Report on test in accordance with
O.E.C.D. STANDARD CODE I for the Official
Testing of Agricultural Tractor Performance

FULL CODE

O.E.C.D. Approval No. : 1/1811

Date of approval : 5th March, 1999



Agricultural Tractor

KUKJE F4350-DE(4WD)

Manufactured by : Kukje Machinery Co., Ltd.
11-1, Yangsoo-ri, Okchun-up, Okchun-gun,
Chungcheungbuk-do, Republic of Korea

NATIONAL AGRICULTURAL MECHANIZATION RESEARCH INSTITUTE
(NAMRI)
520-6 GONJIAM-RI, SILCHON-MYON, KWANGJU-GUN, KYUNGGI-DO, REPUBLIC OF KOREA

This is a report on a tractor test in accordance with the OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance(C(87)53(Final), Code 1) and amendments (C(90)79, C(92)52, C(93)52, C(93)133 and C(95)17).

It does not contain an evaluation of the tractor on practical work

Report No. : 98-M-5-2
Duration of test : August 1998 till January 1999
Date of approval : 5th March, 1999

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

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 kgf	=	9.80665 N
Powers	1 PS	=	0.7355 kW
Pressures	1 kgf/㎠	=	98.0665 kPa

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- Tractor manufacturer's name and address : KUKJE Machinery Co., Ltd.
  11-1, Yangsoo-ri, Okchun-up, Okchun-gun,
  Chungcheungbuk-do, R.O.K.
- Location of tractor assembly : 11-1, Yangsoo-ri, Okchun-up, Okchun-gun,
  Chungcheungbuk-do, R.O.K.
- Submitted for test by : The manufacturer
- Selected for test by : The manufacturer in agreement with the test station
- Place of running-in : Okchun, R.O.K.
- Duration of running-in : Engine and tractor 30 hours
- Location of test : NAMRI

1. SPECIFICATIONS OF TRACTOR

1.1 Identification

- Make : KUKJE
- Model : F4350-DE
- Type : wheeled tractor, unit construction
- Number of driving wheels : 4
- Serial No. : CL6H00009
- 1st Serial No. : CL6H00001

1.2 ENGINE

- Make : Own make
- Model : 3D95T-ATL
- Type : 4 stroke, water cooled, direct injection diesel, naturally aspirated
- Serial No. : TJ2G00354

1.2.1 Cylinders

- Number/disposition : 3, Vertical, in-line
- Bore/stroke : 95 mm/110 mm
- Capacity : 2339 ㎤
- Compression ratio : 18.2 : 1
- Arrangement of valves : Overhead
- Cylinder liners : Dry

1.2.2 Supercharging : None

1.2.3 Fuel system

- Fuel feed system : Forced feed type

- Fuel filter(s)
  - Make : Samo Precision Co.
  - Model : HJ16010000A2
  - Type : Replaceable paper element
- Capacity of fuel tank : 42 dm³
- Injection pump
  - Make : Doowon Precision Industry Co., Ltd.
  - Model : HJ13010000A0
  - Type : Bosch, In-line
- Serial No. : TJ2G00354
- Manufacturer's production setting of injection pump
  - Flow rate : 9.5±0.5dm³/h at rated speed and full load
  - Timing : 17 degrees before T.D.C
- Injectors
  - Make : Doowon Precision Industry Co., Ltd.
  - Model : HJ15010000A2
  - Type : Multi-hole
- Injection pressure : 19.6 MPa

1.2.4 Governor

- Make : Doowon Precision Industry Co., Ltd.
- Model : TJ18000000A9
- Type : Mechanical
- Governed range of engine speed : From 900 to 2800 rev/min
- Rated engine speed : 2600 rev/min

1.2.5 Air cleaner

- Pre-cleaner
  - Make : Sin-Poong Industry Co.
  - Model : HJ06220000A1
  - Type : Cyclone type, dry
  - Location of air intake : Under the bonnet, in front of the radiator
- Main cleaner
  - Make : Poong-Yang Industry co.
  - Model : HJ06210100A1
  - Type : Cyclone type, dry
  - Location of air intake(in case of no pre-cleaner) : -
- Maintenance indicator : None

1.2.6 Lubrication system

- Type of feed pump : Rotor
- Type of filter : Full flow, replaceable canister
- Number of filters : 1

1.2.7 Cooling system

- Type of coolant : Water or water and antifreeze solution
- Type of pump : Centrifugal
- Specification of fan : Belt driven, puller
  - Number of fan blades : 7
  - Fan diameter : 360 mm
- Coolant capacity : 9.75 dm³ (Radiator 5.2 dm³ + Engine 4.55 dm³)
- Type of temperature control : Thermostat
- Superpressure system : 88.3 kPa, radiator cap

1.2.8 Starting system

- Make : Mando Machinery Co., Ltd.
- Model : HH20010000A1
- Type : Electrical, pre-engaged, solenoid operated
- Starter motor power rating : 2.5 kW
- Cold starting aid : Electrothermal wire, 12 V
- Safety device : Starting operable only when main clutch pedal fully depressed

1.2.9 Electrical system

- Voltage : 12 V
- Generator
  - Make : Mando Machinery Co., Ltd.
  - Model : HN21010000A2
  - Type : 3 phase generator
  - Power : 0.54 kW
- Battery of accumulators
  - Number : 1
  - Rating : 110Ah at 20 hours rating

