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

OECD Approval No.: 1/1907 / **FULL CODE**
Date of approval: 12th May, 2000
Test No.: OECD-H11-T004



Agricultural Tractor

KUBOTA M5700DT (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 "Yellow Code", January 1998, 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-H11-T004
Duration of Test:	from February to March, 2000
Date of Approval:	12th May, 2000

Make:	KUBOTA
Model:	M5700DT
Type:	4WD
Serial number:	M570-50108
1st Serial number:	M570-50001

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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Printed in JAPAN

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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 60 h
Location of test:	BRAIN

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

Make:	KUBOTA
Model:	M5700DT
Type:	Four-wheel drive, unit construction Agricultural tractor
Number of driving wheels:	4
Serial Number:	M570-50108
1st Serial Number:	M570-50001

1.2 ENGINE

Make	Own make
Model:	F2803-EA-1
Type:	4-cycle diesel engine with indirect injection, water cooled, naturally aspirated
Serial No.:	XY7955

1.2.1 Cylinders

Number and disposition:	5, vertical, in-line
Bore/Stroke:	87.0 mm / 92.4 mm
Capacity:	2.746 dm^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:	Forced feed type (diaphragm pump)
Filters	
Make:	TAIYO GIKEN KOGYO Corporation
Model:	D1402
Type:	Replaceable paper element type
Number:	1
Capacity of fuel tank:	65 dm^3
Injection pump	
Make:	DENSO Corporation
Model:	ND-PFR5M575A2ND753
Type:	Bosch type M
Manufacturer's production setting of injection pump	
Flow rate:	14.1 $\pm$ 0.7 dm^3/h at rated engine speed and full load
Timing:	18 ~ 20 degrees before T.D.C.
Injectors	
Make:	DENSO Corporation
Model:	DNOPD 95
Type:	Throttle Type
Injection pressure:	13.7 ~ 14.7 MPa

1.2.4 Governor

Make:	Own make
Type:	Mechanical (all speed governor)
Governed range of engine speed:	from 900 to 3020 min^{-1}
Rated engine speed:	2800 min^{-1}

1.2.5 Air cleaner

Pre-cleaner:	Not fitted
Main cleaner	
Make:	NIPPON DONALDSON Co., LTD.
Model:	FP G068355 (fitted on tested tractor)
	FP G068332 (as option)
Type:	Dry dual paper element
Location of air intake:	Under the bonnet, in front of the radiator
Maintenance indicator:	Not fitted

1.2.6 Lubrication system

Type of feed pump:	Forced feed (trochoidal pump)
Type of filter:	Replaceable paper element canister
Number:	1

1.2.7 Cooling system

Type of coolant:	50 % solution of permanent antifreeze and clean water
Specification of pump	
Type:	Centrifugal
Model:	C1641273033
Specification of fan	
Type:	Axial type
Number of fan blades:	5
Fan diameter:	380 mm
Coolant capacity:	6.2 dm^3
Type of temperature control:	Wax type thermostat and bypass circuit
System pressure:	88.3 kPa

1.2.8 Starting system

Make:	DENSO Corporation
Model:	ADXD13
Type:	Solenoid engaged type
Starter motor power rating:	12 V, 1.4 kW
Cold starting aid:	Electrical glow plug
Safety device:	Operable only with shuttle shift lever in neutral and PTO clutch disengaged

1.2.9 Electrical system

Voltage:	12 V
Generator	
Make:	DENSO Corporation
Model:	ACFA69
Type:	Three phase generator
Power:	40 Amps
Battery	
Number:	1
Rating:	68 Ah at 5 hours

1.2.10 Exhaust system

Make:	NELSON Industries Inc.
Model:	25816A
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 alone)

Make:	EXEDY Corporation
Model:	D707 00F
Type:	Dry single plate-single stage
Number of plates:	1
Diameter of plates:	275 mm
Method of disengagement:	Operated by foot pedal

1.3.2 Gear box

Make: Own make

Type: Mechanical

Description: Synchromesh 4 speed (1st ~ 4th) gears with main shift lever, constant mesh 2 gears low(L)/high(H) with range shift lever, synchromesh 2 speed gears, forward(F) / reverse(R) with shuttle lever.
Totally 8 forward/ 8rearward speeds.

