OECD APPROVAL NUMBER 1635 (Restricted Code)
Date of approval: 27 September, 1996

NEBRASKA TRACTOR TESTING LABORATORY
DEPARTMENT OF BIOLOGICAL SYSTEMS ENGINEERING
INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA - EAST CAMPUS
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 9370 (4 WD) Articulated

MANUFACTURED BY	**Case Corporation** **3401 First Avenue North** **Fargo, North Dakota, 58102 USA**
NEBRASKA TEST NO.	**1708**
TEST DATE	**18 April through 31 July, 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 27 September, 1996 for the **Case IH 9370, 4WD Articulated with OECD test number 1635**

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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 agreement with the test station.
Place of running in	J.I. Case , Fargo, North Dakota
Duration of running in	95 hours
Location of Test	Nebraska Tractor Test Laboratory, Lincoln, Nebraska, U.S.A.

TRACTOR.

Make/Model/Type	Case IH 9370/4WD/articulated 30 km/h
Number of driving wheels	4 or 8
Serial number	JEE 0035346
1st Serial number	JEE 0035346 and continuing with JEE 0036503

ENGINE.

Make	Cummins
Model	N14-360-A
Type	Diesel, direct injection, turbocharged and intercooled
Serial Number	30353624

Cylinders

Number/disposition	6, in-line, vertical
Bore x stroke	139.7 mm x 152.4 mm
Displacement	14016 cm^3
Compression Ratio	18.5 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet, replaceable

Turbo-charging

Make/Model/Type	Holset/HT60/exhaust gas driven
Pressure	165.5 ± 17.2 kPa

Fuel System

Feed system	Engine driven transfer pump
Make/Type/Model of filters	Case IH/spin-on/90-3941

Number of filters	One
Fuel tank capacity	1022 l
Make/Model/Type Injection Pump	Cummins Type G/Model PT,AFC variable speed governor,gear pump supplies pressure for PT system
Pump Serial number	30892568 - 37017
Production setting of pump	
Flow Rate (Rated Eng.Spd and full load)	58.1 - 60.4 kg/h
Fuel density	0.841 kg/liter
Make/Model/Type of injectors	Cummins PTD/Stop-top/PN 3047976
Injection timing	19^0 BTDC
Injection pressure	124.1 MPa
Rail Pressure	1075 - 1186 kPa
Timing	5^0 BTDC

Governor

Make/Model/Type	Centrifugal flyweight, integral with fuel pump
Governed engine speed range	From 850 to 2330 rev/min
Rated engine speed	2100 rev/min
High-idle speed range	2330 ± 70

Air Cleaner.

Pre-cleaner	
Make/Model/Type	Donaldson/ Aspirated to exhaust
Air intake location	Top left corner of Cab.
Main Cleaner	
Make/Model/Type	Donaldson/SR814-25/dry with secondary safety element
Secondary element	Donaldson/pleated paper
Location of main cleaner	Front left fender
Maintenance indicator	Restriction switch in air inlet tube,light on dash

Lubrication system.

Type of feed pump	Full pressure, positive displacement.
Type of filters	Full flow and bypass/spin-on
Number	2 in one element
Oil cooler	Oil to water heat exchanger

Cooling system.

Type of coolant	Liquid
Type of pump	Centrifugal,belt driven
Fan specification	Direct driven
Number of fan blades	8
Fan diameter	813 mm
Coolant system capacity	69.0 liter
Type of temperature control	Thermostat
Superpressure	48 kPa

Starting system.

Make/Model/Type	Delco Remy/42 MT400/electro-mechanical engagement
Power Rating	7.46 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
Generator	
Make/Model/Type	Delco Remy/Series 21SI/Type 200
Power rating	125 Ampere at 2100 engine rpm 1.50 kW
Batteries	
Number & connection	3-12 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/MAM 090848/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	16
Plate diameter	229 mm
Method of operation	Hydraulic, pedal actuated.

Gear Box.

Make/Model/Type	UVC/EW16/Full powershift; Mechanical
Arrangement	Countershaft system with 4 clutchpack assemblies mounted on 4 shafts
Number of gears	12 forward, 3 reverse controlled by two hand levers Lever 1: forward reverse shift Lever 2: Up-down pulse shifter
Oil cooler	Air to oil, mounted in front of radiator
Available options	None

Rear axle and final drives.

Make/model/Type	Raba 694/outboard planetary
Differential Lock	
Type	Multiple disc clutch with limited slip
Method of engagement	Electrically
Method of disengagement	Electrically
Cooler	Common with hydraulic system and steering; located in front of engine coolant radiator

Front Axle and final drives.

Make/Model/Type	Raba 694/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 of 2100 rev/min [km/h]
Forward		
1	193.795	3.70
2	160.152	4.47
3	130.124	5.50
4	107.168	6.68
5	88.563	8.08
6	71.958	9.96
7	60.956	11.75
8	50.376	14.22
9	40.929	17.51
10	33.709	21.26
11	27.856	25.73
12	22.634	31.65
Reverse		
1	148.197	4.83
2	81.951	8.74
3	46.615	15.37

Calculated with a tire dynamic radius index of 905 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, vertical center plane.
Diameter of shaft	45 mm
Number of splines	20; conforms to ISO 500/1992.
Height above ground	744 mm
Distance from median planeof tractor	0 mm
Distance behind rear axle	635 mm
PTO Speed at rated engine spd	1000.5
Engine speed at Std. PTO spd	2098 rev/min
Ratio of Engine rpm to PTO rpm	2.09797:1
Direction of rotation (viewed facing driving end)	Clockwise.

