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NEBRASKA TRACTOR TESTING LABORATORY
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INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
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LINCOLN, NEBRASKA 68583-0832, USA

REPORT ON TEST IN ACCORDANCE WITH OECD RESTRICTED CODE (CODE II) FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS
RESTRICTED TEST-CODE II



CASE IH 9330 (4 WD) Articulated

MANUFACTURED BY	**Case Corporation, 3401 First Avenue North Fargo, North Dakota, 58102 USA**
NEBRASKA TEST NO.	**1713**
Test dates	**March 27 through June 4, 1996**

This test report provides the results of the tests conducted in accordance with the OECD Standard Test Code for the Official Testing of Agricultural Tractor Performance - C(87)53Final-Annex II, Restricted Code.

This report has been approved by the OECD Coordinating Centre in Paris (CEMAGREF) on 5 September, 1996

Case IH 9330, 4WD articulated with OECD test # 1630

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SPECIFICATIONS OF TRACTOR.

Manufacturers name/address	Case Corporation, 3401 First Avenue North Fargo, North Dakota 58102
Location of tractor assembly	Fargo plant
Submitted for test by	The manufacturer
Selected for test by	The manufacturer in agreementwith the test station.
Place of running in	Case Corporation, Fargo, North Dakota
Duration of running in	89 hours
Location of Test	Nebraska Tractor Test Laboratory Lincoln, Nebraska, U.S.A.

TRACTOR.

Make/Model/Type	Case IH / 9330/4WD/articulated
Number of driving wheels	4 or 8
Serial number	JEE 0035883
1st Serial number	JEE 0035883 and continuing from JEE 0036501

ENGINE.

Make	CDC
Model	6TA-830-A
Type	Diesel, direct injection, turbocharged and intercooled
Serial Number	45192498

Cylinders

Number/disposition	6, in-line, vertical
Bore x stroke	114.0 mm x 135.0 mm
Displacement	8269 cm^3
Compression Ratio	16.5 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet, replaceable

Turbo-charging

Make/Model/Type	Holset/HX 40W with wastegate control/exhaust gas driven
Pressure	182 ± 10 kPa

Fuel System

Feed system	Engine driven transfer pump
Make/Type/Model of filters	Case IH/spin-on/primary J903410/secondary J903640
Fuel tank capacity	435 l
Make/Model/Type Injection Pump	Robert Bosch/MW with aneroid/in-line multiple plunger; PN 3926885
Pump Serial number	PES6MW100/120RS1242
Production setting of pump Flow Rate (Rated Eng.Spd and full load)	41.2 ± 2.1 kg/h
Fuel density	0.841 kg/l
Make/Model/Type of injectors	Robert Bosch/17mm/PN 3930525
Injection timing	17 BTDC
Injection pressure	26.0 MPa

Governor

Make/Model/Type	Robert Bosch/RSV/mechanical
Governed engine speed range	From 850 to 2400 rev/min
Rated engine speed	2200 rev/min
High-idle speed range	2400 ± 50 rev/min

Air Cleaner.

Pre-cleaner	Integral with air cleaner
Make/Model/Type	Donaldson/ Aspirated to exhaust
Air intake location	Above and in front of coolant radiator
Main Cleaner	
Make/Model/Type	Donaldson/SPB110133/dry with secondary safety element
Secondary element	Donaldson/pleated paper
Location of main cleaner	Under hood above engine
Maintenance indicator	Restriction switch in air inlet tube, warning light on dash

Lubrication system.

Type of feed pump	Full pressure, positive displacement.
Type of filters	Full flow
Number	One
Oil cooler	Heat exchanger with engine coolant

Cooling system.

Type of coolant	Liquid
Type of pump	Centrifugal,belt driven
Fan specification	Direct driven ECS PN 312018
Number of fan blades	6
Fan diameter	610 mm
Coolant system capacity	27.9 liter
Type of temperature control	2 Thermostats
Superpressure	103 kPa

Starting system.

Make/Model/Type	Nippondenso/F4.0/electro-mechanical engagement
Power Rating	4.0 kW
Cold starting aid	Ether spray in intake manifold and in-block coolant heater
Safety device	Electrical lockout on gearshift and PTO controls

Electrical system.

Voltage	12 Volt
Alternator	
Make/Model/Type	Delco Remy/Series 21SI/Type 200
Power rating	125 Ampere at 2100 engine rpm; 1.50 kW
Batteries	
Number & connection	2-12 V batteries in parallel
Rating	90 amp-hours per battery at 20 hour rating 625 Cold crank amps per battery

Exhaust system.

Make/Model/Type	Donaldson/EER 090673/expansion chamber
Location	Vertical,right front side of cab, outlet directed to right side

TRANSMISSION

Clutch. (travel)

Make/Model/Type	UVC/Multi-plate/Oil immersed
Number of plates	10
Plate diameter	229 mm
Method of operation	Hydraulic, pedal actuated.

Gear Box.

Make/Model/Type	UVC/EW16/Mechanical; full range powershift
Arrangement	Countershaft type with four clutch pack assemblies on four shafts
Number of gears	12 forward, 3 reverse controlled by two hand levers Lever 1: forward-reverse Lever 2: 2-position pulse shift
Oil cooler	Air to oil; in front of engine coolant radiator
Available options	None

Rear axle and final drives.

Make/model/Type	Raba/693/outboard planetary
Differential Lock	
Type	Multiple disc clutch with limited slip
Method of engagement	Electrically
Method of disengagement	Electrically

Front Axle and final drives.

