N.A.M.R.I.

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. 1/1743



Agricultural Tractor

LG LT360D(4WD)

Manufactured by : LG Cable & Machinery Ltd.
200, Dangjung-dong, Gunpo-si, Kyunggi-do, KOREA

NATIONAL AGRICULTURAL MECHANIZATION RESEARCH INSTITUTE
(NAMRI)
520-6 GONJIAM-RI, SILCHON-MYUN, KWANGJU-GUN, KYUNGGI-DO, 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. : 97-M-5-1
Duration of test : April 1997 till November 1997
Date of approval : March 27, 1998

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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TABLE OF CONTENTS

	page
SPECIFICATIONS OF TRACTOR	4 to 13
TEST CONDITIONS	14 to 15
COMPULSORY TESTS RESULTS	
Main power take-off performance	16 to 19
Hydraulic power and lifting force	20
Drawbar performance	21
Turning area and turning circle	22
Location of center of gravity	22
Brake	22 to 23
Measurement of external noise level	23
REPAIRS AND ADJUSTMENTS DURING TESTS	23
REMARKS	23

Tractor manufacturer's name and address :	LG Cable & Machinery Ltd. 200, Dangjung-dong, Gunpo-si, Kyunggi-do, R.O.K.
Location of tractor assembly :	200, Dangjung-dong, Gunpo-si, Kyunggi-do, R.O.K.
Submitted for test by :	The manufacturer
Selected for test by :	The manufacturer with agreement by NAMRI
Place of running-in :	LG Cable & Machinery Ltd.
Duration of running-in :	Engine and tractor 120 hours
Location of test :	NAMRI

SPECIFICATIONS OF TRACTOR

TRACTOR

Make :	LG
Model :	LT360D
Type :	Four wheel drive
Serial No. :	LT36-G00593
1st Serial No. :	LT36-G00001

ENGINE

Make :	Mitsubishi Heavy Industries
Model :	S4L2
Type :	4 stroke, water cooled, indirect injection diesel
Serial No. :	20383

Cylinders

Number/disposition :	4, Vertical, in-line
Bore/stroke :	78mm / 92 mm
Capacity :	1758 ㎤
Compression ratio :	22 : 1
Arrangement of valves :	Overhead
Cylinder liners :	None

Supercharging

None

Fuel system

Fuel feed system :	Forced-feed from plunger pump
Filters	
Make :	Mitsubishi Heavy Industries
Model :	MM320886
Type :	Replaceable paper element

Capacity of fuel tank :	38 dm³
Injection pump	
Make :	Nippon Denso
Model :	ND-PFR
Type :	Bosch M
Serial No. :	6442
Manufacturer's production setting of injection pump :	
Flow rate :	8.24±0.4 dm³/h at rated engine speed and full load
Timing :	17 degrees before T.D.C
Injectors	
Make :	Nippon denso
Model :	DN15PD6
Type :	Single hole
Injection pressure :	13.7 MPa

Governor

Make :	Nippon denso
Model :	31A63-05060
Type :	Mechanical
Governed range of engine speed :	From 970 to 2850 rev/min
Rated engine speed :	2700 rev/min

Air cleaner

Pre-cleaner	
Make :	Dae-Yang Industry Co.
Model :	A1190054
Type :	Cyclone type
Location of air intake :	Under the bonnet, in front of the radiator
Main cleaner	
Make :	Tae-Kwang Industry Co.
Model :	A1190079
Type :	Oil bath
Maintenance indicator :	None

Lubrication system

Type of feed pump :	Forced-feed from rotor pump
Type of filter :	Full flow, replaceable canister
Number of filters :	1

Cooling system

Type of coolant :	Water or water and antifreeze solution
Type of pump :	Centrifugal
Specification of fan :	Axle driven puller
Number of fan blades :	7
Fan diameter :	360 mm
Coolant capacity :	4.9 dm³ (Radiator 2.4 dm³ + Engine 2.5 dm³)
Type of temperature control :	Wax type thermostat
Superpressure system :	88.3 kPa, radiator cap

Starting system

Make :	Mitsubishi Electronics
Model :	MM1409413
Type :	Electrical, pre-engaged, solenoid operated
Starter motor power rating :	2.0 kW
Cold starting aid :	Electrothermal plug, 12V
Safety device :	Starting operable only when main clutch pedal fully depressed and PTO clutch disengaged

Electrical system

Voltage :	12 V
Generator	
Make :	Mitsubishi Electronics
Model :	31A68-00401
Type :	3 phase generator
Power :	0.6 kW
Battery	
Number :	1
Rating :	80Ah at 5 hours rating

Exhaust system

Make :	Se-Sin Engineering Co..
Model :	A1151102
Type :	Horizontal silencer
Location :	Under bonnet, left hand side

TRANSMISSION

Clutch (travel)

Make :	Seojin-Daikin Co., Ltd.