1.2.10 Exhaust system

- Make : Tae-Jin Industry Co.
- Model : HJ07300000A0
- Type : Horizontal silencer
- Location : Under bonnet, left hand side

1.3 TRANSMISSION

1.3.1 Clutch (travel and power take-off)

- Make : Luk Gmbh & Co.
- Model : TZ38010000A1
- Type : Dry dual clutch for transmission & PTO
- Number of plates : 2
- Diameter of plates : 225 mm
- Method of operation : Mechanically actuated by pedal

1.3.2 Gear box

- Make : Own make
- Model : TZ41990043A9
- Type : Mechanical
- Description : 4 main gear with synchromesh, 3 range gear with sliding-mesh and creeper gear

	Forward	Reverse
Number of gears	4	4
Number of ranges/groups	3	3
Creeper gears(engaged/disengaged)	2	2
Total of arrangements	24	24

※ The creeper gears are not to be used for heavy drawbar work.

- Available options : None

1.3.3 Rear axle and final drives

- Make : Own make
- Model : TZ49991143A9
- Type : Bevel gear type differential and spur gear type final drives
- Differential lock
  - Type : Mechanical
  - Method of engagement : Mechanically actuated by pedal
  - Method of disengagement : Self-disengagement by spring

1.3.4 Front axle and final drives

- Make : Own make
- Model : TZ09009999A9
- Type : Bevel gear type differential and bevel gear type final drives
- Differential lock None

1.3.5 Total ratios and travelling speeds

Gear No	Group or range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed(*) at rated engine speed of 2600 rev/min (km/h)	
		Forward	Reverse	Forward	Reverse
1	C-L-1	2754.15	2879.94	0.21	0.20
2	C-L-2	2349.61	2456.87	0.25	0.24
3	C-L-3	1751.64	1831.57	0.33	0.32
4	C-L-4	1244.36	1301.24	0.46	0.44
5	C-M-1	1124.12	1175.45	0.51	0.49
6	C-M-2	959.04	1002.85	0.60	0.58
7	C-M-3	714.97	747.59	0.81	0.77
8	C-M-4	507.87	531.10	1.14	1.09
9	C-H-1	467.22	488.57	1.24	1.18
10	C-H-2	398.31	416.84	1.45	1.39
11	C-H-3	297.11	310.69	1.95	1.86
12	C-H-4	211.11	220.76	2.74	2.62
13	L-1	322.50	337.23	1.79	1.71
14	L-2	275.13	287.69	2.10	2.00
15	L-3	205.11	214.47	2.82	2.70
16	L-4	145.71	152.37	3.97	3.79
17	M-1	131.63	137.64	4.39	4.20
18	M-2	112.30	117.43	5.15	4.92
19	M-3	83.72	87.54	6.90	6.60
20	M-4	59.47	62.19	9.72	9.29
21	H-1	54.71	57.21	10.57	10.10
22	H-2	46.64	48.81	12.38	11.84
23	H-3	34.79	36.38	16.61	15.89
24	H-4	24.72	25.85	23.38	22.36
(*) Calculated with the dynamic radius index of 590 mm(ISO 4251/1-1992).					

Number of revolutions of front wheels for one revolution of rear-wheels : 2.36

Range selection : L = Low, M = Medium, H = High, C = Creep

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

- Type : Semi-independent
- Method of engagement : Mechanically engaged by pedal (Dual clutch)
- Number of shaft : 1
- Method of changing power take-off shaft ends and speeds : Manually by hand lever

1.4.1.1 Power take-off proportional to engine speed

Power take-off at 540 rev/min

- Location : Rear of tractor
- Diameter of power take-off shaft end : 35 mm

- Number of splines : 6, in conformity with ISO 500/1991
- Height above ground : 590 mm
- Distance from the median plane of the tractor : 0 mm
- Distance behind rear-wheel axis : 270 mm
- PTO speed at rated engine speed : 4 changing gears

PTO speed at rated engine speed (2600 rev/min)			
1st	2nd	3rd	4th
531 rev/min	655 rev/min	915 rev/min	1300 rev/min

- Engine speed at standard power take-off speed : 2644 rev/min
- Ratio of rotation speeds
  (engine speed / p.t.o speed) : 4.896 : 1
- Power restriction : 36.8 kW
- Maximum torque transmissible : 849.2 Nm
- Direction of rotation
  (viewed from behind tractor) : Clockwise

1.4.1.2 Power take-off proportional to ground speed : None

1.4.2 Optional power take-off : None

1.5 Hydraulic power lift

- Make : Own make
- Model : TNA1010000A9
- Type : Hydraulic, position, draft and mixed control
- Type of hydraulic system : Open center system
- Type and number of cylinders : 1, Single acting, 80mm bore and 134mm stroke
- Type of linkage lock for transport : Hydraulic
- Relief valve pressure setting : 15.7±0.5 MPa
- Opening pressure of cylinder safety valve : 20.6±1.0 MPa
- Lift pump type : Gear pump
- Transmission between pump and engine : Driven by engine cam shaft
- Type and number of filters : 1, paper cartridge
- Site of oil reservoir : Transmission housing
- Type, number and location of tapping points : SAE 1/2" hydraulic female coupler, 2 sets, rear of tractor
- Maximum volume of oil available to external cylinders : None