	Forward	Reverse
Number of gears	4	4
Number of ranges	2	2
Total of arrangements	8	8

Available options: Additional one constant mesh creeper gear
Totally 12 forward / 12 reverse speeds
(fitted on tested tractor)

1.3.3 Rear axle and final drives

Make: Own make

Type: Bevel gear type differential and planetary 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 planetary gear type final drives

Differential lock: Not fitted

1.3.5 Total ratios and travelling speeds (not tested tractor)

Gear Number	Range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed(*) at rated engine speed of 2800 min^{-1} [km/h]	
		Forward	Reverse	Forward	Reverse
1	1-L	251.55	240.82	2.83	2.95
2	2-L	187.43	179.44	3.79	3.96
3	3-L	122.14	116.93	5.82	6.08
4	4-L	81.99	78.50	8.67	9.06
5	1-H	69.79	66.81	10.19	10.64
6	2-H	51.99	49.78	13.67	14.28
7	3-H	33.89	32.44	20.98	21.92
8	4-H	22.75	21.78	31.26	32.65

(*) Calculated with a tyre dynamic radius index (ISO 4251-1:1992) of 674 mm (tyre:16.9-28)

Number of revolutions of front wheels for one revolution of rear wheels: 1.4412

1.3.6 Total ratios and travelling speeds (with creep range, fitted on tested tractor)

Gear Number	Range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed(*) at rated engine speed of 2800 min^{-1} [km/h]	
		Forward	Reverse	Forward	Reverse
1	1-C	1783.79	1707.79	0.40	0.42
2	2-C	1329.09	1272.42	0.54	0.56
3	3-C	866.13	829.19	0.82	0.86
4	4-C	581.48	556.68	1.22	1.28
5	1-L	251.55	240.82	2.83	2.95
6	2-L	187.43	179.44	3.79	3.96
7	3-L	122.14	116.93	5.82	6.08
8	4-L	81.99	78.50	8.67	9.06
9	1-H	69.79	66.81	10.19	10.64
10	2-H	51.99	49.78	13.67	14.28
11	3-H	33.89	32.44	20.98	21.92
12	4-H	22.75	21.78	31.26	32.65

(*) Calculated with a tyre dynamic radius index (ISO 4251-1:1992) of 674 mm (tyre:16.9-28)

Number of revolutions of front wheels for one revolution of rear wheels: 1.4412

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

Type:	Independent PTO
Method of engagement:	Hydraulically actuated wet multi-plate clutch by hand lever
Number of shafts:	1
Method of changing power take-off shafts ends and speeds:	Fixed speed

1.4.1.1 Power take-off proportional to engine speed

Power take-off at 540 min^{-1} (not 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:	658 mm
Distance from the median plane of the tractor:	0 mm

Distance behind rear axle center: 315 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]
540	540	2295	4.250	38.8 kW
	659	2800		

1.4.1.2 Power take-off proportional to ground speed Not fitted

1.4.2 Optional power take-off (fitted on tested tractor)

Type: Independent PTO

Method of engagement: Hydraulically actuated wet multi-plate clutch by hand lever

Number of shafts: 1

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

1.4.2.1 Power take-off proportional to engine speed

Power take-off at 540/540E min^{-1} 2 speeds (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: 658 mm

Distance from the median plane of tractor: 0 mm

Distance behind rear axle center: 377 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]
540	540	2307	4.273	None
	655	2800		
540E	750	2538	3.385	None
	827	2800		

1.4.2.2 Power take-off proportional to ground speed Not fitted

1.5 HYDRAULIC POWER LIFT

Make: Own make

Type: Hydraulic, 3-point hitch
Position, draft and mix 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: 18.6 ~ 19.1 MPa

Opening pressure of cylinder safety valve: 21.1 ~ 22.6 MPa

Lift pump type: Gear type

Transmission between pump and engine: Gear drive

	(gear: injection pump cam shaft drive)
Type and number of filters:	Replaceable paper element canister, 2
Site of oil reservoir:	In rear transmission case
Type, number and location of tapping points	
Type:	SAE 1/2" hydraulic female coupler
Number:	1 set (fitted on tested tractor), 2 sets (option)
Location:	At rear of tractor
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 conformity with ISO 730-1:1994+Cor.1:1995

