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

OECD No. **1299/1**

Agricultural Tractor
LANDINI
R 9880 (2WD)

Type denomination

TL 45 N/A



OECD No. **1299/2**

Agricultural Tractor
MASSEY-FERGUSON
1007 (2WD)

Type denomination

TL 45 N/B



Manufacturer
Landini S.p.A.
I-42042 Fabbrico (R.E.) Italy

Deutsche Landwirtschafts-Gesellschaft e.V. · Zimmerweg 16
D-6000 Frankfurt a. M. 1 · Telefon: (069) 71680
Telex: 04 13 185 dlg-d · Btx * 20063 # · Telefax (069) 724 15 54

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 October 1990
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: 15 th February 1991
OECD No. 1299/1 for LANDINI R 9880 (2WD)
OECD No. 1299/2 for MASSEY-FERGUSON 1007 (2WD)

The tractors LANDINI R 9880 (2WD) and
MASSEY-FERGUSON 1007 (2WD)
are technically identical in all main respects except colour and denominations.

The tractor LANDINI 9880, serial no. 5484P41062 had been tested in 2 variants: As model DT 9880 (4WD) and as model R 9880 (2WD).

Model DT 9880 was converted into model R 9880 by dismantling the front axle drive and by exchange of front axle and steering.

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/cm²
	100 kPa	≈	1000 mbar	≈	750,10	mm Hg

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Tractor manufacturer:	LANDINI S.p.A. I-42042 Fabbrico (R.E.), Italy
Location of tractor assembly:	I-42042 Fabbrico
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running-in:	Fabbrico and Groß-Umstadt
Duration of running-in:	Engine and tractor appr. 40 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	LANDINI respectively MASSEY-FERGUSON
Trade name:	R 9880 respectively 1007
Model denomination:	TL 45 N/A respectively TL 45 N/B
Type:	Wheel tractor, unit construction four wheel driven
Serial No.:	5484P41062
Start of series:	5483P03229

Engine

Make:	PERKINS
Model:	T 4.236
Type:	Watercooled 4-stroke Diesel-engine, direct injection,turbo charged
Serial No.:	LJ 31220*U336234T*A4171
Cylinders:	4, in line, bore 98,4 mm, stroke 127,0 mm, displacement 3863 cm^3, compression ratio 15,1:1; replaceable dry cylinder liners
Valves:	Overhead

Supercharging

Make:	GARRETT AIRESEARCH
Model:	TA 0315, exhaust driven, waste gate
Max.pressure:	85 kPA

LANDINI R 9880 Test No. 90-134

Fuel system:	SUPERPAR fuel supply pump; CAV distributor injection pump DPA 3348 F 230, corresponding to PERKINS P/N 2643C280, serial no.18968 LG 6; manufacturer's production setting 74±2 mm^3/stroke at rated engine speed and full load; with automatic injection timing device; injection timing 16±2° before TDC static, additional 18 ° automatic; CAV multihole-injection nozzles P/N 2645K002, holder P/N 2645A302, code LRB 6701407 JE CAV, automizer PN 2645 K 602, code 6801027 LUCAS CAV HEG, injection pressure 23,0 MPa; CAV fuel filter with replaceable paper element; capacity of fuel tanks 102 dm^3 and 50 dm^3
Governor:	CAV centrifugal variable speed governor, without manifold-pressure compensator, governed range of engine speed 750 to 2280 rev/min, rated engine speed 2200 rev/min
Air cleaner:	DONALDSON dry paper element filter, cyclone precleaner; maintenance indicator light; air intake above bonnet
Lubrication system:	Forced feed with gear pump; strainer in sump, PERKINS oil filter in return line replaceable, engine oil cooling water heat exchanger in oil filter socket
Cooling system:	Water cooling with impeller pump, overpressure relief valve set to 70 kPa, thermostat with by-pass; fan with 8 blades with 457 mm dia, water capacity 22 dm^3
Starting system:	Electrical; LUCAS solenoid pre engaged-drive starter motor 2,5 kW; depressed pedal of clutch as safety device; ISKRA flame plug in intake manifold
Electrical equipment:	12 Volt,negative earth; LUCAS 3-phase alternator 12 V 500 W; 1 lead acid battery, 100 Ah at 20 hours rating, test current for low temperature 500 A
Exhaust silencer:	LUCHAIRE-SA expansion type silencer, 160x260 mm oval, 135 mm long; below bonnet, mouth showing upwards, 2640 mm above ground