Make/Model/Type	Raba/693/outboard planetary
Differential lock	
Type	Multiple disc clutch with limited slip
Method of engagement	Electrically
Method of disengagement	Electrically

TOTAL TRANSMISSION RATIOS AND TRAVEL SPEEDS

Gear Number	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed 2200 rev/min [km/h]
Forward		
1	194.199	3.50
2	160.496	4.24
3	130.410	5.21
4	107.402	6.33
5	88.769	7.66
6	72.107	9.43
7	61.084	11.13
8	50.490	13.47
9	41.009	16.58
10	33.778	20.13
11	27.912	24.36
12	22.679	29.99
Reverse		
1	148.512	4.58
2	82.119	8.28
3	46.723	14.56

Calculated with a tire dynamic radius index of 820 mm (ISO 4251/1-1992)
Number of revolutions of front wheels for one revolution of rear wheels 1.000

POWER - TAKE - OFF.

Main Power-Take-Off.

Type	Independent
Method of engagement	Hydraulically actuated multi-plate wet clutch operated by hand lever, independent of main drive clutch.
Number of shafts	One

Power take-off proportional to engine speed - 1000 rev/min.

Location	Rear of tractor, verticalcenter plane.
Diameter of shaft	45 mm
Number of splines	20; conforms to ISO 500/1979
Height above ground	764 mm
Distance from median plane of tractor	0 mm
Distance behind rear axle	691 mm
PTO Speed at rated engine spd	1048.1
Engine speed at Std. PTO spd	2099 rev/min
Ratio of Engine rpm to PTO rpm	2.09797:1
Direction of rotation (viewed facing driving end)	Clockwise.

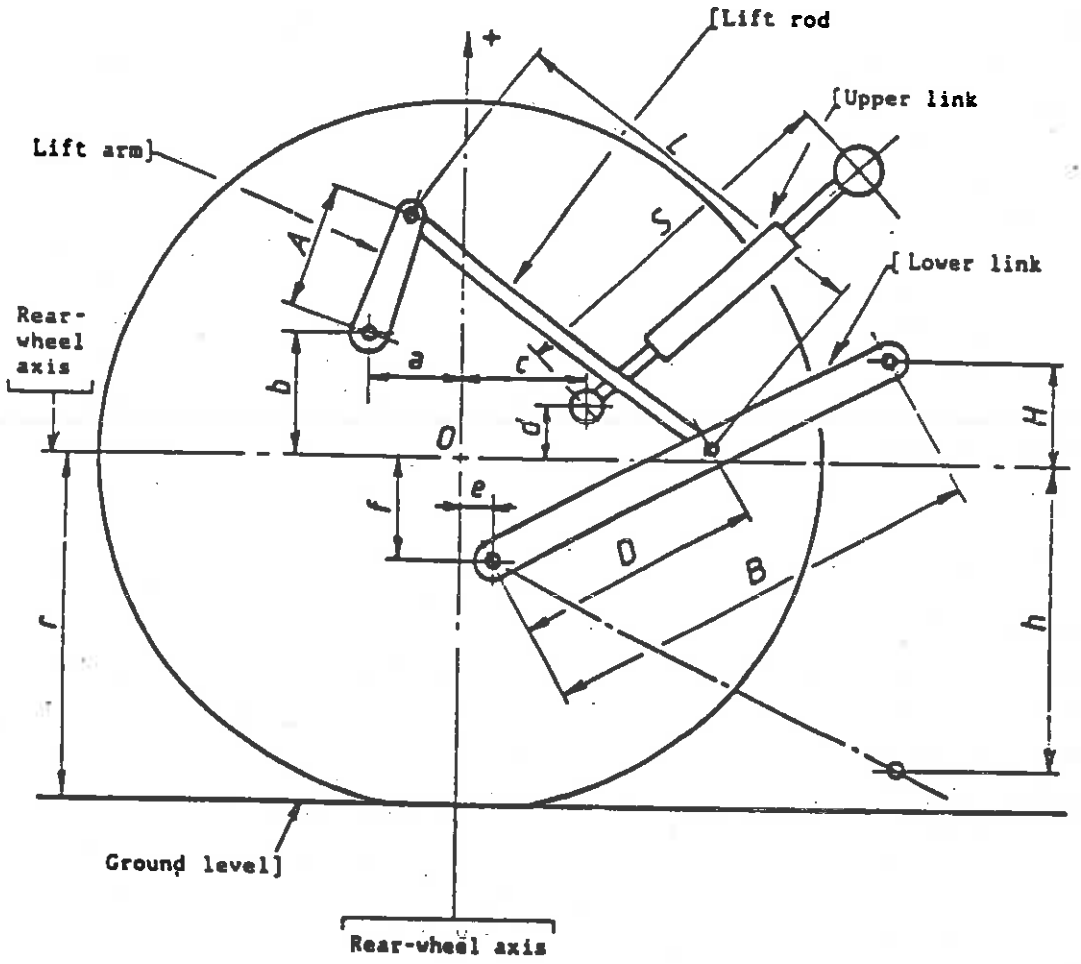
POWER LIFT.

Make/Model/Type	Cessna axial piston pump, pressure and flow compensated
Type of hydraulic system	Closed center, load sensing
Number/Type of cylinders	Two external,both single acting
Type of linkage lock for transport	Hydraulic
Relief valve setting	19.992 ± 0.345 MPa
Opening pressure of cylinder safety valve	20.684 MPa
Lift pump type	Axial piston, pressure and flow compensated
Power transmission to pump	Direct drive
Type/Number of filters	One full flow/spin on cartridge
Location of oil reservoir	separate reservoir, right side,rear end of front frame
Number/Type/Location of tapping points	4 pairs of ISO standard couplings at rear of tractor
Max. oil volume available for external cylinders	22.7 liter

THREE POINT LINKAGE.

