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(Restricted code)
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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





JOHN DEERE 8300 POWERSHIFT MFWD
40 km/h Version (4WD)

MANUFACTURED BY: John Deere Waterloo Tractor Works Tractor Division
P.O. Box 270
Waterloo, Iowa 50704-0270
NEBRASKA TEST NO. 1690
Test Dates: April 13 through May 15, 1995

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 (CEMAGREF) on 31 October, 1995

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40 km/h Version (4WD) OECD # 1577

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SPECIFICATIONS OF TRACTOR.

Manufacturers name/address	John Deere Tractor Works P.O. Box 270 Waterloo, Iowa, USA
Location of tractor assembly	Same
Submitted for test by	The manufacturer
Selected for test by	The manufacturer in agreement with the test station.
Place of running in	John Deere Product Eng. Ctr Waterloo, Iowa, USA
Duration of running in	134 hours
Location of Test	Nebraska Power laboratory Tractor Testing Laboratory Lincoln, Nebraska,USA.

TRACTOR SPECIFICATIONS.

Make	John Deere
Model	8300 Powershift MFWD 40 km/h Version (4WD)
Type	Unit construction, mechanical front wheel drive (MFWD)
Number of driving wheels	2 or 4
Serial Number	*RW8300P001553*
1st Serial number	*RW8300P001002*

ENGINE.

Make	John Deere
Model	6076HRW34
Type	4-stroke diesel; direct Injection; turbocharged; air-to-air intercooled
Serial Number	*RG6076H543008*

Cylinders

Number/Disposition	6, in-line, vertical
Bore/stroke	115.8 mm x 120.7 mm
Capacity	7627 cm^3
Compression Ratio	15.0 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet; replaceable

Super charging

Make/Model/Type	Schwitzer/RE56237/ Exhaust gas driven
Pressure	163 ± 16 kPa at rated speed and load

Fuel System	
Feed system	Transfer pump integral with injection pump
Make/Type/Model of filters	Stanadyne/RE27091/paper element
Fuel tank capacity	512 l
Fuel Cooler	Heat exchanger with air
Make/Model/Type Injection Pump	Bosch/RE57372/In-line; electric shutoff
Pump Serial number	4712400668
Production setting of pump Flow Rate (Rated Eng.Spd & Full Load)	37.4 ± 1.9 kg/h
Fuel Density	0.8355 kg/l at 15° C.
Make/Model/Type Injectors	Nippondenso/RE29318/9.5 mm Pencil type
Injection pressure	29.0 +0.8/-0.0 MPa
Timing	20 degrees BTDC
Governor	
Make/Model/Type	Bosch/electronic
Governed engine speed range	From 800 to 2400 rev/min nominal
Rated engine speed	2200 rev/min
High-idle speed range	2300 +/- 25 rpm
Air Cleaner.	
Pre-cleaner Make/Model/type	Donaldson/RE51631/Strato0tube precleaner with aspirator
Air intake location	Under hood, front of tractor
Main Cleaner Make/Model/Type	Donaldson/RE51629/pleated paper
Location	Under hood, front of tractor
Secondary element	Donaldson/RE51630/pleated paper
Maintenance indicator	Dash mounted warning light and audio signal
Lubrication system.	
Type of feed pump	Full pressure; positive displ.
Type of filters	Full flow
Number	One spin-on.
Oil cooler	Heat exchanger with engine coolant
Cooling system.	
Type of coolant	Liquid
Type of pump	Centrifugal, gear driven
Fan specification	Gear driven; Suction type; Variable speed
Number of fan blades	8
Fan diameter	711 mm

