O. E. C. D. Report No. : 648

Report on test in accordance with

O. E. C. D. Test Code for Agricultural Tractors

ISEKI T 6500

Manufactured by: ISEKI & Co., Ltd.
Ibaragi Plant
Ibaragi, JAPAN



Test No.: 54003/O. E. C. D.
Date of Test: June—July 1979

This report has been approved by the O. E. C. D. Coordinating Centre (C. N. E. E. M. A., France) as being in accordance with the O. E. C. D. Tractor Test Code.
Date of Approval: 7th March, 1980

INSTITUTE OF AGRICULTURAL MACHINERY

OMIYA SAITAMA JAPAN

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Tractor manufacturer:	ISEKI & Co., Ltd. Ibaragi Plant Ibaragi, Japan
Submitted for test by:	The manufacturer
Selected by:	The manufacturer with the agreement of the I. A. M.
Place of running-in:	ISEKI & Co., Ltd. Ibaragi Plant
Duration of running-in:	85 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	ISEKI & Co., Ltd.
Model:	ISEKI T 6500
Type:	Wheel tractor, unit construction, rear wheel driven
Serial No.:	000908

Engine

Make:	ISUZU MORTORS Ltd.
Model:	ISUZU 4BB1
Type:	Water cooled, 4-stroke, direct injection diesel
Serial No.:	502942
Cylinders:	4 cylinders, vertical, in-line, 102 mm bore x 110 mm stroke, capacity 3595 cm^3, compression ratio 17.5 : 1, overhead valves, replaceable dry cylinder liners
Fuel system:	DIESEL KIKI mechanical fuel feed pump with primer, single TAIYO GIKEN KOGYO wire mesh filter and double TOKYO ROKI replaceable paper filter, fuel tank capacity 60 ℓ, DIESEL KIKI NP-PES4A in-line injection pump, serial No. 4QG 019310, manufacturer's production setting 0.0497 cm^3/stroke at 2200 rev/min engine speed and full load, injection timing 16° before TDC, DIESEL KIKI hole type NP-DLLA154S284N386 injection nozzles, injection pressure 147 bar
Governor:	DIESEL KIKI mechanical governor, governed range of engine speed 675-2420 rev/min, rated engin speed 2200 rev/min
Air cleaner:	TSUCHIYA dry paper element filter TSUCHIYA cyclone type pre-cleaner
Exhaust-silencer:	Own make, multichamber-expansion-absorption type silencer, 77 x 117 mm oval, 1216 mm long, on the left hand side of the bonnet, mouth showing upwards
Lubrication system:	Forced feed from gear type pump, replaceable cartridge-type paper element full flow filter, oil capacity 9 ℓ, oil changing period 100 hours, cartridge changing period 300

	hours, recommended oil quality CC, recommended oil viscosity SAE 10W/30
Cooling system:	Water cooled, centrifugal pump assisted with 430 mm dia 4-blade belt driven fan, coolant capacity 17 ℓ, thermostat for temperature control, pressurized at 1.03 bar
Starting system:	Electrical, 24 V HITACHI S25-114 solenoid engaged starter motor 3.7 kW, operable only when clutch pedal is depressed, electrical glow plug for cold starting
Electrical system	
Voltage:	24 V, negative earth
Alternator:	HITACHI three phase alternator LT215-27, 15 A, 0.37 kW
Battery:	YUASA BATTERY Y130-7, 1 lead acid battery capacity 80 Ah at 20 hour rating
Transmission	
Clutch:	DAIKIN single dry clutch, 275 mm dia plate, pedal-operated
Gearbox:	Own make, mechanical type with constant mesh gear, speed change gear with 5 forward and 1 reverse speeds, creep and normal reduction gear boxes with 2 groups each; total 20 forward and 4 reverse speeds, creep speeds (creep lever L position) shall not be used for drawbar works
Rear axle and final drive:	Own make, crown wheel and bevel pinion with planetary gear final drives, pedal operated mechanical differential lock, self disengaging
Oil capacity:	Gearbox and rear axle differential (in common with hydraulic oil) 35 ℓ final drive each 6 ℓ oil changing period 900 hours recommended oil API Service GL-4, SAE 80

Gear ratios and speeds

Gear			Number of engine revolutions for one revolution of driving wheel	*Nominal travelling speed for rated speed of engine km/h
Sub	Creep	Main		
Forward				
L	L	1	1980.83	0.31
L	L	2	1726.45	0.35
L	L	3	1238.88	0.49
L	L	4	799.28	0.76
L	L	5	501.87	1.21
L	H	1	467.74	1.30
L	H	2	407.68	1.49
L	H	3	292.55	2.08
L	H	4	188.74	3.22
L	H	5	118.51	5.12
H	L	1	375.11	1.62
H	L	2	326.93	1.86
H	L	3	234.61	2.59
H	L	4	151.36	4.01
H	L	5	95.04	6.39
H	H	1	88.58	6.85
H	H	2	77.20	7.87
H	H	3	55.40	10.96
H	H	4	35.74	16.99
H	H	5	22.44	27.06
Reverse				
L	L	R	1152.81	0.53
L	H	R	272.22	2.23
H	L	R	218.31	2.78
H	H	R	51.55	11.78

* Calculated with a tyre rolling radius of 732.5 mm

Power take-of

At rear of tractor in vertical centre plane, height above ground 580 mm, 35 mm dia, 6-spline in accordance to JIS Standard (equal I. S. O. Standard)

Proportional to engine speed p. t. o.:

Independent p. t. o. driven by the independent wet multiple disc clutch, hand lever operated

2 speeds selected by hand lever:
High ratio: 850 rev/min at 2200 rev/min engine rated speed
540 rev/min (standard p. t. o. speed) at 1398 rev/min engine speed
Low ratio: 655 rev/min at 2200 rev/min engine rated speed
540 rev/min (standard p. t. o. speed) at 1813 rev/min engine speed
direction of rotation clockwise viewed from driving end

Proportional to ground speed p. t. o. :

Engaged by hand lever and dog clutch, travelled for one revolution of the p.t.o. 0.37 m, number of p.t.o. revolution of driving wheel 12.66 rev., direction of rotation clockwise viewed from driving end

