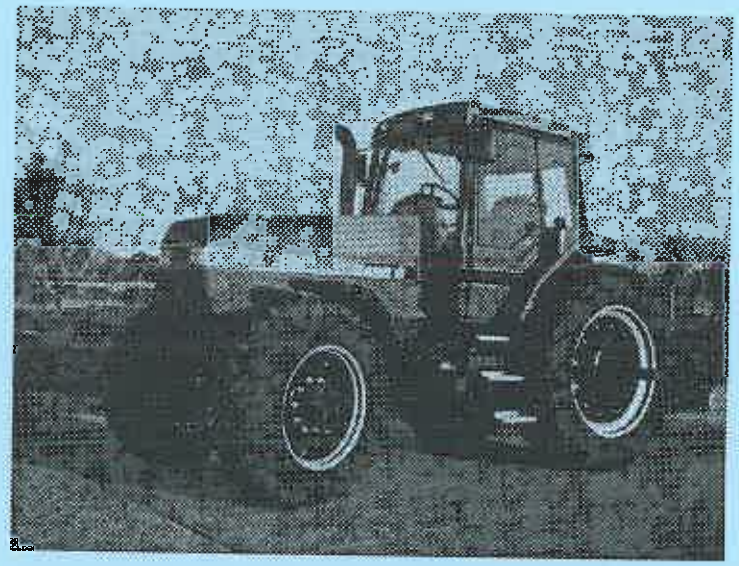
OECD APPROVAL # 1627 (Restricted code)
Date of approval: 26 August, 1996

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) OR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS



CASE IH MAGNUM 7230 - MFWD (4WD)
30 km/h version - 18-Speed Transmission

MANUFACTURED BY	**Case Corporation** **700 State Street** **Racine, Wisconsin 53404 USA**
NEBRASKA TEST NO.	1710
TEST DATE	**1 May through 10 May, 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)53 Final-Annex II, Restricted Code.

This report has been approved by the OECD Coordinating Centre in Paris on 26 August 1996 for the Case IH Magnum 7230 MFWD (4WD), 30 km/h version, 18-speed transmission with OECD number 1627

No reproduction of this report or any part of it can be made without prior approval by the Tractor Testing Laboratory, University of Nebraska - Lincoln, Nebraska USA.

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GENERAL SPECIFICATIONS.

Manufacturers name/address	Case Corporation, 700 State Street Racine, Wisconsin 53404, USA
Location of tractor assembly	Case Corporation 24th and Mead Streets Racine, Wisconsin 53404, USA
Submitted for test by	The manufacturer
Selected for test by	The manufacturer in agreement with the test station.
Place of running in	Case Corporation Racine Tractor Engineering, Racine, Wisconsin
Duration of running in	104 hours
Location of Test	Nebraska Tractor Test Lab. Lincoln, Nebraska, U.S.A.

SPECIFICATIONS OF TRACTOR

Make/Model/Type	Case International Magnum/7230-MFWD/4WD Unit construction; 30 km/h version; 18-speed
Number of driving wheels	2 or 4
Serial number	*JJA0065025*
1st Serial number	*JJA0065000*

ENGINE.

Make	Consolidated Diesel Co
Model	6T-830
Type	Diesel, direct injection, turbocharged
Serial Number	*45259892*
Cylinders	
Number/disposition	6, in-line, vertical
Bore x stroke	114.0 mm x 135.0 mm
Capacity	8268 cm^3
Compression Ratio	16.5:1
Arrangement of valves	Overhead
Cylinder liners	Wet, replaceable
Turbo-charging	
Make/Model/Type	Holset/HX40W/exhaust gas driven with wastegate control
Pressure	120-160 kPa-rated speed and load
Fuel System	
Feed system	Engine driven transfer pump

Make/Type/Model of filters	Fleetguard/FF5038, FF5052/ pin-on cartridges
Number of filters	Two
Fuel tank capacity	359 l
Make/Model/Type Injection Pump	Robert Bosch/MW/in line
Pump Serial number	56828 00748 53809
Production setting of pump	
Flow Rate (Rated Eng.Spd and full load)	35.5 ± 1.8 kg/h
Fuel density	0.841 kg/l
Make/Model/Type of injectors	Robert Bosch/J908507/17 mm
Injection timing	$16^0 \pm 2^0$ BTDC; Lock timed at TDC $\pm 2^0$
Injection pressure	26.0-27.0 MPa

Governor

Make/Model/Type	Robert Bosch/J928228/Variable speed/Mechanical
Governed engine speed range	From 925 to 2457 rev/min
Rated engine speed	2200 rev/min
High-idle speed range	2450 ± 80 rpm

Air Cleaner.

Pre-cleaner	(Integral with air cleaner)
Make/Model/Type	Donaldson/PSHOO-1790/Exhaust aspirated
Air intake location	Underhood; ahead of radiator
Main Cleaner	
Make/Model/Type	Donaldson/EGB11-0077/or Nelson/71198A; both dry, dual element pleated paper
Location of main cleaner	Underhood
Maintenance indicator	Service indicator on digital instrument cluster

Lubrication system.

Type of feed pump	Full pressure, positive displacement.
Type of filters	Full flow/spin-on/dual filter
Number	One
Oil cooler	Water to oil intercooler

Cooling system.

Type of coolant	Liquid
Type of pump	Centrifugal,belt driven
Fan specification	Viscous drive fan
Number of fan blades	6
Fan diameter	600 mm
Coolant system capacity	24.6 liter
Type of temperature control	Two thermostats
Superpressure	103 kPa

Starting system.	
Make/Model/Type	Nippondenso/F114/Solenoid engaged
Power Rating	4.0 kW
Cold starting aid	Ether spray in intake manifold
Safety device	Electrical lockout on transmission
Electrical system.	
Voltage	12 Volt
Alternator	
Make/Model/Type	Bosch/N1/Alternator; belt drive
Power rating	110 Amp. at 1000-2200 rpm
Batteries	
Number & connection	2-12 V batteries in parallel
Rating	180 amp-hours per battery at 20 hour rating 950 Cold crank amps per battery 185 min. reserve cap/battery (SAE J537)
Exhaust system.	
Make/Model/Type	Nelson(muffler)/23839A/Vertical
Location	External muffler integral with vertical exhaust stack; right front corner of cab

TRANSMISSION

Clutch.(Travel)	
Make/Model/Type	Case International/multi-plate/oil cooled
Number of plates	9 friction plates
Plate diameter	228.5 mm
Method of operation	Hydraulic, pedal actuated.
Gear Box.	
Make/Type	Case International/18 speed/full powershift; mechanical
Arrangement	Countershaft type with one 2-speed and two 3-speed constant mesh powershift modules
Number of gears	18 forward, 4 reverse controlled by single lever
Available options	Creeper gear with 6 forward and 2 reverse speeds
Oil cooler	Air to oil in front of radiator
Rear axle and final drives.	
Make/model/Type	Case International; Crown wheel & pinion; differential and planetary reduction
Differential Lock	
Type	Hydraulic
Method of engagement	Electrical; switch on console
Method of disengagement	Electrical; switch on console or activation of brakes
Front Axle and final drives.	