Model :	A1250091
Type :	Dry for transmission only
Number of plates :	1
Diameter of plates :	240 mm
Method of operation :	Mechanically actuated by pedal

Gear box

Make :	Own make
Model :	A1001048
Type :	Mechanical
Arrangement :	Synchromesh 4 speed gears with main lever, Selective-sliding speeds (L/M/H) gears with sub-lever, Synchromesh type forward/reverse with shuttle lever
Number of gears :	12 forward, 12 reverse
Available options :	None

Rear axle and final drives

Make :	Own make
Model :	A1480056
Type :	Bevel gear type differential and helical gear type final drives
Differential lock	
Type :	Mechanical, dog clutch on differential gears
Method of engagement :	Mechanically actuated by pedal
Method of disengagement :	Self-disengagement by spring

Front axle and final drives

Make :	Youngjin-Precision Industries Co.
Model :	A1400110
Type :	Bevel gear type differential and bevel gear type final drives
Differential lock	
Type :	None
Method of engagement :	None
Method of disengagement :	None

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 2700 rev/min (km/h)	
		Forward	Reverse	Forward	Reverse
1	L-1	755.36	539.47	0.73	1.02
2	L-2	529.47	385.34	1.04	1.43
3	L-3	386.34	539.47	1.42	1.02
4	L-4	275.24	385.34	2.00	1.43
5	M-1	234.97	167.84	2.34	3.27
6	M-2	167.84	119.88	3.27	4.59
7	M-3	119.88	167.84	4.59	3.27
8	M-4	85.63	119.88	6.42	4.59
9	H-1	71.51	51.08	7.69	10.76
10	H-2	51.08	36.49	10.76	15.06
11	H-3	36.49	51.08	15.06	10.76
12	H-4	26.06	36.49	21.09	15.06
(*) Calculated with the dynamic radius index of 540 mm (ISO 4251/1-1992).					

Number of revolutions of front wheels for one revolution of rear-wheels : 1.61

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

POWER TAKE-OFF

Main power take-off

Type : Independent PTO

Method of engagement : By switch on body panel electro-hydraulically engaging wet multi-plate clutch

Number of shafts : 1

Method of changing power take-off shaft ends and speeds : Manually by hand lever

Power take-off proportional to engine speed

540 rev/min

Location : Rear of tractor

Diameter of power take-off shaft end : 35 mm

Number of splines : 6 to ISO 500/1991

Height above ground : 550 mm

Distance from the median plane of the tractor : 0 mm

Distance behind rear-wheel axis : 296 mm

PTO speed at rated engine speed : 579 rev/min
(2700rev/min)

Engine speed at standard power take-off speed : 2520 rev/min

Ratio of rotation speeds (engine speed / p.t.o speed) :	4.667 : 1
Power restriction and maximum torque :	None
Direction of rotation (viewed from behind tractor) :	Clockwise

Power take-off proportional to ground speed : None

POWER LIFT

Make :	Hyundai Precision Co.
Model :	A1820031
Type :	Hydraulic three point hitch (Position, draft and mix control)
Type of hydraulic system :	Open center system
Type and number of cylinders :	1, single acting
Type of linkage lock for transport :	Hydraulic
Relief valve pressure setting :	15.6 ~ 16.4 MPa
Opening pressure of cylinder safety valve :	19.6 MPa
Lift pump type :	Gear pump
Transmission between pump and engine :	Driven by engine
Type and number of filters :	1, paper cartridge type
Site of oil reservoir :	Transmission housing
Type, number and location of tapping points :	SAE 3/8" hydraulic female coupler, 2 sets, rear of tractor
Maximum volume of oil available to external cylinders :	None