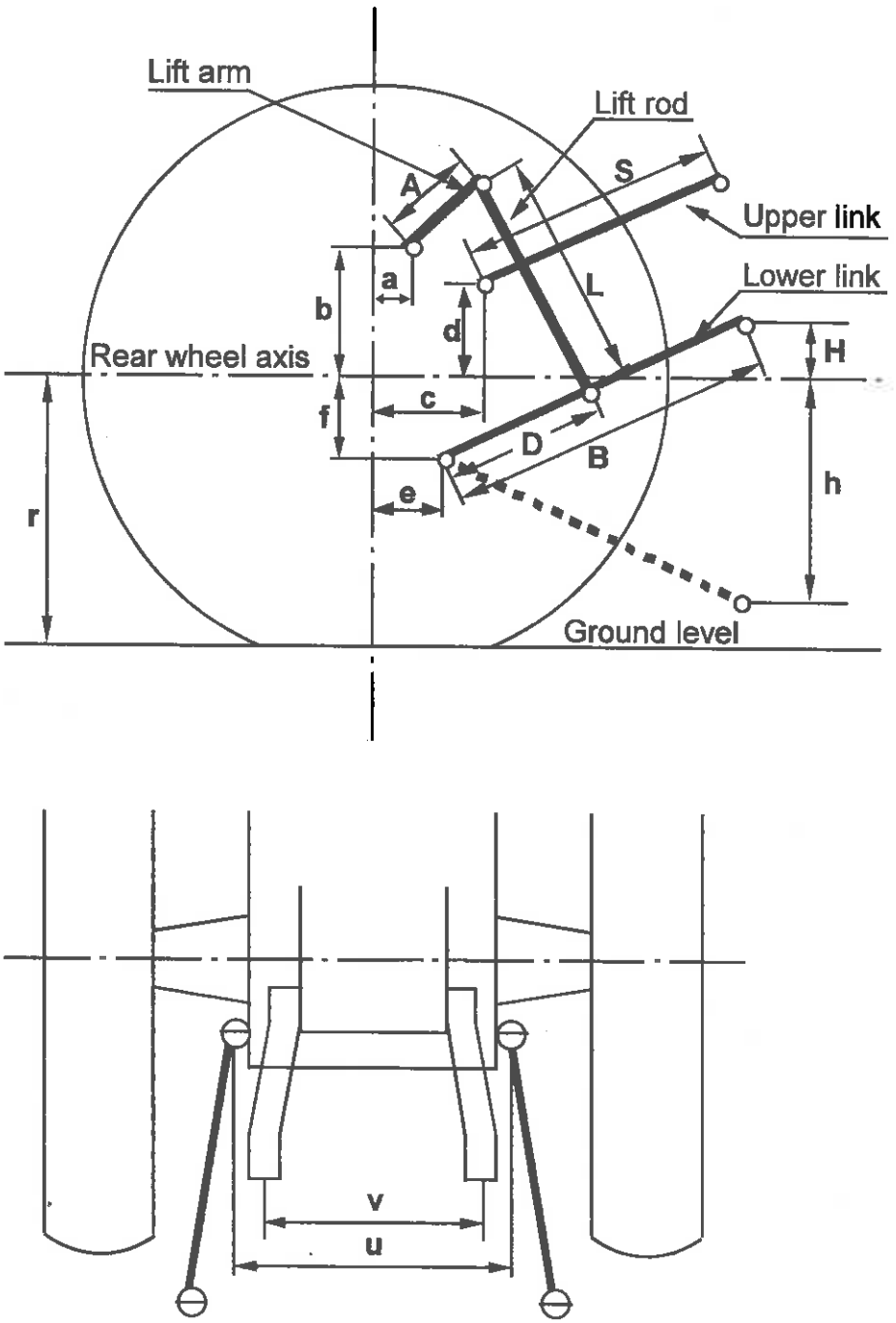


Figure
Lift test - Linkage geometry

		Dimension of range [mm]	Settings used in test [mm]
Length of lift arms	(A)	240	240
Length of lower links	(B)	790	790
Distance of lift arm pivot point from rear-wheel axis:			
- horizontally	(a)	95	95
- vertically	(b)	278	278
Horizontal distance between the 2 lower link points	(u)	339	339
Horizontal distance between the 2 lift arm end points	(v)	464	464
Length of upper link	(S)	from 506 to 712	577
Distance of upper link pivot point from rear wheel axis:			
- horizontally	(c)	301 301 301 305	301
- vertically	(d)	270 240 210 180	210
Distance of lower link pivot point from rear wheel axis:			
- horizontally	(e)	104	104
- vertically	(f)	197	197
Distance of lower link pivot points to lift rod pivot points on lower links:	(D)	395	395
Length of lift rods:	(L)	from 470 to 545	530
Height of lower hitch points relative to the rear wheel axis:			
- in low position	(h)	474	474
- in high position	(H)	129	129
Height above ground of lower hitch points when locked in transport position(*):		from 790 to 930	803
(*) Assuming r = rear tyre dynamic radius index (ISO 4251-1:1992): 674 mm (tyre: 16.9-28)			

Table

Dimensions of linkage geometry when connected to the standard frame

1.7 SWINGING DRAWBAR

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

Height above ground 446 mm at top surface of bar
(tyre size 16.9-28, r = 674 mm)