1.6 Three-point linkage

- Category : 1 to ISO730/1-1994
- Category adapter : None

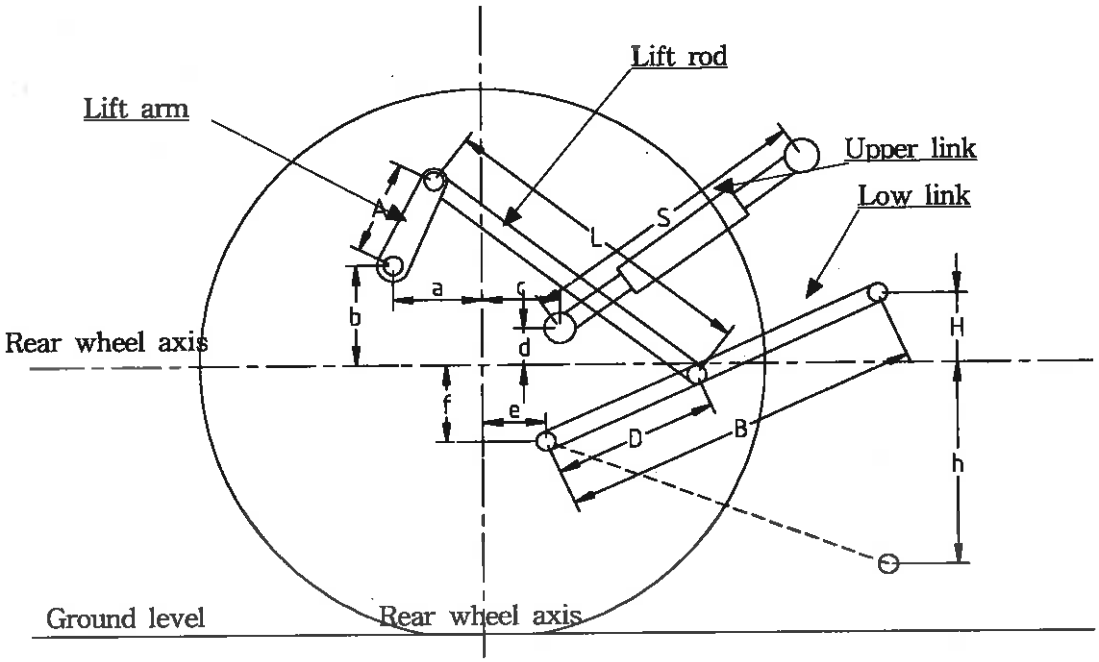


Figure 1.1
Link test - Linkage geometry

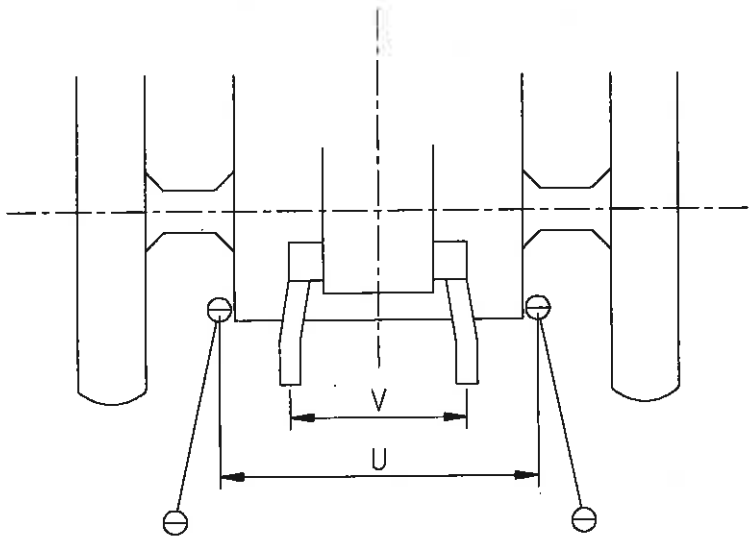


Figure 1.2
Link test - Linkage geometry

			Dimension or range (mm)	Settings used in test (mm)
Length of lift arms		(A)	250	250
Length of lower links		(B)	740	740
Distance of lift arm pivot point from rear-wheel axis	horizontally	(a)	65	65
	vertically	(b)	315	315
Horizontal distance between the 2 lower link points		(u)	490	490
Horizontal distance between the 2 lift arm end points		(v)	455	455
Length of upper link		(S)	from 480 to 720	615
Distance of upper link pivot point from rear wheel axis	horizontally	(c)	from 235 to 245	245
	vertically	(d)	from 260 to 280	260
Distance of lower link pivot point from rear wheel axis	horizontally	(e)	105	105
	vertically	(f)	130	130
Distance of lower link pivot point to lift rod pivot points on lower links		(D)	from 320 to 380	380
Length of lift rods		(L)	from 475 to 515	515
Height of lower hitch points relative to the rear-wheel axis				
- in low position		(h)	from 285 to 485	415
- in high position		(H)	from 225 to 330	225
Height above ground of lower hitch points when locked in transport position(*)			Any height within lifting range (Hydraulic Transport Lock)	

(*)Assuming the dynamic radius index = 590mm (ISO 4251/1-1992)

Table 1.1

Dimensions of linkage geometry

when connected to the standard frame

1.7 Swinging drawbar : None

1.8 Trailer Hitch

- Type	Clevis
- Hole diameter :	26.5 mm
- Height above ground :	364 mm
- Distance of hitch point from rear-wheel axis, horizontally :	550 mm
- Distance of hitch point from power take-off shaft end	
· Vertically :	235 mm
· Horizontally :	280 mm
- Maximum vertical permissible load :	7.0 kN