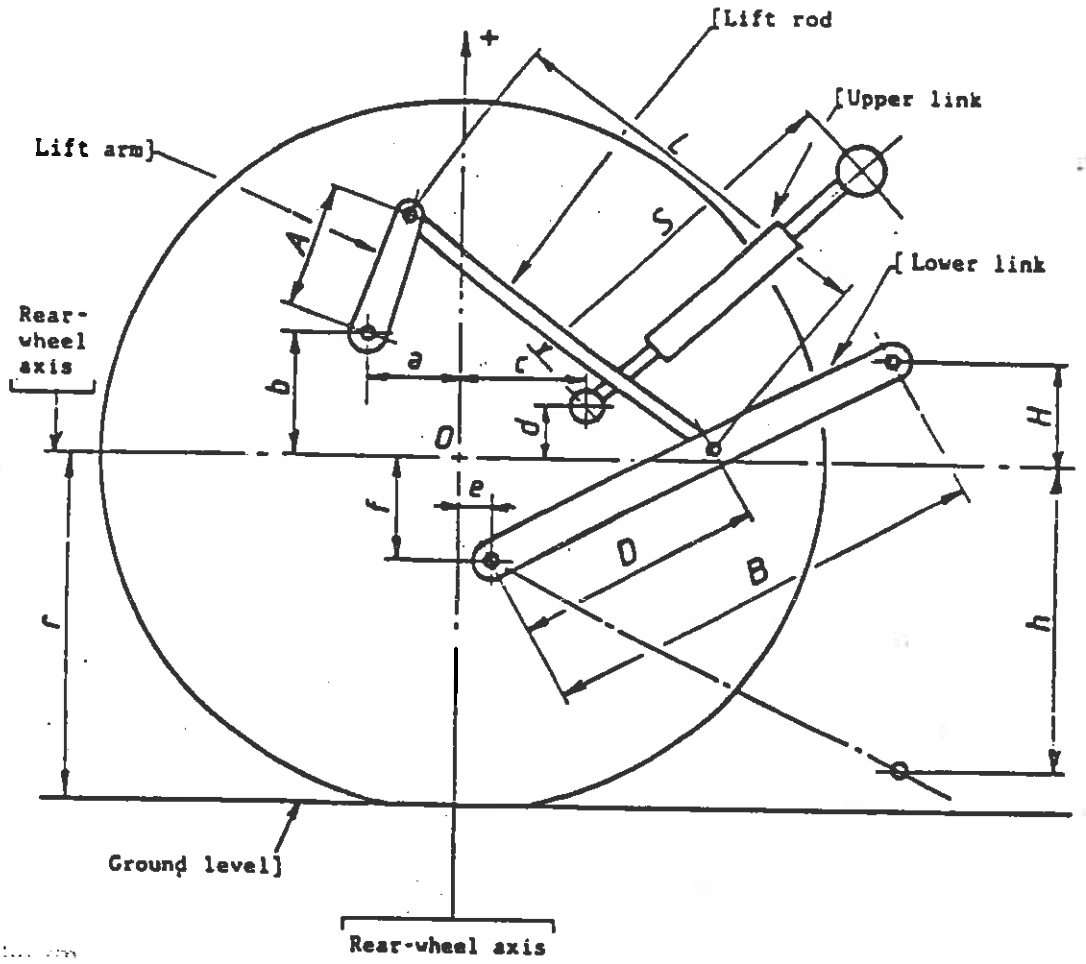
POWER LIFT.

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, left side, rear end of front frame
Number/Type/Location of tapping points	4 pairs of ISO standard couplings at left rear of tractor
Max. oil volume available for external cylinders	22.7 liter
Cooler	Common with Rear axle and Steering system

THREE POINT LINKAGE.

- Category IV-N 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



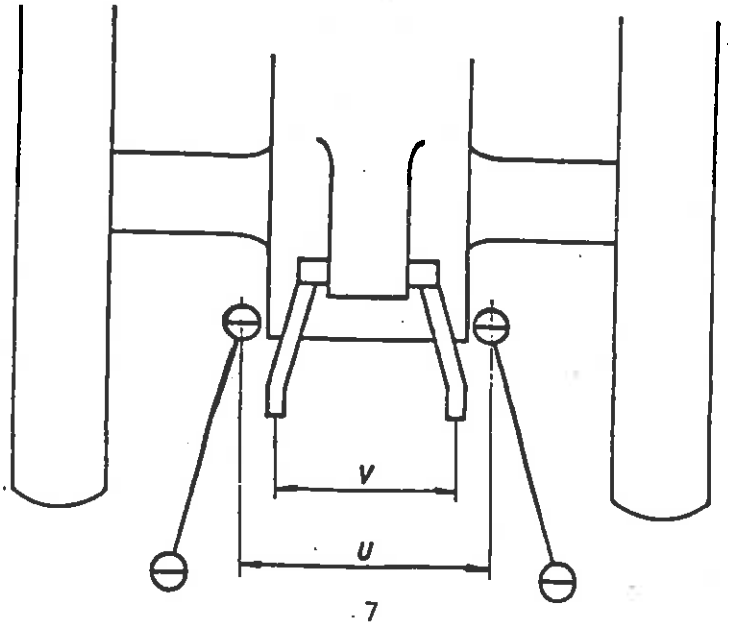


Table 1.1 - LINKAGE GEOMETRY DIMENSIONS (*)

