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

OECD Approval No.: 1/1944/ **FULL CODE**
Date of approval: 7th February, 2001
Test No.: OECD-H12-T001



Agricultural Tractor

KUBOTA L3000DT (4WD)

Manufactured by:
KUBOTA Corporation, TSUKUBA Plant
Aza, Sakanoshinden, Yawaramura, Tsukubagun, IBARAKI, JAPAN

INSTITUTE OF AGRICULTURAL MACHINERY
BIO-ORIENTED TECHNOLOGY RESEARCH ADVANCEMENT INSTITUTION
(I A M - B R A I N)
OMIYA, JAPAN

This bulletin is based on engineering tests in accordance with the OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance "Blue Code", March 2000, Code 1. It does not contain the evaluation of the tractor performance on practical work. This report has been approved by the OECD Coordinating Center (CEMAGREF, France) as being in accordance with the OECD STANDARD CODE.

Test No.:	OECD-H12-T001
Duration of Test:	from November, 2000
Date of Approval:	7th February, 2001

Make:	KUBOTA
Model:	L3000DT
Type:	4WD
Serial number:	L3000DT-52792
1st Serial number:	L3000DT-50001

In this report all performance characteristics are given corresponding to the International Systems of Units.
The reference to the former used Technical Systems of Units is given by the following relations:

Forces	1 kgf	=	9.80665 N
Powers	1 PS	=	0.7355 kW
Pressures	1 kgf/cm^2	=	98.0665 kPa

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GENERALITIES

Tractor manufacturer's name and address:	KUBOTA Corporation, TSUKUBA Plant Aza, Sakanoshinden, Yawaramura, Tsukubagun, IBARAKI, JAPAN
Location of tractor assembly:	Ditto
Submitted for test by:	The manufacturer
Selected for test by:	The manufacturer with agreement by BRAIN
Place of running-in:	KUBOTA Corporation, Tsukuba Plant
Duration of running-in:	Engine and tractor 52 h
Location of test:	BRAIN

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

Make:	KUBOTA
Model:	L3000DT
Type:	Four-wheel drive, unit construction Agricultural tractor
Number of driving wheels:	4
Serial number:	L3000DT-52792
1st Serial number:	L3000DT-50001

1.2 ENGINE

Make	Own make
Model:	D1503-L-A-1
Type:	4-cycle diesel engine with indirect injection, water cooled, naturally aspirated
Serial Number:	17991

1.2.1 Cylinders

Number and disposition:	3, vertical, in-line
Bore/Stroke:	83.0 mm / 92.4 mm
Capacity:	1499 cm^3
Compression ratio:	23:1
Arrangement of valves:	Over head
Cylinder Liners:	None

1.2.2 Supercharging: Not fitted

1.2.3 Fuel System

Fuel feed system:	Gravitational feed type
Filters	
Make:	TOKYO ROKI Co.,LTD.
Model:	V53026A-0000
Type:	Replaceable paper element type
Number:	1
Capacity of fuel tank:	31 dm^3
Injection pump	
Make:	DENSO Corporation
Model:	ND-PFR3M55A2ND567
Type:	Bosch type
Manufacturer's production setting of injection pump	
Flow rate:	6.9 ± 0.8 dm^3/h at rated engine speed and full load
Timing:	17 ~ 19 degrees before T.D.C.
Injectors	
Make:	DENSO Corporation
Model:	DN0PD 80
Type:	Throttle Type
Injection pressure:	13.7 MPa

1.2.4 Governor

Make:	Own make
Type:	Mechanical (all speed governor)
Governed range of engine speed:	from 900 to 2920 min^{-1}
Rated engine speed:	2700 min^{-1}

1.2.5 Air cleaner

Pre-cleaner:	Not fitted
Main cleaner	
Make:	WAKO Industrial Co., LTD.
Model:	11304-0002
Type:	Dry single paper element
Location of air intake:	Under the bonnet, in front of the radiator
Maintenance indicator:	Not available

1.2.6 Lubrication system

Type of feed pump:	Forced feed (trochoidal pump)
Type of filter:	Replaceable paper element ,cartridge type
Number:	1

1.2.7 Cooling system

Type of coolant:	50 % solution of permanent antifreeze and clean water
Specification of pump	
Type:	Centrifugal
Specification of fan	
Type:	Axial type
Number of fan blades:	7
Fan diameter:	360 mm
Coolant capacity:	6.0 dm^3
Type of temperature control:	Wax type thermostat
System pressure:	88.3 kPa

1.2.8 Starting system

Make:	HITACHI Co.,LTD.
Model:	S114-833A
Type:	Solenoid engaged type
Starter motor power rating:	12 V, 1.2 kW
Cold starting aid:	Electrical glow plug
Safety device:	Operable only with range gear lever disengaged and PTO change lever disengaged

1.2.9 Electrical system

Voltage:	12 V
Generator	
Make:	DENSO Corporation
Model:	ND 101211-1221
Type:	Three phase generator
Power:	0.54kW
Battery	
Number:	1
Rating:	52 Ah at 5 hours,550 cold cranking amps