- Category III in conformity with ISO 730/1-1990, except for horizontal distance from PTO to center of hitch points on the lower links while in the horizontal position - 664 mm

- Category adaptor Quick-Attach Coupler



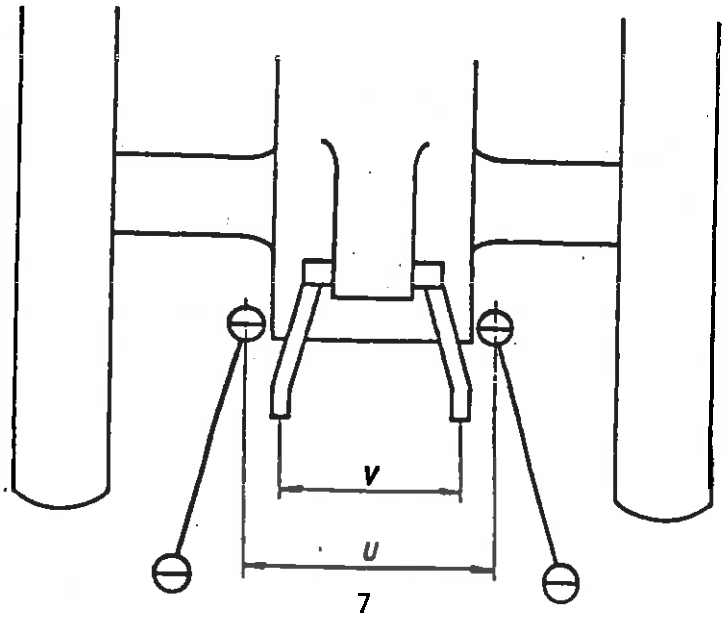


Table 1.1 - LINKAGE GEOMETRY DIMENSIONS (*)

		Dimension or range [mm]	Settings used on [mm]
Lift category		III	same
Rear Tire - Radius Index	(r)	820	same
Front Tire - Radius Index	(r')	820	same
Length of lift arms	(A)	533	same
Length of lower links	(B)	1067	same
Distance of lift arm pivot from: horizontal	(a)	134	same
rear wheel axis: vertical	(b)	637	same
Horizontal distance between the 2 lower link points	(u)	627	same
Horizontal distance between the 2 lift arm end points	(v)	719	same
Length of upper link	(S)	722	
	to	848	740
Distance of upper link pivot from horizontal	(c)	554	
	or	579	579
rear wheel axis: vertical	(d)	187	
	or	289	289
Distance of lower link pivot from: horizontal	(e)	259	same
rear wheel axis: vertical	(f)	251	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	584	same
Length of lift rods	(L)	869	
	to	965	959
Height of lower hitch points relative to rear wheel axis In low position	(h)	518	
	to	718	591
In high position	(H)	105	
	to	273	196
Height above ground of lower hitch points when locked in transport position.		925	
	to	1093	1016

(*) Assuming (r) with a dynamic tire index of 820 mm; ISO 4251/1-1992

SWINGING DRAWBAR.

Type	Swings for hook-up only
Height above ground:	Maximum 544 mm
	Minimum 417 mm
Adjustments	By inverting drawbar
Distance of hitch point from rear wheel axle, horizontal	1198 mm
Distance of hitch point from PTO shaft end	
Vertically	253 mm
Horizontally	50 mm
Lateral movement for hookup only	
Right side	215 mm
Left side	215 mm
Distance of pivot point from rear wheel axle horizontally	478 mm
Diameter of drawbar pin hole	46 mm
Maximum vertical permissible load	56.7 kN

STEERING

Make/Model/Type	Eaton hydrostatic steering control unit
Method of operation	Steering wheel
Pump	Cessna axial piston,pressure and flow compensated
Rams - Number/Type	Two/double acting
Working pressure	17.2 MPa

BRAKES

Service brake.

Make/Model/Type	Kelsey Hayes,caliper,dry disc
Method of operation	manual/hydraulic,operated by foot pedal.

Trailer braking take-off: None

Parking brake.

Type	Caliper/dry disc
Method of operation	mechanically by hand lever

WHEELS

Number.	
Front and rear	Eight/Driving and steering
Wheel base	3058 mm

Track width adjustment (fixed)

	Inside Distance [mm]	Outside Distance [mm]	Adjustment method
Front	1524	3302	Sliding hub on axle
Rear	1524	3302	Sliding hub on axle

PROTECTIVE STRUCTURE

Make/Model/Type	Case IH,4CSF-2
Manufacturer's name/address	Case IH 3401 First Avenue North, Fargo, North Dakota
Protective device	Cab,Case IH, 4CSF-2, 4 post with charpy v-notch certified material
Tiltable	No
OECD approval number	CSS 076/13

DRIVER'S SEAT

Make/Model/Type	Sears, P108 Air Seat, Type 9100
Type of suspension	Air suspension
Type of damping	Fore/aft and lateral
Range of adjustment	
Longitudinal	152 mm
Vertical	76 mm

LIGHTING.

	Height above ground of center [mm]	Size [mmxmm]	Distance from outside edge of lights to median plane of tractor. [mm]
Headlights	1638	92 x 172	355
Cab-lights (rear)	3353	102 x 172	800
(front)	3176	102 x 165	762
Rearlights	1939	109 x 172	955
Reflectors	None		

TEST CONDITIONS.(See NOTE)

Overall dimensions.

Length [mm]	Width as tested with duals [mm]	Height at top of protective structure [mm]	Height at top of exhaust stack [mm]
6410	2890	3269	3307

Ground clearance (unballasted) 280 mm
Clearance-limiting part Bottom of swinging drawbar

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	With driver [kg]
Unballasted	**Front**	5587	5647
	Rear	5140	5155
	Total	10727	10802

Tire and track width specifications.

	Front	Rear
Make	Goodyear	Goodyear
Dimensions	18.4R38	18.4R38
Ply rating	1 star (6,8 ply)	1 star (6,8 ply)
Type	Radial	Radial
Max.load (tire manufacturer)	27 kN	27 kN
Max.load(tractor manufacturer)	Same	same
Inflation pressure(tire mfr)	124 kPa	124 kPa
Dynamic Radius Index	820 mm	820 mm
Chosen track width - inner	1510 mm	1510 mm
- outer	2910 mm	2910 mm

NOTE : According to manufacturer's instructions in the Operator Handbook, the tractor was operated with duals only in the unballasted mode.