			Dimension or range [mm]	Settings used on test [mm]
Lift category			IV	same
Rear Tire - Radius Index	(r)		905	same
Front Tire - Radius Index	(r')		905	same
Length of lift arms	(A)		533	same
Length of lower links	(B)		997	same
Distance of lift				
arm pivot from: horizontal	(a)		381	same
rear wheel axis: vertical	(b)		592	same
Horizontal distance between the				
2 lower link points	(u)		825	same
Horizontal distance between the				
2 lift arm end points	(v)		1057	same
Length of upper link	(S)		756	
		to	946	851
Distance of upper				
link pivot from horizontal	(c)		466	same
rear wheel axis: vertical	(d)		270	same
Distance of lower				
link pivot from: horizontal	(e)		311	same
rear wheel axis: vertical	(f)		355	same
Distance of lower link pivot				
points to lift rod pivot pts				
on lower links.	(D)		647	same
Length of lift rods	(L)		820	
		to	1016	975
Height of lower hitch points				
relative to rear wheel axis				
In low position	(h)		445	
		to	752	692
In high position	(H)		51	
		to	359	106
Height above ground of lower				
hitch points when locked				
in transport position.			956	
		to	1264	1011

(*) Assuming (r) with a dynamic tire index of 905 mm ISO 4251/1-1972

SWINGING DRAWBAR.

Type	Swinging drawbar
Height above ground:	Maximum 544 mm ; Minimum 384 mm
Adjustments	By inverting clevis bar
Distance of hitch point from rear wheel axis, horizontal	1143 mm
Distance of hitch point from PTO shaft end	
Vertically	203 & 356 mm
Horizontally	509 mm
Lateral adjustment (center of clevis)	
Right side	215 mm
Left side	215 mm
Distance of pivot point from rear wheel axle;horizontally	1140 mm
Diameter of drawbar pin hole	46 mm
Maximum vertical permissible load	62.28 kN

STEERING

Make/Model/Type	Eaton hydrostatic steering control unit
Method of operation	Steering wheel
Pump	Cessna axial piston,pressure and flow compensated
Rams	Two; double acting
Working pressure	15.9 MPa
Cooler	Uses same cooler as the Hydraulic system and Rear axle

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	Two of four/Driving and steering
Rear	Two or four/Driving and steering
Wheel base	3658 mm

Track width adjustment (fixed)

	MINIMUM [mm]	MAXIMUM [mm]	Adjustment method
Front	1943	3391	Non-adjustable
Rear	1943	3391	Non-adjustable

OPERATOR ENCLOSURE

Make/Model/Type	Case IH,4CSF-2
Manufacturer's name/address	Case Corporation, 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 076/21

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		1854	92 x 152	409
		1219	92 x 152	742
Cab-lights	(rear)	3530	109 x 172	711
	(front)	3176	109 x 172	750
Rear lights		2159	109 x 172	1072
Reflectors		None		

TEST CONDITIONS.

Overall dimensions.

Length [mm]	Width as tested with duals [mm]	Height at top of Protective Structure [mm]	Height at top of exhaust stack [mm]
7535	4023	3627	3635

Ground clearance (unballasted)	365 mm
Clearance-limiting part	Bottom of swinging drawbar

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	With driver [kg]
Unballasted	**Front**	8290	8350
	Rear	7035	7050
	Total	15325	15400

Tire and track width specifications. (SEE NOTE)

	Front	Rear
Make	Goodyear	Goodyear
Dimensions	20.8R42	20.8R42
Ply rating	2 star (10 ply)	2 star (10 ply)
Type	Radial	Radial
Max.load (tire manufacturer)	38.48 kN	38.48 kN
Max.load(tractor manufacturer)	same	same
Inflation pressure(tire mfr)	165 kPa	165 kPa
Dynamic Radius Index	905 mm	905 mm
Chosen track width - inner	1943 mm	1943 mm
- outer	3391 mm	3391 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 hours	Filter change hours
Engine	38.6	250	250
Gear Box	39.7	1500	1500
Front axle	34.0	1500	1500
Hydraulic system (includes steering, and hydraulic lift and rear axle)	113.5	1500	1500

