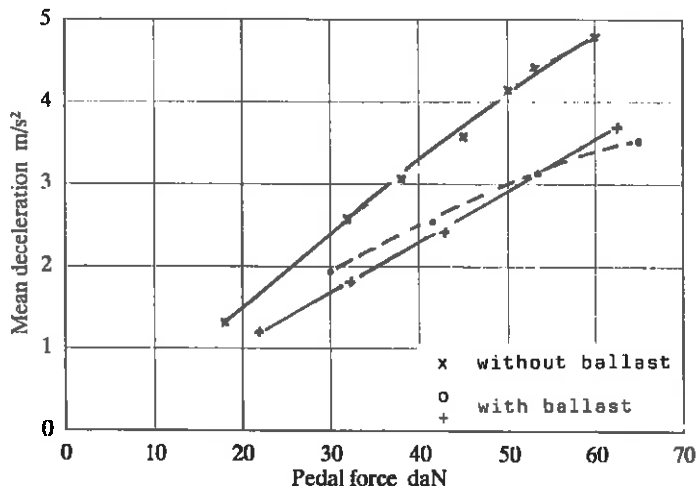
Date of test: 30th April 1992
 Type of track: Concrete
 Type of sound level meter: BRÜEL & KJÆR model 2209

Results of test

Gear: 4 H Hi
 Travelling speed before acceleration: 29,3 km/h
 Sound level: 87,5 dB(A)

7 BRAKING (front wheel drive disengaged)
Date of tests: 4th and 7th May 1992

	Tractor mass (with driver)			Speed before application of brakes km/h
	front kg	rear kg	total kg	
Without ballast	2035	2600	4635	39,0
With ballast	3300	3550	6850	38,5

7.1 Cold service braking device test —————7.2 Fade test - - - - -

No significant deviation of tractor from original course
and no abnormal vibrations

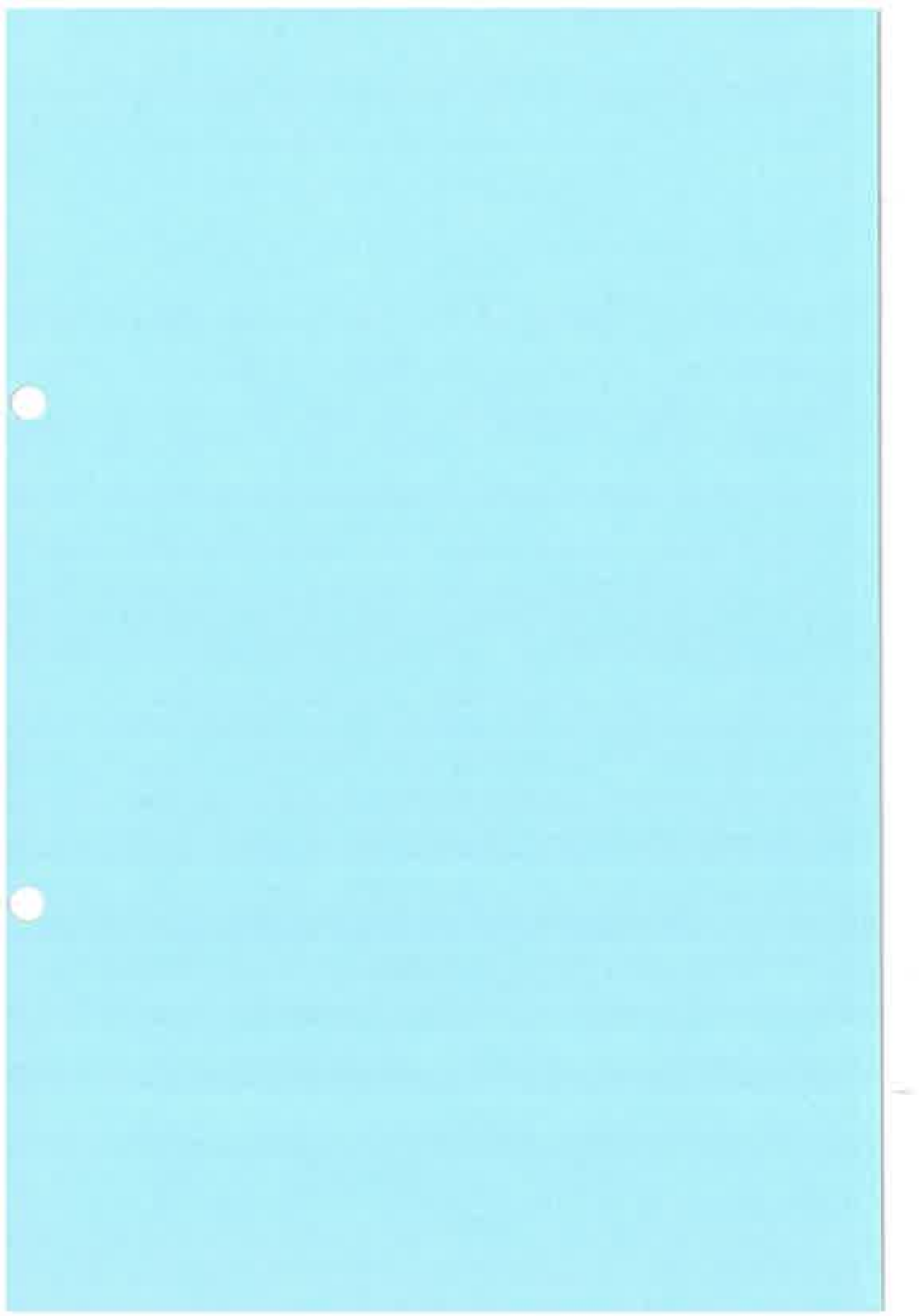
Brakes-heating: Actuating of brake for 1 km with pedal
force corresponding to 1 m/s^2

7.3 Parking braking device test

		Ballasted tractor on 18% - slope	
		up	down
Braking device control force	N	220	240

8 REPAIRS NoneREMARKS None





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