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Oil change hrs	Filter change hrs
Engine	21	250	250
Gear Box	38.8	1000	1000
Front and Rear axle	34	1000	---
Hydraulic system (includes steering, and hydraulic lift)	68	1000	1000

Specifications:

	Recommended	Used during test
Engine oil		
Type	SAE 15W40	same
Viscosity	14.8 cSt at 100°C	
Classification	API CC/CD	
Transmission oil		
Type	Case IH Hytran Plus	same
Viscosity	6.2 cSt at 100°C	
Classification	NA	
Hydraulic fluid		
Type	Case IH Hytran Plus	same
Viscosity	6.2 cSt at 100°C	
Classification	NA	
Steering oil	Same as hydraulic	same
Grease	NLGI No.2 Lithium	
Number of lubrication points	28	

Fuel

Type	Grade 2-D,in conformity with the National Standard
Density (Pto test)	0.841 Kg/l
(Drawbar test)	Same as on PTO test
Cetane number	50.6
Viscosity	2.51 CSt at 38°C

COMPULSORY TESTS

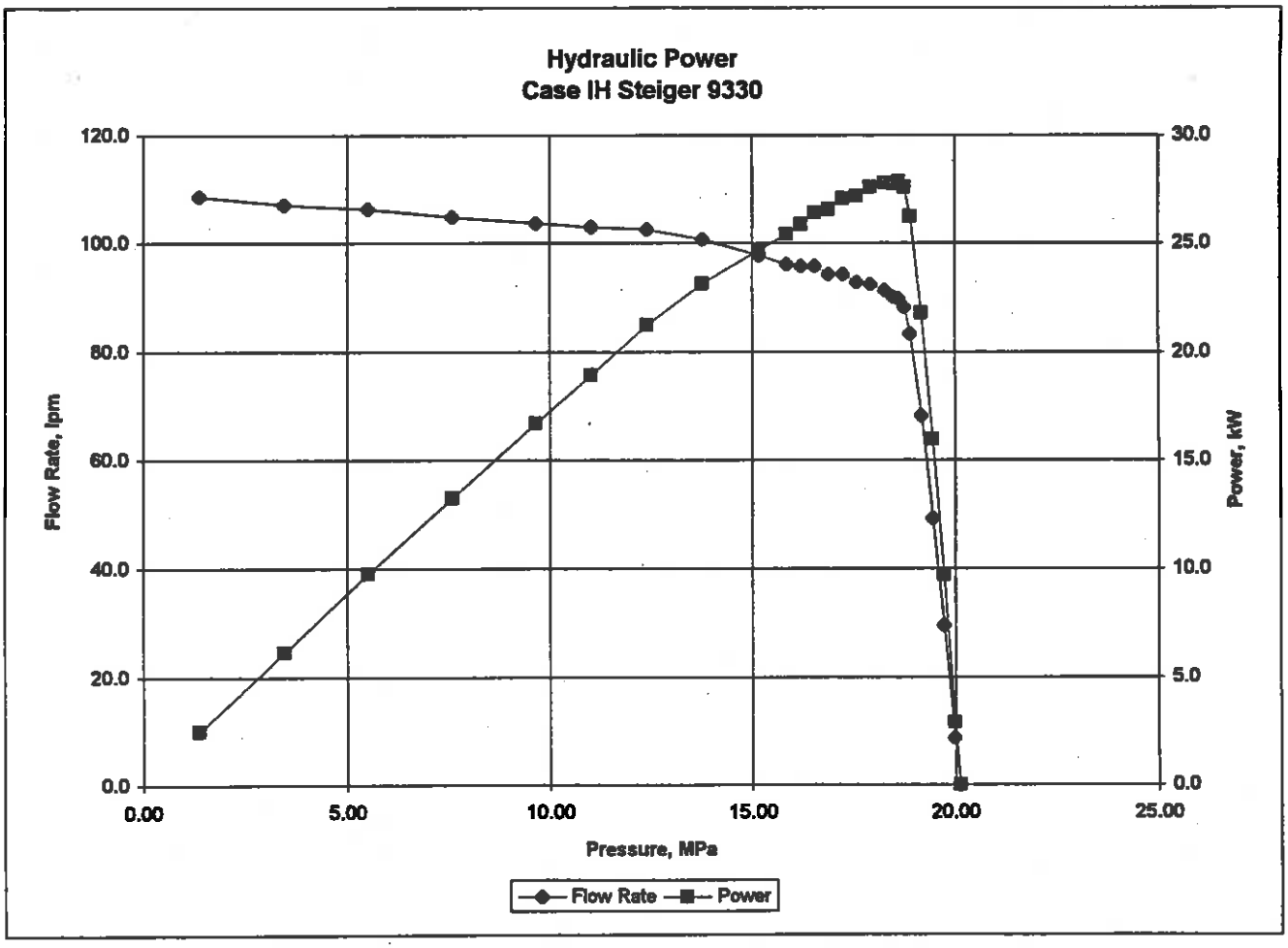
1. MAIN POWER TAKE OFF

Date: 29-May-96 Location: UNL Tractor Test Lab, Lincoln, NE, USA
Type of dynamometer: Eddy current, Eaton
Fuel Density 0.841 kg/l