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	25	

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

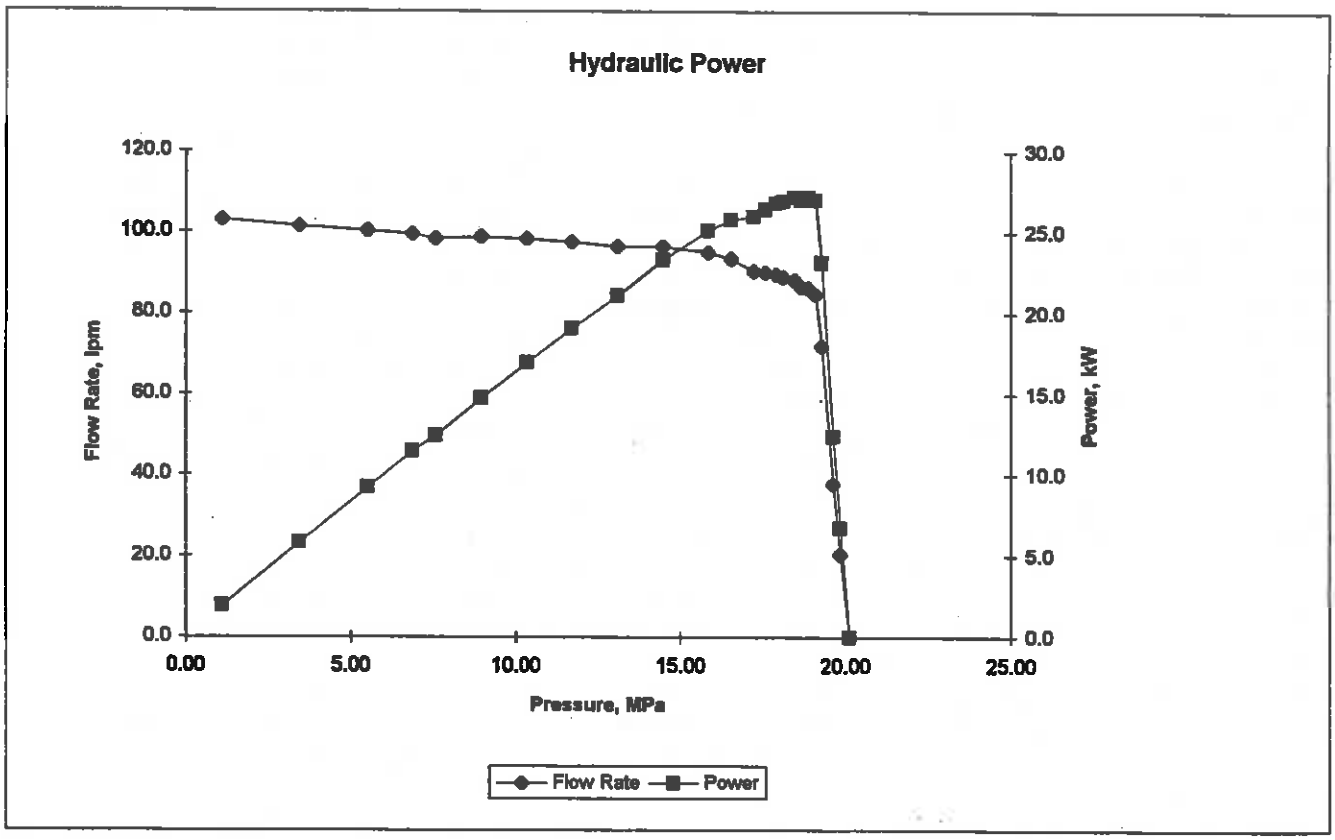
1. MAIN POWER TAKE OFF

Date: 18-Apr-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/kWeh / *lb/hp-h*	kWeh/l / *hp-h/gal*
1.1 Maximum Power - 2 Hours						
246.56	1900	905	67.52	56.80	0.230	3.65
330.65			*17.84*	*125.23*	*0.379*	*18.54*
1.2 Power at Rated Engine Speed - 1 hour						
239.88	2100	1001	70.74	59.52	0.248	3.39
321.69			*18.69*	*131.21*	*0.408*	*17.21*
1.3 Power at Standard Power Take Off Speed - 1 hour						
239.88	2100	1001	70.74	59.52	0.248	3.39
321.69			*18.69*	*131.21*	*0.408*	*17.21*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
239.88	2100	1001	70.74	59.52	0.248	3.39
321.69			*18.69*	*131.21*	*0.408*	*17.21*
1.4.2 85% of torque obtained in 1.4.1						
213.73	2201	1049	67.61	56.88	0.266	3.16
286.61			*17.86*	*125.40*	*0.438*	*16.05*
1.4.3 75% of torque defined in 1.4.2						
163.77	2251	1073	57.74	48.58	0.297	2.84
219.62			*15.25*	*107.10*	*0.488*	*14.40*
1.4.4 50% of torque defined in 1.4.2						
110.43	2275	1084	46.10	38.78	0.351	2.40
148.09			*12.18*	*85.50*	*0.577*	*12.16*
1.4.5 25% of torque defined in 1.4.2						
56.17	2306	1099	33.48	28.17	0.501	1.68
75.33			*8.84*	*62.10*	*0.824*	*8.52*
1.4.6 unloaded						
1.19	2341	1116	22.16	18.64	15.687	0.05
1.59			*5.85*	*41.10*	*25.790*	*0.27*
1.5 Part Loads at Standard Power Take Off Speed						
1.5.1 Torque at maximum power						
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1.5.6 unloaded						
1.19	2341	1116	22.16	18.64	15.687	0.05
1.59			*5.85*	*41.10*	*25.790*	*0.27*