1.9 Holed drawbar None

1.10 Steering

- Make :	Danfoss
- Model :	TT33010000A3
- Type :	Hydrostatic
- Method of operation :	
· Pump :	Gear
· Ram :	1, single acting ram, actuated directly on front axle 55mm bore and 93mm stroke
- Working pressure :	9 ~ 9.5 MPa

1.11 Brakes

1.11.1 Service brake

- Make :	Jin Myoung Metal Co.
- Model :	TN50130000A9
- Type :	Oil-immersed multiplate discs, 4 per side
- Method of operation :	Operated by 2 pedals which can be locked together
- Trailer braking take-off :	None

1.11.2 Parking brake

- Type :	Mechanical in common with service brake
- Method of operation :	Depressed by pedals and ratched by hand lever

1.12 Wheels

- Number	
· Front :	2, driving
· Rear :	2, driving
- Wheelbase :	1808 mm

- Track width adjustment :

	Minimum (mm)	Maximum (mm)	Adjustment method
Front	1300	1540	By reversing wheels and offset lug rims
Rear	1216	1505	

1.13 Protective structure

- Make : FRITZMEIER
- Model : BA 4121/2
- Type : 2 posts rear frame
- Manufacture's name and address : BASKONIA BAVARIA, SA.
  Bº Mosolo Erreka S/N ABADIANO (Vizcaya)
- Protective device : Rollguard, tiltable
- OECD approval
  - Approval number : 4/0 523
  - Date of approval number : 21 April, 1998
  - Nos. of minor modification certificates, if any : No

1.14 Seat

1.14.1 Driver's seat

- Make : Han Jong
- Model : 6111
- Seat and steering wheel reversible : None
- Type of suspension : Spring
- Type of damping : None
- Range of adjustment
  - Longitudinally : 100 mm
  - Vertically : Fixed
- Safety belt : Yes

1.14.2 Optional driver's seat(s) None

1.14.3 Passenger seat None

1.15 Lighting

	Height above ground of center (mm)	Size (mm)	Distance from outside edge of lights to median plane of tractor (mm)
Headlights	845	150×90	260
Sidelights	1371	78×78	448
Rearlights	1356	90×60	620
Reflectors	1371	90×60	530

2. TEST CONDITIONS

2.1 Overall dimensions

	Length	Width		Height at top of	
		minimum	maximum	protective structure	exhaust silencer
	mm	mm	mm	mm	mm
Ballasted	3437	1535	1825	2595	580
Unballasted	3102	1535	1825	2595	580

2.2 Ground clearance (unballasted tractor) : 330 mm

- Clearance-limiting part : Front axle housing

2.3 Tractor mass

- Mass(with frame)

	Ballasted		Unballasted	
	Without driver	With driver	Without driver	With driver
	kg	kg	kg	kg
Front	832	855	739	752
Rear	1077	1129	1090	1152
Total	1909	1984	1829	1904

2.4 Ballast

	Weights		Water
	Number	Total mass	
		kg	kg
Front	4	80	-
Rear	-	-	-
Optional	-	-	-

2.5 Track specifications : None

2.6 Tyres and track width specifications

	Front	Rear
Tyres		
· dimensions	8-18	12.4-28
· ply rating	8	8
· type	Diagonal	Diagonal
· maximum load (tyre manufacturer's)	6.62 kN	15.04 kN
· maximum load (tractor manufacturer's)	6.62 kN	15.04 kN
· inflation pressure (tyre manufacturer's)	196 kPa	137.2 kPa
· dynamic radius index	391 mm	590 mm
Chosen track width	1300 mm	1216 mm

2.7 Fuel

- Type : Diesel fuel No2, in conformity with Korean Standard (KS M 2620)
- Density at 15℃ : 0.824 g/㎤

2.8 Oils and lubricants

2.8.1 Capacity and change interval

	Capacity	Oil change	Filter change
	dm³	h	h
Engine	6.3	100	100
Gear box with hydraulic system and steering	35.0	300	300
Front axle and final drives	7.0	300	-
Rear axle and final drives	2.0	300	-

2.8.2 Specifications

	Recommended	Used during test
Engine oil · Type : · Viscosity : · Classification :	 SUPREME 10W-30 72.8 cSt at 40 ℃, 11.2 cSt at 100 ℃ API-CC or CD	Same
Transmission oil and Hydraulic fluid · Type : · Viscosity : · Classification :	 Transmission oil (KUKJE TF500) 51.8 cSt at 40 ℃, 9.3 cSt at 100 ℃ API GL-4	Same
Steering oil : · Type : · Viscosity : · Classification :	 Transmission oil (KUKJE TF500) 51.8 cSt at 40 ℃, 9.3 cSt at 100 ℃ API GL-4	Same

2.8.3 Grease : Multi purpose grease

- Number of lubrication points : 7

3. COMPULSORY TESTS RESULTS

3.1 Main power take-off

- Date and location of tests : 1st October, 1998
  National Agricultural Mechanization Research Institute
  Gonjiam-ri, Silchon-myon, Kwangju-gun, Kyunggi-do
- Type of dynamometer : Eddy current, FROUD AG250