1.2.10 Exhaust system

Make:	HANKEN NARA SEISAKUSHO. Co.,LTD.
Type:	Multi chamber absorption-expansion
Location:	Horizontally left side under the body, mouth showing rearward (fitted on tested tractor) Vertically left side of tractor (as option)

1.3 TRANSMISSION

1.3.1 Clutch (travel and power –take-off)

Make: EXEDY Corporation
Model: C267C00F
Type: Dry dual stage
Number of plates: 2
Diameter of plates: 215 mm
Method of disengagement: Operated by foot pedal

1.3.2 Gear box

Make: Own make
Type: Mechanical
Description: Main gear shift with 4 forward and 1 rearward speed:
constant mesh 2 speed gears (1st , 4th) and
sliding selective 3 speed gears (2nd, 3rd, rearward)
Range gear shift with 2 speed:
sliding selective 2 speed gears High(H) and Low(L)
Totally 8 forward and 2 rearward speeds.

	Forward	Rearward
Number of main gears	4	1
Number of range gears	2	2
Total of arrangements	8	2

Available options: Not available

1.3.3 Rear axle and final drives

Make: Own make
Type: Bevel gear type differential and helical gear type final drives

Differential lock
Type: Mechanical, dog clutch
Method of engagement: By foot pedal
Method of disengagement: Self disengagement

1.3.4 Front axle and final drives

Make: Own make
Type: Bevel gear type differential and final drives
Differential lock Not available

Total ratios and travelling speeds (tested tractor)

Gear Number	Range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed(*) at rated engine speed of 2700 min^{-1} [km/h]	
		Forward	Rearward	Forward	Rearward
1	1-L	412.226	242.486	1.27	2.16
2	2-L	317.097	59.689	1.65	8.78
3	3-L	220.931	-	2.37	-
4	4-L	113.591	-	4.61	-
5	1-H	101.471	-	5.17	-
6	2-H	78.055	-	6.72	-
7	3-H	54.383	-	9.64	-
8	4-H	27.960	-	18.75	-

(*) Calculated with a tyre dynamic radius index (ISO 4251-1:1992) of 515 mm (tyre:11.2-24)

Number of revolutions of front wheels for one revolution of rear wheels: 1.6363

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

Type: Semi-independent PTO

Method of engagement: By means of transmitting gears and shifting gear lever

Number of shafts: 1 (540min^{-1} and 1000min^{-1})

Method of changing power take-off shafts ends and speeds: By shifting gear lever

1.4.1.1 Power take-off proportional to engine speed

Power take-off at 540 min^{-1} (fitted on tested tractor)

Location: At rear of tractor

Diameter of power take-off shaft end: 35 mm

Number of splines: 6, in conformity with ISO 500:1991/ SAE J1170

Height above ground: 548 mm

Distance from the median plane of the tractor: 0 mm

Distance behind rear axle center: 174 mm

Direction of rotation (viewed from shaft end): Clockwise

PTO type	PTO speed [min^{-1}]	Engine speed [min^{-1}]	Engine/PTO transmission ratio	Power restriction [kW]	Maximum torque[Nm]
540	540	2298	4.256	21.0	410
	634	2700			

Power take-off at 1000 min^{-1} (fitted on tested tractor)

Location: At rear of tractor

Diameter of power take-off shaft end: 35 mm

Number of splines: 6, not in conformity with ISO 500:1991/ SAE J1170

Height above ground: 548 mm

Distance from the median plane of tractor: 0 mm

Distance behind rear axle center: 174 mm

Direction of rotation (viewed from shaft end): Clockwise

PTO type	PTO speed [min^{-1}]	Engine speed [min^{-1}]	Engine/PTO transmission ratio	Power restriction [kW]	Maximum torque[Nm]
1000	1000	2430	2.430	-	-
	1111	2700			

1.4.1.2 Power take-off proportional to ground speed Not available

1.4.2 Optional power take-off (fitted on tested tractor) Not available

1.5 HYDRAULIC POWER LIFT

Make:	Own make
Type:	Hydraulic, 3-point hitch Position and draft control
Type of hydraulic system:	Open center system
Type and number of cylinders:	Single acting, 1
Type of linkage lock for transportation:	Hydraulically closed by throttle valve
Relief valve pressure setting:	14.7 ~ 15.7 MPa
Opening pressure of cylinder safety valve:	Not fitted
Lift pump type:	Gear type
Transmission between pump and engine:	Gear drive
Type and number of filters:	Metal mesh strainer, 1
Site of oil reservoir:	In rear transmission case
Type, number and location of tapping points	
Type:	Rp ¼ plug
Number:	1
Location:	In front of hydraulic cylinder
Maximum volume of oil available to external cylinders:	Hydraulic oil should be added for external hydraulic circuit

1.6 THREE POINT LINKAGE

Category: 1 (in accordance with ISO 730/1-1994+Cor.1:1995)