Transmission

Clutch:	LUK dry dual-disc clutch; pedal operated travel drive, disc 305 mm dia, cerametallic lining; hand lever operated p.t.o. drive, disc 305 mm dia, organic lining
Gear box:	LANDINI, gearbox with reverse shuttle and overdrive; synchronized speed change gear with 4 speeds, synchronized reverse shuttle and overdrive range gear (N,R,O), collar shifted range gear with 3 ranges (S,M,H); total 24 forward speeds, 12 reverse speeds, 3 hand levers; optionally available: synchronized speed change gear with 4 speeds combined with - range gear box with 3 ranges combined with - reverse shuttle and underdrive or - reverse shuttle and creeper total 24 forward, 12 reverse speed, 3 hand levers or - range gear box with 3 forward ranges and 1 reverse range combined with range gear with 3 ranges: - underdrive, overdrive, standard or - creeper, overdrive, standard, or - creeper, underdrive, standard total 36 forward speeds, 12 reverse speeds, 3 hand levers or - range gear box with 3 forward ranges and 1 reverse range as a standard option total 12 forward speeds, 4 reverse speeds, 2 hand levers
Rear axle and final drives:	LANDINI bevel gear drive, bevel gear differential with pedal operated lock, self disengaging; spur gear final drives
Front axle	LANDINI not driven, telescopically adjustable
Lubrication:	Gear box, rear axle and hydraulic system have oil in common, see pages 15 and 16

LANDINI R 9880 Test No. 90-134

Range		Gear	Total ratio engine : driving wheel	Nominal travelling speed at rated engine speed 2200/rev/min km/h *)
N	S	1	370,50	1,78
		2	235,70	2,80
		3	186,64	3,53
		4	126,49	5,21
	M	1	155,09	4,25
		2	98,67	6,68
		3	78,13	8,44
		4	52,95	12,45
	H	1	62,87	10,49
		2	40,00	16,48
		3	31,67	20,82
		4	21,47	30,72
O	S	1	287,58	2,29
		2	182,95	3,60
		3	144,87	4,55
		4	98,18	6,72
	M	1	120,38	5,48
		2	76,58	8,61
		3	60,64	10,87
		4	41,10	16,04
	H	1	48,40	13,51
		2	31,05	21,24
		3	24,59	26,82
		4	16,66	39,57
R	S	1	366,79	1,80
		2	233,34	2,83
		3	184,77	3,57
		4	125,23	5,27
	M	1	153,54	4,29
		2	97,68	6,75
		3	77,35	8,52
		4	52,42	12,58
	H	1	62,25	10,59
		2	39,60	16,65
		3	31,36	21,03
		4	21,25	31,03

*) calculated with the radius index 795 mm (ISO 4251/1-1984)

Power take-off

Main p.t.o.: Shiftable by hand lever (collar shifting) to independent or ground speed p.t.o. and by second hand lever to 540 or 1000 rev/min; p.t.o. speed indicator lamps

1 p.t.o.shaft at rear of tractor, in tractor's median plane; height above ground 790 mm, horizontal distance to rear wheels centre line 265 mm; 35 mm dia, 6 splines, in conformity with ISO 500/1979, type 1

Power take-off proportional to engine speed (independent p.t.o.): Driven by second plate of dry dual-disc clutch; sense of rotation clockwise (viewed to tractor's rear)

P.t.o. type	P.t.o.speed rev/min	Engine speed rev/min	Ratio engine:p.t.o.	Power restriction kW
540	540	1944	3,6000	-
	611	2200		
1000/750 *)	1000/540*)	1917/1377	1,9167/2,5500	-
	1148/863*)	2200		

Power take-off proportional to ground speed: Driven by rear axle drive, sense of rotation clockwise (at forward movement, viewed to tractor's rear)

P.t.o. type	Travel distance per p.t.o. revolution m	Number of p.t.o.revolutions per rear wheel revolution
540	0,4870	10,2562
1000/750*)	0,2593/0,3450*)	19,2638/14,4793*)

*) 750 rev/min p.t.o. not fitted on tested tractor, optionally available instead of 1000 rev/min p.t.o.