No load maximum engine speed:	2341	rev/min		
Equivalent torque at rated speed:	1091	N.m	*805*	lb-ft
Equivalent torque at maximum power:	1239	N.m	*914*	lb-ft
(engine speed:	1900	rev/min)		
Maximum equivalent crankshaft torque:	1589	N.m	*1172*	lb-ft
(engine speed:	1250	rev/min)		
Mean Dry bulb:	25	deg C	*77*	deg F
Wet bulb:	15	deg C	*58*	deg F
Relative Humidity	33	%		
Pressure:	96.7	kPa	*28.56*	in Hg
Maximum Coolant:	89	deg C	*193*	deg F
Engine Oil:	117	deg C	*242*	deg F
Fuel:	65	deg C	*150*	deg F
Air Intake:	36	deg C	*96*	deg F
Transmission/hydraulic oil:	55	deg C	*131*	deg F
Intake manifold pressure at rated speed:	176	kPa	*25.6*	psig
Intake manifold pressure at maximum power:	167	kPa	*24.2*	psig

Date of Test		24-Apr-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:						
103.0	**l/min**					
27.2	*gpm*					
III. Flow rate, pressure, power:						
90% of relief valve setting						
89.0	**l/min**	**18.13**	**MPa**	**26.9**	**kW**	
23.5	*gpm*	*2630*	*psig*	*36.1*	*hp*	
Maximum hydraulic power:						
86.3	l/min	18.89	MPa	27.2	kW	
22.8	*gpm*	*2740*	*psig*	*36.4*	*hp*	
IV. Hydraulic fluid temperature at flow meter						
66	°C					
150	*°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. Cat IV with quick attach coupler

Date of test: 31 July 1996

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	213/8.4	206/8.1
Vertical movement: without load:	[mm/in]	798/31.4	866/34.1
Vertical movement: with load:	[mm/in]	764/30.1	826/32.5
Maximum corrected force through full range:	[kN/lb]	98.2/22068	80.7/18144
Corresponding pressure:	[kPa/psi]	18100/2625	
Moment about rear axle:	[kN.m/lb.ft]	146.4/107949	169.5/125042
Maximum mast tilt angle:	[deg]	--	5.0

Lifting height relative to horizontal position of lower links.

	[mm]	-338	-330	-300	-201	-102	0
	[in]	-13.3	-13.0	-11.8	-7.9	-4.0	0
Corrected lift forces							
Hitch point.	[kN]	--	138.6	129.7	123.9	119.8	115.9
	[lb]	--	31158	29160	27864	26928	260643
at frame	[kN]	132.1	--	125.7	119.1	113.0	107.5
	[lb]	29700	--	28260	26766	25398	24174

Lifting height relative to horizontal position of lower links.

	[mm]	99	201	300	399	434	488
	[in]	3.9	7.9	11.8	15.7	17.1	19.2
Corrected lift forces							
Hitch point	[kN]	112.5	109.3	104.7	100.3	98.2	--
	[lb]	25290	24570	23544	22554	22068	--
at frame	[kN]	102.6	97.3	92.5	--	85.5	80.7
	[lb]	23076	21870	20790	--	19244	18144

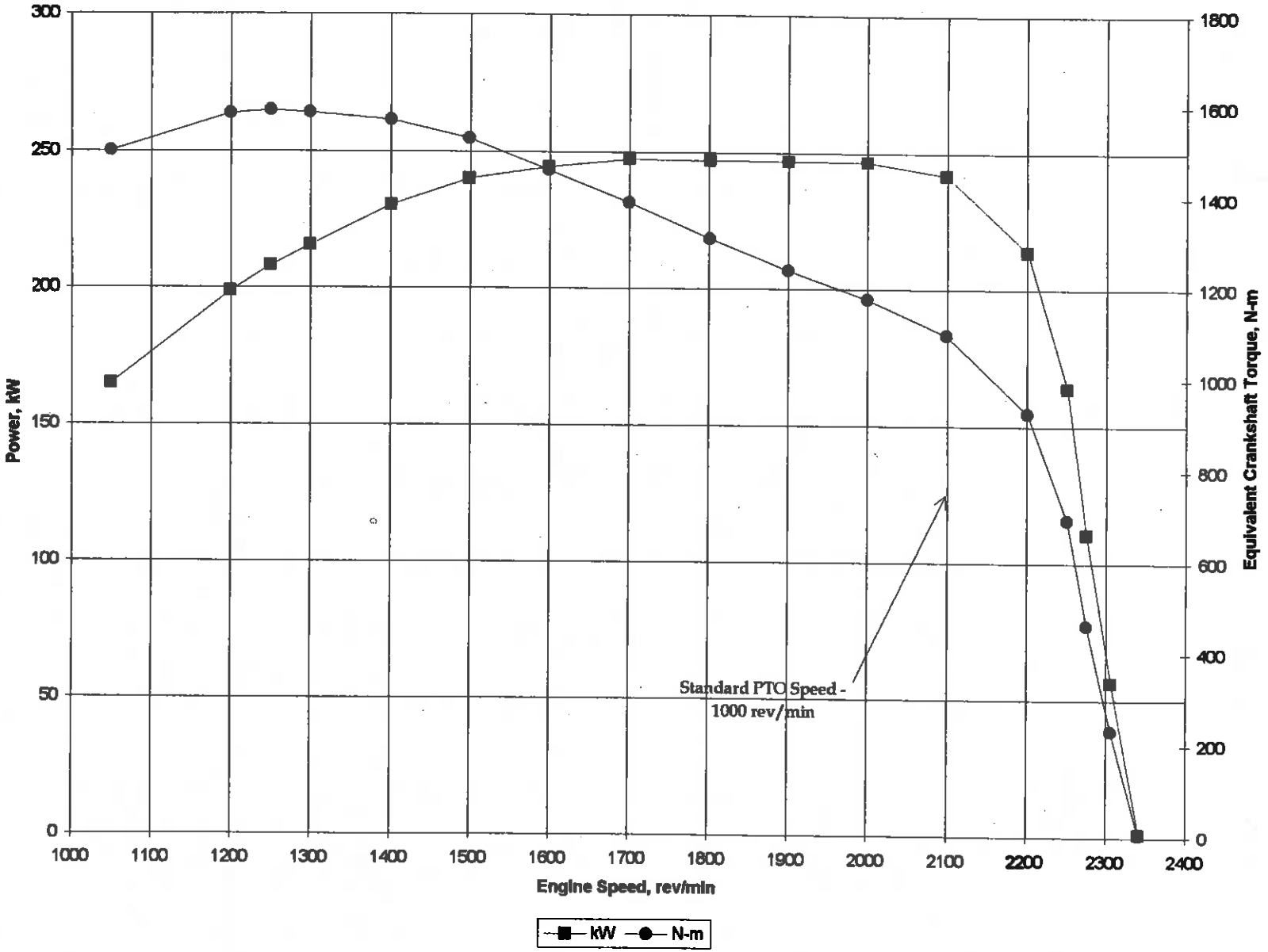
OECD Drawbar Data (SI)