Three-point linkage

Category : 1 to ISO730/1-1994

Category adapter : None

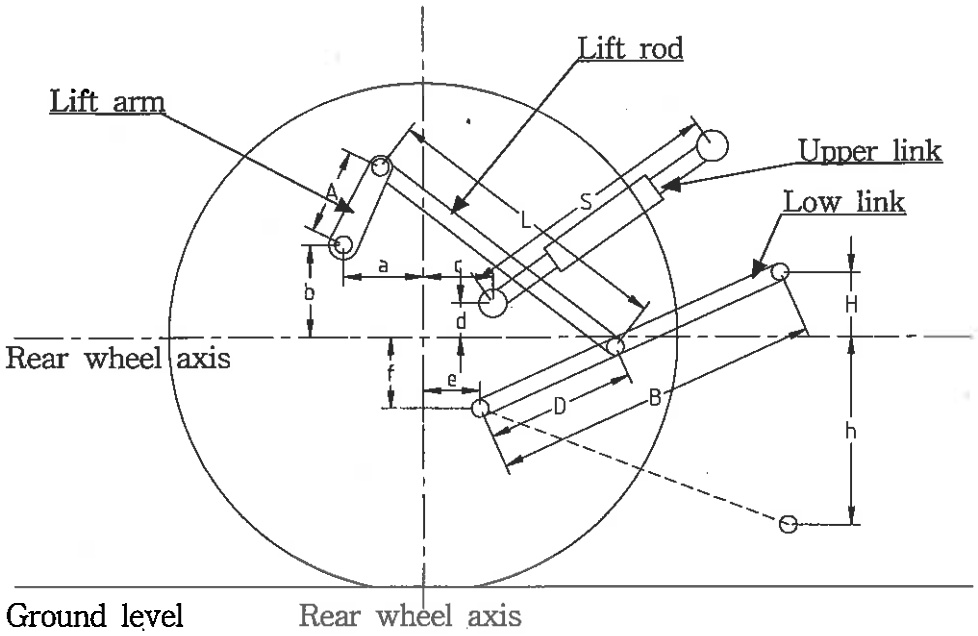


Figure 1.1 Linkage geometry

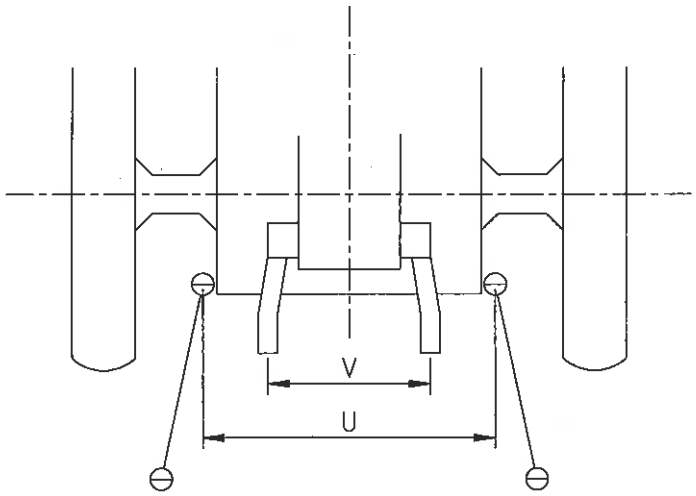


Figure 1.2 Linkage geometry

			Dimension or range (mm)	Settings used in test (mm)
Length of lift arms		(A)	265	265
Length of lower links		(B)	725	725
Distance of lift arm pivot point from rear-wheel axis	horizontally	(a)	220	220
	vertically	(b)	265	265
Horizontal distance between the 2 lower link points		(u)	360	360
Horizontal distance between the 2 lift arm end points		(v)	440	440
Length of upper link		(S)	from 460 to 750	520
Distance of upper link pivot point from rear wheel axis	horizontally	(c)	420	420
	vertically	(d)	265	265
Distance of lower link pivot point from rear wheel axis	horizontally	(e)	240	240
	vertically	(f)	125	125
Distance of lower link pivot point to lift rod pivot points on lower links		(D)	400	400
Length of lift rods		(L)	from 430 to 540	520
Height of lower hitch points relative to the rear-wheel axis				
- in low position		(h)	from 265 to 495	370
- in high position		(H)	from 141 to 311	225
Height above ground of lower hitch points when locked in transport position(*)			Any height within lift range(Hydraulic Transport Lock)	

(*)Assuming the dynamic radius index = 540mm (ISO 4251/1-1992)

Table 1.1 Dimensions of linkage geometry
(when connected to the standard frame)

SWINGING DRAWBAR : None

TRAILER HITCH

Type	
Hole diameter :	29 mm
Height above ground :	370 mm
Distance of hitch point from rear-wheel axis, horizontally :	520 mm
Distance of hitch point from power take-off shaft end	
· Vertically :	187 mm
· Horizontally :	85 mm
Maximum vertical permissible load :	5.5 kN

HOLED DRAWBAR None

STEERING

Make :	Sumitomo Eaton Hydraulics Co.
Model :	UVS100B16A2D
Type :	Hydrostatic
Method of operation	
Pump :	Gear pump
Ram :	1 double acting ram actuating directly on front axle
Working pressure :	10.2 MPa

BRAKES

Service brake

Make :	Jin Myoung Metal Co.
Model :	A1250091
Type :	Oil-immersed multi-plate discs, 2 per side
Method of operation :	Independent or combined pedal on rear wheels
Trailer braking take-off :	None

Parking brake

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

WHEELS

Number	
Front :	2, steering and driving
Rear :	2, driving
Wheelbase :	1600 mm

Track width adjustment :

	Minimum (mm)	Maximum (mm)	Adjustment method
Front	1140	1140	By reversing wheels and offset lug rims
Rear	984	1356	

PROTECTIVE STRUCTURE

Make : Daesung industry

Model : A1880009

Type : Roll guard

Manufacture's name and address : Daesung Industry/195-4, Sangpyung-dong, Jinju-si, Kyungsang-namdo, KOREA