Power lift

Own make, hydraulic, gear type pump directly driven from engine, supplies oil to a single acting ram, overpressure relief valve for ram adjusted to 196 bar, 2 external tappings, maximum oil pressure 167 ± 10 bar, JIS 2 implement linkage (equal I. S. O. Standard), draught and position control, oil capacity and oil changing period in common with gearbox (see page 2)

Drawbar

Swinging drawbar, height above ground to centre of clevis 485 mm, 425 mm, 395 mm and 335 mm changed by inverting drawbar and clevis, distance from rear wheel centre 750 mm and 650 mm, position relative to p.t.o. 400 mm and 300 mm, lateral adjustment 240 mm and 205 mm, pivot position relative to rear wheel centre 0 mm, drawbar pin hole 29 mm dia.
Linkage drawbar, optional

Steering

NIPPON SEIKO, power-assisted ball and nut type with single drag link, oil supply from hydraulic system of power lift with flow dividing valve

Brakes

NSK WARNER, mechanically acting on 6 wet disc on differential shaft, operated by foot pedals, independent for field work or locked together for road traffic, ratchet on both pedals for parking

Wheels

Steering wheels:

Two at front, BRIDGESTONE 7.50-16 tyres, 6 ply rating, diagonal type tyre casing, maximum permissible weight on each tyre 6970 N at 2.55 bar pressure, track width 1320 mm by 100 mm steps to 1820 mm, changed by extending axle, rims 5.00 F x 16

Driving wheels:

Two at rear, BRIDGESTONE 12.4/11-36 tyres, 6 ply

rating, diagonal type tyre casing, maximum permissible weight on each tyre 13780 N at 1.18 bar pressure, track width 1230 mm, 1350 mm, 1430 mm, 1520 mm, 1550 mm, 1630 mm, 1720 mm and 1840 mm, changed by reversing wheels and offset lug rims, rims W 11 x 36

BRIDGESTONE 16.9/14-30 tyres, 6 ply rating, diagonal type tyre casing, maximum permissible weight on each tyre 18100 N at 1.18 bar pressure, rims W 15 L x 30

Wheelbase: 2150 mm

Safety frame: Own make
ISEKI SF-104
O. E. C. D. tested: CSD 0121/2-a(F)

CONDITIONS DURING TEST

Masses:

Tractor without driver but with tanks full and safety frame
Tyre size: front; 7.50-16 6 ply rating rear; 12.4/11-36 6 ply rating

	Front kg	Rear kg	Total kg
Without ballast	971	1477	2448
With ballast	1283	1794	3077

Ballast:

	No. of weights	Total mass kg	Water kg
Front	4	60	—
Rear	10	368	—
Additional *)	8	201	—

*) front bumper

Track setting: Front wheels track width 1320 mm
Rear wheels track width 1430 mm

Lighting: in accordance with Japanese Regulations (equal SAE Standard)

	Height above ground of centre mm	Dimensions mm	Distance from outside edge of tractor to centre *) mm
Head lights	945	145 x 90	710
Side lights	1670	90 **)	315
Rear lights	1480	80	205
Reflectors	1385	35	205

*) at 1763 mm width
**) in combination with direction indicator

Number of grease points: (whole tractor) 17

Overall dimensions:

	Length 1) m	Width m		Heights m	
		max. 2)	min.	with exhaust	without exhaust 5)
With ballast	3.83	2.16	1.90 3)	2.40	2.34
Without ballast	3.61	2.16	1.62 4)	2.41	2.35

Remarks: 1) length with 3 point linkage
2) at 1840 mm rear wheels track width
3) at 1230 mm rear wheels track width
4) at 1320 mm front wheels track width
5) to top of safety frame

Ground clearance: 360 mm below swinging drawbar bracket

Seat: NANBA PRESS WORKS, cross linkage and gas damper, pan seat with cushon, range of adjustment 100 mm fore and aft, range of vertical adjustment 80 mm

FUEL AND LUBRICANTS USED IN TESTS

Fuel: Diesel oil, specific gravity 0.8383 at 15°C, viscosity at 30°C 4.471 cSt, Cetane No. 59.4 to No. 2 JIS

Engine oil: MARUZEN OIL, HEAVY DUTY DIESEL ENGINE OIL, API service CC, SAE 10W30, viscosity at 37.8°C 68.9 cSt

Transmission oil: MARUZEN OIL, HYPOID GEAR OIL, API service GL -4, SAE 80, viscosity at 37.8°C 89.9 cSt

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE

Date and locations of tests: 13th June, 1979 I. A. M., Omiya, Japan
Type of dynamometer: EC Electrical, MEIDENSHA TW-D1

Power	Speed		Fuel consumption			Specific Energy
			hourly		specific	
kW	Engine rev/min	p. t. o. rev/min	ℓ/h	kg/h	kg/kWh	kWh/ℓ
MAXIMUM POWER-2hours test						
45.7	2160	643	13.83	11.59	0.254	3.30
Part loads, the governor hand lever in the position corresponding to the maximum power at full load						
(Ⅰ) 85% of the torque obtained at maximum power						
39.8	2209	659	11.99	10.05	0.252	3.32
(Ⅱ) unloaded						
—	2385	710	3.80	3.19	—	—
(Ⅲ) half the load defined in (Ⅰ)						
20.6	2289	682	7.70	6.45	0.313	2.68
(Ⅳ) a load corresponding to maximum power						
45.7	2160	643	13.83	11.59	0.254	3.30
(Ⅴ) one quarter of the load defined in (Ⅰ)						
10.5	2327	693	5.63	4.72	0.450	1.86
(Ⅵ) three quarters of the load defined in (Ⅰ)						
30.3	2250	670	9.79	8.21	0.271	3.09

Power kW	Speed		Fuel consumption			Specific Energy kWh/ℓ
	Engine rev/min	p. t. o. rev/min	hourly ℓ/h	hourly kg/h	specific kg/kWh	
Part loads, the governor hand lever in the position corresponding to the standard p. t. o. speed at full load						
(Ⅰ) 85% of the torque obtained at maximum power						
35.5	1853	552	10.08	8.45	0.238	3.52
(Ⅱ) unloaded						
—	2038	607	2.82	2.36	—	—
(Ⅲ) half the load defined in (Ⅰ)						
18.6	1937	577	6.32	5.30	0.285	2.94
(Ⅳ) a load corresponding to maximum power						
40.9	1813	540	11.87	9.95	0.243	3.45
(Ⅴ) one quarter of the load defined in (Ⅰ)						
9.5	1974	588	4.47	3.74	0.394	2.13
(Ⅵ) three quarters of the load defined in (Ⅰ)						
27.3	1896	565	8.12	6.81	0.249	3.36

STANDARD SPECIFIC FUEL CONSUMPTION: 0.252/0.313/0.238/0.285 kg/kWh

Noload maximum engine speed: 2385 rev/min

Torque* at maximum power: 203.1 Nm

Maximum torque*: 232.5 Nm
at 1300 rev/min of the engine
Mean atmospheric conditions

temperature:	22 ℃
pressure:	1015 mbar
relative humidity:	54 %

Maximum temperatures:

coolant:	94 ℃
engine oil:	93 ℃
fuel:	49 ℃
engine air intake:	33 ℃

*The torque is the equivalent crankshaft torque.