Coolant system capacity	34 l.
Type of temperature control	Two thermostats and variable speed fan
System pressure	69 kPa
Starting system.	
Make/Model/Type of starter	Nippondenso/RE61516/Solenoid Engaged
Power Rating	4.0 kW
Cold starting aid	Ether spray in intake manifold
Safety device	Electrical lockout on gearshift
Electrical system.	
Voltage & grounding.	12 Volt DC; negative ground
Alternator	
Make/Model/Type	Nippondenso/RE46608/Belt driven
Power rating	140 Amp at rated engine speed and 25°C ambient
Batteries	
Number & connection	Two; 12 Volt batteries in parallel; SAE tapered post
Rating	925 cold cranking amps/battery 175 Ah/battery at 20 h rating
Exhaust system.	
Muffler Make/Model/Type	Nelson/RE44716/Expansion chamber
Location	Vertical muffler
Exhaust stack location	Vertical; right front of cab
TRANSMISSION.	
Clutch. (travel)	
Make/Model/Type	John Deere/Multiple plate/oil cooled
Number of plates	7
Plate diameter	232 mm
Method of operation	Hydraulic; pedal actuated
Gear Box.	
Make/Model/Type	John Deere/Full powershift/ Mechanical
Arrangement	Countershaft design consisting of 8 multidisc hydraulically cooled clutches and 1 multidisc hydraulically cooled planetary brake
Number of gears	16 forward and 4 reverse operated by one lever
Oil cooler	Heat exchanger with air

Rear axle and final drives.	
Make/Model/Type	John Deere/Crown wheel and pinion, differential and inboard planetary reduction
Differential Lock	
Type	Electro-Hydraulic
Method of engagement	Pedal operated switch
Method of disengagement	Self-disengaging with brake pedal operation
Front Axle and final drives.	
Make/Model/Type	John Deere/1300/Crown wheel and pinion, differential and inboard planetary reduction
Differential Lock	
Type	Limited slip
Method of engagement	Self-engaging
Method of disengagement	Self-disengaging

Gear ratios and travel speeds.

(Tire dynamic radius of 905 mm. ISO 4251/1-1992)

Gear Number	Number of engine revolutions for one revolution of the driving wheels	Nominal travel speed at rated engine speed of 2200 rev/min [km/h]
Forward		
1	344.05	2.18
2	269.34	2.79
3	211.60	3.55
4	165.64	4.53
5	136.79	5.49
6	121.23	6.19
7	107.09	7.01
8	94.92	7.91
9	84.14	8.92
10	74.55	10.07
11	65.87	11.40
12	58.38	12.86
13	45.87	16.36
14	35.90	20.91
15	28.20	26.61
16	22.07	34.01
Reverse *		
1	394.43	1.90
2	156.82	4.79
3	138.99	5.40
4	52.58	10.38 *

Number of front wheel revolutions
for one rear wheel revolution: 1.32

* Engine speed is limited to 1600 rpm the NUMBER 4 reverse gear

POWER - TAKE - OFF.

Main Power-Take-Off.

Type	Independent
Method of engagement	Electro-hydraulically actuated multi-plate wet clutch operated by hand control knob
Number of shafts	Single speed - one (tested)
Optional shaft	Dual speed
Method of changing speeds	Reversible shaft

Standard single speed PTO-1000 rev/min - tested version

Location	Rear of tractor; center plane
Diameter of shaft	44.5 mm
Number of splines	20; conforms to ISO 500/1991.
Height above ground	708 mm
Distance from median plane of tractor	0 mm
Distance behind rear axle	683.5 mm
PTO Speed at rated engine spd	1009 rev/min
Engine speed at Std. PTO spd	2180 rev/min
Engine speed/PTO speed ratio	2.18:1
Power restriction	None
Direction of rotation when viewed from shaft end	Clockwise.

Optional dual speed PTO - 540 and 1000 rev/min.