Power lift

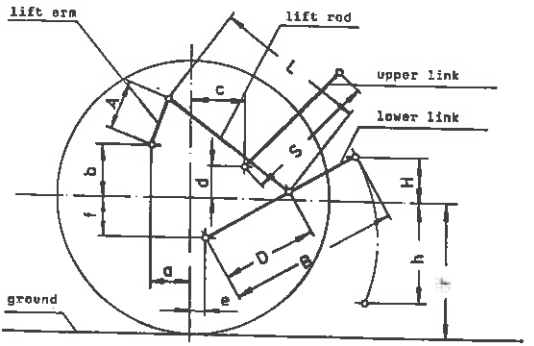
LANDINI
hydraulic power lift, unit construction; draft and position control, both infinitely mixable, floating position, lowering throttle (non-adjustable); adjustable raise control, top link sensing; open centre system;
1 single acting lifting cylinder, 100 mm bore, 127 mm stroke, cylinder safety valve set to 19,0 MPa

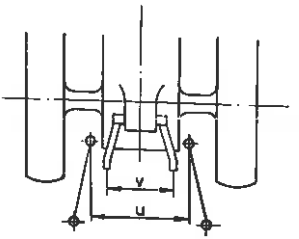
2 single acting assister cylinders 50 mm bore, 208 mm stroke;

no linkage lock for transport;
TUROLLA gear type pump TFA/211 S,
gear driven by engine;
delivery 42 l/min at rated engine
speed, relief valve pressure setting
17,0±0,5 MPa;
1 hydraulic oil filter within suction
line;
hydraulic oil circuit in common with
gear box lubrication, reservoir within
gear box, oil cooler in front of engine
radiator

MASSEY-FERGUSON control valve,
3 double acting OMC additional control
valves, 6 oil couplings ar rear of tractor;
maximum volume of oil available to external
cylinders 5 dm^3 ,
remote power lift control at tractor's rear

Three-point linkage category 2 acc. to ISO 730/I-1977
with quick couplers





Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p.21)

Rear tyres 16.9 R 38		radius index*)	(r)	795
Front tyres 9.00 - 16		static radius	(r')	590
Length of lift arms			(A)	272
Length of lower links			(B)	905
Distance of lift arm pivot points from rear wheel centre	horizontal		(a)	43
	vertical		(b)	310
Horizontal distance between lower link pivot points			(u)	390
Horizontal distance between lift arm end points			(v)	525
Length of upper link			(S)	625 to 875, <u>750</u>
Distance of upper link pivot point from rear wheel centre	horizontal		(c)	205
	vertical		(d)	<u>256</u> or 301
Distance of lower link pivot point from rear wheel centre	horizontal		(e)	32
	vertical		(f)	135
Distance of lower link pivot points from lift rod pivot points on lower links			(D)	475
Length of lift rods			(L)	530 to 640, <u>640</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)	<u>640</u>	530	640
Linkage distance of lift rods	(D)		475	
Lowest position	(h)	465	215	465
Highest position	(H)	230	395	230
Transport position	(H')	230	395	230

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

Pull attachment

Swinging drawbar:	Height above ground	460 or 570 mm
	distance of hitch point from rear wheel axis, horizontally	565, 610, 655 mm
	distance of hitch point from p.t.o. shaft end: vertically	350 or 240 mm
	horizontally	300,345 or 390 mm
	distance of pivot point behind rear-wheel axis, horizontally	210 mm
	lateral swing to both sides, max.	240 mm
	hitch hole diameter	30 mm
	max. permissible laod (at max.length)	- kN
Trailer hitch:	Optionally available, not fitted	
Holed drawbar:	Long bar; length 1500 mm, thickness 30 mm, width 80 mm, length between joint balls 770 m; 7 holes between joint balls with 80 mm distance each, 3 holes outside the joint balls on either side with 120 mm distance each, holes' diameter 22 mm and 24 mm alternately; at each end of the bar 1 hole with 32 mm dia;	
	height above ground minimum	390 mm
	maximum	1250 mm
	holes' centre line behind p.t.o. shaft end (lower links in horizontal position)	705 mm
Towing hitch:	At front of tractor height above ground	700 mm

Steering	MASSEY-FERGUSON and DANFOSS model ORBITROL OSPC 80, hydrostatic steering; separate oil circuit fed by TUROLLA gear type pump TFA/211 S directly driven by front end of crankshaft; delivery 24 l/min at rated engine speed, working pressure 12,0 MPa; 1 double acting ram, bore 45 mm, stroke 165 mm, piston rod 20 mm dia, acting on steering levers of front axle; oil filter incorporated in steering oil tank
Brakes	
Service brake:	LANDINI, pedal operated muscle power brake with hydraulic transmission, acting on rear axle of tractor; wet disc brakes on the differential half shafts of rear axle with 6 lining discs each with 178 mm dia
Parking brake:	Mechanically actuated by hand lever with ratchet, acting on the discs of service brake
Steering brake:	Divided pedals of service brake, for normal use locked together
Trailer braking take-off:	None
Wheels	
Steering wheels:	At front,2 pneumatics 9.00 - 16 rims W8x16
Driving wheels:	At front and at rear, rear wheels: 2 pneumatics 16.9 R 38 rims DW15x38
Wheelbase:	2463 mm
Track widths:	At front 1495 to 1995 mm in 5 steps of 100 mm by telescopic adjustable axle at rear 1400 to 2000 in steps of 100 mm each, variable by adjustable gauge bowl wheels