The recommended speed for drawbar work was not expressly specify by the manufacturer.

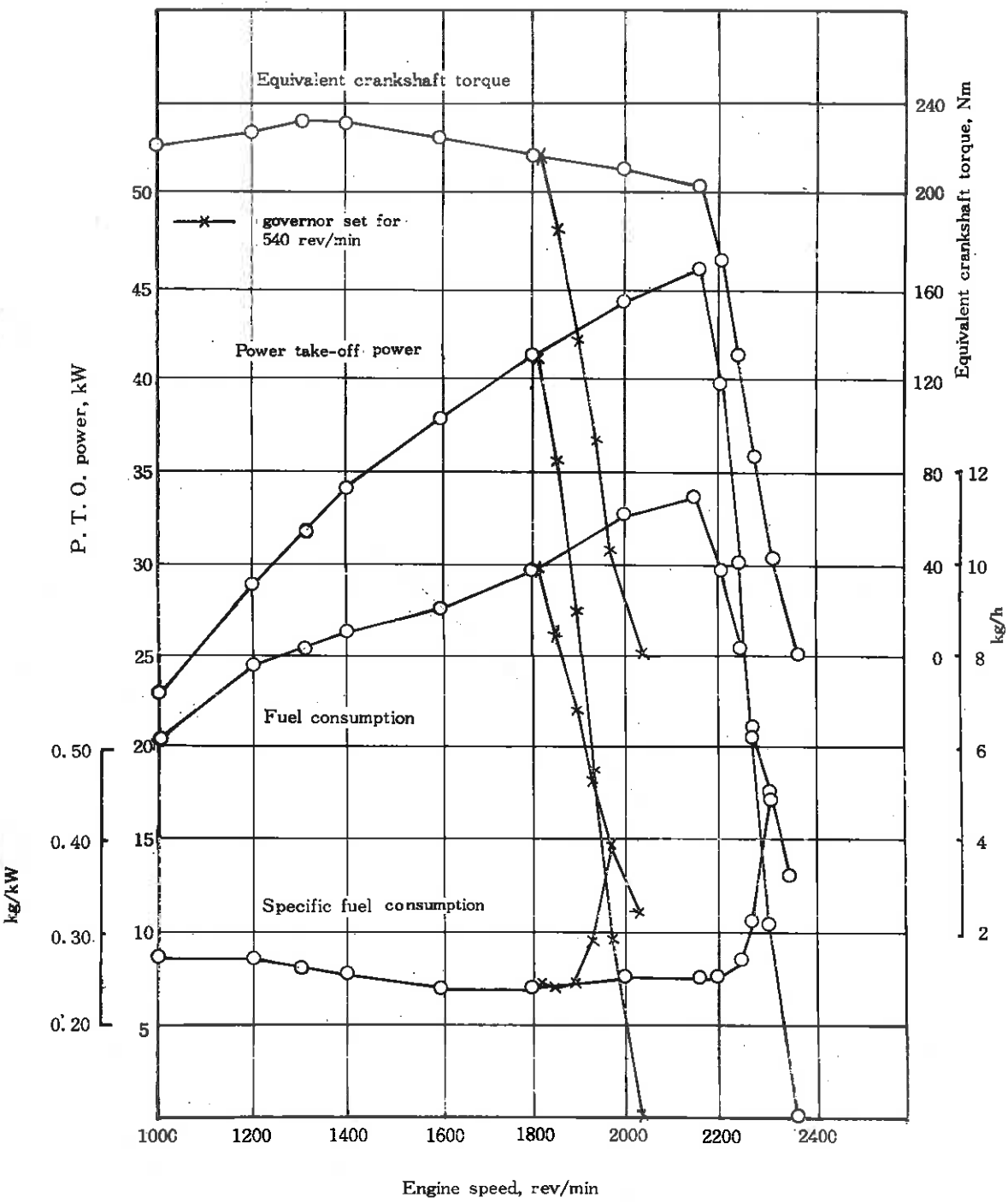


Fig. 1 Power take-off test

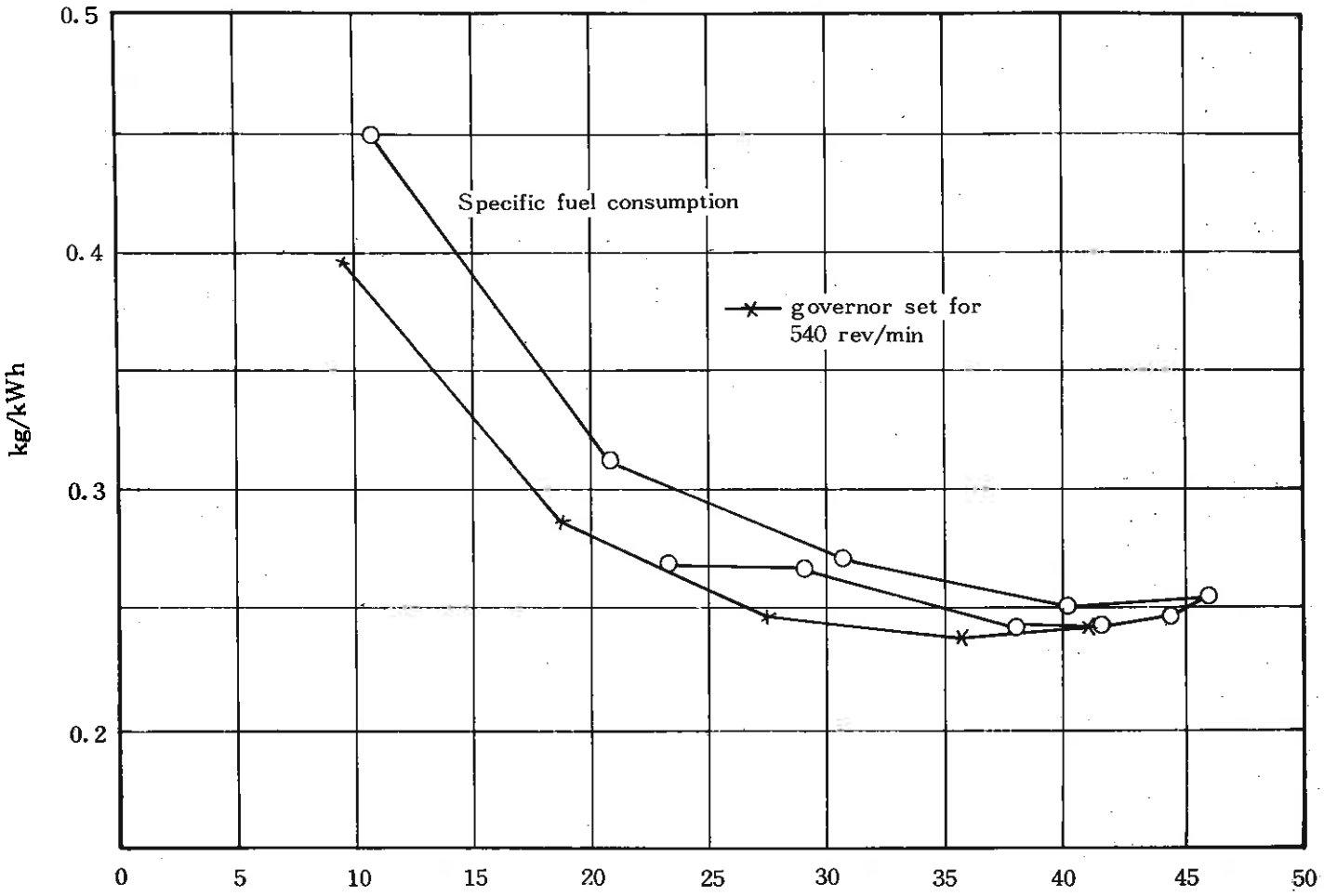


Fig. 2 Power take-off test

(2) DRAWBAR PERFORMANCE (I)

Date of tests: 18th-27th June, 1979
Type of track: Concrete
Tyre size: 12.4/11-36 at rear, 7.50-16 at front
Height of drawbar above ground: 485 mm
Tyre inflation pressure: 1.18 bar at rear, 2.55 bar at front

Gear No.	Speed km/h	Power kW	Drawbar pull N	Engine speed rev/min	Slip of wheels %	Specific fuel consumption kg/kWh	Specific energy kWh/ℓ	Temperature			Atmospheric conditions		
								Fuel °C	Coolant °C	Engine oil °C	Temperature °C	Relative humidity %	Pressure mbar
(I) MAXIMUM POWER (with ballast)													
L-H-1	1.08	4.1	13730	2279	15.1	0.907	0.88	53	80	85	32	55	1015
L-H-2	1.26	4.8	13730	2274	15.0	0.801	1.00	54	80	86	32	55	1015
L-H-3	1.73	6.6	13730	2271	15.1	0.679	1.18	53	80	86	32	49	1015
L-H-4	2.66	10.1	13730	2256	15.0	0.468	1.71	53	79	85	32	55	1015
L-H-5	4.21	16.0	13730	2240	15.0	0.347	2.31	51	80	85	32	49	1015
H-H-1	5.58	21.3	13730	2218	15.0	0.336	2.40	51	81	86	32	49	1015
H-H-2	6.37	24.3	13730	2205	14.9	0.325	2.47	51	81	86	32	55	1016
H-H-3	8.71	33.2	13730	2166	15.0	0.314	2.57	49	81	84	32	55	1016
H-H-4	14.47	35.5	8830	2161	8.7	0.289	2.79	46	82	81	30	65	1016