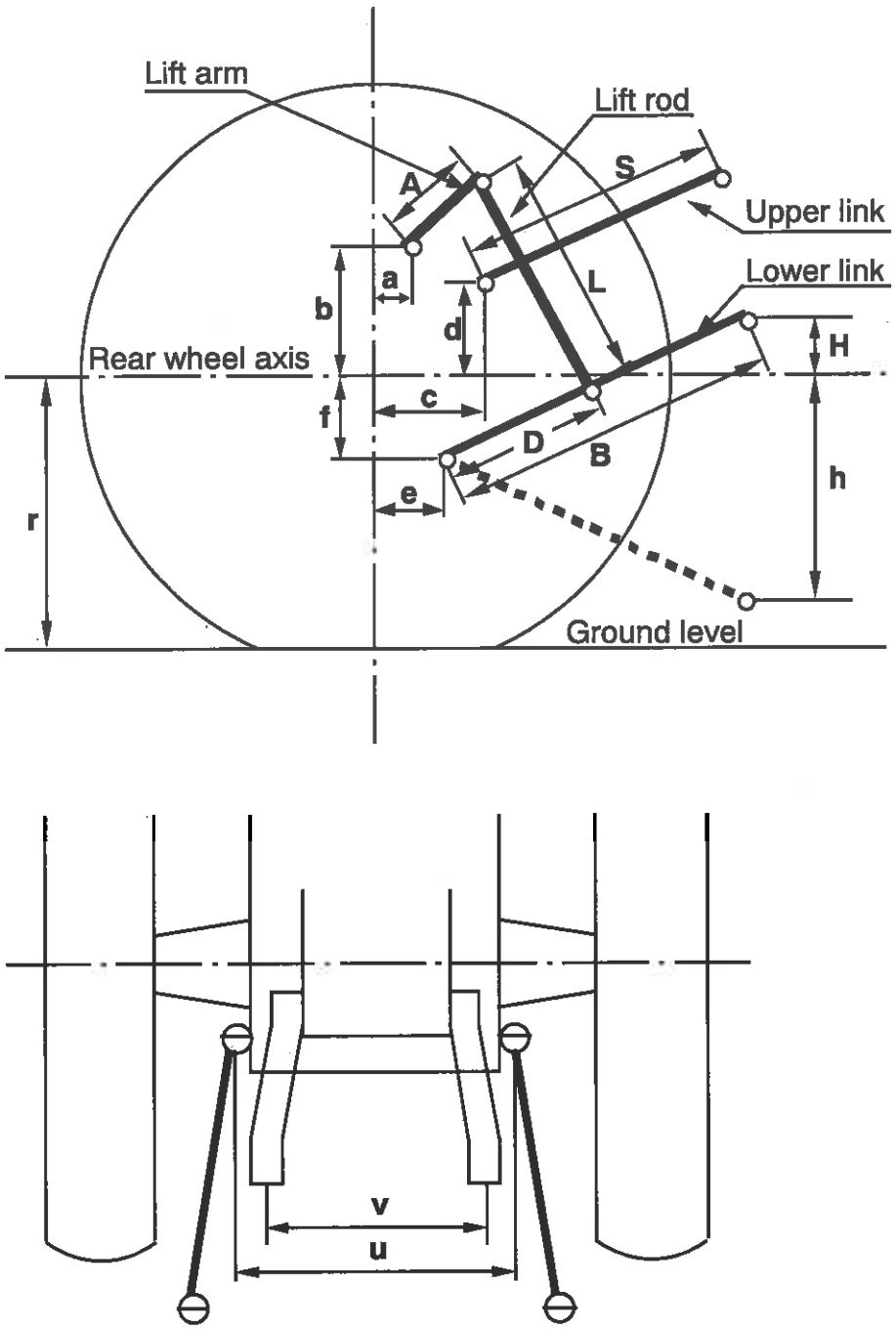


Figure
Lift test - Linkage geometry

		Dimension of range [mm]	Settings used in test [mm]
Length of lift arms	(A)	230	230
Length of lower links	(B)	620	620
Distance of lift arm pivot point from rear-wheel axis:			
- horizontally	(a)	-10	-10
- vertically	(b)	305	305
Horizontal distance between the 2 lower link points	(u)	221	221
Horizontal distance between the 2 lift arm end points	(v)	333	333
Length of upper link	(S)	from 500 to 730	603
Distance of upper link pivot point from rear wheel axis:			
- horizontally	(c)	148 148 148 148	148
- vertically	(d)	259 229 199 169	259
Distance of lower link pivot point from rear wheel axis:			
- horizontally	(e)	112	112
- vertically	(f)	85	85
Distance of lower link pivot points to lift rod pivot points on lower links:	(D)	280	280
Length of lift rods:	(L)	415 440 465	440
Height of lower hitch points relative to the rear wheel axis:			
- in low position	(h)	282,352,422	352
- in high position	(H)	271,223,174	223
Height above ground of lower hitch points when locked in transport position(*):		from 95 to 815	774
(*) Assuming r = rear tyre dynamic radius index (ISO 4251-1:1992): 515 mm (tyre: 11.2-24)			

Table

Dimensions of linkage geometry when connected to the standard frame

1.7 SWINGING DRAWBAR

Not available

1.8 TRAILER HITCH

Type: Bar type (fitted on tested tractor)
Clevis type (as option)