Protective device : Rollguard, not tiltable

OECD approval number : None

SEAT

Driver's seat

Make : MT-Cobo

Model : GT60

Type of suspension : Spring

Seat and steering wheel reversible : No

Type of damping : Hydraulic

Range of adjustment

· Longitudinal : 150 mm

· Vertical : 50 mm

Safety belt : No

Optional driver's seat(s) No

Passenger seat No

LIGHTING

	Height above ground of center (mm)	Size (mm)	Distance from outside edge of lights to median plane of tractor (mm)
Headlights	1032	455×128	165
Sidelights	-	-	-
Rearlights	1187	105×50	515
Reflectors	1187	250×130	500

TEST CONDITIONS

OVERALL DIMENSIONS

	Length (mm)	Width		Height at top of	
		Minimum (mm)	Maximum (mm)	Protective structure (mm)	Exhaust silencer (mm)
Ballasted	3200	1304	1676	2050	890
Unballasted	2940	1304	1676	2050	890

Ground clearance (unballasted tractor) : 340 mm

Clearance-limiting part : Front axle housing

TRACTOR MASS AND BALLAST

Mass(with roll guard)

	Ballasted		Unballasted	
	Without driver (kg)	With driver (kg)	Without driver (kg)	With driver (kg)
Front	730	744	575	590
Rear	905	966	815	875
Total	1635	1710	1390	1465

BALLAST

	Weights		Water (kg)
	Number	Total mass (kg)	
Front	1(27kg)+6(15kg)	117	-
Rear	4	128	-
Optional	-	-	-

TYRES AND TRACK WIDTH SPECIFICATIONS

	Front	Rear
Tyres		
· dimensions	8-16	12.4-24
· ply rating	4	8
· type	Diagonal	Diagonal
· maximum load (tyre manufacturer's)	4.65 kN	13.87 kN
· maximum load (tractor manufacturer's)	4.65 kN	13.87 kN
· inflation pressure (tyre manufacturer's)	156 kPa	215 kPa
· dynamic radius index	392 mm	540 mm
Chosen track width	1140 mm	1110 mm

OILS AND LUBRICANTS

Capacity and change interval

	Capacity (dm^3)	Oil change (h)	Filter change (h)
Engine	4.5	100	100
Gear box in common with hydraulic system and steering	23	150	200
Front axle and final drives	10	150	-
Rear axle and final drives	4	150	-

Specifications

	Recommended	Used during test
Engine oil · Type : · Viscosity : · Classification :	 Below 0℃:SAE 10W or 10W-30 From 10℃ to 25℃ : SAE 20 or 10W-30 Above 25℃ : SAE 30 or 10W-30 68.2 cSt at 40 ℃ 11.4 cSt at 100 ℃ API-CC or CD	 SAE 10W-30
Transmission oil, Hydraulic fluid, Steering oil : · Type : · Viscosity : · Classification :	 Transmission oil 10 cSt API GL-4	 As recommened

Grease : Multi purpose grease

Number of lubrication points : 7

Fuel

Type : Diesel fuel No2, in conformity with Korean Standard(KS M 2620)

Density at 15℃ : 0.8396 g/㎤

COMPULSORY TESTS RESULTS

1. MAIN POWER TAKE-OFF PERFORMANCE

Date and location of tests : 3rd September, 1997, NAMRI, KOREA

Type of dynamometer : FROUD AG250

Power kW	Speed		Fuel consumption			Specific energy kWh/ℓ
	Engine rev/min	P.T.O rev/min	Hourly kg/h	Hourly ℓ/h	Specific g/kWh	
1.1 MAXIMUM POWER - TWO-HOUR TEST						
24.96	2700	579	7.15	8.52	287	2.931
1.2 POWER AT RATED ENGINE SPEED						
24.96	2700	579	7.15	8.52	287	2.931
1.3 STANDARD POWER TAKE-OFF SPEED (540 rev/min)						
24.46	2520	540	6.82	8.12	279	3.011
1.4 PART LOADS 1.4.1 The torque corresponding to maximum power at rated engine speed						
24.96	2700	579	7.15	8.52	287	2.931
1.4.2 85% of torque obtained in 1.4.1						
21.45	2730	585	6.55	7.80	305	2.750
1.4.3 75% of torque defined in 1.4.2						
16.22	2753	590	5.30	6.31	327	2.570
1.4.4 50% of torque defined in 1.4.2						
10.92	2780	596	4.35	5.18	398	2.108
1.4.5 . 25% of torque defined in 1.4.2						
5.52	2810	602	3.00	3.57	544	1.545
1.4.6 Unloaded						
0	2852	611	2.35	2.80	-	-