(II) FIVE HOUR TEST at 75% of pull at maximum power													
H-H-2	6.55	22.7	12510	2212	12.8	0.341	2.36	48	81	90	28	70	1014
(III) FIVE HOUR TEST at pull corresponding to 15% wheelslip in test (I)													
*H-H-3	8.96	—	13730	—	—	—	—	50	82	91	29	64	1013

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

Height of drawbar above ground : 493 mm
Tyre inflation pressure: 1.18 bar at rear, 2.55 bar at front

Gear No.	Speed km/h	Power kW	Drawbar pull N	Engine speed rev/min	Slip of wheels %	Specific fuel consumption kg/kWh	Specific energy kWh/ℓ	Temperature			Atmospheric conditions		
								Fuel °C	Coolant °C	Engine oil °C	Temperature °C	Relative humidity %	Pressure mbar
(Ⅳ) MAXIMUM POWER (without ballast)													
L-H-1	1.08	3.5	11770	2279	15.0	1.014	0.79	52	81	85	32	49	1012
L-H-2	1.26	4.1	11770	2277	14.9	0.869	0.92	52	80	84	32	49	1012
L-H-3	1.73	5.7	11770	2266	15.1	0.736	1.10	52	80	85	32	49	1013
L-H-4	2.66	8.7	11770	2256	15.2	0.547	1.47	52	81	85	27	77	1015
L-H-5	4.21	13.8	11770	2237	15.1	0.418	1.93	51	81	84	27	77	1015
H-H-1	5.62	18.4	11770	2222	14.8	0.372	2.17	50	80	84	27	77	1015
H-H-2	6.41	20.9	11770	2212	14.9	0.353	2.28	49	80	83	27	77	1015
H-H-3	8.82	28.8	11770	2185	14.9	0.313	2.58	47	80	83	27	77	1015
H-H-4	13.50	35.7	9520	2056	11.1	0.307	2.64	43	82	78	27	77	1015