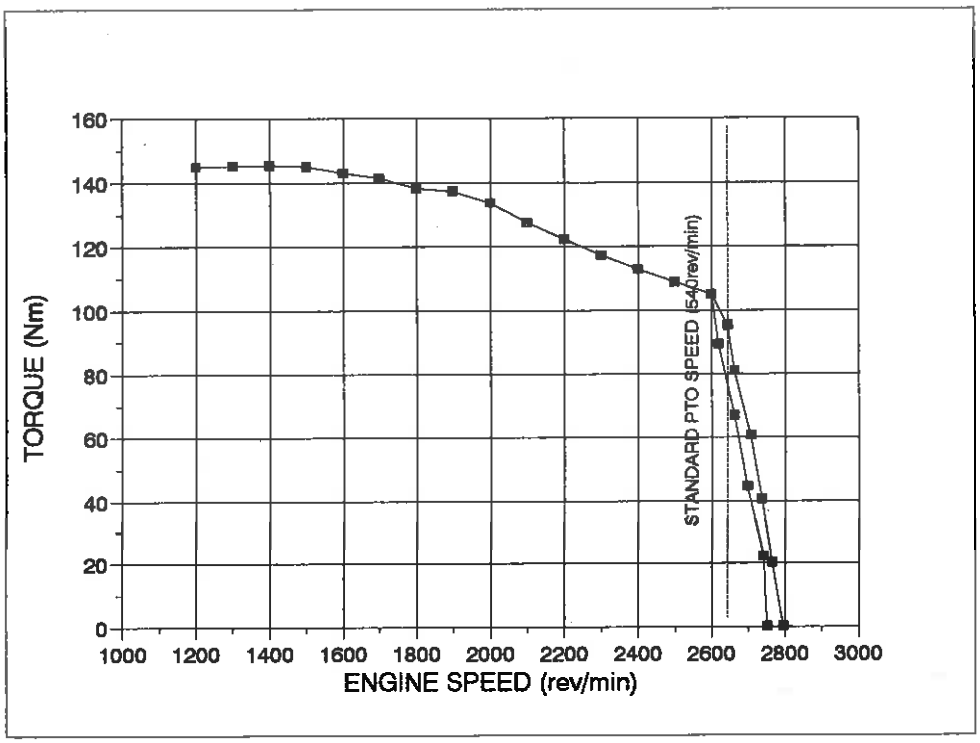
Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O	Hourly		Specific	
kW	rev/min		kg/h	ℓ/h	g/kWh	kWh/ℓ
3.1.1 MAXIMUM POWER - TWO-HOUR TEST						
28.58	2600	531	7.43	9.01	260	3.17
3.1.2 POWER AT RATED ENGINE SPEED						
28.58	2600	531	7.43	9.01	260	3.17
3.1.3 STANDARD POWER TAKE-OFF SPEED (540±10 rev/min)						
26.34	2644	540	6.86	8.33	261	3.16
3.1.4 PART LOADS 3.1.4.1 The torque corresponding to maximum power at rated engine speed						
28.58	2600	531	7.43	9.01	260	3.17
3.1.4.2 85% of torque obtained in 3.1.4.1						
24.47	2619	535	6.46	7.84	264	3.12
3.1.4.3 75% of torque defined in 3.1.4.2						
18.66	2663	544	5.34	6.48	286	2.88
3.1.4.4 50% of torque defined in 3.1.4.2						
12.60	2698	551	4.32	5.24	343	2.40
3.1.4.5 25% of torque defined in 3.1.4.2						
6.40	2742	560	3.28	3.98	512	1.61
3.1.4.6 Unloaded						
0	2752	562	2.08	2.53	-	-

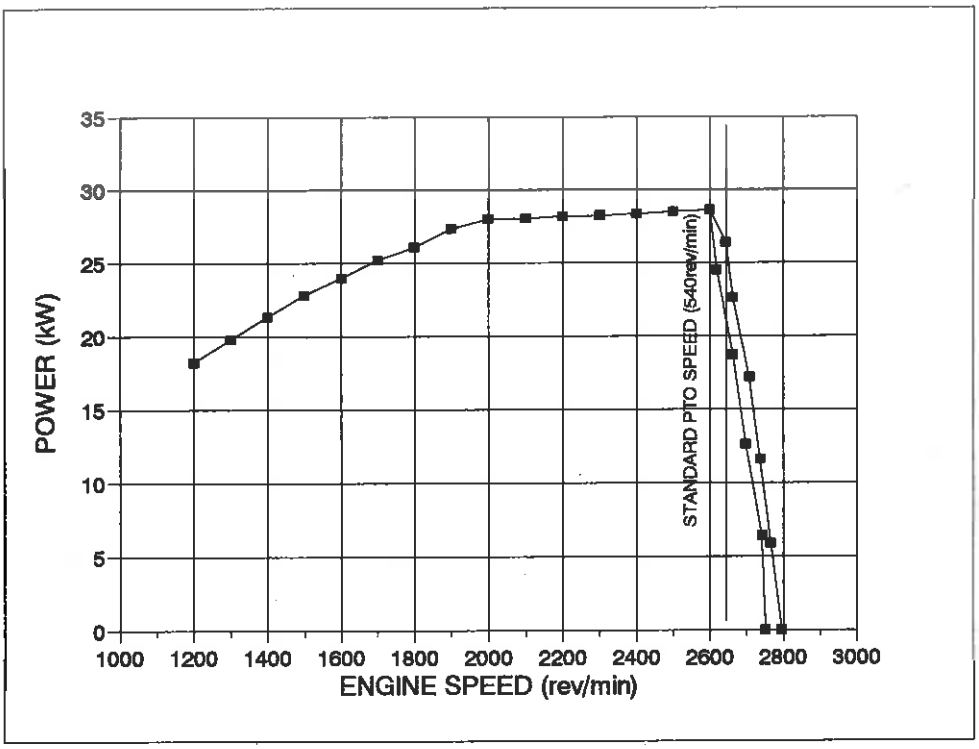
Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O	Hourly		Specific	
kW	rev/min		kg/h	ℓ/h	g/kWh	kWh/ℓ
3.1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED(540±10 rev/min) 3.1.5.1 The torque corresponding to maximum power available						
26.34	2644	540	6.86	8.33	261	3.16
3.1.5.2 85% of torque obtained in 3.1.5.1						
22.56	2663	544	6.03	7.32	267	3.08
3.1.5.3 75% of torque defined in 3.1.5.2						
17.20	2707	553	4.94	6.00	287	2.87
3.1.5.4 50% of torque defined in 3.1.5.2						
11.59	2737	559	3.96	4.80	341	2.41
3.1.5.5 25% of torque defined in 3.1.5.2						
5.86	2766	565	3.07	3.72	523	1.57
3.1.5.6 Unloaded						
0	2796	571	2.13	2.58	-	-