Permissible tyre combinations:

Tyre sizes	
at front	at rear
9.00 - 16 8 ply	16.9 R 38 141 A8
	18.4 R 34 144 A8
	480/70 R 34 143 A8
	520/70 R 34 148 A8
	16.9 R 34 139 A8
	14.9 R 38 133 A8

Protective structure

LANDINI CS 13 Approval number: CSS 0120/2 for LANDINI R 9880 (2WD) (TL 45 N/A)	MASSEY-FERGUSON CS 14 Approval number: CSS 0120/10 for MASSEY FERGUSON 1007 (2WD) (TL 45 N/B)

antivibration mounted with 4 silent blocks;
2 doors with 2 steps each,
steps 575 and 825 mm above ground;
driver's platform 1110 mm above ground;
rear-, side windows and roof hatch tiltable;
3-step blower and heating/ventilating system
within roof, air intake on right side of cab's top;
air outlet jets within cab's top;

Noise reduction material:

floor:	molded PU-mat	20 mm
rear wall and mudguards:	foam and perforated coat	15 mm
roof:	foam	10 mm
	resin bonded fleece with textile	5 mm
middle and rear posts:	resin bonded fleece with textile	5 mm

Driver's seat

GRAMMER
DS 85 H,
upholstered seat with back rest and
arm rests, adjustable suspension and
hydraulic shock absorber;
height of unloaded seat above platform
adjustable in 2 steps to 490, 520 and 550 mm,
longitudinal adjustment 150 mm

Running-time meter — Electronic, counts real operating hours, when engine is running above low idle speed

Lighting — Electrical 12 Volt, in accordance with Italian legislation

	Size mm	Height above ground of centre mm	Distance from outside edge of lights to median plane of tractor mm
Head lights	130 dia	2B95	240
Side lights	110x130	1667	885
Rear lights	70x55	1730	715
Reflectors			
1st pair	45x55	1730	760
2nd pair	80 dia	645	405

TEST CONDITIONS

Overall dimensions

Length:	3950 mm without ballast, 4225 mm with ballast
Width:	2040 mm without ballast, 2360 mm with ballast
Height:	2725 mm to top of cab
	2640 mm to exhaust pipe's mouth
Ground clearance:	410 mm below swinging drawbar

Tractor mass — With full tanks and with cab

			without driver kg	with driver kg
Without ballast:	Mass	front	1290	1300
		rear	2290	2355
		total	3580	3655
With ballast:	Mass	front	1825	1825
		rear	3660	3730
		total	5475	5555

Ballast

Front:	13 weights, total	510 kg
Rear:	1 ballast weight	212 kg
	5 weights per wheel, total	600 kg
	water in the tyres	578 kg

Tyres and track widths specifications

	Front	Rear
Tyres:	PIRELLI TD 300	KLEBER SUPER 9
dimensions	9.00 - 16	16.9 R 38
type	cross-ply	radial
ply rating/load index	8 ply/-	-/141 A8
maximum load	1080 kg	2575 kg
inflation pressure	310 kPa	160 kPa
radius index	406 mm (static)	795 mm
Chosen track width:	1495 mm	1600 mm
Technically permissible axle load:	1820 kg	3670 kg
Technically permissible total weight	5555 kg	

Oils and lubrication

Capacity and change interval:

	Capacity dm^3	Oil change h	Filter change h
engine	8,0	250	250
gear box including rear axle and hydraulic system	31,0	1000	250*)
front axle	5,8		-
final drives at front	2x1,4		-
final drives at rear	2x4,2		-
steering system	2,3		500 *)

*) only filter cleaning

Specifications

	Recommended	Used during test
Engine oil:		
type	engine oil	MF SUPER UNIVERSALOIL
viscosity		
winter	SAE 10W, 20W or 10W/30	SAE 15W/40
summer	SAE 20W or 20W/30	
tropics	SAE 30, 20W/40 or 20W/50	
for all condiditions	SAE 15W/40	
classification	API - CC	API - CC
Transmission oils:		
gearbox, rear axle hydraulic system		
type	super tractor oil universal	MF SUPER UNIVERSALOIL
viscosity	SAE 15W/40	SAE 15W/40
classification	API - CD/API - GL4	API - CD/API - GL4
final drives at front and at rear, front axle		
type	gear oil	MOBILUBE GX85W/90-A
viscosity	SAE 85W/90	SAE 85W/90
classification	API - GL4	API - GL4
Steering oil:		
steering system		
type	automatic transmission fluid	MOBIL ATF 200
viscosity	-	
classification	Type A, SUFFIX A	