Front Axle and final drives.

Make/Model/Type	Dana/070BP149-1/Crown wheel & pinion, differential & planetary reduction

Differential lock

Type	Limited slip
Method of engagement	Self locking
Method of disengagement	Self unlocking

TOTAL TRANSMISSION RATIOS AND TRAVEL SPEEDS
(18 speed transmission)

Gear Number	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2200 rev/min [km/h]
Forward		
1st	243.260	2.97
2nd	212.073	3.40
3rd	183.909	3.92
4th	160.331	4.50
5th	139.776	5.16
6th	121.856	5.92
7th	104.463	6.91
8th	91.070	7.92
9th	78.976	9.14
10th	68.851	10.48
11th	60.024	12.02
12th	52.328	13.79
13th	45.741	15.77
14th	39.877	18.09
15th	34.581	20.87
16th	30.148	23.93
17th	26.283	27.45
18th	22.913	31.49
Reverse		
R1	168.997	4.27
R2	147.331	4.90
R3	72.572	9.94
R4	63.268	11.40

Calculated with a tire dynamic radius index of 870 mm (ISO 4251/1-1992).

Number of revolutions of front wheels for one revolution of rear wheels	1.3304

TOTAL TRANSMISSION RATIOS AND TRAVEL SPEEDS

(18 speed transmission plus optional 6 forward/2 reverse Creeper gears)
Not fitted on tested tractor.

Gear Number	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2200 rev/min [km/h]
Forward		
1st Creeper	835.817	0.86
2nd Creeper	631.893	1.14
3rd Creeper	480.256	1.50
4th Creeper	358.923	2.01
5th Creeper	271.354	2.66
6th Standard	243.260	2.97
7th Standard	212.073	3.40
8th Creeper	206.234	3.50
9th Standard	183.909	3.92
10th "	160.331	4.50
11th "	139.776	5.16
12th "	121.856	5.92
13th "	104.463	6.91
14th "	91.070	7.92
15th "	76.976	9.14
16th "	68.851	10.48
17th "	60.024	12.02
18th "	52.328	13.79
19th "	45.741	15.77
20th "	39.877	18.09
21th "	34.581	20.87
22th "	30.148	23.93
23th "	26.283	27.45
24th "	22.913	31.49
Reverse		
R1 Creeper	580.657	1.24
R2 Creeper	249.351	2.89
R3 Standard	168.997	4.27
R4 "	147.331	4.90
R5 "	72.572	9.94
R6 "	63.268	11.40

Calculated with a tire dynamic radius index of 870 mm (ISO 4251/1-1992). Number of revolutions of front wheels for one revolution of rear wheels 1.3304

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 (Standard) or two shaft system (Optional)
Method of changing shafts on optional system	Separate shafts at fixed ratios

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

Location	Rear of tractor, vertical center plane.
Diameter of shaft (Standard)	45 mm (ISO 500/1991)
Number of splines	20; (ISO 500/1991)
Height above ground	780 mm
Distance from median planeof tractor	0 mm
Distance behind rear axle	796 mm
PTO Speed at rated engine spd	1003 rev/min
Engine speed at Std. PTO spd	2193 rev/min
Ratio of Engine rpm to PTO rpm	2.193:1
Direction of rotation (viewed facing driving end)	Clockwise.

Optional Two speed Power-Take-Off System

A. Proportional to engine speed - 540 rev/min

Location	Rear of tractor, vertical center plane.
Diameter of shaft	35 mm (ISO 500/1991)
Number of splines	6;(ISO 500/1991)
Height above ground	657 mm
Distance from median plane of tractor	0 mm
Distance behind rear axle	796 mm
PTO Speed at rated engine spd	533 rev/min
Engine speed at Std. PTO spd	2229 rev/min
Ratio of Engine rpm to PTO rpm	4.128:1
Maximum allowed power level	63 kW
Direction of rotation (viewed facing driving end)	Clockwise.

B. Proportional to engine speed - 1000 rev/min

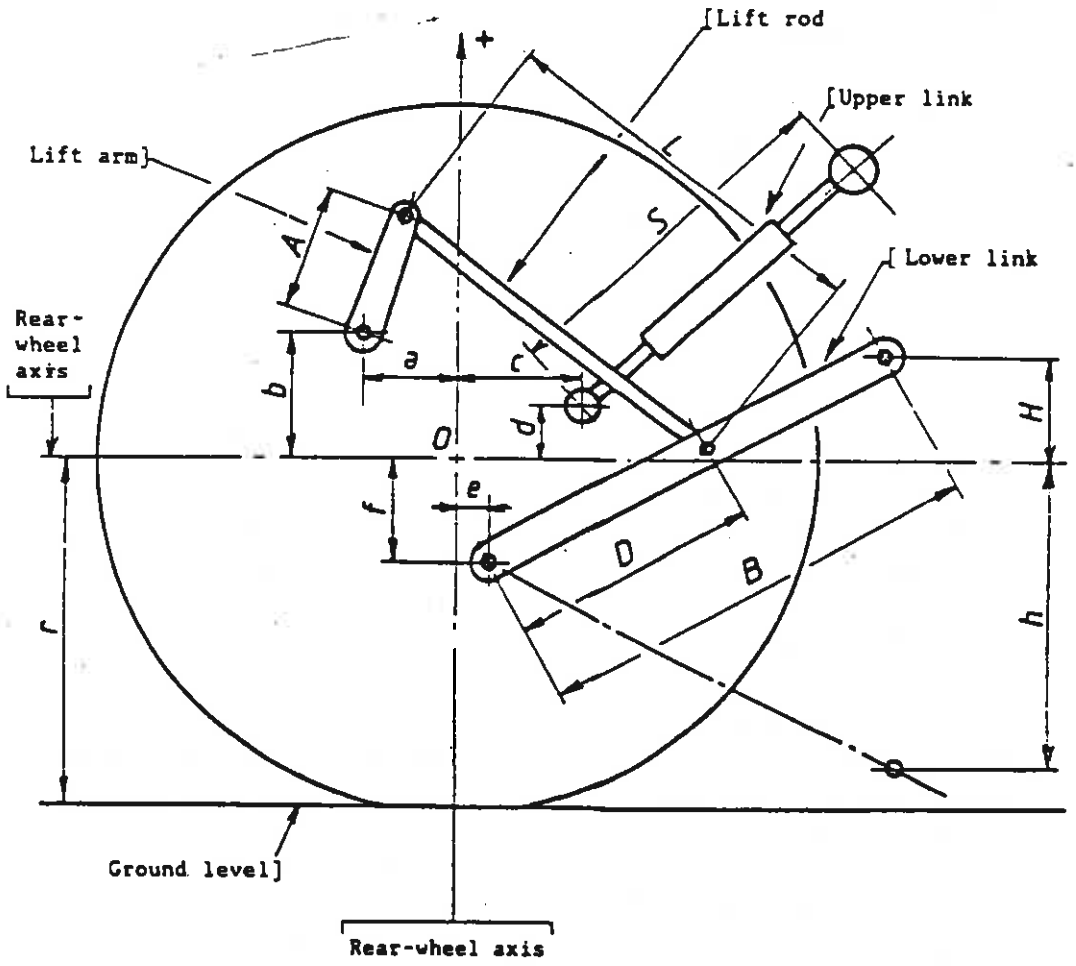
Location	Rear of tractor, vertical center plane.
Diameter of shaft (Standard)	35 mm (ISO 500/1991)
Number of splines	21; (ISO 500/1991)
Height above ground	780 mm
Distance from median plane of tractor	0 mm
Distance behind rear axle	745 mm
PTO Speed at rated engine spd	1003 rev/min
Engine speed at Std. PTO spd	2193 rev/min
Ratio of Engine rpm to PTO rpm	2.193:1
Direction of rotation (viewed facing driving end)	Clockwise.