Height above ground 379 mm at top surface of bar
(tyre size 11.2-24, r = 515 mm)

Distance of hitch point from rear wheel axis,
horizontally: 529 mm

Distance of hitch point from power take-off shaft end
vertically: 151 mm at top surface of bar
horizontally: 355 mm

Diameter of drawbar pin hole: 25 mm

Maximum vertical permissible load: 3.2 kN

1.9 HOLED DRAWBAR

Not available

1.10 STEERING

Make:	Nippon Power Steering CO., LTD.
Model:	PQC1645
Type:	Power-assisted with single drag link
Method of operation:	Steering wheel operated and hydraulic power assisted
Pump:	Gear type
Ram:	Integral type
Working pressure:	From 10.3 ~10.8 MPa
Option:	Ball and screw type with single drag link
	(Not fitted on the test tractor)

1.11 BRAKES

1.11.1 Service brake

Make:	Own make
Type:	2 oil immersed disks operated by 2 foot pedals which can be combined together
Method of operation:	By Independent or combined pedal
Trailer breaking take-off:	Not available

1.11.2 Parking brake

Type:	Mechanical acting type (combined foot pedal)
Method of operation:	By foot pedals with ratchet

1.12 WHEELS

Number	4
Front:	2, steering and driving
Rear:	2, driving
Wheelbase:	1592 mm

Track width adjustment

	Minimum [mm]	Maximum [mm]	Adjusted method
Front	1010	1010	Not adjustable
Rear	1020	1295	Changing by turning wheels and offset of rims

1.13 PROTECTIVE STRUCTURE

Safety frame

Make:	KUBOTA
Model:	SFL-30, SFL-F30
Type:	2-post safety frame
Protective device:	Rear roll bar not tiltable
Approval number:	None

1.14 SEAT

1.14.1 Driver's seat

Make:	NAMBA PRESS WORKS .Co.,LTD.
Model:	N91640
Seat and steering wheel reversible:	No
Type of suspension:	Coil spring
Type of damping:	Not available
Range of adjustment	
Longitudinal:	60 mm
Vertical:	0 mm
Safety belt:	Not fitted on tested tractor

1.14.2 Optional driver's seat — Not available

1.14.3 Passenger seat — Not available

1.15 LIGHTING

	Height above ground of center [mm]	Size [mm]	Distance from outside edge of lights to median plane of tractor [mm]
Headlights	1127	142 x 91	231
Sidelights	1244	90 x 35	591
Rearlights	1255	90 x 35	591
Reflectors	1166	94 x 45	541
Breaklights	1295	55 x 55	538
Flashers	1295	55 x 55	591

2. TEST CONDITIONS

2.1 OVERALL DIMENSIONS

	Length	Width		Height	
		Minimum	Maximum	At top of protective structure	Exhaust pipe(*)
	[mm]	[mm]	[mm]	[mm]	[mm]
Unballasted	2893	1295	1570	2147	470
Ballasted	3103	1382	1570	2149	470

(*) The Exhaust pipe is on the left hand side under the body , mouth showing rearward.

2.2 GROUND CLEARANCE

Ground clearance: 310 mm

Clearance-limiting part: Front differential gear box

2.3 TRACTOR MASS

	Ballasted		Unballasted	
	Without driver [kg]	With driver [kg]	Without driver [kg]	With driver [kg]
Front	615	621	477	483
Rear	913	982	627	696
Total	1528	1603	1104	1179

2.4 BALLAST

	Weights		Water
	Number	Total mass [Kg]	[kg]
Front	5	101	-
Rear	6	164	159

2.5 TYRES AND TRACK WIDTH SPECIFICATIONS

		Front	Rear
Tyres:			
- dimension		7-16	11.2-24
- ply rating		4	4
- type		cross-ply	cross-ply
- maximum load (tyre manufacturer's)	[kN]	3.97	8.28
- maximum load (tractor manufacturer's	[kN]	3.78	6.68
- inflation pressure (tyre manufacturer's)	[kPa]	180	120
- dynamic radius index	[mm]	348	515
Chosen track width	[mm]	1010	1020

2.6 FUEL

Type: Diesel fuel No.2 in conformity with JIS

Density at 15°C: 0.8374 g/cm^3

2.7 OILS AND LUBRICATION

2.7.1 Capacity and change interval

	Capacity [dm³]	Oil change [h]	Filter change [h]
Engine	5.5	100	200
Gear box Rear axle Final drive (rear and front) Hydraulic system Power steering	28.0	400	cleaning period 400
Front axle	6.0	400	-
Service brake	-	-	-

2.7.2 Specifications

	Recommended	Used during test
Engine oil: Type Viscosity Classification	API grade CC or CD Below 0 °C : SAE 10W , 10W-30 , 10W-40 From 0 °C to 25 °C : SAE 20W , 10W-30 , 10W-40 Above 25 °C : SAE 30W , 10W-30 , 10W-40	SAE 10W-30
Transmission oils Hydraulic fluid Steering oil Type Viscosity Classification	API grade GL-3 SAE 75W/80 (ISO VG46)	API grade GL-3 SAE 75W/80 (ISO VG46)