Grease: Multi purpose grease, number of lubrication points 16

Fuel

type: ARAL Diesel-fuel in conformity with DIN 51601

density: at 15°C at p.t.o. test 0,823 g/cm^3

drawbar power tests

without ballast 0,820 g/cm^3

with ballast 0,823 g/cm^3

REPAIRS None

REMARKS None

COMPULSORY TESTS

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

Date of tests: 30th August 1990
Location of tests: DLG-Testing Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
1.1 At 2-hour test						
66,7	2200	1148	20,19	16,62	249	3,31
1.2 At rated speed						
66,7	2200	1148	20,19	16,62	249	3,31
1.3 At standard p.t.o. speed						
62,6	1917	1000	17,80	14,65	234	3,52
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						
66,7	2200	1148	20,19	16,62	249	3,31
1.4.2 85% of the torque obtained in 1.4.1						
57,8	2242	1170	18,05	14,85	257	3,20
1.4.3 75% of the torque defined in 1.4.2						
43,7	2260	1179	14,84	12,21	279	2,94
1.4.4 50% of the torque defined in 1.4.2						
29,0	2253	1175	11,55	9,50	327	2,51
1.4.5 25% of the torque defined in 1.4.2						
14,6	2261	1180	8,54	7,03	482	1,71
1.4.6 unloaded						
-	2272	1185	5,90	4,85	-	-

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
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						
62,6	1917	1000	17,80	14,65	234	3,52
1.5.2 85% of the torque obtained in 1.5.1						
54,6	1969	1027	15,76	12,97	237	3,47
1.5.3 75% of the torque defined in 1.5.2						
41,3	1986	1036	12,75	10,49	254	3,24
1.5.4 50% of the torque defined in 1.5.2						
27,5	1981	1033	9,76	8,03	292	2,82
1.5.5 25% of the torque defined in 1.5.2						
13,9	2009	1048	7,34	6,04	433	1,90
1.5.6 unloaded						
-	2025	1056	4,45	3,66	-	-

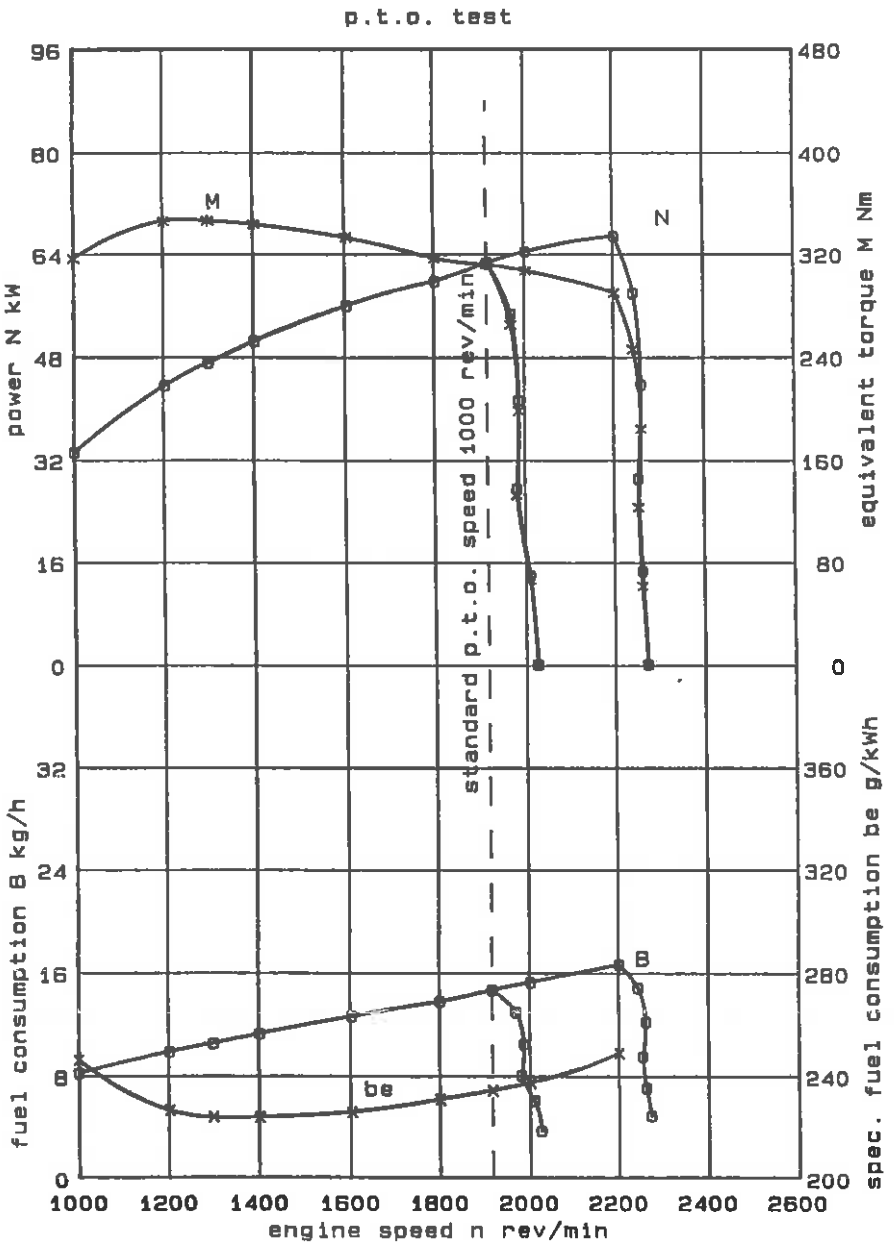
No load maximum engine speed: 2272 rev/min
Equivalent flywheel torque at rated engine speed: 290 Nm
Maximum equivalent flywheel torque: 346 Nm at 1298 rev/min of the engine