Power kW / hp	Engine rev/min	PTO rev/min	l/h / gal/h	kg/h / lb/hr	kg/kW.h / lb/hp-h	kW.h/l / hp-h/gal
1.1 Maximum Power - 2 Hours						
171.48	1950	928	50.40	42.40	0.247	3.40
229.96			*13.31*	*93.48*	*0.406*	*17.27*
1.2 Power at Rated Engine Speed - 1 hour						
149.77	2200	1047	49.38	41.54	0.277	3.03
200.85			*13.05*	*91.59*	*0.456*	*15.40*
1.3 Power at Standard Power Take Off Speed - 1 hour						
161.84	2100	1000	50.62	42.58	0.263	3.20
217.03			*13.37*	*93.88*	*0.433*	*16.23*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
149.77	2200	1047	49.38	41.54	0.277	3.03
200.85			*13.05*	*91.59*	*0.456*	*15.40*
1.4.2 85% of torque obtained in 1.4.1						
130.88	2257	1075	44.64	37.56	0.287	2.93
175.51			*11.79*	*82.80*	*0.472*	*14.88*
1.4.3 75% of torque defined in 1.4.2						
99.71	2298	1093	37.04	31.16	0.313	2.69
133.71			*9.78*	*68.70*	*0.514*	*13.66*
1.4.4 50% of torque defined in 1.4.2						
67.49	2336	1112	29.44	24.77	0.367	2.29
90.51			*7.78*	*54.60*	*0.603*	*11.64*
1.4.5 25% of torque defined in 1.4.2						
34.56	2378	1132	21.51	18.10	0.524	1.61
46.34			*5.68*	*39.90*	*0.861*	*8.15*
1.4.6 unloaded						
1.23	2433	1158	14.72	12.38	10.042	0.08
1.65			*3.89*	*27.30*	*16.509*	*0.43*
1.5 Part Loads at Standard Power Take Off Speed						
1.5.1 Torque at maximum power						
161.84	2100	1000	50.62	42.58	0.263	3.20
217.03			*13.37*	*93.88*	*0.433*	*16.23*
1.5.2 85% of torque obtained in 1.5.1						
141.72	2163	1029	45.94	38.65	0.273	3.09
190.04			*12.14*	*85.20*	*0.448*	*15.66*
1.5.3 75% of torque defined in 1.5.2						
108.04	2197	1046	37.20	31.30	0.290	2.90
144.89			*9.83*	*69.00*	*0.476*	*14.74*
1.5.4 50% of torque defined in 1.5.2						
73.34	2238	1065	28.95	24.38	0.332	2.53
98.35			*7.65*	*53.70*	*0.546*	*12.86*
1.5.5 25% of torque defined in 1.5.2						
37.39	2281	1086	20.54	17.28	0.462	1.82
50.14			*5.43*	*38.10*	*0.760*	*9.24*
1.5.6 unloaded						
1.19	2341	1114	12.94	10.89	9.177	0.09
1.59			*3.42*	*24.00*	*15.067*	*0.47*

No load maximum engine speed:	2433	rev/min		
Equivalent torque at rated speed:	650	N.m	*479*	lb-ft
Equivalent torque at maximum power:	840	N.m	*619*	lb-ft
(engine speed:	1950	rev/min)		
Maximum equivalent crankshaft torque:	1022	N.m	*754*	lb-ft
(engine speed:	1350	rev/min)		
Mean Dry bulb:	24	deg C	*75*	deg F
Wet bulb:	18	deg C	*64*	deg F
Relative Humidity	56	%		
Pressure:	98.2	kPa	*29.00*	in Hg
Maximum Coolant:	97	deg C	*206*	deg F
Engine Oil:	115	deg C	*239*	deg F
Fuel:	50	deg C	*122*	deg F
Air Intake:	36	deg C	*97*	deg F
Transmission/hydraulic oil:	64	deg C	*147*	deg F
Intake manifold pressure at rated speed:	195	kPa	*28.3*	psig
Intake manifold pressure at maximum power:	206	kPa	*29.9*	psig

Date of Test: 4-Jun-96			
Location of Test-City-State:	Tractor Test Lab, Lincoln, NE, USA		
Tapping point used for test:	Remote hydraulic outlets		
I. Sustained pressure with pump stalled:			
20.13 MPa			
2920 psig			
II. Pump delivery rate at minumum pressure and rated engine speed:			
108.6 l/min			
28.7 gpm			
III. Flow rate, pressure, power:			
90% of relief valve setting:			
91.2 l/min	18.27 MPa	27.8 kW	
24.1 gpm	*2650 psig*	*37.3 hp*	
Maximum hydraulic power:			
89.7 l/min	18.62 MPa	27.8 kW	
23.7 gpm	*2700 psig*	*37.3 hp*	
IV. Hydraulic fluid temperature at flow meter:			
66.4 °C			
151 °F			
This hydraulic system does not use an accumulator. Opening and closing pressures of the unloading valve could not be measured.			



2.2 POWER LIFT TEST.

Date of test: 27 March 1996

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	224/8.8
Vertical movement:			
without load:	[mm/in]	787/31.0	856/33.7
with load:	[mm/in]	673/26.5	706/27.8
Maximum corrected force through full range:	[kN/lb]	59.4/13356	61.7/13878
Corresponding pressure:	[MPa/psi]	18.0/2610	
Moment about rear axle:	[kN.m/lb.ft]	86.3/63664	127.3/93908
Maximum mast tilt angle:	[deg]	--	2.6

Lifting height relative to horizontal position of lower links.

	[mm]	-345	-340	-254	-152	-53
	[in]	-13.6	-13.4	-10.0	-6.0	-2.1
Corrected lift forces						
Hitch point.	[kN]	--	59.4	64.0	67.8	71.1
	[lb]	--	13356	14391	15246	15993
at frame	[kN]	67.7	--	67.9	68.9	68.9
	[lb]	15228	--	15255	15498	15498

Lifting height relative to horizontal position of lower links.