Total oil consumption during ten hours duration of tests (Ⅱ) and (Ⅲ) 15.5 g/h

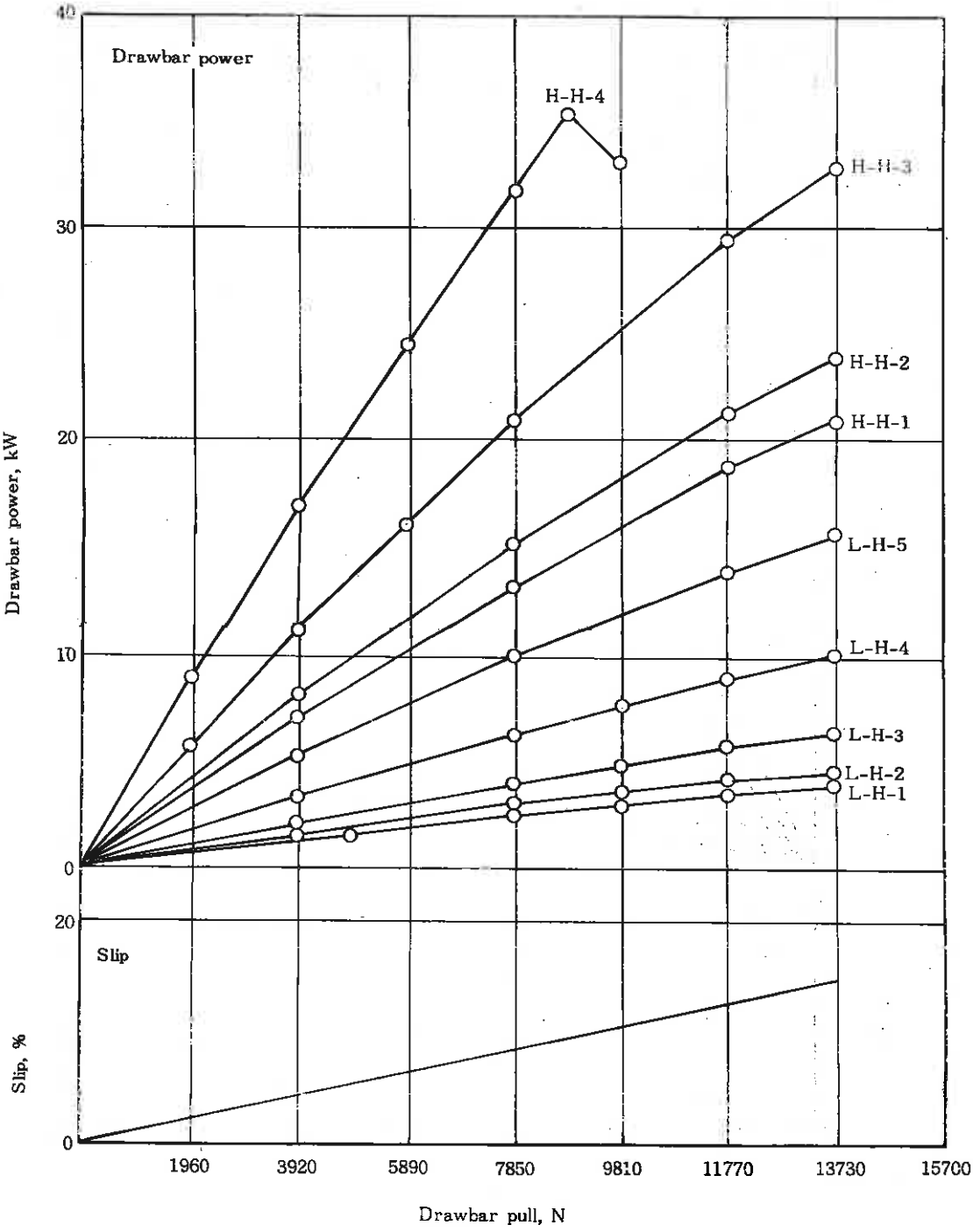


Fig. 3 Drawbar-test on concrete, with ballast

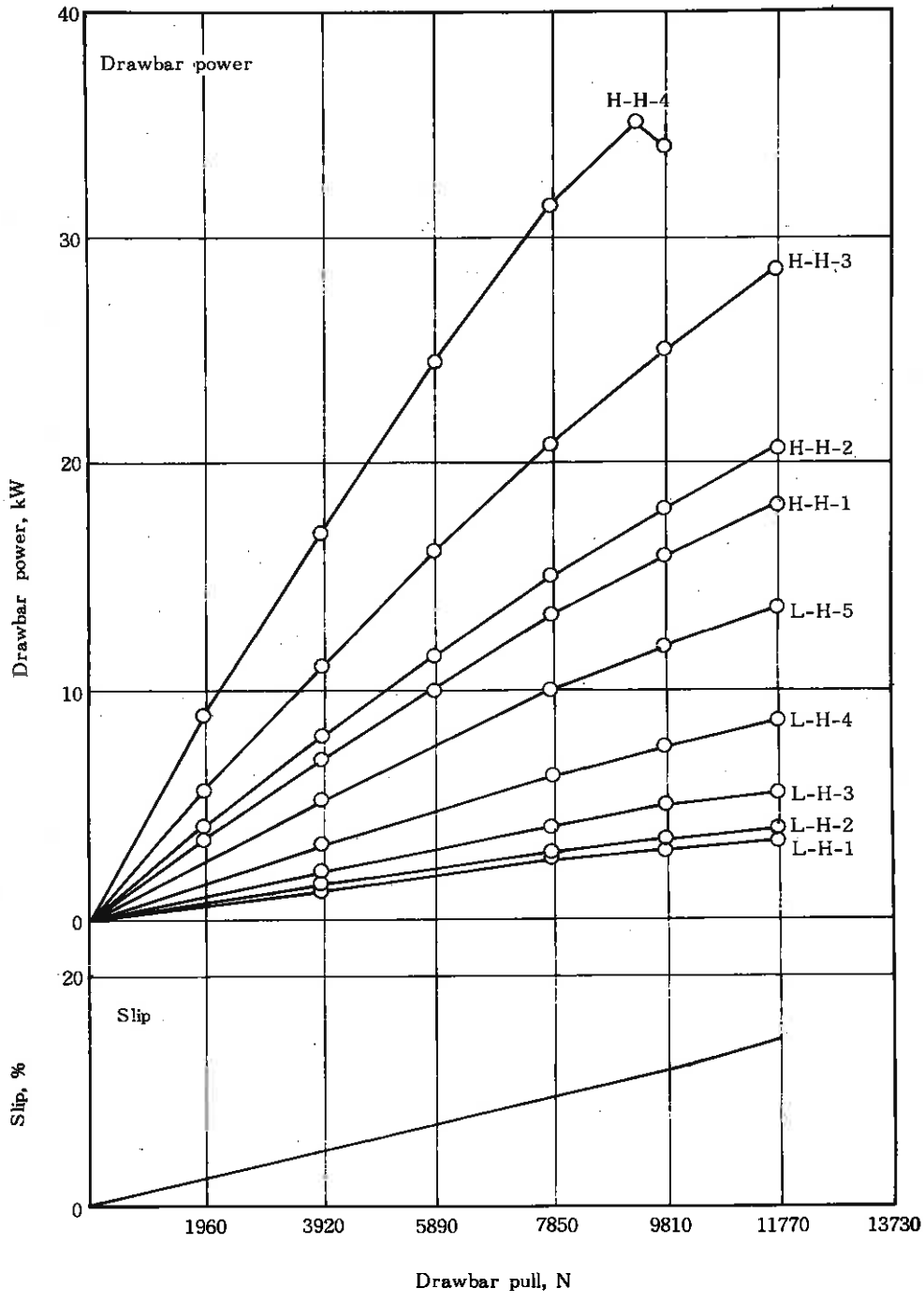


Fig. 4 Drawbar-test on concrete, without ballast

(2) DRAWBAR PERFORMANCE (Ⅱ)

Date of tests: 28th June-2nd July, 1979
Type of track: Concrete
Tyre size: 16.9/14-30 at rear, 7.50-16 at front
Height of drawbar above ground 498 mm
Tyre inflation pressure: 1.18 bar at rear, 2.55 bar at front

Gear No.	Speed km/h	Power kW	Drawbar pull N	Engine speed rev/min	Slip of wheels %	Specific fuel consumption kg/kWh	Specific energy kWh/ℓ	Temperature			Atmospheric conditions		
								Fuel ℃	Coolant ℃	Engine oil ℃	Temperature ℃	Relative humidity %	Pressure mbar
(Ⅰ) MAXIMUM POWER (with ballast)													
L-H-1	1.12	4.6	14720	2295	14.8	0.933	0.88	33	80	75	29	64	1008
L-H-2	1.26	5.1	14720	2284	14.8	0.884	0.92	34	79	74	29	64	1008
L-H-3	1.76	7.2	14720	2277	15.1	0.651	1.25	36	79	75	29	64	1008
L-H-4	2.74	11.2	14720	2267	14.7	0.543	1.50	35	80	66	29	64	1008