POWER LIFT.

Make/Type	Case International/3-point
Type of hydraulic system	Closed center, load sensing
Number/Type of cylinders	One internal, one external; single acting
Type of linkage lock for transport	Hydraulic, with locking notch on hand lever on console
Relief valve setting (High pressure standby)	18.27 ± 0.35 MPa
Opening pressure of cylinder safety valve	19.65-20.34 MPa
Lift pump type	Axial piston, pressure and flow compensated
Power transmission to pump	Direct drive from transmission
Type/Number of filters	Two Spin-on cartridges; Cleanable suction screen inside reservoir
Location of oil reservoir	Transmission housing
Number/Type/Location of tapping points	3 pairs of ISO standard couplings at rear of tractor
Max. oil volume available for external cylinders	8.5 liter

THREE POINT LINKAGE.

- Category 3 in conformity with ISO 730/1-1990
- Category adaptor None



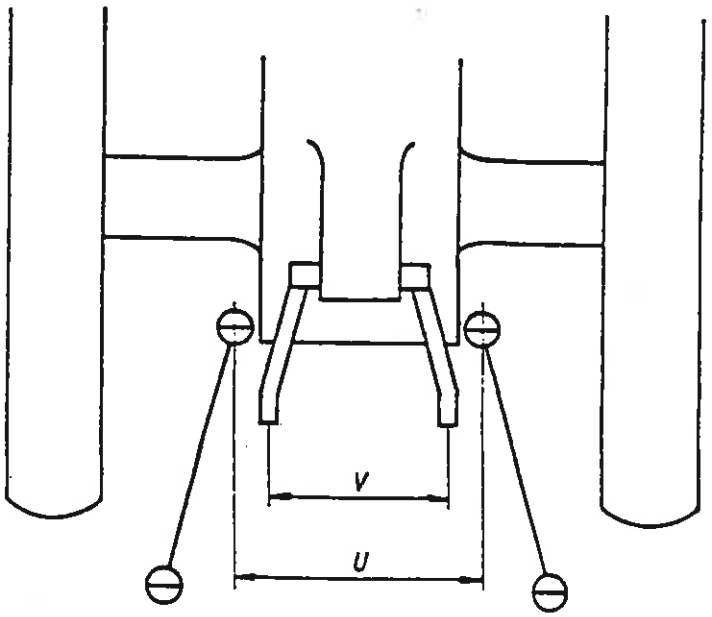


TABLE I.1 - LINKAGE GEOMETRY DIMENSIONS

			Dimension or range [mm]	Settings used on test [mm]
Lift category			III	same
Rear Tire - Radius Index	(r)		870	855
Front Tire - Radius Index	(r')		665	645
Length of lift arms	(A)		381	same
Length of lower links	(B)		861	same
Distance of lift arm pivot from: horizontal	(a)		364	same
rear wheel axis: vertical	(b)		422	same
Horizontal distance between the 2 lower link points	(u)		604	same
Horizontal distance between the 2 lift arm end points	(v)		737	same
Length of upper link	(S)	from	600	657
		to	831	
Distance of upper link pivot from horizontal	(c)		627	same
rear wheel axis: vertical	(d)		169	169
		and	250	
Distance of lower link pivot from: horizontal	(e)		445	same
rear wheel axis: vertical	(f)		332	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)		579	same
Length of lift rods	(L)	from	660	794
		to	866	
Height of lower hitch points relative to rear wheel axis				
In low position	(h)	from	378	629
		to	699	
In high position	(H)	from	3	59
		to	269	
Height above ground of lower hitch points when locked in transport position.		from	873	914
		to	1139	

*Assuming (r) with a dynamic tire index of 870 mm (ISO 4251/1-1992)

SWINGING DRAWBAR.

Type	Swinging
Height above ground - Maximum	559 mm (strap on top)
Minimium	444 mm (strap on bottom)
Adjustments	Laterally adjustable with 3 fore-aft positions
Distance of hitch point from rear wheel axis, horizontal	
Position 1	1202 mm
Position 2	1304 mm
Position 3	1406 mm
Distance of hitch point from PTO shaft end of 1000 rpm PTO	
Vertically	222 mm (strap on top) 336 mm (strap on bottom)
Horizontally	
Position 1	406 mm
Position 2	508 mm
Position 3	610 mm
Lateral adjustment (center of clevis) Right side & Left side	
Position 1	210 mm
Position 2	228 mm
Position 3	246 mm
Distance of pivot point from rear wheel axle;horizontally	50 mm forward
Diameter of drawbar pin hole	42 mm
Maximum vertical permissible load (static)	
Positions 1 & 2	20.9 kN
Position 3	16.5 kN

STEERING

Make/Model/Type	Eaton/266-4070-002/hydrostatic steering control unit
Method of operation	
Pump(s)	Cessna main axial piston pump through steering priority valve
Ram(s)	2 double-acting cylinders
Working pressure	16.203-16.892 MPa

BRAKES

Service brake.

Make/Model/Type	Case International/Oil immersed disc type
Method of operation	Hydraulic,operated by two pedals, separate or coupled.
Trailer brake	none

Parking brake.

Type	Transmission lock
Method of operation	Mechanical; Gear selector lever

WHEELS

Number.

Front	Two; Driving and steering
Rear	Two or Four; Driving
Wheel base	3006 mm

TRACK WIDTH ADJUSTMENT

	Minimum [mm]	Maximum [mm]	Adjustment method
Front	1527	2408	Reversing wheel rims and offset lug rims
Rear	1549	3353	Adjustable clamping edges on bar axle and offset lug rims

PROTECTIVE STRUCTURE

Make/Model/Type	Case IH Magnum/CX-96/Cab
Manufacturer's name/address	Case Corporation, 700 State Street, Racine, Wisconsin 53404, USA
Protective device	Cab, 4-post with charpy v-notch certified material
Tiltable	No
OECD approval number	CSS 096/41 for seat Sears SA11035/Air suspension CSS 096/49 for seat Sears SA 12105/Air suspension
Date of approval	16 March 1994

DRIVER'S SEAT

Make/Model/Type	Sears/SA12105/Air suspension or Sears/SA11035/Air suspension
Type of suspension	Air ride; fore-aft isolator; adjustable for weight. SA11035 has also a lateral isolator
Type of damping	Air damping
Range of adjustment	
Longitudinal	152.4 mm
Vertical	76.2 mm

LIGHTING.