Power kW	Speed		Fuel consumption			Specific energy kWh/ℓ
	Engine rev/min	P.T.O rev/min	Hourly kg/h	Hourly ℓ/h	Specific g/kWh	
1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED(540 rev/min) 1.5.1 The torque corresponding to maximum power available						
24.46	2520	540	6.82	8.12	279	3.011
1.5.2 85% of torque obtained in 1.5.1						
21.10	2557	548	6.38	7.60	302	2.776
1.5.3 75% of torque defined in 1.5.2						
16.02	2590	555	5.25	6.25	328	2.563
1.5.4 50% of torque defined in 1.5.2						
10.80	2618	561	4.25	5.06	394	2.133
1.5.5 25% of torque defined in 1.5.2						
5.45	2641	566	2.95	3.51	542	1.550
1.5.6 Unloaded						
0	2662	570	2.25	2.68	-	-

Other results

No load maximum engine speed : 2852 rev/min

Torque (equivalent crankshaft) at maximum power

-at rated engine speed : 88.26 Nm

-at standard power take-off speed : 92.67 Nm

Maximum torque (equivalent crankshaft) : 98.56 Nm

(engine speed : 1750 rev/min)

Mean atmospheric conditions

Temperature : 25 ℃

Pressure : 101.0 kPa

Relative humidity : 34 %

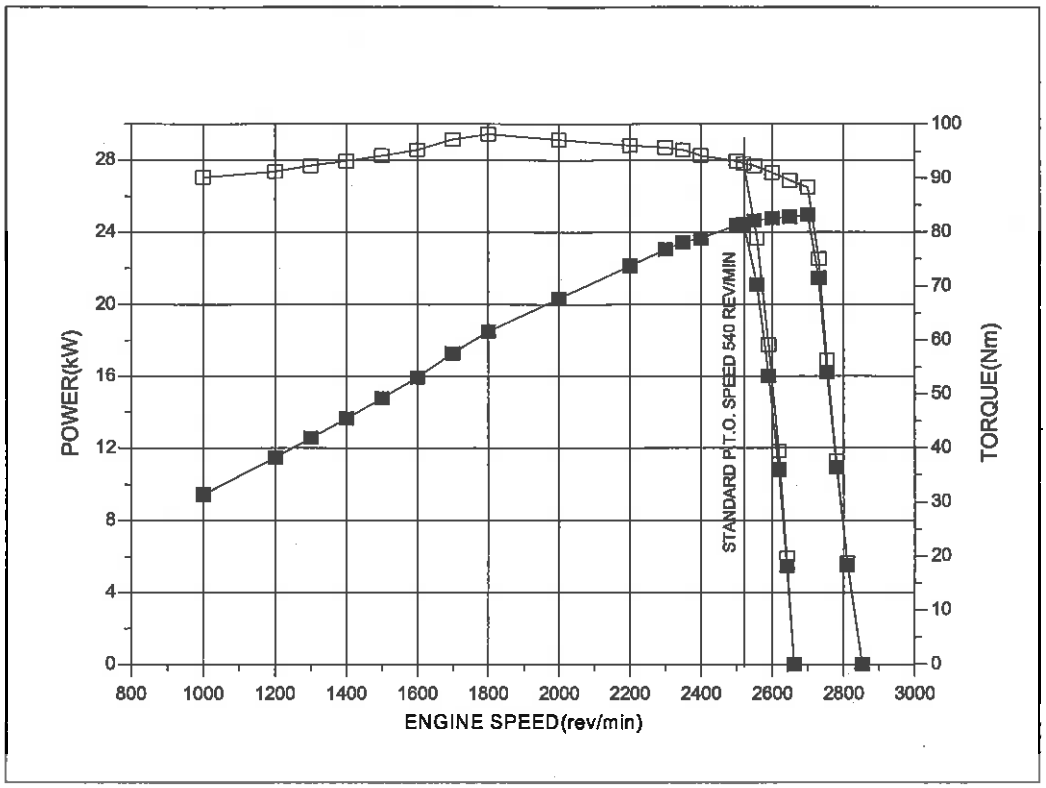
Maximum temperatures

Coolant 96 ℃

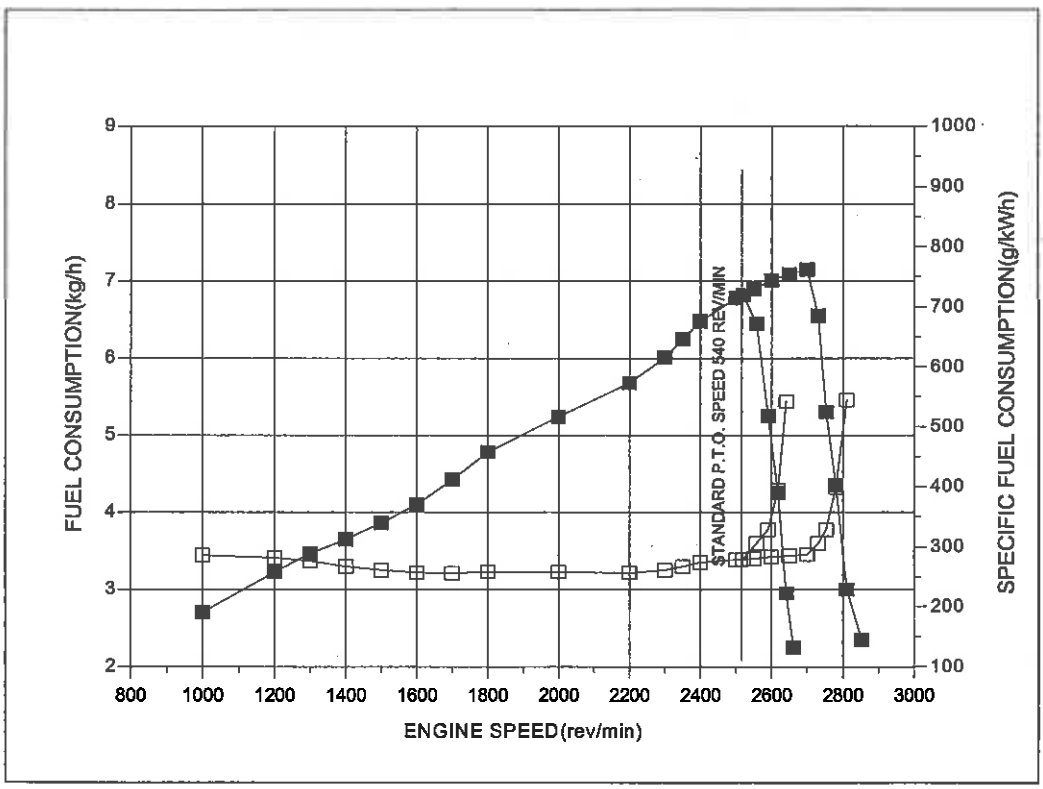
Engine oil : 115 ℃

Fuel : 35 ℃

Engine air intake : 32 ℃

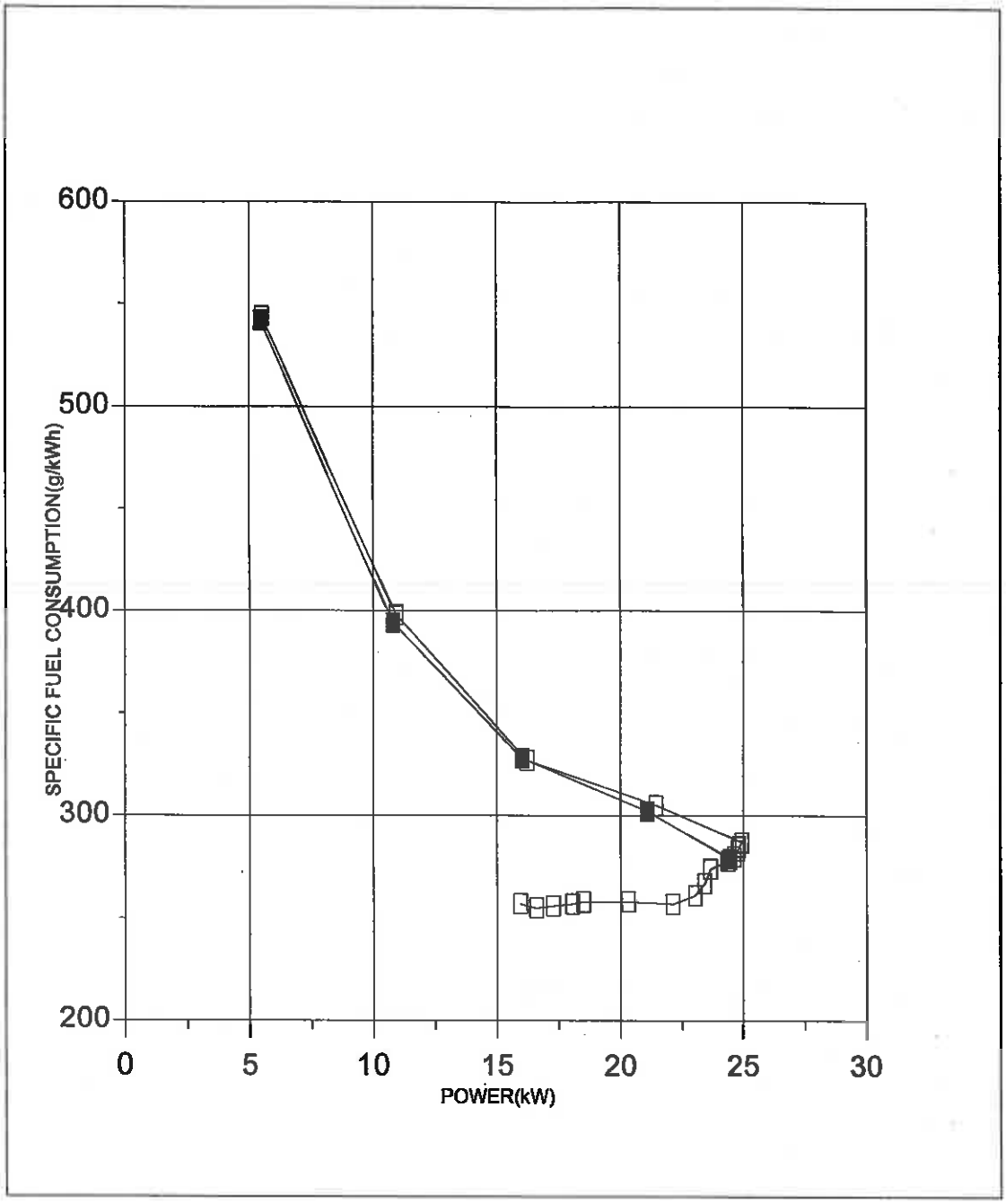


□ : TORQUE(Nm) ■ : POWER(kW)



□ : SPECIFIC FUEL CONSUMPTION(g/kWh) ■ : FUEL CONSUMPTION(kg/h)

POWER TAKE - OFF PERFORMANCE



□ : Governor set for maximum power at rated speed

■ : Governor set for maximum power at pto speed

POWER TAKE - OFF PERFORMANCE

2. HYDRAULIC POWER AND LIFTING FORCE

Date of tests : 23th September, 1997