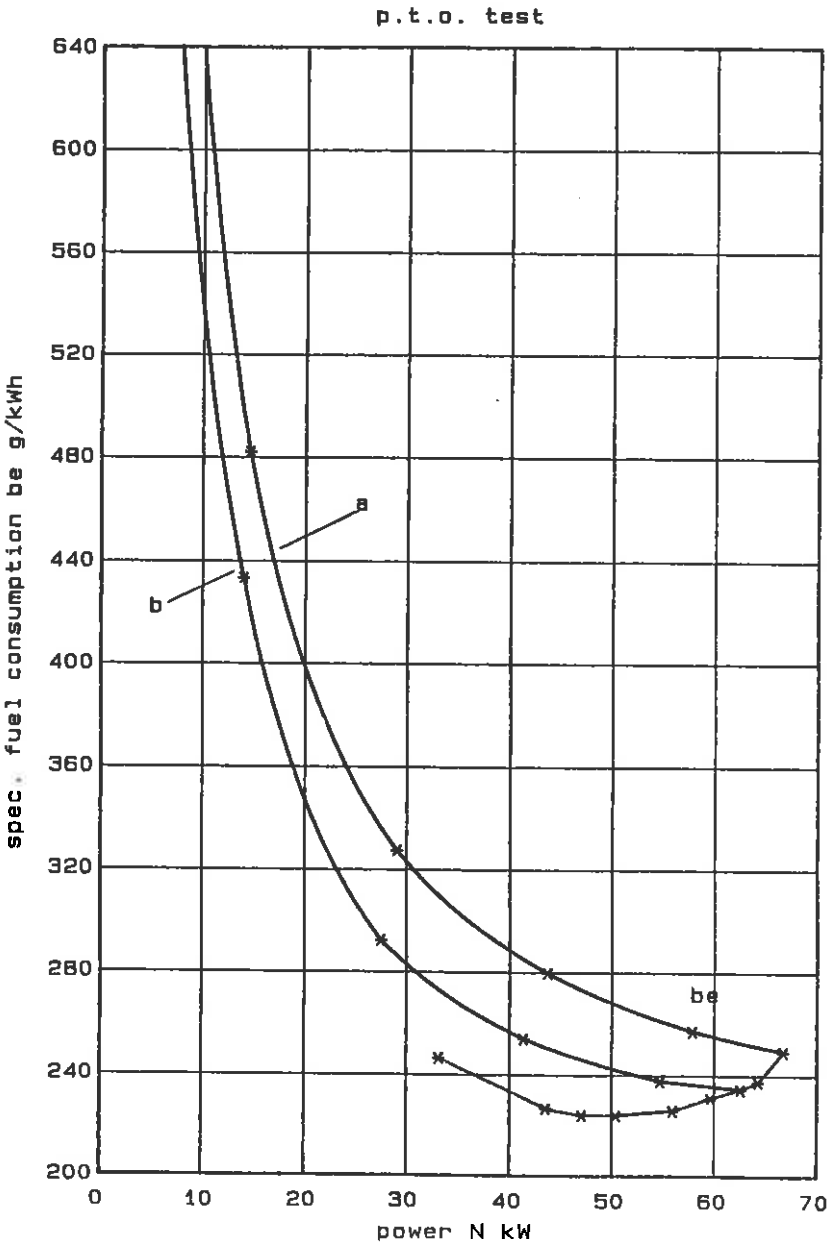
Mean atmospheric conditions

temperature	21 °C
pressure	100 kPa
rel. humidity	60 %

Maximum temperatures

coolant	81 °C
oil	115 °C
fuel	26 °C
air intake	26 °C


p.t.o. test
power N kW
equivalent torque M Nm
fuel consumption B kg/h
spec. fuel consumption be g/kWh
engine speed n rev/min
standard p.t.o. speed 1000 rev/min
M
N
B
be
96
80
64
48
32
16
0
480
400
320
240
160
80
0
32
24
16
8
0
360
320
280
240
200
1000
1200
1400
1600
1800
2000
2200
2400
2600


p.t.o. test
spec. fuel consumption be g/kWh
640
600
560
520
480
440
400
360
320
280
240
200
0
10
20
30
40
50
60
70
power N kW
a
b
be

2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 10th October 1990

2.1 Hydraulic power test

Sustained pressure with relief valve open 17,5 MPa
Pump delivery rate at minimum pressure 43,7 l/min

	Hydraulic power kW	Flow rate l/min	Pressure MPa	Oil temperature °C
At 90% of the actual relief valve setting	8,6	32,6	15,8	65
At max. power	10,1	40,6	15,0	65

Tapping point used for test: At rear of tractor

2.2 Power lift test

	At the hitch point	On the frame
Height of lower hitch points above ground in down position	330 mm	330 mm
Vertical movement without lifting forces	695 mm	820 mm
with lifting forces	650 mm	755 mm
Max. corrected forces exerted through full range	30,6 kN	26,2 kN
Corresponding pressure	15,0 MPa	15,0 MPa
Moment about rear axle	-	24,5 kNm
Max. tilt angle of mast from vertical	-	9°

Lifting heights relative to horizontal lower links

mm	-380	-330	-300	-200	-100	0	+100	+200	+300	+320	+375