	Height above ground of center [mm]	Size [mmxmm]	Distance from outside edge of lights to median plane of tractor. [mm]
Headlights	1637	260.5x130.8	390
Rearlights	2069	100.0x 45.2	654
Reflectors-rear	2069	50.0x 45.2	554 and 704

TEST CONDITIONS.

Overall dimensions (unballasted).

Length [mm]	Width minimum [mm]	maximum [mm]	Height at top of protective structure [mm]	exhaust stack [mm]
5083	3048	4623	3042	3004

Ground clearance (unballasted) 454 mm
Clearance-limiting part Drawbar anchor point

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	With driver [kg]
Unballasted	**Front**	2554	2569
	Rear	5515	5575
	Total	8069	8144

Tire and track width specifications.

	Front	Rear
Make	Goodyear	Goodyear
Dimensions	14.9R30	18.4R42
Ply rating	3 star-134A8	2 star-148A8
Type	Radial	Radial
Max.load (tire manufacturer)	2270 kg/tire	3375 kg/tire
Max.load(tractor manufacturer)	2165 kg/tire	3375 kg/tire
Inflation pressure(tire mfr)	210 kPa	160 kPa
Dynamic Radius Index	665 mm	870 mm
Chosen track width	1875 mm	1770 mm

OILS AND LUBRICATION

Capacity and change interval

	Capacity	Oil change	Filter change
	liter	hours	hours
Engine (without filter)	19	250	250
Gear Box	191	1000	1000
Front axle	11.4	1000	------
Rear axle	Common with Gear box		
Hydraulic system	Common with Gear box		
Final drive-front (each side)	0.9	1000	------
Final drive-rear	Common with Gear box		

Lubricant Specifications

	Recommended	Used during test
Engine oil		
Type	Case IH N0. 1 SAE 15W-40	same
Viscosity	14.9 cSt at 100°C	
Classification	API SG/CD/CE	
Transmission oil		
Type	Case IH Hy-tran Plus	same
Viscosity	6.3 cSt at 100°C	
Classification	NA	
Hydraulic fluid		
Type	Case IH Hytran Plus	same
Viscosity	6.3 cSt at 100°C	
Classification	NA	
Front differential and final drive		
Type	Case IH 135HEP Gear Lube; SAE 85W-140	same
Viscosity	27 cSt at 100°C	
Classification	API GL-5 or MIL-L-2105D	
Grease		
Type	Case IH Hi-Temp EP	same
Number of lube points	26	

FUEL

Type	Premier; Grade 2-D,in conformity with the national standard
Density (Pto test)	0.841 kg/l at 15°C
(Drawbar test)	Same as PTO test
Cetane number	50.6
Viscosity	2.51 cSt at 38°C

COMPULSORY TESTS

1. MAIN POWER TAKE OFF

Date: 2-May-96 Location: UNL Tractor Test Lab, Lincoln, NE, USA

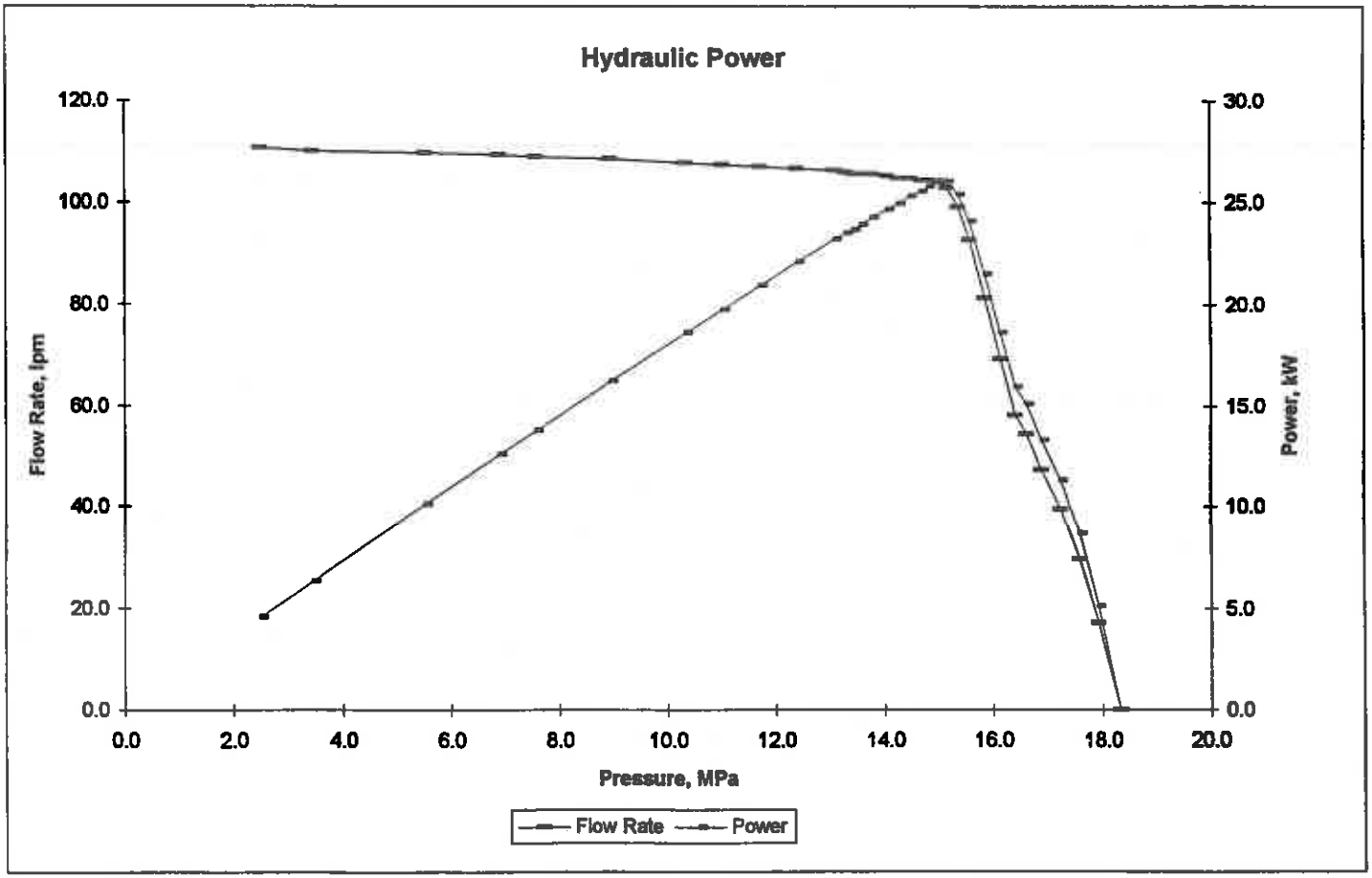
Type of dynamometer: Eddy current, Eaton