2.7.3 Grease

Number of lubrication points: 6

3. COMPULSORY TESTS RESULTS

3.1 MAIN POWER TAKE-OFF

Date and location of tests: 6th November, 2000, BRAIN, Omiya

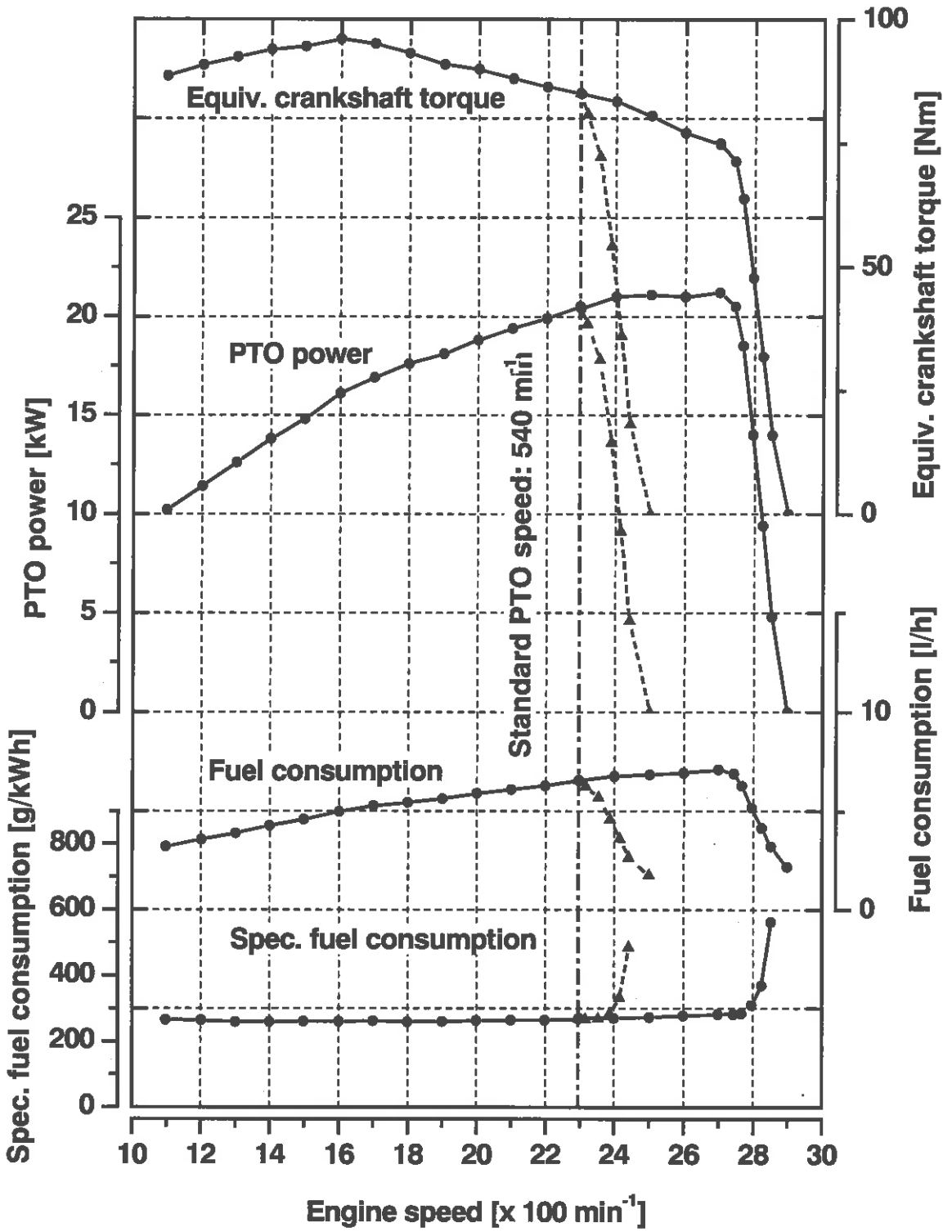
Type of dynamometer: Alternating current , MEIDEN FC-95