Lifting forces at hitch points, corrected to 15,0 mPa

kN		30,6	31,5	33,3	33,7	35,1	35,3	35,3	35,0	34,6	

Lifting forces at standard frame, corrected to 15,0 MPa

kN	28,4		29,5	29,9	30,0	30,0	29,1	28,7	27,1		26,2

LANDINI R 9880

3 DRAWBAR PERFORMANCE

Date of tests: 11th September till 11th October 1990
Type of track: Concrete

Gear	Driving speed km/h	Power kW	Drawbar pull kN	Engine speed rev/min	Slip of wheels %
3.1 Maximum power in tested gears (unballasted tractor) height of drawbar above ground 900 mm					
2 M N	5,70	49,7	31,39	2230	14,9
4 S O	5,71	49,9	31,49	2223	15,1
3 M N	7,69	55,3	25,90	2206	7,9
2 M O	7,90	54,6	24,89	2208	7,5
1 H N	9,71	56,3	20,86	2202	6,1
3 M O	10,17	54,5	19,30	2204	5,3
4 M N	11,76	55,4	16,95	2206	4,7
2 H N	15,56	54,2	12,53	2197	3,4
3.2 Maximum power in tested gears (ballasted tractor) heigth of drawbar above ground 840 mm					
1 S N	1,55	18,0	41,94	2252	15,1
1 S O	1,98	22,7	41,21	2242	15,0
2 S N	2,41	27,5	41,12	2235	15,1
3 S N	3,08	35,4	41,42	2257	15,0
2 S O	3,14	36,1	41,40	2259	15,0
1 M N	3,69	42,4	41,69	2244	15,0
3 S O	3,92	45,4	41,69	2237	15,0
4 S N	4,45	51,5	41,63	2216	15,0
1 M O	4,80	50,9	38,14	2204	12,2
2 M N	5,95	54,7	33,11	2197	10,2
4 S O	6,02	53,4	31,96	2198	10,0
3 M N	7,80	55,2	25,48	2200	7,1
2 M O	7,99	54,3	24,48	2200	6,4
1 H N	9,85	55,9	20,42	2197	5,1
3 M O	10,28	55,0	19,27	2202	4,9
4 M N	11,83	54,6	16,61	2200	4,2
3.3.1 Five-hour-test at 75% of pull at maximum power in 3 M N gear *)					
3 M N	8,44	42,2	17,99	2257	2,2
3.3.2 Five-hour-test at 75% of pull corresponding to 15% wheel slip in test 3.2 *)					
2 S O	3,03	44,3	52,64	2233	-