- No load maximum engine speed : 2796 rev/min
- Torque (equivalent crankshaft) at maximum power
  - At rated engine speed : 105.0 Nm
  - At 2-hour test : 105.0 Nm
- Maximum torque(equivalent crankshaft) : 145.4 Nm
  (engine speed : 1400 rev/min)

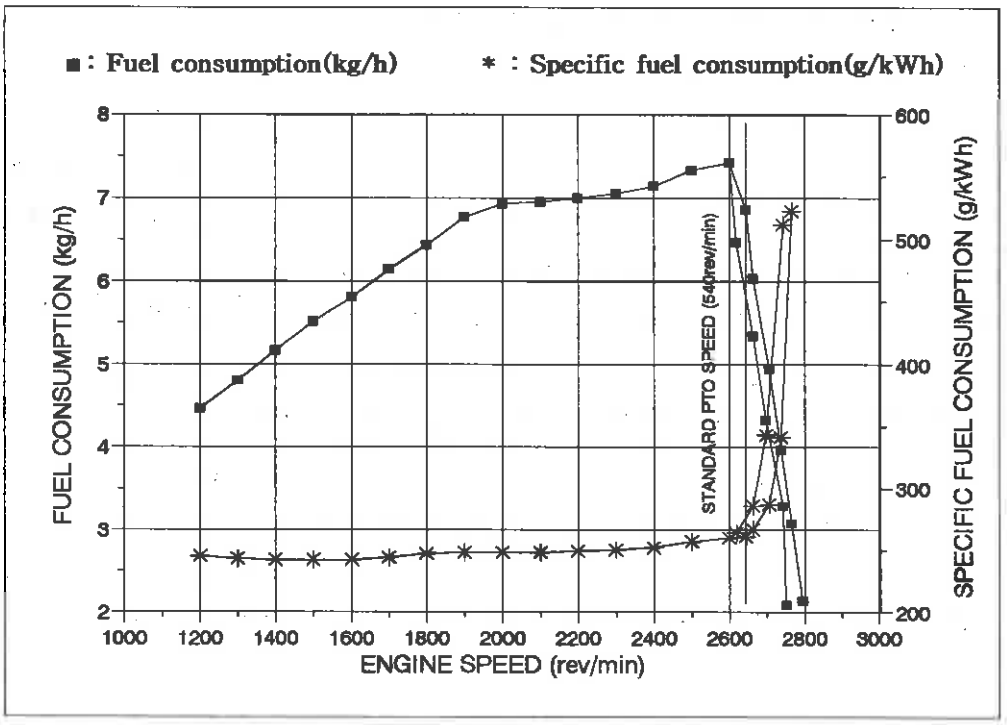
Mean atmospheric conditions :	
Temperature	25 ℃
Pressure	100.3 kPa
Relative humidity	65 %
Maximum temperatures :	
Coolant	86 ℃
Engine oil	105 ℃
Fuel	53 ℃
Engine air intake	28 ℃