Distance of hitch point from rear wheel axis,
horizontally: 690 mm

Distance of hitch point from power take-off shaft end
vertically: 192 mm at top surface of bar
horizontally: 540 min^{-1} one speed power take-off: 374.5 mm
540/540E min^{-1} 2 speeds power take-off: 313 mm

Lateral adjustment (center of clevis)
right hand: 117 mm
left hand: 117 mm

Distance of pivot point from rear wheel axis,
horizontally: 195 mm

Diameter of drawbar pin hole: 26.5 mm

Maximum vertical permissible load: 9.8 kN

1.8 TRAILER HITCH

Not fitted

1.9 HOLED DRAWBAR

Not fitted

1.10 STEERING

Make:	SUMITOMO EATON HYDRAULICS CO., LTD.
Model:	WVQ 150Z23AUD
Type:	Hydrostatic power steering
Method of operation:	Steering wheel operated and full hydraulic power
Pump:	Independent gear type
Ram:	Balanced type cylinder
Working pressure:	17.5 MPa

1.11 BRAKES

1.11.1 Service brake

Make:	Own make
Type:	Multiple wet disks operated by two foot pedals which can be locked together
Method of operation:	By Independent or combined pedal
Trailer breaking take-off:	Not fitted

1.11.2 Parking brake

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

1.12 WHEELS

Number	4
Front:	2, steering and driving
Rear:	2, driving
Wheelbase:	2000 mm

Track width adjustment

	Minimum [mm]	Maximum [mm]	Adjusted method
Front	1330	1430	Changing by offset of rims
Rear	1420	1720	Changing by turning wheels and offset of rims

1.13 PROTECTIVE STRUCTURE

Safety frame

Make:	KUBOTA
Model:	SFM-54
Type:	2-post safety frame
Protective device:	Rear roll bar not tiltable
OECD approval number:	4/0388/1
Date of approval:	26th April, 2000

Cab

Make:	KUBOTA
Model:	IC68
Type:	Integral cab
Protective device:	Cab, not tilted
OECD approval number:	4/0634
Date of approval:	26th April, 2000

1.14 SEAT

1.14.1 Driver's seat

Make:	Seats Incorporated
Model:	176710-1
Seat and steering wheel reversible:	No
Type of suspension:	Coil spring
Type of damping:	Oil damping
Range of adjustment	
Longitudinal:	152.4 mm
Vertical:	0 mm
Safety belt:	Not fitted on tested tractor

1.14.2 Optional driver's seat — Not fitted

1.14.3 Passenger seat — Not fitted

1.15 LIGHTING

	Height above ground of center [mm]	Size [mm]	Distance from outside edge of lights to median plane of tractor [mm]
Headlights	940	145 x 90	217
Sidelights	–	–	–
Rearlights	1520	101.5 x 89.5	698.5
Reflectors	1390	195 x 75	676
Flashers	1520	101.5 x 89.5	698.5

2. TEST CONDITIONS

2.1 OVERALL DIMENSIONS

	Length	Width		Height	
		Minimum	Maximum	At top of protective structure	Mirror
	[mm]	[mm]	[mm]	[mm]	[mm]
Unballasted	3420	1855	2155	2360	1817
Ballasted	3808	1985	2155	2350	1807

2.2 GROUND CLEARANCE

Ground clearance: 420 mm

Clearance-limiting part: Bottom of the muffler

2.3 TRACTOR MASS

	Ballasted		Unballasted	
	Without driver [kg]	With driver [kg]	Without driver [kg]	With driver [kg]
Front	1311	1320	769	780
Rear	1821	1887	1164	1228
Total	3132	3207	1933	2008

2.4 BALLAST

Front:	1 bracket	44 kg
	8 weights, total	360 kg
Rear:	6 weights, total	310 kg
	Water in the tyres	485 kg

2.5 TYRES AND TRACK WIDTH SPECIFICATIONS

		Front	Rear
Tyres:			
- dimension		9.5-22	16.9-28
- ply rating		6	6
- type		cross-ply	cross-ply
- maximum load (tyre manufacturer's)	[kN]	8.83	18.04
- inflation pressure (tyre manufacturer's)	[kPa]	196	118
- dynamic radius index	[mm]	478	674
Chosen track width	[mm]	1430	1420

2.6 FUEL

Type: Diesel fuel No.2 in conformity with JIS

Density at 15°C: 0.8375 g/cm^3

2.7 OILS AND LUBRICATION

2.7.1 Capacity and change interval

	Capacity [dm^3]	Oil change [h]	Filter change [h]
Engine	8.0	100	200
Gear box Rear axle Final drive (rear and front) Hydraulic system Power steering	40.0	600	200
Front axle	8.0	600	–
Service brake	–	–	–