Date of tests:		23-Apr-96		Fuel density:		0.841 kg/l								
Type of track:		Concrete		Test number:		1708								
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel humidity	Barom. Press
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, 4wd at 1900 rev/min)						Tire pressure:		83 kPa, rear		83 kPa, front		Drawbar height:	419 mm	
1	162.31	162.85	3.59	2224	10%	0.339	2.49	61	83	112	11	7	58%	98.68
2	192.20	163.76	4.23	2159	10%	0.293	2.87	61	83	113	9	6	62%	98.71
3	209.99	153.43	4.93	1981	7%	0.274	3.07	62	84	114	12	7	49%	98.68
4	219.37	134.28	5.88	1902	4%	0.260	3.24	62	84	114	12	7	50%	98.68
5	221.80	110.80	7.21	1904	3%	0.256	3.28	62	84	115	13	8	51%	98.68
6	221.63	89.46	8.92	1900	2%	0.256	3.28	61	84	113	14	8	44%	98.68
7	220.83	75.24	10.57	1900	2%	0.257	3.27	61	84	114	14	8	45%	98.68
8	220.11	61.88	12.81	1893	2%	0.257	3.27	61	84	114	15	9	45%	98.68
9	216.63	49.13	15.87	1901	1%	0.261	3.23	61	83	112	16	9	42%	98.65
Note: Slip within operating conditions of test station														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed														
5	213.40	96.11	7.99	2100	3%	0.280	3.01	62	84	115	13	8	52%	98.68
II.1.1 75% of pull at maximum power at rated engine speed														
5	172.92	72.59	8.57	2232	2%	0.311	2.70	60	84	114	18	10	34%	98.61
II.1.2 50% of pull at maximum power at rated engine speed														
5	117.94	48.48	8.76	2269	1%	0.371	2.27	59	83	112	18	10	34%	98.61
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
7	173.37	72.55	8.60	1543	2%	0.244	3.45	60	83	113	18	10	34%	98.61
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
7	117.61	48.44	8.74	1559	1%	0.252	3.34	60	83	111	18	10	34%	98.61
II.2 in selected gear nearest to 7.5 km/h at rated engine speed														
5	213.40	96.11	7.99	2100	3%	0.280	3.01	62	84	115	13	8	52%	98.68
II.2.1 75% of pull at maximum power at rated engine speed														
5	172.92	72.59	8.57	2232	2%	0.311	2.70	60	84	114	18	10	34%	98.61
II.2.2 50% of pull at maximum power at rated engine speed														
5	117.94	48.48	8.76	2269	1%	0.371	2.27	59	83	112	18	10	34%	98.61
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7	173.37	72.55	8.60	1543	2%	0.244	3.45	60	83	113	18	10	34%	98.61
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7	117.61	48.44	8.74	1559	1%	0.252	3.34	60	83	111	18	10	34%	98.61