Total consumption during ten hours duration of tests 3.3.1 and 3.3.2: 36 g/h

*) Tests 3.3.1 and 3.3.2 were carried out on model DT 9880

Tyre size front: 9.00 - 16
rear: 16.9 R 38

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure kPa
tyre inflation pressure: 180 kPa at front, 60 kPa at rear							
324	2,53	21	62	100	21	64	100,7
332	2,47	23	72	100	21	72	100,0
298	2,75	19	72	100	11	80	100,6
303	2,71	18	62	100	12	82	100,5
293	2,79	25	65	102	18	81	100,5
303	2,71	25	65	100	18	81	100,5
299	2,74	25	65	100	18	81	100,5
307	2,67	23	67	102	18	81	100,5
tyre inflation pressure 240 kPa at front, 180 kPa at rear							
474	1,73	26	70	95	15	87	99,2
426	1,93	26	70	95	15	87	99,5
388	2,12	27	70	90	17	82	99,2
356	2,31	28	70	95	17	81	99,2
358	2,29	28	72	95	17	84	99,2
340	2,42	28	70	91	17	87	99,7
333	2,50	28	70	90	13	90	100,4
322	2,55	28	70	90	16	90	100,4
327	2,52	28	70	95	16	95	100,4
305	2,70	28	71	93	15	98	100,4
310	2,65	29	67	96	17	99	100,4
301	2,73	31	68	96	17	99	100,4
307	2,68	31	68	93	17	99	100,4
296	2,78	31	61	95	17	99	100,4
302	2,72	31	68	95	17	99	100,4
304	2,71	31	66	100	17	95	100,4
340	2,44	24	75	105	25	76	100,5
-	-	25	74	112	27	74	99,8

Test 3.3.2 was carried out with additional ballast of 240 kg, the figures not quoted are therefore irrelevant

4 TURNING AREA AND TURNING CIRCLE

Wheel equipment front: 9.00 - 16
rear: 16.9 R 38

Track of wheels front: 1495 mm
rear: 1600 mm

	With brakes		Without brakes	
	left-hand mm	right-hand mm	left-hand mm	right-hand mm
Radius of turning area	3,89	3,80	4,43	4,57
Radius of turning circle	3,80	3,71	4,34	4,48

5 LOCATION OF CENTRE OF GRAVITY

Height above ground	1020 mm
Distance forward from rear axle centre	861 mm
Distance from tractor's median plane, to the right	16 mm

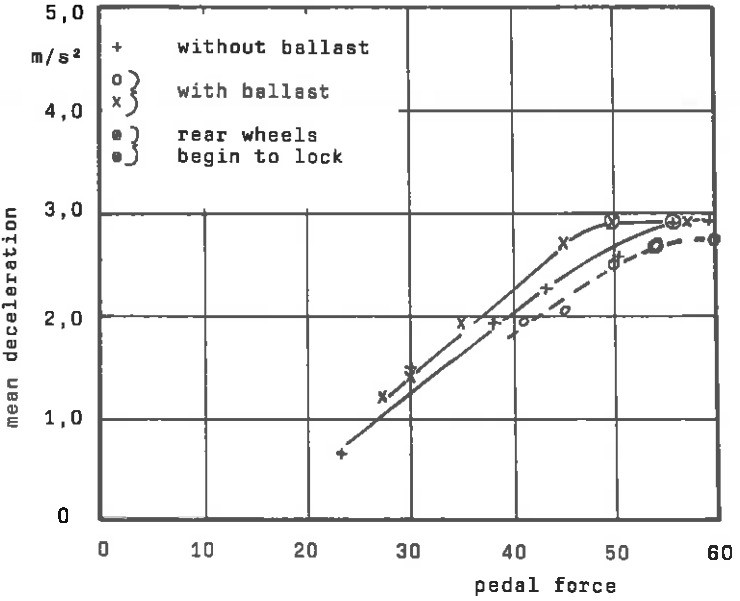
6 BRAKING

Date of tests: 13th and 14th September 1990

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	1300	2355	3655	40,0
With ballast	1825	3730	5555	40,2

6.1 Cold service braking device test

6.2 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/s²

6.3 Parking braking device test

	Ballasted tractor on 18% - slope up	down
Braking device control force N	350	350

7 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test:	18th September 1990
Type of track:	Concrete
Type of sound level meter:	BRÜEL & KJAER model 2209

Results of test

Gear:	4 H O
Travelling speed before acceleration:	30,2 km/h
Sound level:	84,0 dB(A)

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Deutsche Landwirtschafts-Gesellschaft e.V. (DLG)
Fachbereich Landtechnik — Prüfungsabteilung —
Zimmerweg 16 (DLG-Haus)
D-6000 Frankfurt am Main 1