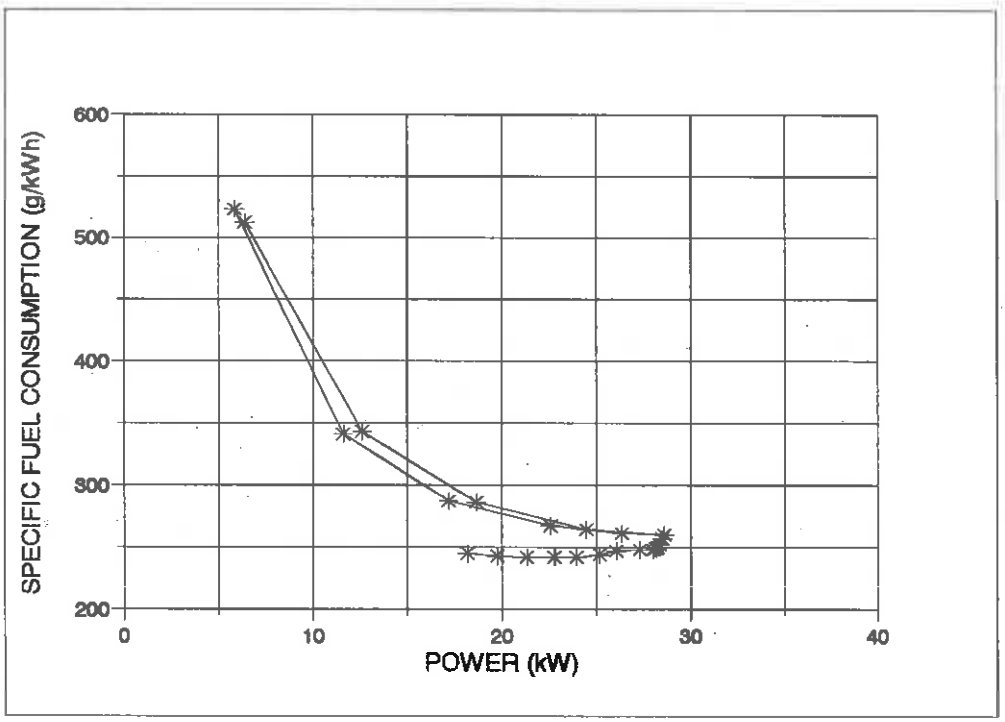
POWER TAKE - OFF PERFORMANCE





POWER TAKE - OFF PERFORMANCE





3.2 HYDRAULIC POWER AND LIFTING FORCE

- Date of tests : 26th December, 1998

3.2.1 Hydraulic power test

- Sustained pressure with relief valve open : 15.40 MPa
- Pump delivery rate at minimum pressure : 29.76 ℓ/min

	Flow rate	Pressure	Power
	ℓ/min	MPa	kW
Flow rate corresponding to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting and corresponding hydraulic power	24.32	13.86	5.62
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	29.12	12.75	6.19

- Tapping point used for test : Rear of tractor
- Temperature of hydraulic fluid if different from 65±5℃ : - ℃
- Opening pressure of the unloading valve : Not available
- Closing pressure of the unloading valve : Not available

3.2.2 Power lift test

- Linkage settings for test - Table 1.1 and Figures 1.1 and 1.2

	At the hitch point	On the frame
Height of lower hitch point above ground in down position	175 mm	175 mm
Vertical movement without lifting forces with lifting forces	 640 mm 630 mm	 665 mm 655 mm
Maximum corrected force exerted through full range	12.66 kN	10.71 kN
Corresponding pressure of hydraulic fluid	13.86 MPa	13.86 MPa
Moment about rear axle	9.13 kNm	15.58 MPa
Maximum tilt angle of mast over range of lift	-	4 degrees

Lifting heights relative to the horizontal plane including the lower link pivot point											
mm	-270	-250	-200	-100	0	100	200	300	360	400	405
Lifting forces(the values of force measured shall be corrected to corresponding to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting of the hydraulic lifting system):											
At hitch point, corrected to 13.86 MPa											
kN	12.66	-	14.03	14.86	15.04	14.79	14.33	13.46	12.82	-	-
At the frame, corrected to 13.86 MPa											
kN	-	13.54	13.78	13.54	13.41	12.38	11.68	11.24	-	10.87	10.71

3.3 DRAWBAR PERFORMANCE

- Date of tests : 4th, 8th and 11th December, 1998
- Type of track : Asphalt

	Height of drawbar above ground	Tyre inflation pressure	
		Front	Rear
	mm	kPa	kPa
Unballasted	405	196	137
Ballasted	405	196	137

Gear and range	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consum-ption	Specific energy	Temperatures			Atmospheric conditions		
								Fuel	Coolant	Engine oil	Tem-perature	Relative humidity	Pressure
	kW	kN	km/h	rev/min	%	g/kWh	kWh/ℓ	℃	℃	℃	℃	%	kPa
3.3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)													
L-1	6.60	13.97	1.70	2756	15.0	526	1.57	35	75	104	7	62	101.9
L-2	7.73	13.92	2.00	2748	15.0	465	1.78	34	76	104	7	62	102.0
L-3	10.35	13.99	2.66	2732	15.0	409	2.02	34	76	104	7	61	102.0
L-4	14.48	13.97	3.73	2717	15.0	346	2.38	35	76	104	8	62	102.0
M-1	15.89	13.96	4.10	2698	15.0	340	2.43	35	77	105	8	61	102.0
M-2	18.45	13.93	4.77	2676	15.0	330	2.50	35	76	105	7	62	102.0
M-3	23.64	13.64	6.24	2603	14.8	324	2.54	36	76	104	8	62	101.9
M-4	25.27	9.53	9.55	2601	6.8	304	2.71	35	76	103	7	62	102.0
H-1	23.65	8.09	10.52	2600	5.8	324	2.54	34	77	104	8	62	102.0
H-2	23.02	6.64	12.48	2598	4.9	333	2.48	35	76	104	9	62	102.0
3.3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor) (†)													
L-1	6.69	14.30	1.68	2754	15.0	527	1.56	35	76	105	8	61	101.8
L-2	7.78	14.24	1.97	2748	15.0	462	1.78	34	77	104	8	62	102.0
L-3	10.31	14.15	2.62	2729	15.0	411	2.00	34	77	105	8	62	102.0
L-4	14.58	14.24	3.69	2709	15.0	348	2.37	35	76	104	9	63	102.1
M-1	15.90	14.22	4.03	2695	15.0	333	2.47	35	76	103	9	63	102.1
M-2	18.55	14.09	4.74	2675	15.0	326	2.53	35	78	104	9	62	102.1
M-3	23.88	13.73	6.26	2602	14.0	321	2.56	36	77	104	10	61	102.1
M-4	25.36	9.57	9.54	2600	6.7	303	2.72	35	76	105	10	61	101.9
H-1	24.73	8.48	10.50	2601	5.9	311	2.65	34	77	103	9	62	101.9
H-2	24.32	7.03	12.46	2599	4.8	316	2.61	35	76	104	9	62	101.8
3.3.3 FIVE-HOUR TESTS													
3.3.3.1 FIVE-HOUR TEST at 75% of pull at maximum power													
M-3	20.17	10.30	7.05	2705	7.4	310	2.65	35	77	104	8	62	102.0
3.3.3.2 FIVE-HOUR TEST at pull corresponding to 15% wheelslip with additional ballast : 40 kg													
M-2	19.00	14.10	4.85	2670	(*)	(*)	(*)	36	76	101	10	62	102.1