Fuel Density 0.841 kg/l

Power kW *hp*	Engine rev/min	PTO rev/min	l/h *gal/h*	kg/h *lb/hr*	$kg/kW_e h$ *lb/hp-h*	$kW_e h/l$ *hp-h/gal*
1.1 Maximum Power - 2 Hours						
137.93	1800	820	38.48	32.38	0.235	3.58
184.97			*10.17*	*71.38*	*0.386*	*18.20*
1.2 Power at Rated Engine Speed - 1 hour						
128.56	2200	1003	40.16	33.78	0.263	3.20
172.41			*10.61*	*74.48*	*0.432*	*16.25*
1.3 Power at Standard Power Take Off Speed - 1 hour						
128.56	2200	1003	40.16	33.78	0.263	3.20
172.41			*10.61*	*74.48*	*0.432*	*16.25*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
128.56	2200	1003	40.16	33.78	0.263	3.20
172.41			*10.61*	*74.48*	*0.432*	*16.25*
1.4.2 85% of torque obtained in 1.4.1						
112.89	2273	1036	36.55	30.75	0.272	3.09
151.39			*9.66*	*67.80*	*0.448*	*15.68*
1.4.3 75% of torque defined in 1.4.2						
85.88	2307	1052	30.41	25.58	0.298	2.82
115.17			*8.03*	*56.40*	*0.490*	*14.34*
1.4.4 50% of torque defined in 1.4.2						
58.38	2343	1068	23.78	20.00	0.343	2.46
78.29			*6.28*	*44.10*	*0.563*	*12.46*
1.4.5 25% of torque defined in 1.4.2						
29.68	2382	1086	17.79	14.97	0.504	1.67
39.80			*4.70*	*33.00*	*0.829*	*8.47*
1.4.6 unloaded						
0.78	2419	1102	11.81	9.93	12.698	0.07
1.05			*3.12*	*21.90*	*20.875*	*0.34*
1.5 Part Loads at Standard Power Take Off Speed						
1.5.1 Torque at maximum power						
128.56	2200	1003	40.16	33.78	0.263	3.20
172.41			*10.61*	*74.48*	*0.432*	*16.25*
1.5.2 85% of torque obtained in 1.5.1						
112.89	2273	1036	36.55	30.75	0.272	3.09
151.39			*9.66*	*67.80*	*0.448*	*15.68*
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85.88	2307	1052	30.41	25.58	0.298	2.82
115.17			*8.03*	*56.40*	*0.490*	*14.34*
1.5.4 50% of torque defined in 1.5.2						
58.38	2343	1068	23.78	20.00	0.343	2.46
78.29			*6.28*	*44.10*	*0.563*	*12.46*
1.5.5 25% of torque defined in 1.5.2						
29.68	2382	1086	17.79	14.97	0.504	1.67
39.80			*4.70*	*33.00*	*0.829*	*8.47*
1.5.6 unloaded						
0.78	2419	1102	11.81	9.93	12.698	0.07
1.05			*3.12*	*21.90*	*20.875*	*0.34*

No load maximum engine speed:	2419	rev/min		
Equivalent torque at rated speed:	558	N.m	*412*	lb-ft
Equivalent torque at maximum power:	732	N.m	*540*	lb-ft
(engine speed:	1800	rev/min)		
Maximum equivalent crankshaft torque:	795	N.m	*586*	lb-ft
(engine speed:	1399	rev/min)		
Mean Dry bulb:	24	deg C	*74*	deg F
Wet bulb:	16	deg C	*61*	deg F
Relative Humidity	43	%		
Pressure:	97.3	kPa	*28.72*	in Hg
Maximum Coolant:	89	deg C	*193*	deg F
Engine Oil:	112	deg C	*233*	deg F
Fuel:	53	deg C	*128*	deg F
Air Intake:	31	deg C	*87*	deg F
Transmission/hydraulic oil:	54	deg C	*130*	deg F
Intake manifold pressure at rated speed:	128	kPa	*18.5*	psig
Intake manifold pressure at maximum power:	128	kPa	*18.5*	psig

Date of Test:	8-May-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:			
	18.3 MPa		
	2660 *psig*		
II. Pump delivery rate at minumum pressure and rated engine speed:			
	110.9 l/min		
	29.3 *gpm*		
III. Flow rate, pressure, power:			
90% of relief valve setting			
	54.5 l/min	16.6 MPa	15.1 kW
	14.4 gpm	*2410 psig*	*20.2 hp*
Maximum hydraulic power:			
	104.1 l/min	15.0 MPa	26.1 kW
	27.5 gpm	*2180 psig*	*35.0 hp*
IV. Hydraulic fluid temperature at flow meter			
	63 °C		
	146 °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 III,
Upper link in bottom hole on tractor
Date of test: 20 July 1988 - Data taken from OECD test 1197 on the Case International 7130 which has the mechanically identical lifting system.

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	226/8.9	218/8.6
Vertical movement:			
without load:	[mm/in]	688/27.1	791/31.1
with load:	[mm/in]	650/25.6	737/29.0
Maximum corrected force through full range:	[kN/lb]	45.5/10233	42.3/9504
Corresponding pressure:	[kPa/psi]	17100/2475	
Moment about rear axle:	[kN.m/lb.ft]	59.4/43831	81.0/59717
Maximum mast tilt angle:	[deg]	--	7.7

Lifting height relative to horizontal position of lower links.

[mm]	-277	-269	-198	-99	0
[in]	-10.9	-10.6	-7.8	-3.9	0

Corrected lift forces

Hitch [kN]	--	45.5	47.0	51.3	54.0
point.[lb]	--	10233	10557	11538	12146
at [kN]	43.4	--	45.7	47.0	47.7
frame [lb]	9761	--	10274	10571	10728

Lifting height relative to horizontal position of lower links.