L-H-5	4.32	17.7	14720	2245	14.6	0.397	2.06	36	80	62	29	64	1007
H-H-1	5.65	23.1	14720	2211	15.2	0.370	2.20	37	81	59	29	64	1007
H-H-2	6.48	26.5	14720	2209	15.2	0.350	2.33	38	84	54	29	64	1007
H-H-3	8.78	35.9	14720	2134	14.6	0.334	2.44	39	83	49	29	64	1007
H-H-4	14.69	36.0	8830	2144	8.3	0.338	2.40	38	82	45	30	58	1007
(Ⅱ) MAXIMUM POWER (without ballast)					Height of drawbar above ground 506 mm Tyre inflation pressure: 1.18 bar at rear, 2.55 bar at front								
L-H-1	1.08	3.6	12070	2279	15.2	1.038	0.78	34	78	79	27	76	1003
L-H-2	1.26	4.2	12070	2275	15.2	0.888	0.92	32	78	83	28	68	1003
L-H-3	1.76	5.9	12070	2272	15.1	0.694	1.18	32	78	80	29	63	1003
L-H-4	2.70	9.0	12070	2252	15.0	0.532	1.53	33	79	82	30	60	1003
L-H-5	4.32	14.5	12070	2248	14.9	0.418	1.96	34	83	79	30	60	1003
H-H-1	5.76	19.3	12070	2238	15.0	0.369	2.21	36	80	81	30	57	1003
H-H-2	6.55	21.9	12070	2221	15.1	0.357	2.28	33	81	82	30	57	1003
H-H-3	8.89	29.8	12070	2163	15.1	0.332	2.46	34	85	84	30	58	1003
H-H-4	14.00	35.4	9120	2097	11.0	0.323	2.51	36	81	82	30	58	1003