2.7.2 Specifications

	Recommended	Used during test
Engine oil: type viscosity classification	API grade CD Below 0 °C : SAE 10W , 10W-30 , 10W-40 From 0 °C to 25 °C : SAE 20 , 10W-30 , 10W-40 Above 25 °C : SAE 30 , 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: 9

3. COMPULSORY TESTS RESULTS

3.1 MAIN POWER TAKE-OFF

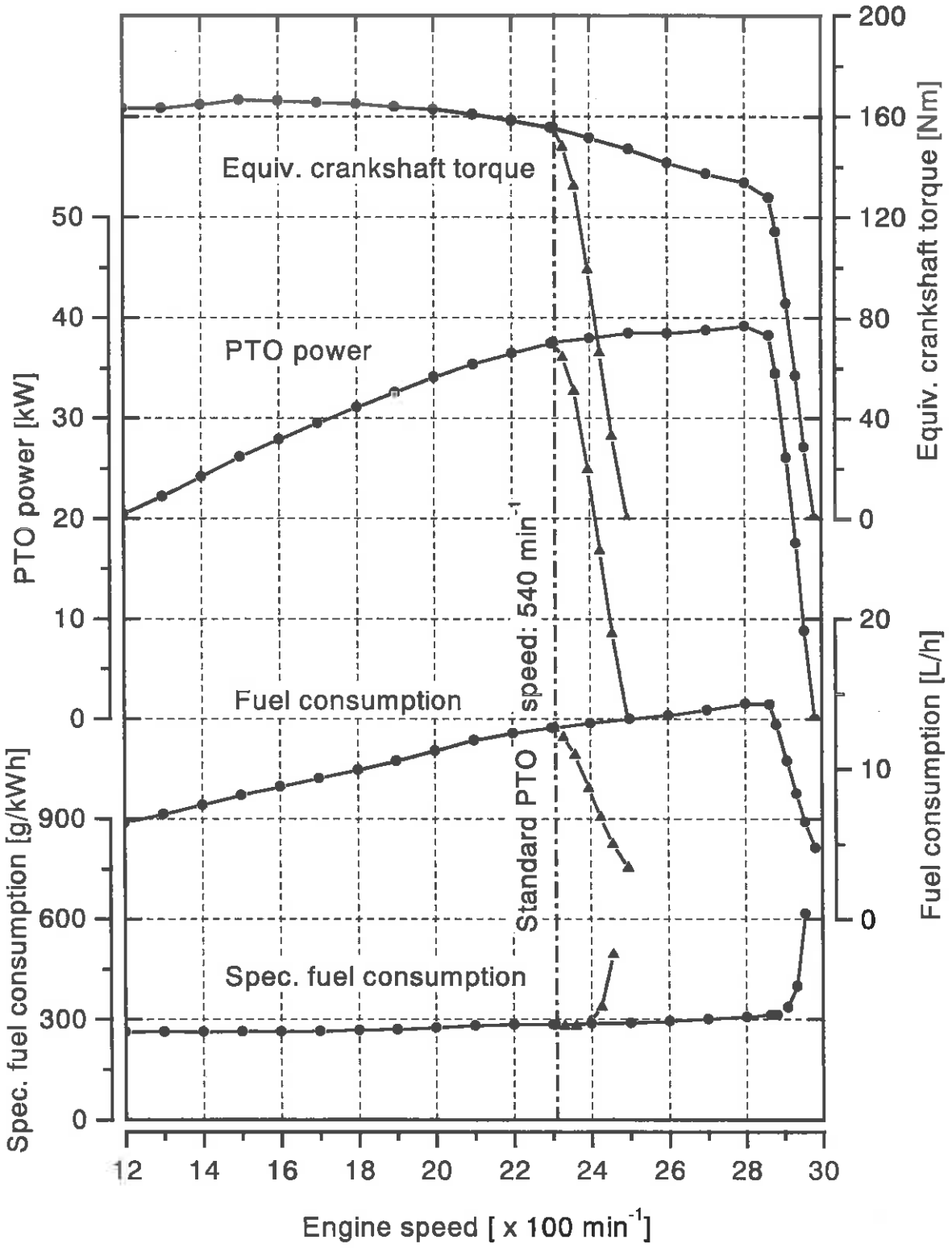
Date and location of tests: 29th February, 2000, BRAIN, Omiya