[mm]	99	201	300	381	460
[in]	3.9	7.9	11.8	15.0	18.1

Corrected lift forces

Hitch [kN]	55.6	57.2	57.7	58.6	--
point [lb]	12501	12870	12978	13181	--
at [kN]	48.0	46.7	--	43.7	42.3
frame [lb]	10791	10508	--	9828	9504

OECD Drawbar Data (SI)

Date of tests:	03-May-96	Fuel density:	0.841 kg/l
Type of track:	Concrete	Test number:	1710

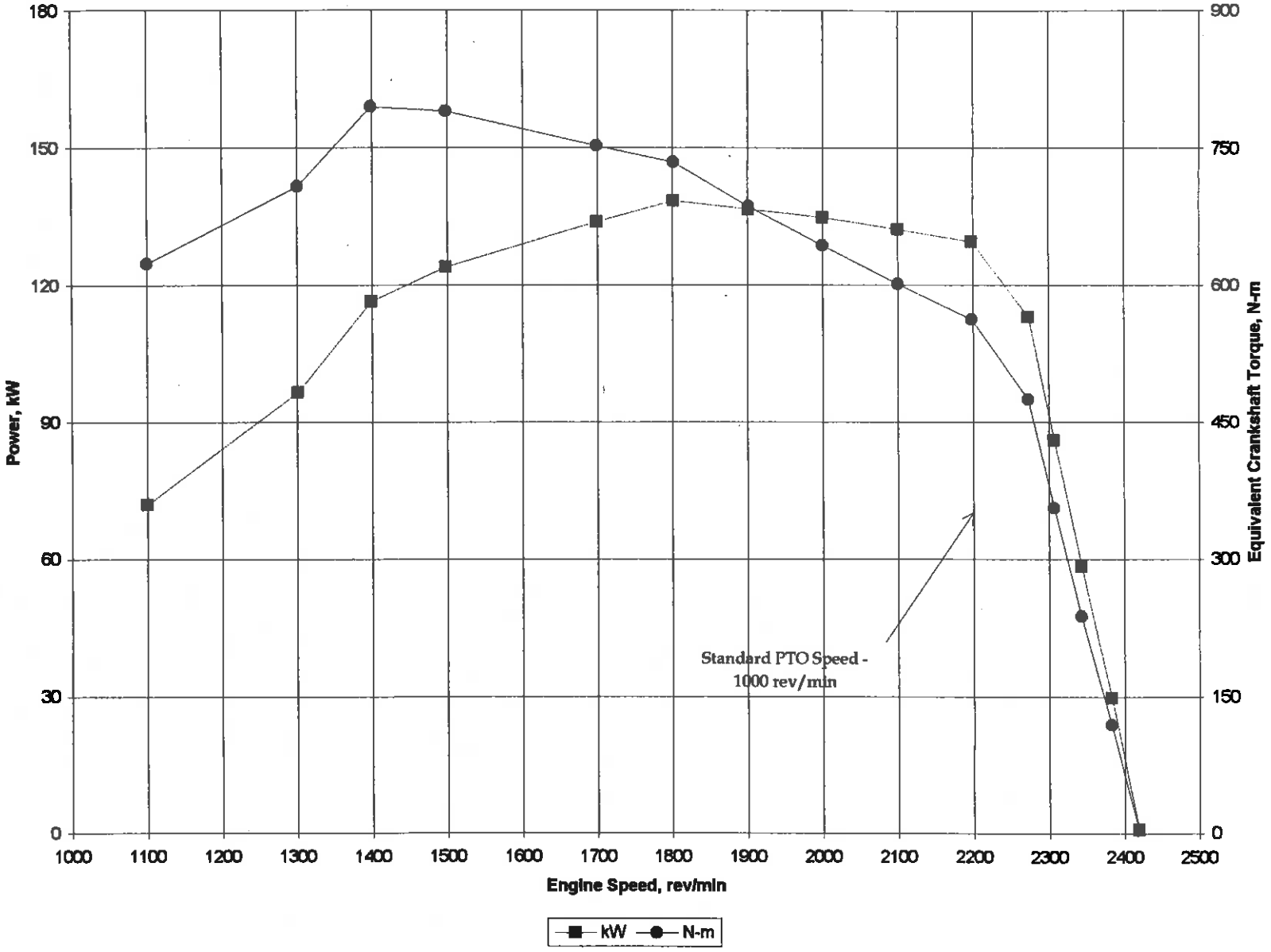
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel humidity	Barom. Press
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, 4wd at 1800 rev/min)						Tire pressure:		138 kPa, rear		97 kPa, front		Drawbar height:		381 mm
*3	74.49	74.75	3.59	2292	14%	0.368	2.29	55	86	111	12	9	72%	98.37
*4	85.80	75.10	4.11	2274	14%	0.354	2.38	55	85	111	12	8	65%	98.41
5	102.10	74.42	4.94	2243	8%	0.328	2.57	54	85	111	11	8	70%	98.44
6	106.30	69.87	5.48	2167	8%	0.316	2.66	53	86	113	12	9	72%	98.37
7	113.10	66.32	6.14	2051	7%	0.292	2.89	52	86	112	12	9	72%	98.37
8	115.56	67.43	6.17	1804	7%	0.282	2.98	53	87	113	15	12	65%	97.49
9	118.74	58.72	7.28	1804	5%	0.277	3.03	51	87	113	16	12	70%	97.49
10	119.09	51.01	8.40	1796	4%	0.275	3.06	52	88	113	16	13	70%	97.46
11	117.00	43.22	9.75	1801	3%	0.278	3.03	52	87	113	17	13	70%	97.39
12	117.03	37.42	11.26	1804	3%	0.279	3.01	52	86	113	17	14	75%	97.36
13	115.95	32.28	12.93	1802	2%	0.284	2.96	52	87	113	16	13	75%	97.36
*Note: Slip within operating conditions of testing station														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed														
10	108.92	37.63	10.42	2198	3%	0.309	2.72	53	86	113	16	13	70%	97.43
II.1.1 75% of pull at maximum power at rated engine speed														
10	85.47	28.14	10.93	2287	2%	0.335	2.51	52	86	112	16	13	79%	97.36
II.1.2 50% of pull at maximum power at rated engine speed														
10	58.49	18.80	11.20	2328	1%	0.390	2.16	51	86	111	16	13	79%	97.36
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	85.56	28.12	10.95	1742	2%	0.288	2.93	50	85	109	16	13	79%	97.36
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	58.53	18.76	11.23	1775	1%	0.317	2.65	49	84	107	16	13	74%	97.36
II.2 in selected gear nearest to 7.5 km/h at rated engine speed														
8	110.34	51.11	7.77	2197	4%	0.306	2.75	52	87	113	16	12	65%	97.53
II.2.1 75% of pull at maximum power at rated engine speed														
8	87.38	38.30	8.21	2288	3%	0.326	2.58	51	87	112	14	12	78%	97.36
II.2.2 50% of pull at maximum power at rated engine speed														
8	59.87	25.56	8.43	2330	2%	0.375	2.24	51	85	111	14	12	78%	97.36
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
10	87.55	38.31	8.23	1734	3%	0.277	3.04	50	85	109	14	12	78%	97.36
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
10	59.99	25.55	8.45	1765	2%	0.306	2.75	50	83	108	14	12	78%	97.36

OECD Drawbar Data (US)