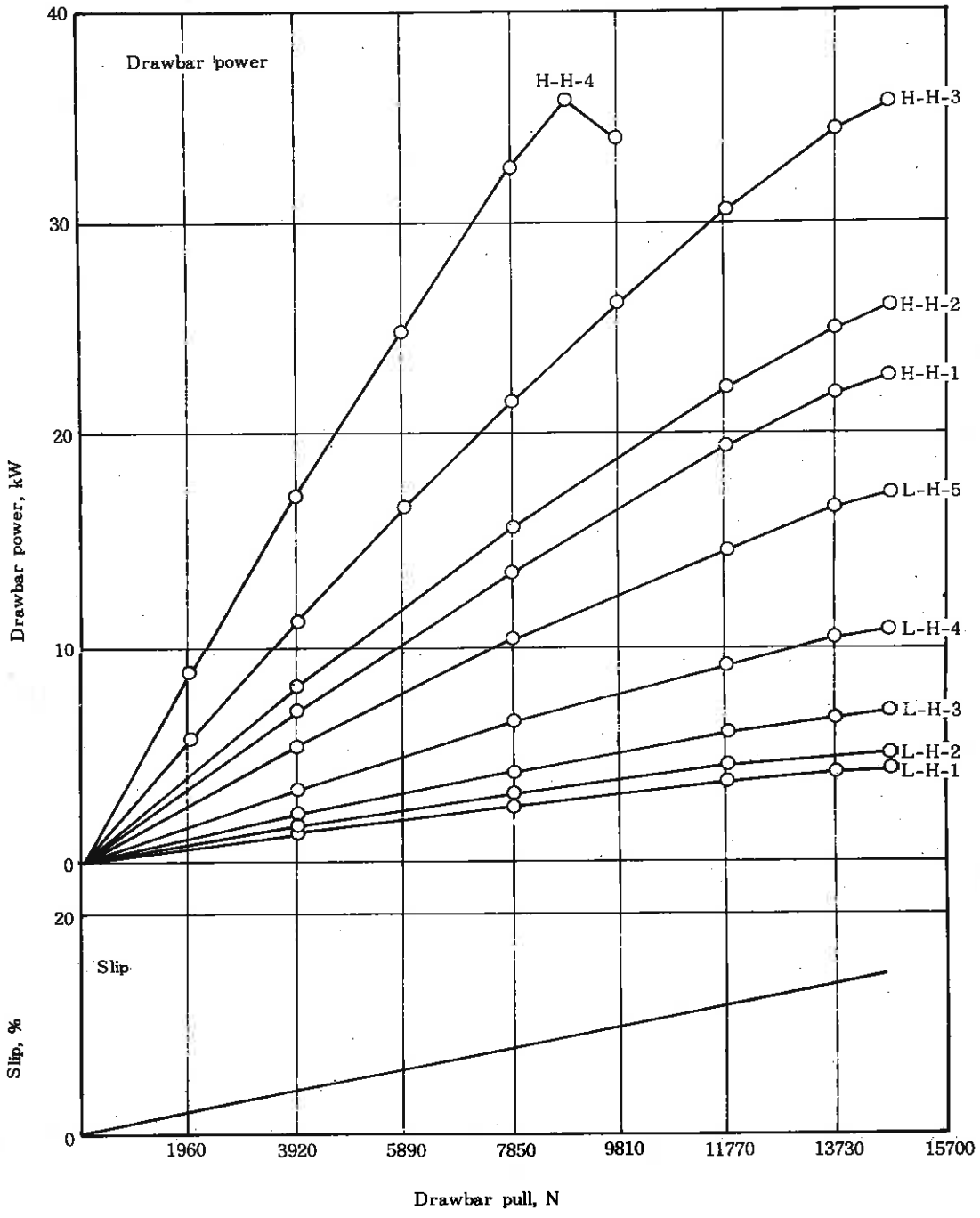


Fig. 5 Drawbar-test on concrete, with ballast

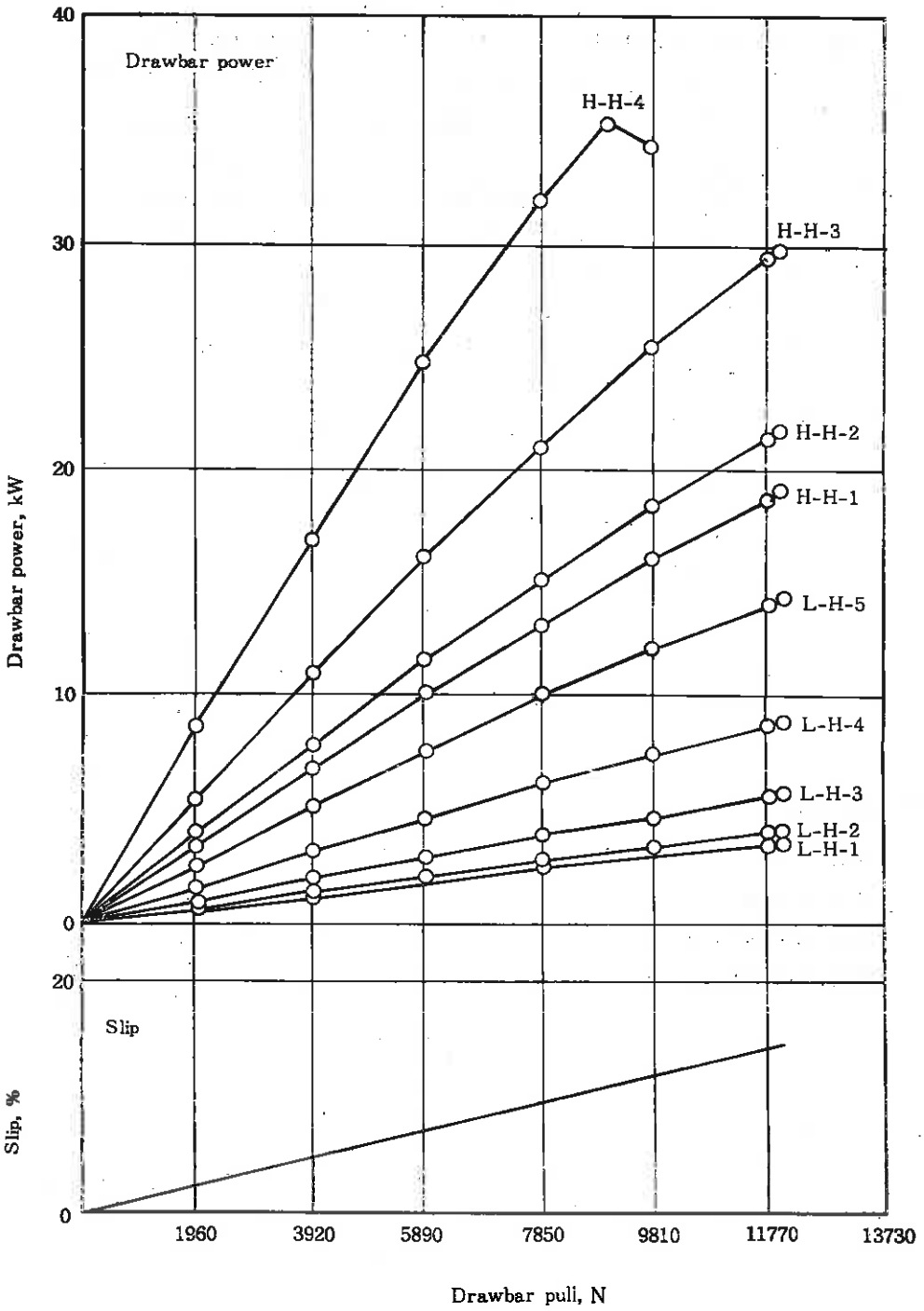


Fig. 6 Drawbar-test on concrete, without ballast

(3) TURNING SPACE AND TURNING CIRCLE

Details of wheel equipment: As in specification, without ballast
front 1320 mm, rear 1430 mm

Results	With brakes		Without brakes	
	right-hand m	left-hand m	right-hand m	left-hand m
Radius of turning space	3.15	3.19	3.65	3.70
Radius of turning circle	2.99	3.03	3.49	3.54

(4) LOCATION OF CENTRE OF GRAVITY

mm

Height above ground	855
Distance forward from the vertical plane containing the axis of the rear wheels	838
Distance from the median plane	0