	[mm]	46	147	246	333	361
	[in]	1.8	5.8	9.7	13.1	14.2
Corrected lift forces						
Hitch point	[kN]	73.5	75.9	77.0	76.5	--
	[lb]	16533	17055	17316	17199	--
at frame	[kN]	67.8	67.1	64.8	62.8	61.7
	[lb]	15246	15084	14562	14112	13878

OECD Drawbar Data (SI)

Date of tests: 30-May-96 Fuel density: 0.841 kg/l
Type of track: Concrete Test number: 1713

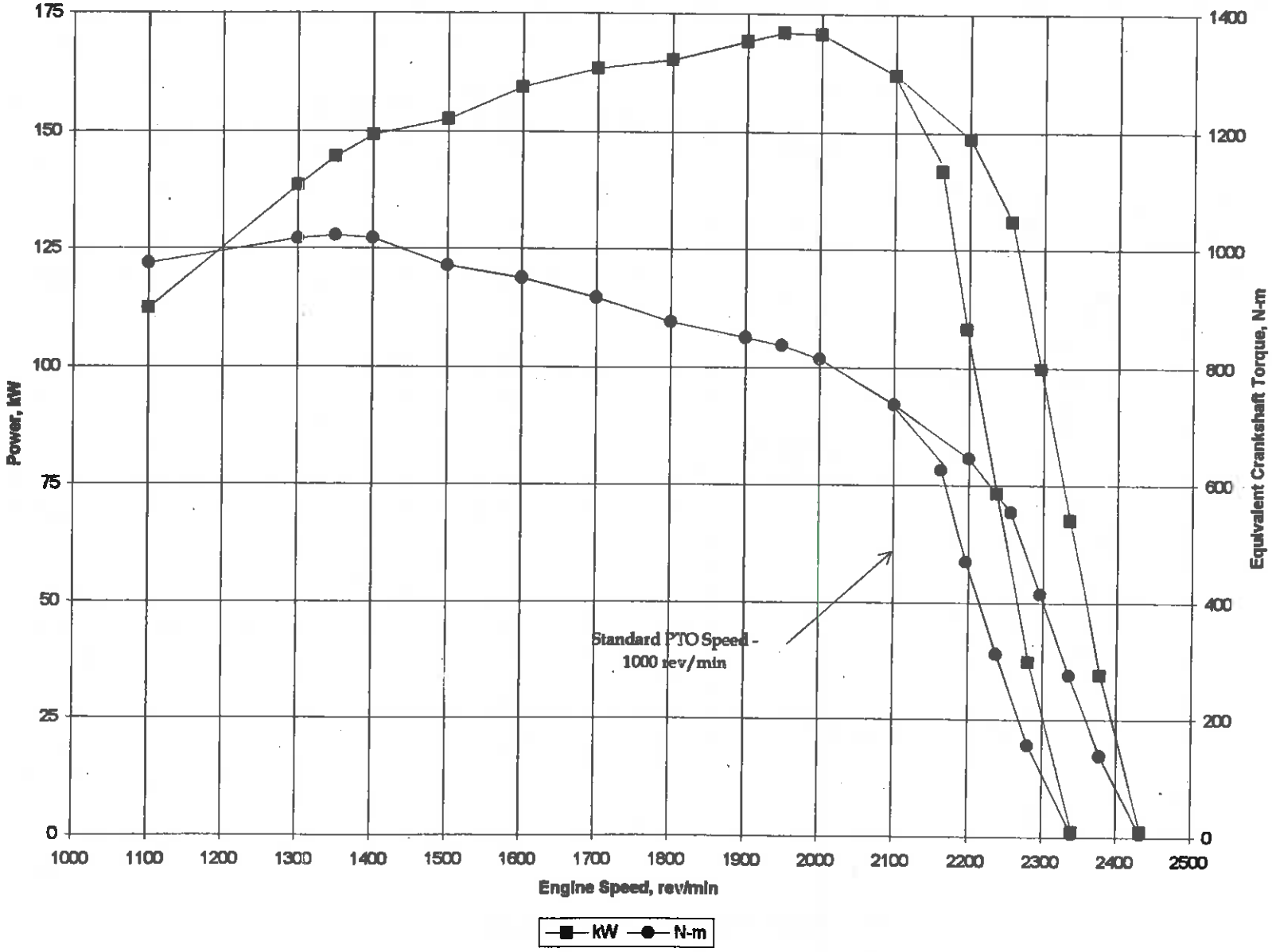
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel hum-idity	Baro. Pres
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, 4wd at 1950 rev/min)						Tire pressure:		83 kPa, rear		97 kPa, front		Drawbar height:	343 mm	
* 1	104.57	113.18	3.33	2264	9%	0.331	2.54	52	84	106	16	14	79%	98.37
* 2	127.52	114.77	4.00	2231	8%	0.316	2.67	52	85	106	15	13	79%	98.34
3	141.79	109.13	4.68	2107	8%	0.298	2.82	50	88	110	17	14	75%	98.41
4	153.74	101.05	5.48	1987	6%	0.278	3.03	49	91	110	18	15	71%	98.44
5	155.04	84.26	6.62	1952	4%	0.271	3.10	49	94	113	19	15	67%	98.41
6	155.30	67.72	8.26	1953	3%	0.271	3.10	49	96	114	20	16	60%	98.37
7	155.56	57.15	9.80	1952	2%	0.272	3.09	50	95	114	21	16	60%	98.41
8	155.50	47.24	11.85	1941	2%	0.271	3.10	50	94	114	21	16	60%	98.37
9	154.04	37.69	14.71	1949	1%	0.276	3.05	49	89	108	21	16	60%	98.34
* Note: Slip limited to avoid excessive tractor bouncing.														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed.														
7	138.43	44.83	11.12	2200	2%	0.298	2.83	49	92	109	20	16	64%	98.37
II.1.1 75% of pull at maximum power at rated engine speed														
7	107.72	33.62	11.53	2272	1%	0.317	2.65	49	88	109	21	16	60%	98.31
II.1.2 50% of pull at maximum power at rated engine speed														
7	73.61	22.42	11.82	2318	1%	0.358	2.35	46	87	104	21	16	60%	98.31
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
9	107.57	33.66	11.51	1522	1%	0.258	3.26	46	83	106	21	16	60%	98.31
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
9	73.60	22.41	11.82	1557	1%	0.275	3.06	45	82	104	21	16	60%	98.31
II.2 in selected gear nearest to 7.5 km/h at rated engine speed.														
5	138.61	65.93	7.57	2202	3%	0.297	2.84	49	93	111	18	15	71%	98.44
II.2.1 75% of pull at maximum power at rated engine speed														
5	108.10	49.39	7.88	2271	2%	0.313	2.68	48	87	108	21	16	61%	98.31
II.2.2 50% of pull at maximum power at rated engine speed														
5	73.41	32.92	8.03	2297	1%	0.353	2.38	48	84	106	21	16	61%	98.31
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7	108.26	49.20	7.92	1571	2%	0.256	3.29	46	83	105	21	16	61%	98.31
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7	73.50	32.93	8.04	1583	1%	0.272	3.10	48	81	104	21	16	61%	98.31