2.1 HYDRAULIC POWER TEST

Sustained pressure with relief valve open : 16.38 MPa

Pump delivery rate at minimum pressure : 32.9 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	18.5	14.74	4.54
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	28.7	10.79	5.16

Tapping point used for test : Rear of tractor

Temperature of hydraulic fluid if different from 65±5℃ : -- ℃

2.2 POWER LIFT TEST

		At the hitch point	On the frame
Height of lower hitch point above ground in down position	mm	170	170
Vertical movement without lifting forces with lifting forces	 mm mm	 595 580	 740 715
Maximum corrected force exerted through full range	kN	13.24	9.82
Corresponding pressure of hydraulic fluid	MPa	14.74	14.74
Moment about rear axle	kNm	12.78	15.47
Maximum tilt angle of mast over range of lift	degrees	-	10

Lifting heights relative to the horizontal lower links												
mm	-305	-300	-245	-200	-100	0	100	200	300	335	400	410
Lifting forces at hitch points, corrected to 14.74 MPa												
kN	-	-	13.24	13.84	14.35	14.96	15.09	15.26	15.37	14.56	-	-
Lifting forces at test frame, corrected to 14.74 MPa												
kN	11.43	11.57	-	11.87	12.10	11.91	11.55	11.26	10.81	-	10.46	9.82

3. DRAWBAR PERFORMANCE

Date of test : 11th September, 1997

Type of track : Asphalt

	Height of drawbar above ground (mm)	Tyre inflation pressure	
		Front (kPa)	Rear (kPa)
Unballasted	370	156	215
Ballasted	370	156	215

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	Tempe-rature	Relative humidity	Pressure
	kW	kN	km/h	rev/min	%	g/kWh	kWh/ℓ	°C	°C	°C	°C	%	kPa