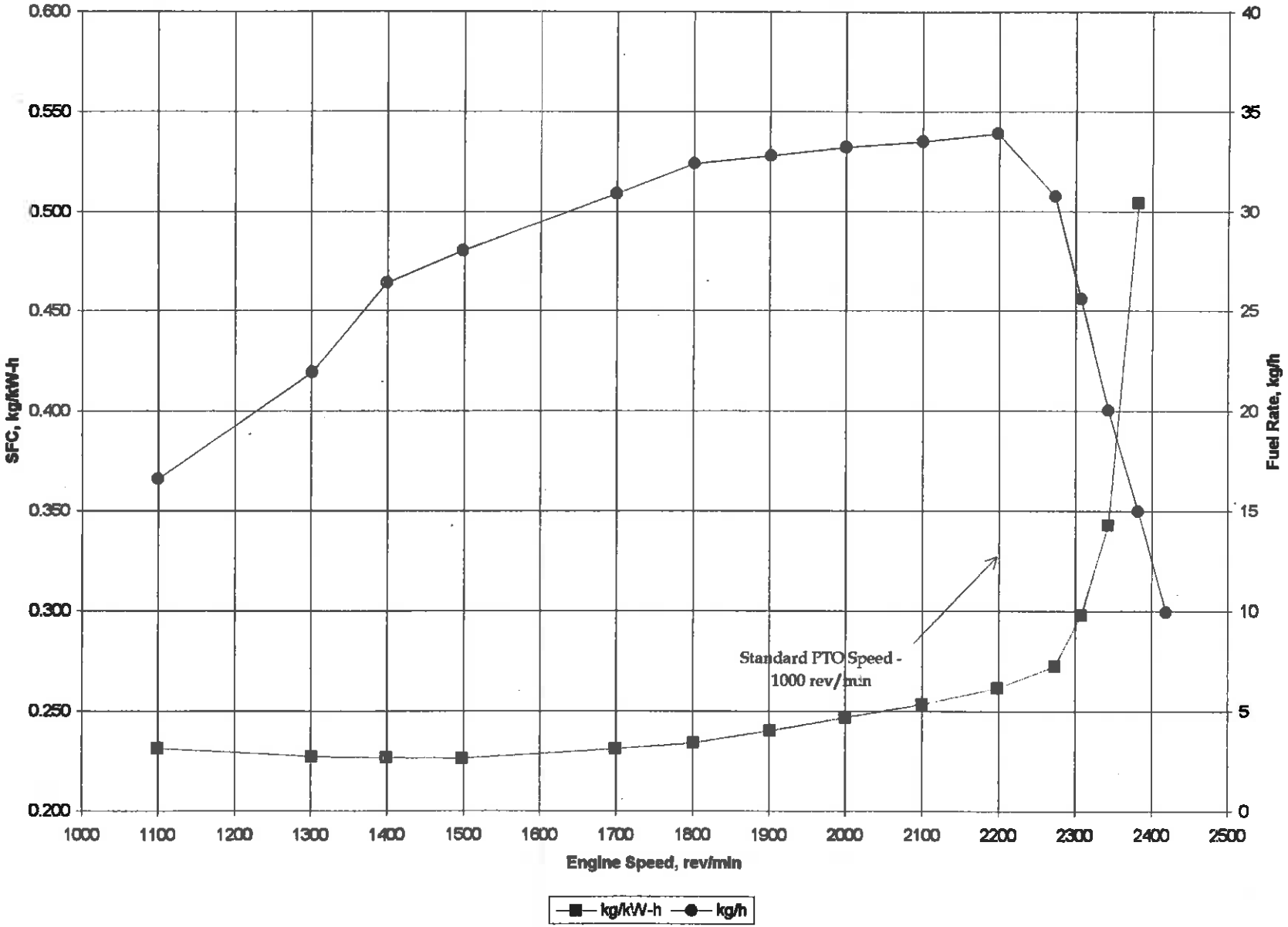
Date of tests:	03-May-96	Fuel density:	7.021 lb/gal
Type of track:	Concrete	Test number:	1710

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 1800 rev/min)						Tire pressure:		20 psig, rear		14 psig, front		Drawbar height:		15.0 in
*3	99.89	16804	2.23	2292	14%	0.604	11.61	131	186	231	54	49	72%	29.05
*4	115.05	16884	2.56	2274	14%	0.582	12.07	131	185	232	53	47	65%	29.06
5	136.91	16730	3.07	2243	8%	0.539	13.04	130	186	232	51	46	70%	29.07
6	142.54	15707	3.40	2167	8%	0.519	13.52	127	187	235	54	49	72%	29.05
7	151.67	14910	3.81	2051	7%	0.479	14.65	126	187	234	54	49	72%	29.05
8	154.96	15158	3.83	1804	7%	0.464	15.14	127	189	235	59	53	65%	28.79
9	159.24	13201	4.52	1804	5%	0.456	15.40	125	188	235	61	54	70%	28.79
10	159.70	11468	5.22	1796	4%	0.452	15.52	125	190	235	61	55	70%	28.78
11	156.90	9716	6.06	1801	3%	0.456	15.38	126	188	235	62	56	70%	28.76
12	156.93	8412	7.00	1804	3%	0.459	15.30	126	188	235	62	57	75%	28.75
13	155.50	7256	8.04	1802	2%	0.467	15.05	126	189	236	61	56	75%	28.75
*Note: Slip within operating conditions of testing station														
II. Part loads (unballasted, 4wd)														
II.1 in selected gear at maximum power at rated engine speed														
10	146.07	8459	6.48	2198	3%	0.508	13.83	127	188	236	61	55	70%	28.77
II.1.1 75% of pull at maximum power at rated engine speed														
10	114.61	6327	6.79	2287	2%	0.551	12.75	126	187	233	60	56	79%	28.75
II.1.2 50% of pull at maximum power at rated engine speed														
10	78.43	4226	6.96	2328	1%	0.642	10.94	123	187	231	60	56	79%	28.75
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	114.74	6321	6.81	1742	2%	0.473	14.85	122	185	229	60	56	79%	28.75
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	78.50	4217	6.98	1775	1%	0.521	13.47	121	183	225	60	55	74%	28.75
II.2 in selected gear nearest to 4.6 mph at rated engine speed														
8	147.97	11489	4.83	2197	4%	0.503	13.95	126	189	236	61	54	65%	28.80
II.2.1 75% of pull at maximum power at rated engine speed														
8	117.18	8610	5.10	2288	3%	0.536	13.10	124	188	234	57	53	78%	28.75
II.2.2 50% of pull at maximum power at rated engine speed														
8	80.29	5746	5.24	2330	2%	0.617	11.38	123	186	232	57	53	78%	28.75
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
10	117.40	8612	5.11	1734	3%	0.455	15.43	122	185	229	57	53	78%	28.75
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
10	80.45	5744	5.25	1765	2%	0.503	13.95	122	182	226	57	53	78%	28.75