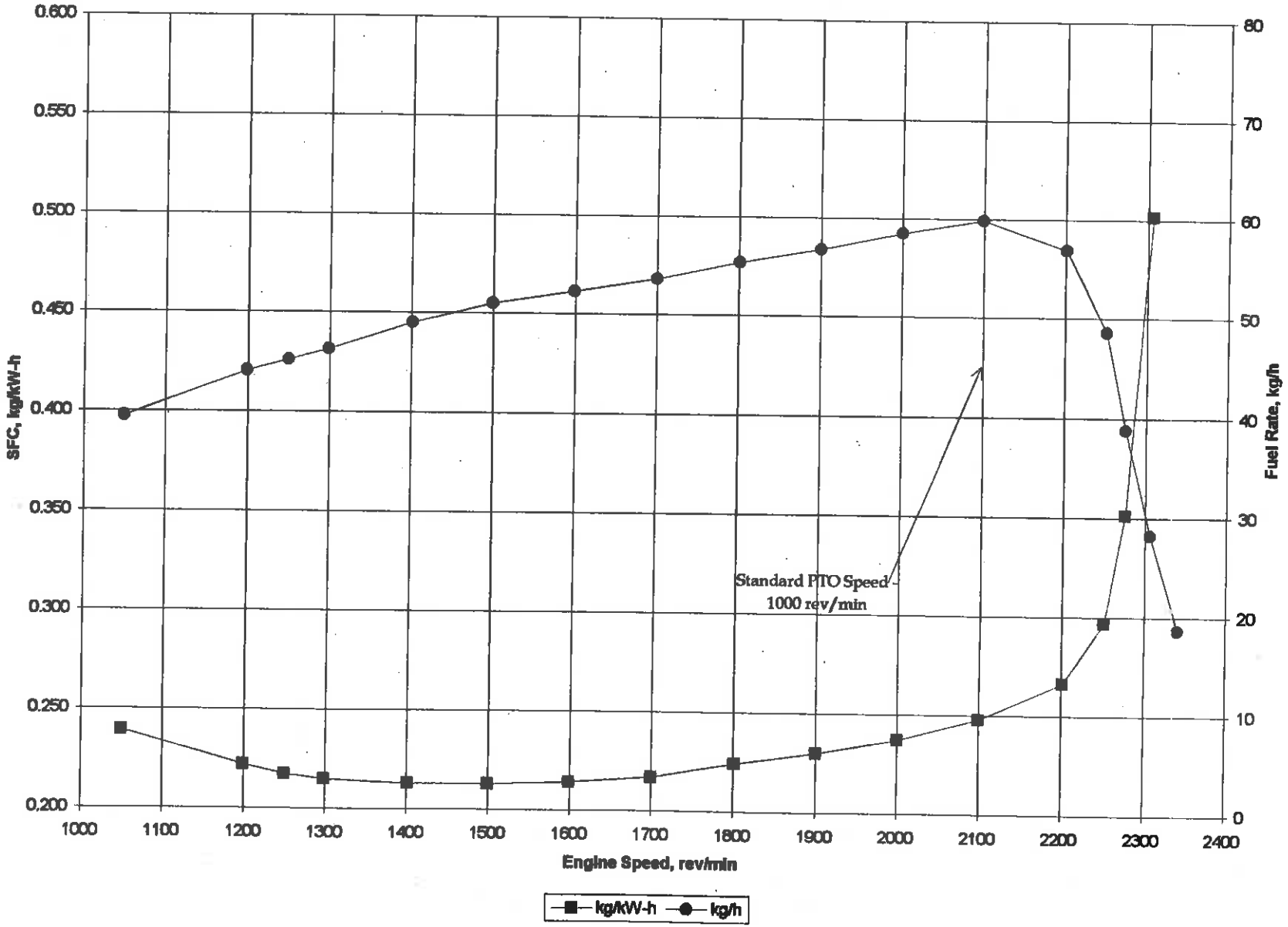
OECD Drawbar Data (US)

Date of tests:		23-Apr-96		Fuel density:		7.021 lb/gal								
Type of track:		Concrete		Test number:		1708								
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel humidity	Barom. Press
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (unballasted, 4wd at 1900 rev/min)						Tire pressure:		12 psig, rear		12 psig, front		Drawbar height:	16.5 in	
1	217.66	36611	2.23	2224	10%	0.557	12.62	142	181	234	51	44	58%	29.14
2	257.74	36814	2.63	2159	10%	0.482	14.57	143	181	235	49	43	62%	29.15
3	281.60	34493	3.06	1981	7%	0.451	15.58	144	183	237	53	44	49%	29.14
4	294.18	30187	3.65	1902	4%	0.427	16.44	144	183	238	54	45	50%	29.14
5	297.43	24909	4.48	1904	3%	0.421	16.67	143	184	239	55	46	51%	29.14
6	297.21	20113	5.54	1900	2%	0.421	16.66	142	183	236	57	47	44%	29.14
7	296.13	16914	6.57	1900	2%	0.423	16.61	143	184	238	58	47	45%	29.14
8	295.17	13911	7.96	1893	2%	0.423	16.61	142	183	237	59	48	45%	29.14
9	290.51	11045	9.86	1901	1%	0.428	16.39	142	182	233	60	48	42%	29.13
Note: Slip within operating conditions of test station														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed														
5	286.17	21607	4.97	2100	3%	0.460	15.26	143	184	240	56	47	52%	29.14
II.1.1 75% of pull at maximum power at rated engine speed														
5	231.88	16320	5.33	2232	2%	0.512	13.71	141	183	238	65	50	34%	29.12
II.1.2 50% of pull at maximum power at rated engine speed														
5	158.16	10898	5.44	2269	1%	0.610	11.50	139	181	234	65	50	34%	29.12
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
7	232.49	16311	5.35	1543	2%	0.401	17.53	139	181	235	65	50	34%	29.12
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
7	157.71	10889	5.43	1559	1%	0.415	16.94	139	181	232	65	50	34%	29.12
II.2 in selected gear nearest to 4.6 mph at rated engine speed														
5	286.17	21607	4.97	2100	3%	0.460	15.26	143	184	240	56	47	52%	29.14
II.2.1 75% of pull at maximum power at rated engine speed														
5	231.88	16320	5.33	2232	2%	0.512	13.71	141	183	238	65	50	34%	29.12
II.2.2 50% of pull at maximum power at rated engine speed														
5	158.16	10898	5.44	2269	1%	0.610	11.50	139	181	234	65	50	34%	29.12
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7	232.49	16311	5.35	1543	2%	0.401	17.53	139	181	235	65	50	34%	29.12
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7	157.71	10889	5.43	1559	1%	0.415	16.94	139	181	232	65	50	34%	29.12