OECD Drawbar Data (US)

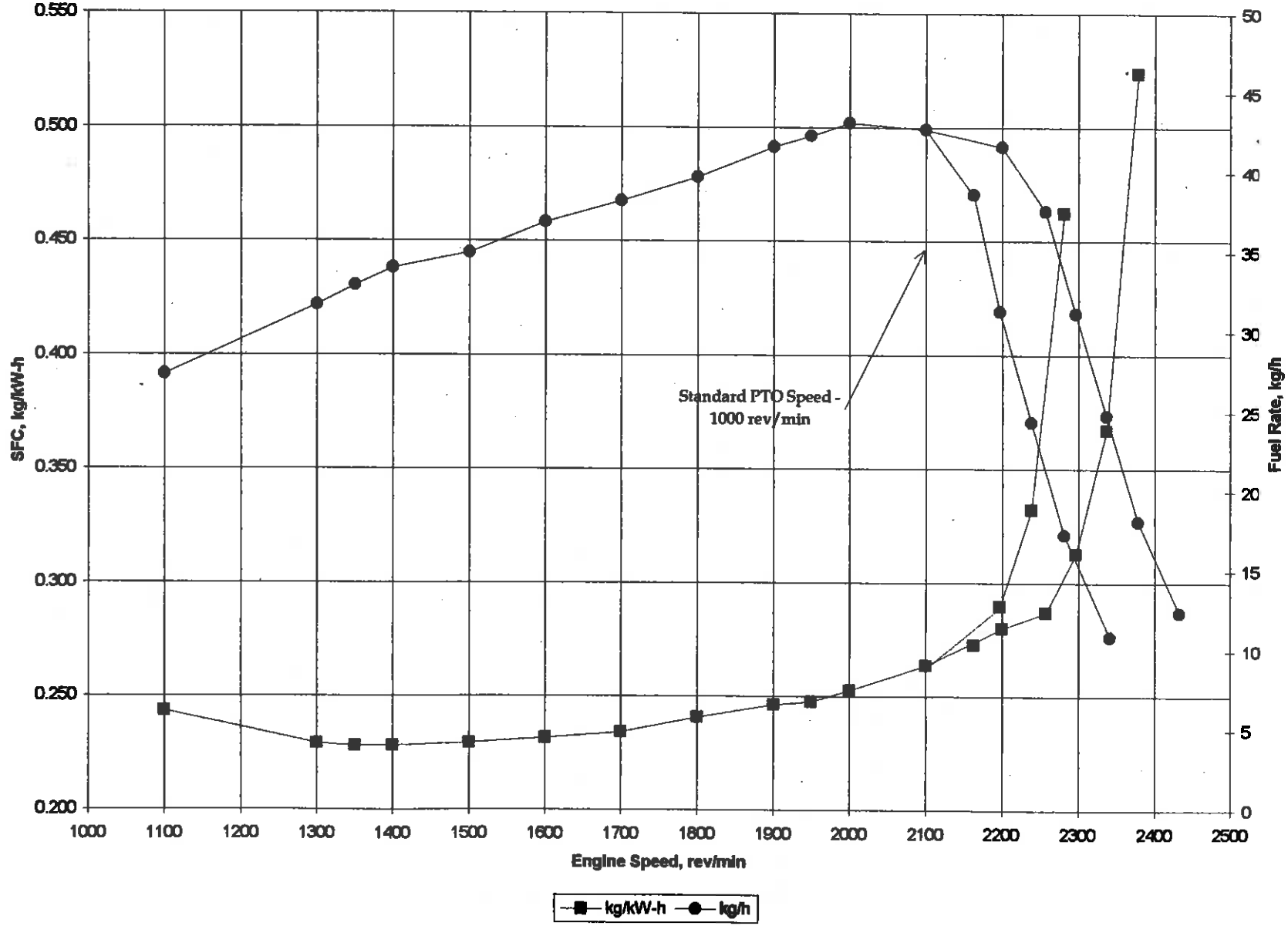
Date of tests: 30-May-96 Fuel density: 7.021 lb/gal
Type of track: Concrete Test number: 1713