Power	Speed		Fuel consumption			Specific Energy
	Engine	PTO	Hourly		Specific	
[kW]	[min^{-1}]		[kg/h]	[L/h]	[g/kWh]	[kWh/L]
3.1.1 MAXIMUM POWER - TWO-HOUR TEST						
21.2	2700	634	5.97	7.12	281	2.978
3.1.2 POWER AT RATED ENGINE SPEED						
21.2	2700	634	5.97	7.12	281	2.978
3.1.3 STANDARD POWER TAKE-OFF SPEED (540 min^{-1})						
20.5	2298	540	5.51	6.58	269	3.116
3.1.4 PART LOADS AT RATED ENGINE SPEED						
3.1.4.1 The torque corresponding to maximum power at rated engine speed						
21.2	2700	634	5.97	7.12	281	2.978
3.1.4.2 85% of torque obtained in 1.4.1						
18.5	2766	650	5.27	6.30	285	2.937
3.1.4.3 75% of torque defined in 1.4.2						
14.0	2795	657	4.34	5.18	310	2.703
3.1.4.4 50% of torque defined in 1.4.2						
9.4	2824	664	3.47	4.14	369	2.271
3.1.4.5 25% of torque defined in 1.4.2						
4.8	2851	670	2.70	3.22	562	1.491
3.1.4.6 Unloaded						
0	2898	681	1.84	2.20	-	-
3.1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED (540 min^{-1})						
3.1.5.1 The torque corresponding to maximum power at standard power take-off speed						
20.5	2298	540	5.51	6.58	269	3.116
3.1.5.2 85% of torque obtained in 1.5.1						
17.8	2353	553	4.77	5.70	268	3.123
3.1.5.3 75% of torque obtained in 1.5.2						
13.6	2388	561	3.85	4.60	283	2.957
3.1.5.4 50% of torque obtained in 1.5.2						
9.2	2415	567	3.02	3.61	332	2.521
3.1.5.5 25% of torque obtained in 1.5.2						
4.6	2442	574	2.23	2.66	485	1.729
3.1.5.6 Unloaded						
0	2500	587	1.48	1.77	-	-

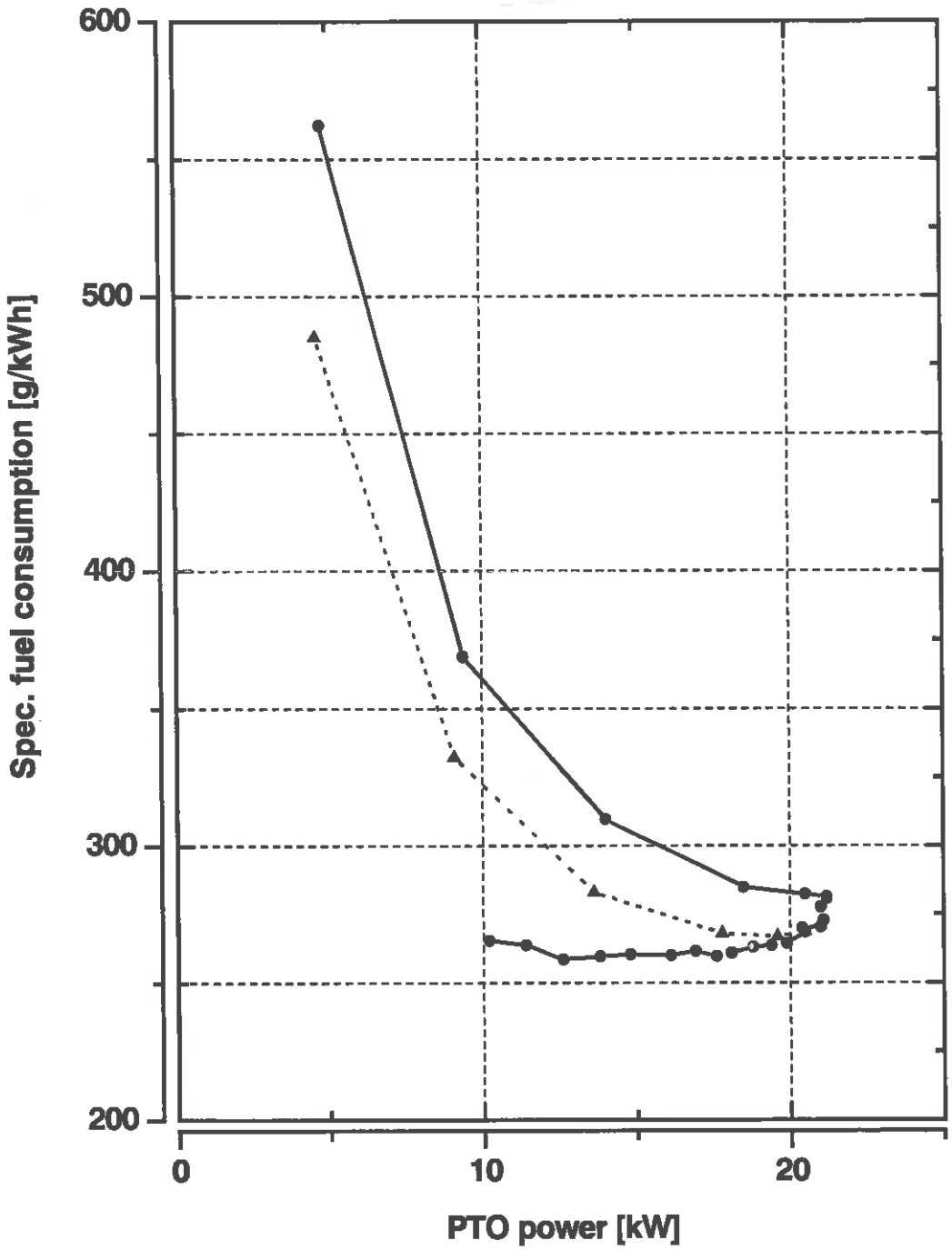
Other results

No load maximum engine speed:	2898	min^{-1}
Torque (equivalent crankshaft) at maximum power		
At rated engine speed:	75.0	Nm
At 2-hour test:	75.0	Nm
Maximum torque (equivalent crankshaft):	96.0	Nm
(engine speed: 1600 min^{-1})		