3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)													
L-2	3.3	12.2	0.98	2804	15.0	973	0.86	35	85	102	25	63	99.2
L-3	5.1	13.5	1.37	2783	15.0	823	1.02	36	84	101	25	64	99.2
L-4	7.0	13.1	1.92	2764	15.0	675	1.24	34	84	101	26	63	99.1
M-1	8.0	12.8	2.24	2852	15.0	644	1.30	35	85	101	25	63	99.2
M-2	11.0	12.7	3.12	2733	15.0	573	1.47	35	85	102	25	64	99.2
M-3	15.2	12.6	4.34	2703	10.3	469	1.79	36	86	102	26	64	99.3
M-4	21.5	12.5	6.21	2707	9.2	331	2.54	35	86	101	25	63	99.2
H-1	22.1	10.4	7.65	2705	6.4	323	2.60	34	85	102	25	63	99.2
H-2	21.0	7.0	10.75	2702	5.8	343	2.45	33	84	100	25	63	99.2
H-3	18.6	4.4	15.33	2699	3.3	387	2.17	34	85	101	25	64	99.1
3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)													
L-2	3.5	12.9	0.97	2801	15.0	990	0.85	36	86	101	25	63	99.2
L-3	5.2	13.8	1.36	2774	15.0	841	1.00	35	85	101	26	63	99.2
L-4	7.6	14.3	1.91	2758	15.0	639	1.31	35	85	102	26	64	99.1
M-1	9.0	14.5	2.23	2803	15.0	625	1.34	34	86	101	26	64	99.3
M-2	12.3	14.2	3.10	2772	15.0	560	1.50	35	87	102	25	63	99.2
M-3	16.7	13.9	4.34	2753	10.3	427	1.97	36	87	101	25	65	99.2
M-4	23.5	13.7	6.20	2706	9.1	303	2.77	35	86	101	25	65	99.1
H-1	22.9	11.0	7.51	2703	7.9	309	2.72	35	86	101	26	64	99.2
H-2	21.5	7.2	10.76	2700	5.4	326	2.58	34	85	100	26	64	99.1
H-3	19.4	4.6	15.27	2695	3.4	362	2.32	34	85	101	25	65	99.2
3.3 FIVE-HOUR TESTS													
3.3.1 FIVE-HOUR TESTS at 75% of pull at maximum power													
M-4	18.5	10.3	6.48	2752	6.7	286	2.94	35	85	102	25	65	99.1
3.3.2 FIVE-HOUR TEST at pull corresponding to 15% wheelslip with additional ballast : 60 kg													
L-4	7.8	14.4	1.89	2772	-	-	-	36	86	102	24	64	99.2