(†) The creeper gears are not to be used for heavy drawbar work.

(*) Those figures not quoted are irrelevant due to the additional ballast.

Oil consumption during ten hours duration of tests 3.3.3.1 and 3.3.3.2 : 12.4 g/h

3.4 TURNING AREA AND TURNING CIRCLE

Wheel equipment if several sets of tyres are tested

	With brakes		Without brakes	
	Right-hand	Left-hand	Right-hand	Left-hand
	m	m	m	m
Radius of turning area	2.85	2.75	3.40	3.35
Radius of turning circle	2.95	2.85	3.50	3.45

3.5 LOCATION OF CENTER OF GRAVITY

- Height above ground : 800 mm
- Distance from the vertical plane containing the axis of the rear-wheel : 714 mm
- Distance from the median longitudinal plane of the tractor, to the left side : 11 mm

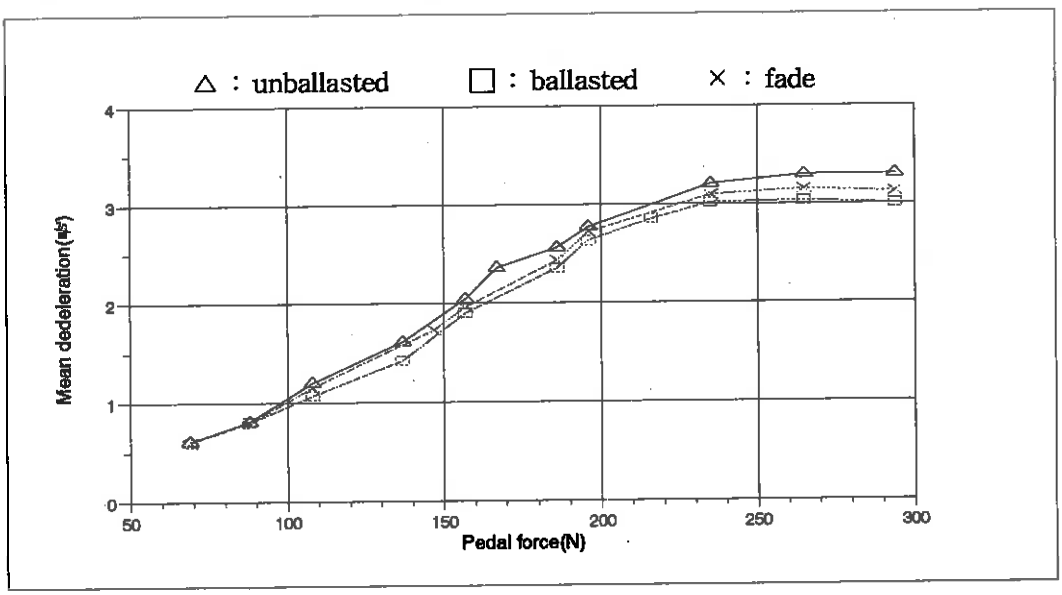
3.6 BRAKING

- Date of tests : 18th December, 1998

3.6.1 Cold service braking device test

	Speed before application of brakes	Braking device control force	Mean deceleration
	km/h	kN	m/s²
Ballasted tractor	26.39	0.235	3.01
Unballasted tractor	26.46	0.235	3.20

- Maximum deviation of tractor from its original course : None
- Abnormal vibration : None
- Brake heating method : None



COLD SERVICE BRAKING DEVICE TEST AND FADE TEST

3.6.2 Fade Test

Speed before application of brakes		Braking device control force		Mean deceleration	
26.39	km/h	0.235	kN	3.09	%

- Maximum deviation of tractor from its original course : None
- Abnormal vibration : None
- Brake heatingmethod : By means of towing the tractor for 1km at 21.11km/h with a towing force 1.74 kN

3.6.3 Parking braking device test

	Uphill		Downhill	
Braking device control force	275	N	275	N

3.7 Measurement of external noise

- Date of tests : 16th October, 1998
- Sound level meter, make/model/type : Bruel and kjaer 2236
- Type of track : Asphalt
- Gear number : H-4
- Travelling speed before acceleration : 26.42 km/h
- Sound level : 90.2 dB(A)

4. REPAIRS None

5. REMARKS None