Mean atmospheric conditions		
Temperature:	20	°C
Pressure:	102.4	kPa
Relative humidity:	61	%
Maximum temperatures		
Coolant:	95	°C
Engine oil:	103	°C
Fuel:	19	°C
Engine air intake:	23	°C



POWER TAKE-OFF PERFORMANCE



POWER TAKE-OFF PERFORMANCE

3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 7th November, 2000

3.2.1 HYDRAULIC POWER TEST

Tapping point used for test: Auxiliary service connection
(can be measured by transferring circuit)

Sustained pressure with relief valve open: 15.7 Mpa

Pump stalled: No

Pump delivery rate at minimum pressure: 28.6 L/min

	Flow rate [L/min]	Pressure [MPa]	Power [kW]
Flow rate corresponding to a hydraulic pressure Equivalent to 90 percent of the actual relief valve pressure setting and corresponding hydraulic power	20.0	14.1	4.71
Flow rate and hydraulic pressure corresponding to Maximum hydraulic power	26.6	12.9	5.74

Temperature of hydraulic fluid: 62 °C

Opening pressure of the unloading valve: -(*)

Closing pressure of the unloading valve: -(*)

(*)Opening and closing pressures of the unloading valve could not be measured

3.2.2 POWER LIFT TEST

	At hitch point	On the frame
Height of lower hitch points above ground in down position [mm]	180	111
Vertical movement without lifting forces [mm]	575	749
with lifting forces [mm]	553	717
Maximum corrected force exerted through full range (*) [kN]	7.65	5.93
Corresponding pressure of hydraulic fluid [MPa]	14.1	14.1
Moment about rear wheel axle [kNm]	5.60	7.96
Maximum tilt angle mast from vertical [Degrees]	-	10

Lifting height (**) [mm]		-336	-300	-267	-200	-100	0	100	200	286	300	381
Lifting force (**)	at the hitch point [kN]	-	-	7.65	7.79	8.06	8.29	8.51	8.69	8.90	-	-
	Corresponding pressure:14.1MPa											
	at the frame [kN]	5.93	5.93	-	6.18	6.40	6.45	6.54	6.45	-	6.40	6.40
	Corresponding pressure:14.1MPa											

(*) The values of force measured are corrected to correspond to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting.

(**) Lifting heights relative to the horizontal plane including the lower link pivot points.

3.3 DRAWBAR POWER TEST

Date of test:: 7th, 8th, 9th and 10th November, 2000

Type of track: Concrete

Tyre size: front: 7-16 Tyre inflation pressure: unballasted: front 176.5kPa rear 117.7kPa Height of drawbar above ground: unballasted: 426mm

rear: 11.2-24 ballasted: 176.5kPa 117.7kPa ballasted: 490mm

Gear number and range	Power (kW)	Drawbar pull (kN)	Speed (km/h)	Engine speed (min-1)	Slip of wheels (%)	Specific fuel consumption (g/kWh)	Specific energy (kWh/L)	Temperature			Atmospheric conditions		
								Fuel (°C)	Coolant (°C)	Engine oil (°C)	Temperature (°C)	Relative Humidity (%)	Pressure (kPa)
3.3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)													
1-L	3.34	10.2	1.19	2830	15.3	732	1.144	38	76	89	23	62	1016
2-L	4.32	10.1	1.55	2820	15.1	599	1.398	37	76	88	23	64	1016
3-L	6.25	10.2	2.20	2815	14.9	498	1.680	37	76	88	23	64	1016
4-L	11.90	10.2	4.21	2766	15.1	374	2.238	38	76	88	23	64	1016
1-H	13.41	10.3	4.72	2760	15.0	359	2.330	35	75	89	23	65	1016
2-H	17.03	10.1	6.05	2697	13.9	346	2.420	31	76	82	21	68	1017
3-H	17.36	6.8	9.25	2699	8.2	335	2.500	32	76	87	22	67	1017
4-H	13.64	2.7	18.40	2698	6.1	422	1.984	34	80	89	22	67	1016
3.3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)													
1-L	4.12	12.6	1.19	2823	15.0	631	1.328	40	74	87	21	32	1016
2-L	5.34	12.5	1.55	2817	15.1	551	1.521	34	76	88	22	34	1013
3-L	7.70	12.6	2.20	2799	15.0	438	1.912	36	77	88	22	34	1013
4-L	14.7	12.6	4.18	2745	15.0	360	2.323	37	78	90	22	32	1014
1-H	16.23	12.6	4.64	2717	15.0	353	2.372	40	80	92	22	33	1014
2-H	17.12	9.7	6.34	2703	10.1	336	2.491	40	80	92	22	33	1014
3-H	17.26	6.5	9.58	2709	5.6	334	2.508	40	77	92	22	33	1014
4-H	14.04	2.6	19.30	2701	2.1	413	2.030	41	81	92	21	32	1015
3.3.3 FIVE HOUR TEST													
3.3.3.1 FIVE HOUR TEST at 75 % of the pull corresponding to maximum power													
2-H	13.70	7.3	6.77	2775	6.3	345	2.425	27	76	90	21	31	1024
3.3.3.2 FIVE HOUR TEST at pull corresponding to 15 % wheel slip													
1-H	16.23	12.6	4.64	2717	15.0	353	2.372	40	78	92	20	45	1018