Oil consumption during ten hours duration of tests 3.3.1 and 3.3.2 : 1.2 g/h

4. TURNING AREA AND TURNING CIRCLE

Front wheel drive disengaged

	With brakes		Without brakes	
	Right-hand (m)	Left-hand (m)	Right-hand (m)	Left-hand (m)
Radius of turning area	2.67	2.69	3.05	3.07
Radius of turning circle	2.50	2.52	2.87	2.89

5. LOCATION OF CENTER OF GRAVITY

Height above ground : 752 mm

Distance forward from the vertical plane containing the axle of the rear-wheel : 655 mm

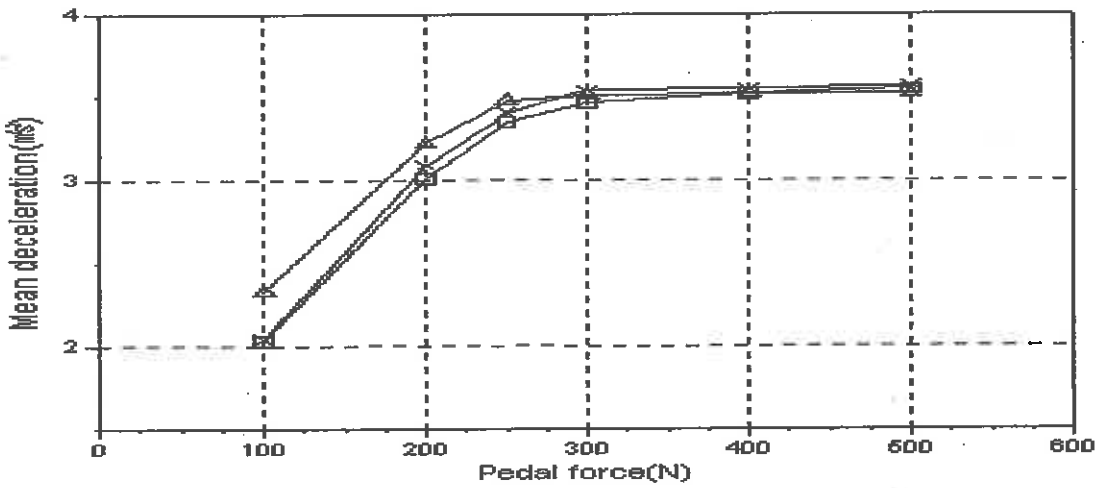
Distance from the median plane of the tractor to the left : 2 mm

6. BRAKING

Date of tests : 10th September, 1997

Type of track : Asphalt and concrete

	Speed before application of brakes (km/h)	Tractor mass (With driver)		
		Front (kg)	Rear (kg)	Total (kg)
Ballasted tractor	23.72	744	966	1710
Unballasted tractor	23.65	590	875	1465



△ unballasted, □ ballasted, × fade

COLD SERVICE BRAKING DEVICE TEST AND FADE TEST

6.1 COLD SERVICE BRAKING DEVICE TEST

	Ballasted tractor	Unballasted tractor
Speed before application of brakes (km/h)	23.72	23.65

Maximum deviation of tractor from its original course : None

Abnormal vibration : None

Brake heating method : None

6.2 FADE TEST

Speed before application of brakes : 23.72 km/h

Maximum deviation of tractor from its original course : None

Abnormal vibration : None

Brake heating method : By means of towing the tractor for 1km at 18.98km/h with a towing force of 17.16 kN

6.3 PARKING BRAKE

	Ballasted tractor on 18% slope	
	Uphill (N)	Downhill (N)
Braking device control force	142	142

7. MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests : 10th September, 1997

Type of track : Asphalt

Type of sound level meter : B & K model 2236

Gear	Travelling speed before acceleration (km/h)	Sound level (dB(A))
H-4	17.42	91.6

8. REPAIRS AND ADJUSTMENTS DURING TESTS

None

9. REMARKS

None