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel hum-idity	Baro. Pres
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (unballasted, 4wd at 1950 rev/min)						Tire pressure:		12 psig, rear		14 psig, front		Drawbar height:	13.5 in	
* 1	140.24	25445	2.07	2264	9%	0.544	12.91	125	183	224	61	57	79%	29.05
* 2	171.01	25802	2.49	2231	8%	0.519	13.53	125	185	223	59	55	79%	29.04
3	190.15	24534	2.91	2107	8%	0.490	14.33	122	191	230	63	58	75%	29.06
4	206.17	22717	3.40	1987	6%	0.457	15.37	121	196	230	65	59	71%	29.07
5	207.91	18942	4.12	1952	4%	0.446	15.73	120	202	236	66	59	67%	29.06
6	208.27	15225	5.13	1953	3%	0.446	15.74	121	204	238	68	60	60%	29.05
7	208.60	12848	6.09	1952	2%	0.447	15.71	122	203	238	69	60	60%	29.06
8	208.52	10621	7.36	1941	2%	0.446	15.76	122	202	238	69	60	60%	29.05
9	206.57	8473	9.14	1949	1%	0.453	15.49	121	192	226	69	60	60%	29.04
* Note: Slip limited to avoid excessive tractor bouncing.														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed.														
7	185.64	10079	6.91	2200	2%	0.489	14.35	120	197	228	68	60	64%	29.05
II.1.1 75% of pull at maximum power at rated engine speed														
7	144.45	7559	7.17	2272	1%	0.521	13.47	120	190	228	69	60	60%	29.03
II.1.2 50% of pull at maximum power at rated engine speed														
7	98.71	5040	7.34	2318	1%	0.589	11.91	115	189	219	69	60	60%	29.03
II.1.3higher gear at reduced engine speed, same pull and travel speed as II.1.1														
9	144.25	7567	7.15	1522	1%	0.424	16.56	115	181	222	69	60	60%	29.03
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
9	98.70	5039	7.35	1557	1%	0.452	15.54	113	179	220	69	60	60%	29.03
II.2 in selected gear nearest to 4.6 mph at rated engine speed.														
5	185.88	14822	4.70	2202	3%	0.488	14.40	121	199	231	65	59	71%	29.07
II.2.1 75% of pull at maximum power at rated engine speed														
5	144.97	11104	4.90	2271	2%	0.515	13.62	118	189	226	70	61	61%	29.03
II.2.2 50% of pull at maximum power at rated speed														
5	98.45	7402	4.99	2297	1%	0.581	12.09	118	183	224	70	61	61%	29.03
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7	145.18	11061	4.92	1571	2%	0.421	16.69	115	182	221	70	61	61%	29.03
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7	98.56	7402	4.99	1583	1%	0.447	15.72	119	179	219	70	61	61%	29.03

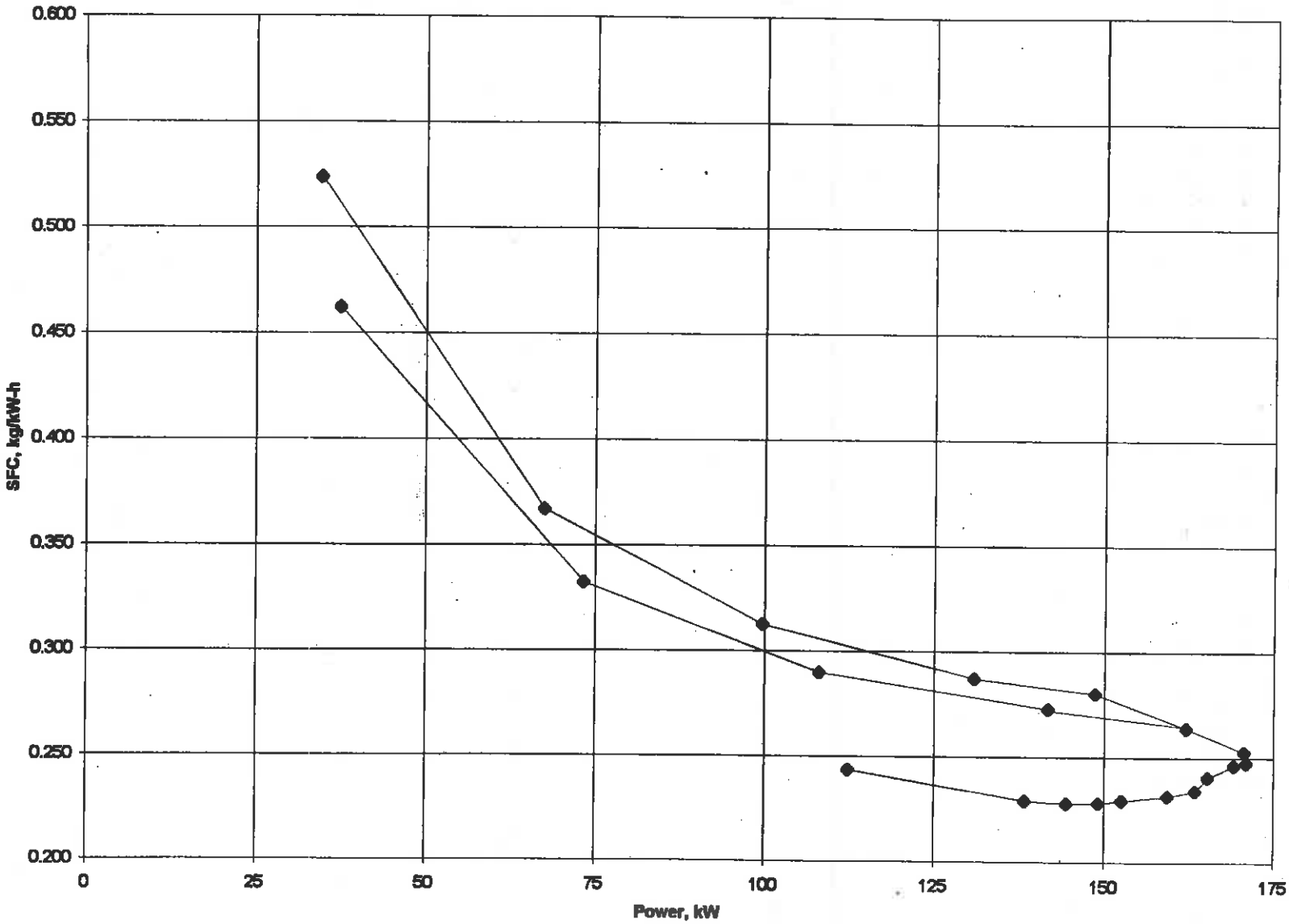
Power and Equivalent Crankshaft Torque



Specific Fuel Consumption and Fuel Rate



Power and Specific Fuel Consumption



Repairs None

Remarks According to manufacturer's instructions in the Operator Handbook, the tractor was operated with duals only in the unballasted mode.

The gears which were used for the reduced drawbar load tests were selected because the gears immediately above the full drawbar loads did not provide significant fuel consumption savings as required in sections 2.2.3.3.4 and 2.2.3.3.5