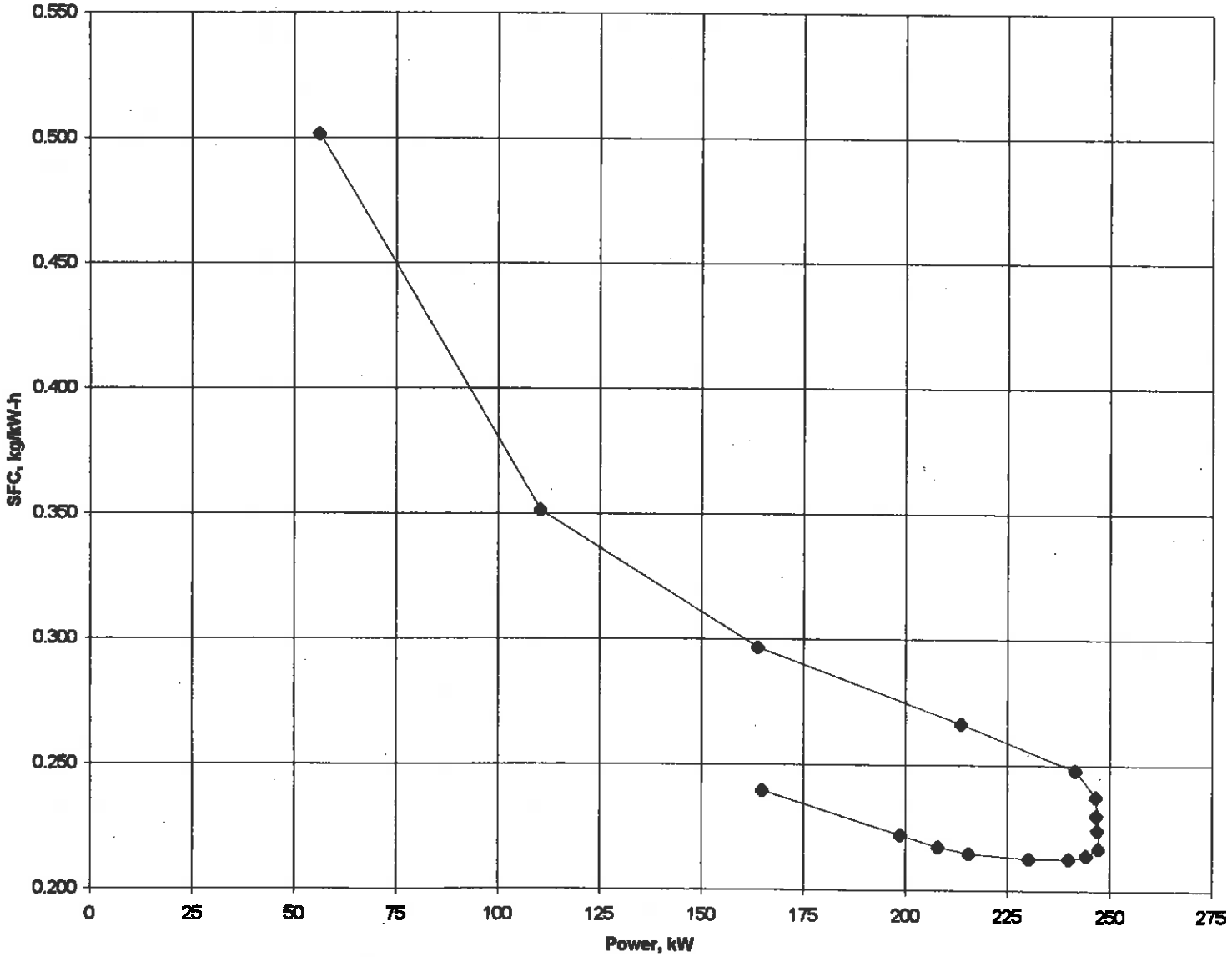
Power and Equivalent Crankshaft Torque



Specific Fuel Consumption and Fuel Rate



Power and Specific Fuel Consumption



MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test	19 April, 1996
Location of test	Nebraska power Lab, Lincoln, NE, USA
Sound Level meter	Bruel and Kjaer 2209
Type of track	Concrete oval
Gear Number	12th
Speed prior to acceleration	27.0 km/h
Noise Level	94.0 dB(A)

Repairs: **The hydraulic pressure relief valve was replaced before the hydraulic lift test was performed.**

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