Oil consumption during ten hours duration of tests 3.3.3.1 and 3.3.3.2: 2.2g/h

3.4 TURNING AREA AND TURNING CIRCLE

3.4.1 Front wheel drive disengaged

	With brakes		Without brakes	
	Left-hand [m]	Right-hand [m]	Left-hand [m]	Right-hand [m]
Radius of turning area	2.65	2.68	3.04	3.06
Radius of turning circle	2.81	2.84	3.22	3.24

3.4.2 Front wheel drive engaged

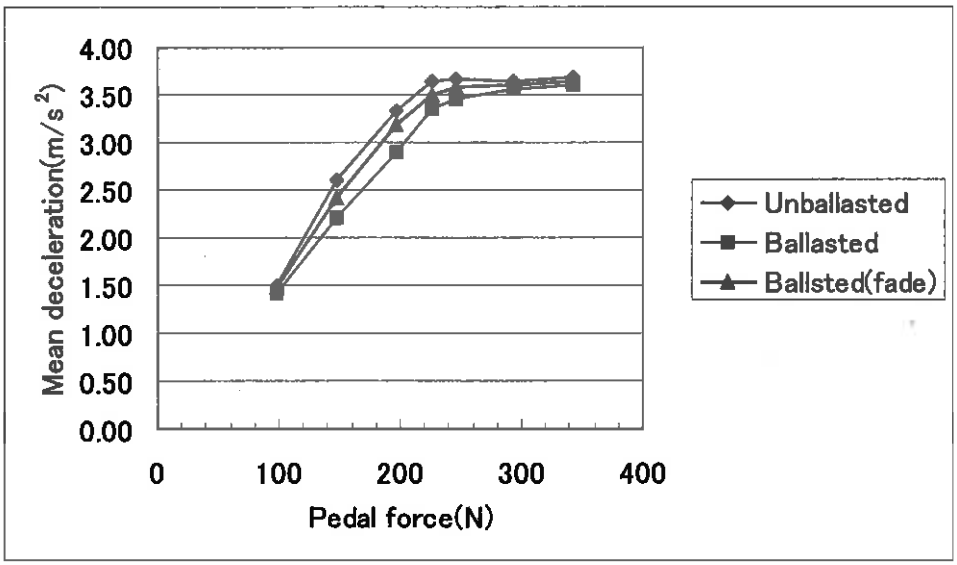
	With brakes		Without brakes	
	Left-hand [m]	Right-hand [m]	Left-hand [m]	Right-hand [m]
Radius of turning area	2.63	2.68	3.20	3.21
Radius of turning circle	2.82	2.84	3.40	3.41

3.5 LOCATION OF CENTER OF GRAVITY

Height above ground:	703 mm
Distance forward from the vertical plane containing the axis of the rear-wheels:	653 mm
Distance from the median plane of the tractor (to the right):	4 mm

3.6 BRAKING (front wheel drive disengaged)

Date of tests: 8th November, 2000



Figure

COLD SERVICE BRAKING DEVICE TEST AND FADE TEST

3.6.1 Cold service braking device test

	Speed before application of brakes [km/h]	Braking device control force [N]	Mean deceleration [m/s²]
Ballasted tractor	19.7	98	1.42
		147	2.21
		196	2.90
		226	3.34
		245	3.46
		294	3.57
		343	3.60
Unballasted tractor	19.9	98	1.50
		147	2.60
		196	3.33
		226	3.64
		245	3.67
		294	3.64
		343	3.68

Maximum deviation of tractor from its original course: None

Abnormal vibration: None

3.6.2 Fade test

Speed before Application of brakes [km/h]	Braking device control force [N]	Mean deceleration [m/s²]
19.7	98	1.48
	147	2.42
	196	3.19
	226	3.49
	245	3.58
	294	3.61
	343	3.64

Maximum deviation of tractor from its original course: None

Abnormal vibration: None

Brake heating method: By means of towing the tractor for 1 km at 15.8 km/h with the towing force of 1.53 kN

3.6.3 Parking braking device test

	Ballasted tractor on 18% slope	
	Uphill	Downhill
Braking device control force [N]	451	422

3.7 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests:	7th November, 2000
Sound level meter	
Make:	RION
Model:	NL-14
Type:	Precision sound level meter
Type of track:	Concrete
Gear number:	4-H
Travelling speed before acceleration:	15.9 km/h
Sound level:	82.0 dB(A)

REPAIRS AND ADJUSTMENTS DURING TESTS

None

REMARKS

None