Type of dynamometer: Alternating current , MEIDEN FC-95

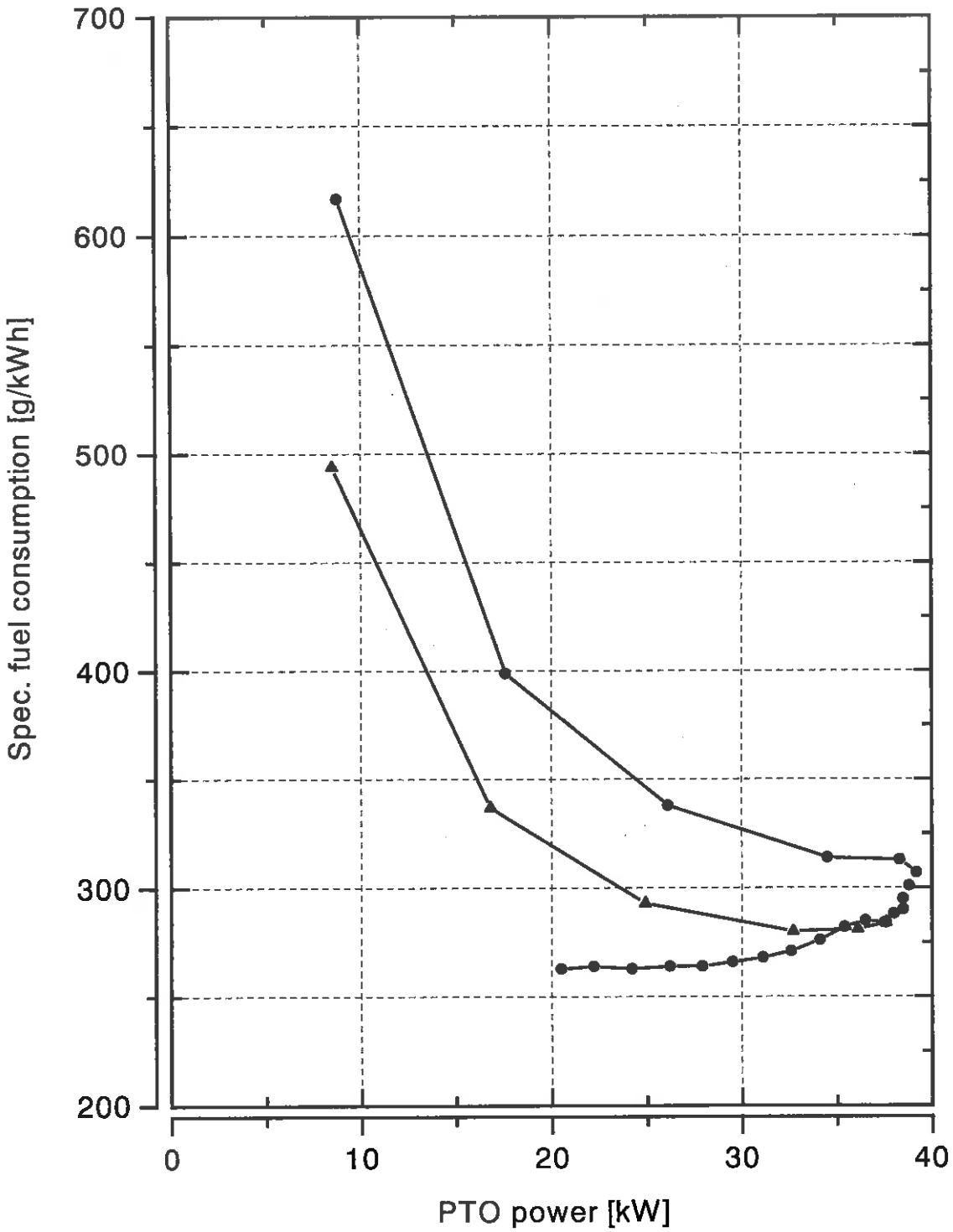
Power	Speed		Fuel consumption			Specific Energy
	Engine	PTO	Hourly		Specific	
[kW]	[min^{-1}]		[kg/h]	[L/h]	[g/kWh]	[kWh/L]
3.1.1 MAXIMUM POWER - TWO-HOUR TEST						
39.2	2800	655	12.02	14.36	307	2.730
3.1.2 POWER AT RATED ENGINE SPEED						
39.2	2800	655	12.02	14.36	307	2.730
3.1.3 STANDARD POWER TAKE-OFF SPEED (540 min^{-1})						
37.6	2307	540	10.69	12.76	284	2.947
3.1.4 PART LOADS AT RATED ENGINE SPEED						
3.1.4.1 The torque corresponding to maximum power at rated engine speed						
39.2	2800	655	12.02	14.36	307	2.730
3.1.4.2 85% of torque obtained in 1.4.1						
34.5	2880	674	10.84	12.94	314	2.666
3.1.4.3 75% of torque defined in 1.4.2						
26.1	2910	681	8.82	10.53	338	2.480
3.1.4.4 50% of torque defined in 1.4.2						
17.6	2936	687	7.02	8.38	399	2.099
3.1.4.5 25% of torque defined in 1.4.2						
8.8	2957	692	5.43	6.48	617	1.358
3.1.4.6 Unloaded						
0	2983	698	4.00	4.77	–	–
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						
37.6	2307	540	10.69	12.76	284	2.947
3.1.5.2 85% of torque obtained in 1.5.1						
32.7	2359	552	9.15	10.92	280	2.993
3.1.5.3 75% of torque obtained in 1.5.2						
24.9	2393	560	7.30	8.71	293	2.858
3.1.5.4 50% of torque obtained in 1.5.2						
16.8	2427	568	5.67	6.77	337	2.482
3.1.5.5 25% of torque obtained in 1.5.2						
8.5	2457	575	4.20	5.01	494	1.695
3.1.5.6 Unloaded						
0	2495	584	2.86	3.42	–	–