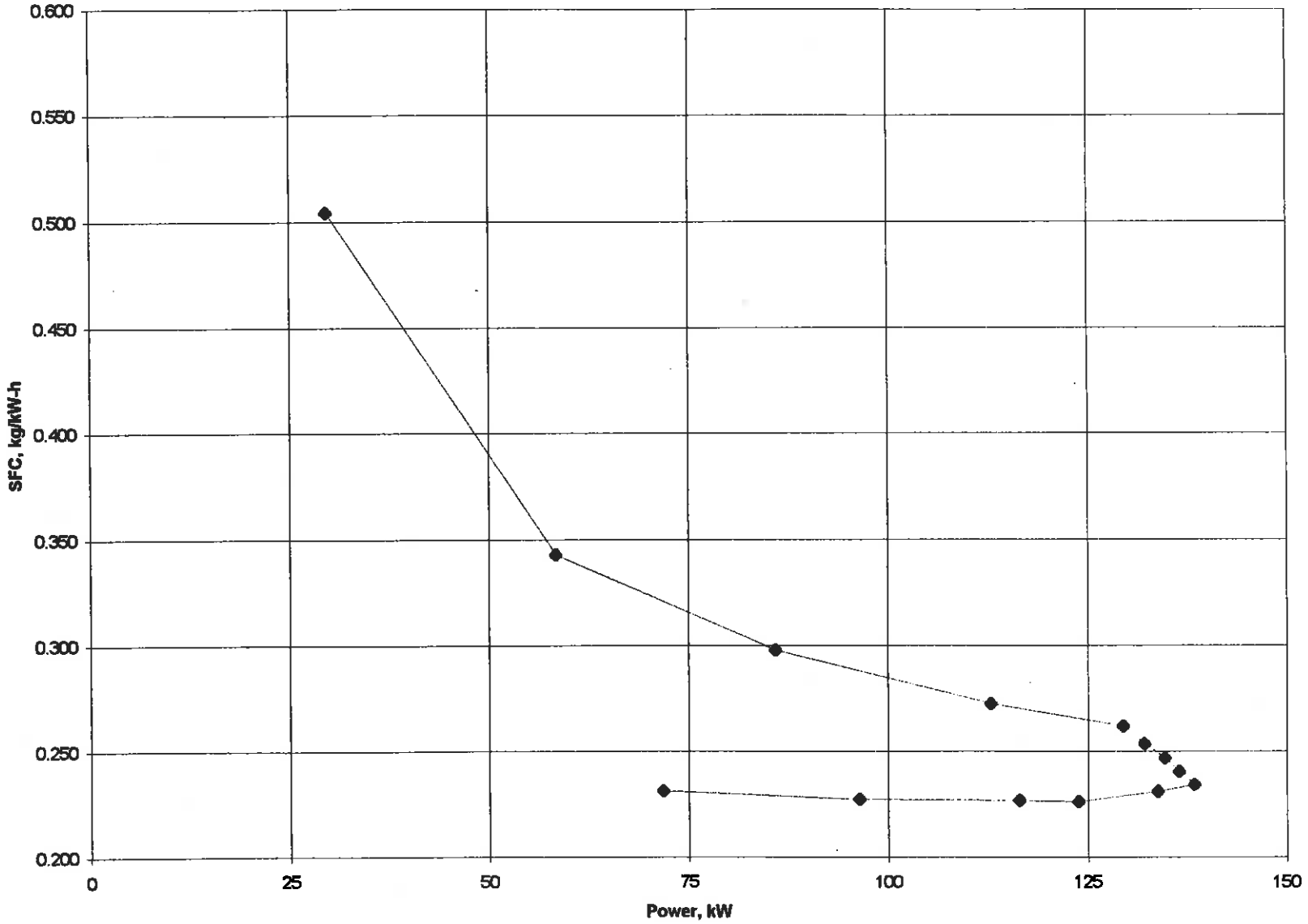
Power and Equivalent Crankshaft Torque



Specific Fuel Consumption and Fuel Rate



Power and Specific Fuel Consumption



THREE POINT LINKAGE. (Upper link in top hole on tractor)

- Category adaptor - none

Table 1.2 - *Linkage geometry dimensions.

		Dimension or range [mm]	Settings used on test [mm]
Lift category		III	III
Rear Tire - Radius Index	(r)	870	855
Front Tire - Radius Index	(r')	665	645
Length of lift arms	(A)	381	same
Length of lower links	(B)	861	same
Distance of lift arm pivot from: horizontal	(a)	364	same
rear wheel axis: vertical	(b)	422	same
Horizontal distance between the 2 lower link points	(u)	604	same
Horizontal distance between the 2 lift arm end points	(v)	737	same
Length of upper link	(S)	600	657
	to	831	
Distance of upper link pivot from horizontal	(c)	627	same
rear wheel axis: vertical	(d)	169	250
	and	250	
Distance of lower link pivot from: horizontal	(e)	445	same
rear wheel axis: vertical	(f)	332	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	579	same
Length of lift rods	(L)	660	794
	to	866	
Height of lower hitch points relative to rear wheel axis In low position	(h)	378	629
	to	699	
In high position	(H)	3	59
	to	269	
Height above ground of lower hitch points when locked in transport position.	from	858	914
	to	1174	

*Assuming (r) with a dynamic tire index of 870 mm (ISO 4251/1-1992)

2.2 POWER LIFT TEST. Cat III, (for dimensions see p.21)
Upper link in top hole on tractor
Date of test: 21 July 1988 - Data taken from OECD test 1197 on the Case International 7130 which has the mechanically identical lifting system.

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	226/8.9	254/10.0
Vertical movement: without load:	[mm/in]	688/27.1	679/26.8
Vertical movement: with load:	[mm/in]	650/25.6	642/25.3
Maximum corrected force through full range:	[kN/lb]	45.5/10233	49.8/11196
Corresponding pressure:	[kPa/psi]	17100/2475	
Moment about rear axle:	[kN.m/lb.ft]	59.4/43831	95.4/70348
Maximum mast tilt angle:	[deg]	--	2.6

Lifting height relative to horizontal position of lower links.

[mm]	-269	-241	-198	-99	0
[in]	-10.6	-9.5	-7.8	-3.9	0
Corrected lift forces					
Hitch point. [kN]	45.5	--	47.0	51.3	54.0
Hitch point. [lb]	10233	--	10557	11538	12146
at frame [kN]	--	55.0	52.8	54.6	55.2
at frame [lb]	--	12357	11876	12267	12420

Lifting height relative to horizontal position of lower links.

[mm]	99	201	300	381	401
[in]	3.9	7.9	11.8	15.0	15.8
Corrected lift forces					
Hitch point [kN]	55.6	57.2	57.7	58.6	--
Hitch point [lb]	12501	12870	12978	13181	--
at frame [kN]	54.3	54.0	50.9	50.5	49.8
at frame [lb]	12204	12150	11444	11349	11196

MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test	6 May, 1996
Location of test	Nebraska power Lab, Lincoln, NE, USA
Sound Level meter	Bruel and Kjaer 2209
Type of track	Concrete oval
Gear Number	18th
Speed prior to acceleration	26.5 km/h
Noise Level	85.5 dB(A)

Repairs: None

Remarks: **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**