(5) BRAKING

Date of tests: 4th July, 1979

Type of track: Concrete

Type of decelerometer: YOSHIDA SEIKI Co., Ltd., Type 106-2C

Weight of ballasted tractor: 3089 kg

COLD BRAKES

	Ballasted	Without Ballast
Travelling speed of the tractor km/h	25.0	25.0
(1) Deceleration m/s²	6.4	6.4
(2) Stopping distance m	6.3	6.5
(3) Force exerted on the brake pedal N	196	196
(4) Force exerted on the brake pedal to achieve a deceleration of 2.5 m/s² N	177	177

BRAKE FADE CHARACTERISTICS (hot tests)

		Ballasted	Without Ballast
Deceleration, hot/deceleration, cold × 100	%	106	103
Stopping distance, cold/stopping distance, hot × 100	%	97	101
Force on pedal, cold/force on pedal, hot × 100	%	67	100

PARKING BRAKE

Efficiency of handbrake: Satisfactory facing up and down 16 % slope

Pull on handbrake: 196 N

(6) MEASUREMENT OF AMBIENT NOISE

Date of tests:	3rd July, 1979
Type of sound level meter:	Bruel and Kjaer 2203
Type of track:	Concrete
Results of tests:	Gear H-H-5 Travelling speed before acceleration 20.0 km/h Sound level 83 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR LEVEL

Date of tests:	3rd July, 1979
Type of sound level meter:	Bruel and Kjaer 2203
Type of track:	Concrete

Results of tests:

Gear	Travelling speed km/h	dB (A)
H-H-2	7.3	97.5

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date and location of tests:	2nd July, 1979 I. A. M., Omiya, Japan
Hydraulic fluid Make and type:	MARUZEN OIL Co., Ltd. Hypoid Gear Oil API Service GL-4 Grade 80
Viscosity:	89.9 cSt (37.8°C)
Viscosity index:	101
Type of linkage lock for transport:	Hydraulic

Pump characteristics:

(Ⅰ)	Opening pressure of the relief valve:	127 bar
	Sustained pressure of the open relief valve:	163 bar
(Ⅱ)	Pump delivery rate at minimum pressure and rated engine speed:	32.5 ℓ/min
(Ⅲ)	Pump delivery rate at maximum hydraulic power:	26.6 ℓ/min
	Corresponding delivery pressure:	122 bar
	Power:	5.39 kW

Linkage geometry when connected to the standard frame

	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view		
lower links, mm	820	820
lift arm, mm	280	280
lift rods, mm	630	810
top link, mm	645	640
Distance of lift rod connection point from pivot point of lower link mm	500	500
The following dimension are given relative to the rear wheel center line, situated 690 mm above the ground level		
Lower link pivot point	100 mm behind, 175 mm below	100 mm behind, 175 mm below
Top link pivot point	270 mm behind, 210 mm above	280 mm behind, 170 mm above
Lift arm pivot point	165 mm forward, 295 mm above	165 mm forward, 295 mm above
Maximum and minimum height of lower link hitch points	356 mm above, 110 mm below	94 mm above, 585 mm below
Height of lower link hitch points when locked in transport position	Any height within lift range	Any height within lift range

Lifting heights in relation to a horizontal line through the lower link pivoting point, cm

			--48.1	−41.0	−40	−30	−20	−10	0	+ 6.5	+10	+20	+26.9	+30	+32.5	+40	+50	+53.1	+60	+69.0
Lifting force with the pressure at maximum hydraulic power 122 bar calculated from measurements made at the maximum pressure 163 bar kN	At the hitch points	Max. mech. advantage								16.92	17.36	18.46		19.64		20.08	20.37	21.04		
		Min. mech. advantage		9.41	9.26	11.91	13.24	14.19	14.78		15.00	15.37	15.59							
		Maximum force exerted throughout whole range 16.92 kN Force at which front of tractor is calculated to lift with maximum allowable front ballast 29.41 kN																		
	On the frame	Max. mech. advantage								14.27	14.49	14.63		14.34		14.12	13.16		12.35	11.62
		Min. mech. advantage	8.82		9.85	10.88	11.47	12.13	12.21		11.69	11.54		11.10	10.96					
		Maximum force exerted throughout whole range 11.62 kN Force at which front of tractor is calculated to lift with maximum allowable front ballast 17.69 kN																		

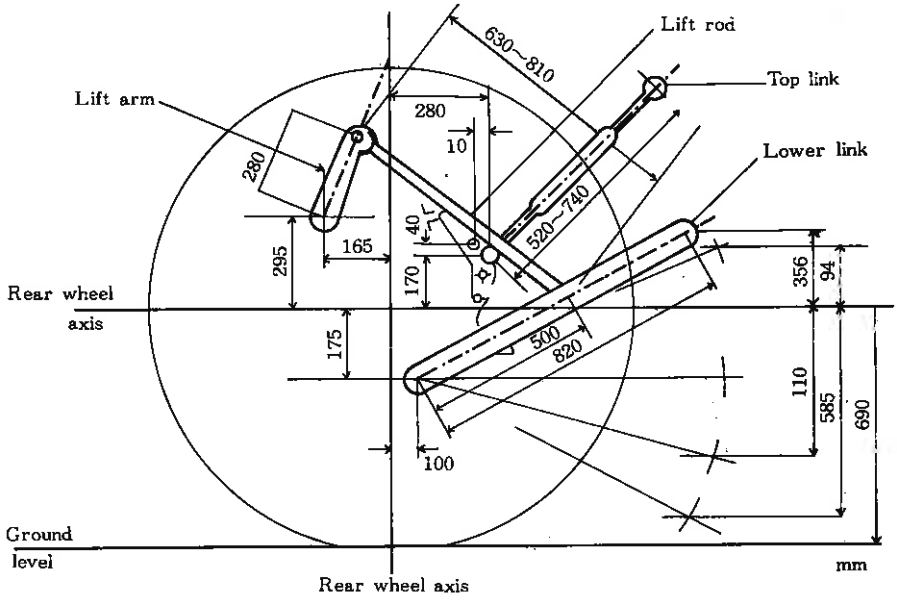


Fig. 7 Dimensions required for table of linkage geometry

REPAIRS AND ADJUSTMENTS DURING TESTS:	None
REMARKS:	None

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