Other results

No load maximum engine speed:	2983	min^{-1}
Torque (equivalent crankshaft) at maximum power		
At rated engine speed:	133.7	Nm
At 2-hour test:	133.7	Nm
Maximum torque (equivalent crankshaft):	166.7	Nm
(engine speed: 1500 min^{-1})		
Mean atmospheric conditions		
Temperature:	24	°C
Pressure:	102.7	kPa
Relative humidity:	22	%
Maximum temperatures		
Coolant:	86	°C
Engine oil:	113	°C
Fuel:	19	°C
Engine air intake:	25	°C



POWER TAKE-OFF PERFORMANCE



POWER TAKE-OFF PERFORMANCE

3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 29th February, 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: 18.9 MPa

Pump delivery rate at minimum pressure: 41.6 L/min

Temperature of hydraulic fluid: 63 °C

	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	33.2	17.1	9.44
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	38.6	16.7	10.72

3.2.2 POWER LIFT TEST

		At hitch point	On the frame
Height of lower hitch points above ground in down position	[mm]	200	190
Vertical movement without lifting forces	[mm]	600	700
with lifting forces	[mm]	568	652
Maximum corrected force exerted though full range (*)	[kN]	14.71	12.63
Corresponding pressure of hydraulic fluid	[MPa]	17.1	17.1
Moment about rear wheel axle	[kNm]	–	17.71
Maximum tilt angle mast from vertical	[Degrees]	–	10

Lifting height (**) [mm]		-277	-262	-200	-100	0	100	200	300	306	375
Lifting force (**)	at the hitch point [kN]	–	14.71	16.23	17.46	18.04	18.39	18.44	18.44	18.49	–
	at the frame [kN]	15.00	–	15.93	16.15	15.88	15.33	14.39	13.59	–	12.63

(*) 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 Tests: 1st, 2nd ,3rd and 6th March, 2000

Type of track: Concrete

				front	rear			
Tire size:	front:	9.5-22	Tyre inflation pressure:	unballasted:	196 kPa	118 kPa	Height of drawbar above ground:	unballasted: 500 mm
	rear:	16.9-28		ballasted:	196 kPa	118 kPa		ballasted: 483 mm

Gear No. and range	Power	Drawbar pull	Travelling speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atomospheric condition		
								Fuel	Coolant	Engine oil	Temperature	Relative humidity	Pressure
	[kW]	[kN]	[km/h]	[min^{-1}]	[%]	[g/kWh]	[kWh/L]	[°C]	[°C]	[°C]	[°C]	[%]	[kPa]
3.3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)													
L-1	13.4	20.02	2.41	2918	15.0	519	1.613	28	75	99	17	17	102.4
L-2	18.6	20.13	3.33	2900	15.0	439	1.906	29	74	98	17	20	102.3
L-3	28.2	19.98	5.08	2869	15.1	389	2.153	28	74	97	16	20	102.4
L-4	35.2	16.00	7.92	2797	8.7	342	2.451	29	75	96	13	20	102.4
H-1	34.7	13.15	9.50	2794	6.5	347	2.416	27	74	94	14	21	102.3
H-2	34.1	9.50	12.92	2758	4.1	353	2.375	28	74	95	14	19	102.4
3.3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)													
L-1	19.9	28.89	2.48	2900	14.9	441	1.898	24	74	94	12	21	102.4
L-2	26.6	29.56	3.24	2873	15.2	390	2.145	26	76	99	12	25	102.4
L-3	35.0	24.47	5.15	2772	9.0	344	2.437	24	75	96	11	24	102.4
L-4	35.9	16.09	8.03	2767	4.7	335	2.500	21	75	91	9	26	102.4
H-1	35.4	13.41	9.50	2763	3.8	340	2.465	21	76	93	9	25	102.4
H-2	34.9	9.75	12.89	2760	2.6	345	2.430	24	75	97	10	25	102.4
3.3.3 FIVE HOURS TEST													
3.3.3.1 FIVE HOUR TEST at 75 % of the pull corresponding to maximum power													
L-4	28.1	12.07	8.39	2868	3.9	368	2.259	33	75	97	21	20	102.6
3.3.3.2 FIVE HOURS TEST at pull corresponding to 15 % wheelslip													
L-2	26.6	29.56	3.24	2873	15.0	390	2.145	27	75	99	15	41	101.5

(*) Oil consumption during ten hours duration of tests 3.3.3.1 and 3.3.3.2: 14.1 g/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	3.27	3.24	3.59	3.59
Radius of turning circle	3.05	3.04	3.35	3.35

3.4.2 Front wheel drive engaged

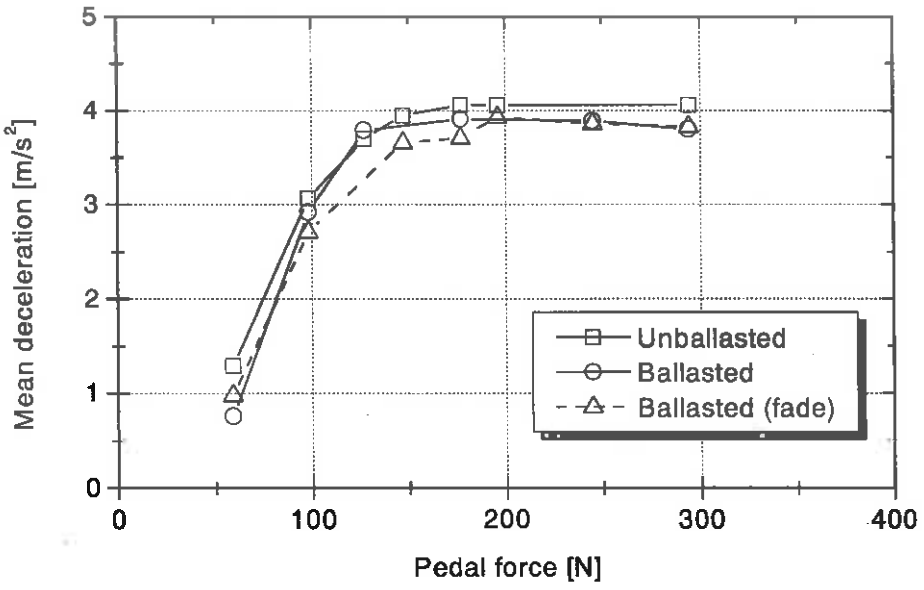
	With brakes		Without brakes	
	Left-hand [m]	Right-hand [m]	Left-hand [m]	Right-hand [m]
Radius of turning area	3.29	3.27	4.10	4.11
Radius of turning circle	3.02	3.00	3.80	3.81

3.5 LOCATION OF CENTER OF GRAVITY

Height above ground:	774 mm
Distance forward from the vertical plane containing the axis of the rear-wheels:	777 mm
Distance from the median plane of the tractor (to the left):	1 mm

3.6 BRAKING (front wheel drive disengaged)

Date of tests: 2nd and 8th August, 1996



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	31.9	58.8	0.76
		98.1	2.92
		127	3.79
		177	3.91
		245	3.89
		294	3.80
Unballasted tractor	32.3	58.8	1.29
		98.1	3.07
		127	3.70
		147	3.95
		177	4.06
		196	4.06
		294	4.06

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]
31.9	58.8	0.98
	98.1	2.71
	147	3.66
	177	3.71
	196	3.93
	245	3.86
	294	3.83

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 25.5 km/h with the towing force of 3.10 kN

3.6.3 Parking braking device test

	Ballasted tractor on 18% slope	
	Uphill	Downhill
Braking device control force [N]	431	431

3.7 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests:	1st March, 2000
Sound level meter	
Make:	RION
Model:	NL-14
Type:	Precision sound level meter
Type of track:	Concrete
Gear number:	H-4
Travelling speed before acceleration:	24.8 km/h
Sound level:	84.5 dB(A)

REPAIRS AND ADJUSTMENTS DURING TESTS

None

REMARKS

None