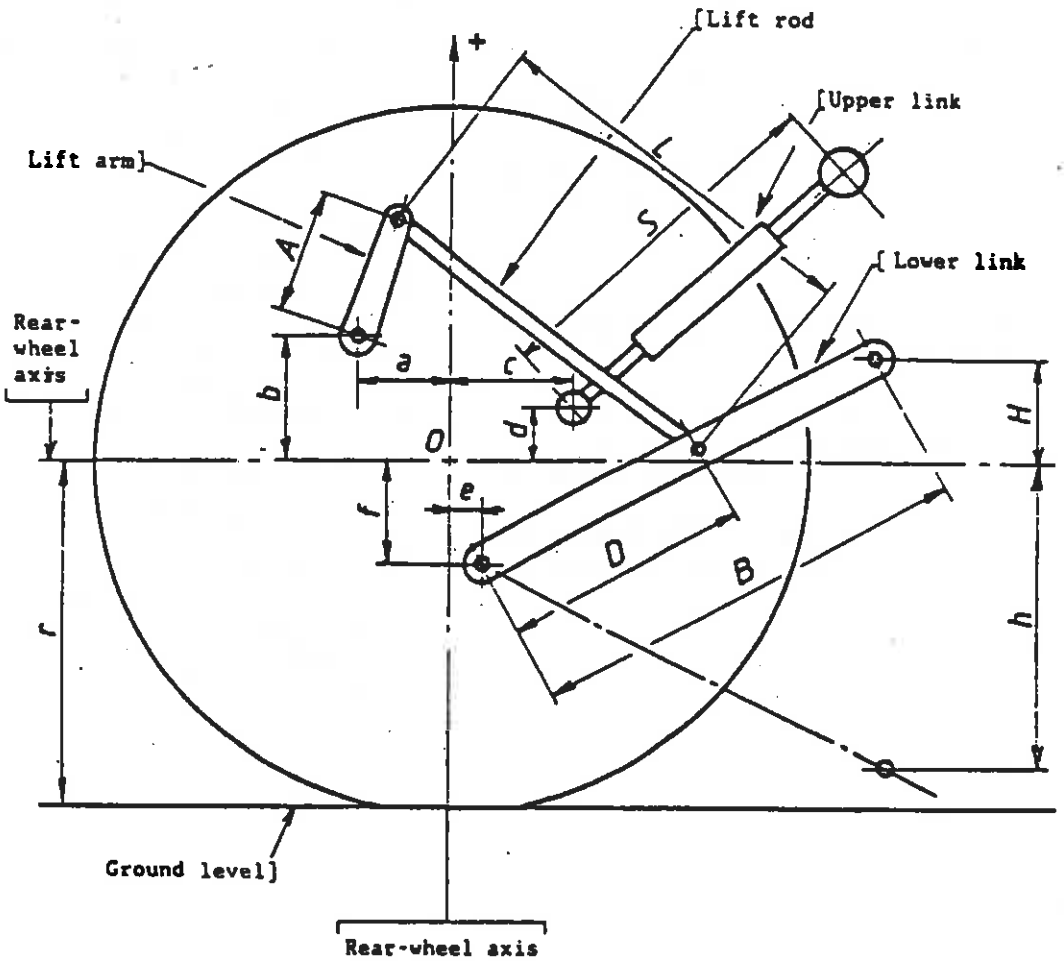
Location	Rear of tractor; center plane
Diameter of shaft	35 mm
Number of splines	
for 540 rev/min side	6; conforms to ISO 500/1991.
for 1000 rev/min side	21; conforms to ISO 500/1991
Height above ground	740 mm
Distance from median plane of tractor	0 mm
Distance behind rear axle	785 mm
PTO Speed at rated engine spd	
for 540 rev/min side	601 rev/min
for 1000 rev/min side	1009 rev/min
Engine speed at Std. PTO spd	
for 540 rev/min side	1978 rev/min
for 1000 rev/min side	2180 rev/min
Engine speed/PTO speed ratio	
for 540 rev/min side	3.663:1
for 1000 rev/min side	2.180:1
Power restriction	
for 540 rev/min side	56 kW
for 1000 rev/min side	112 kW
Direction of rotation when viewed from shaft end	Clockwise.

POWER LIFT.

Make/Model/Type	John Deere/Electro-hydraulic lower link sensing; adjustable mix of draft and position control;
Type of hydraulic system	Closed center; pressure/flow compensated
Number/Type of cylinders	Two external, single acting
Type of linkage lock for transport	Electro-hydraulic
Relief valve pressure setting	20.3 ± 0.3 MPa
Opening pressure of cylinder safety valve	23.25 ± 0.5 MPa
Lift pump type	Axial piston, variable delivery and flow, pressure and flow compensated
Power transmission to pump	Helical gear drive
Type/Number of filters	Synthetic media ,screw-on canister/one
Location of oil reservoir	Differential case housing
Number/Type/Location of tapping points.	Up to 5 pairs of ISO standard couplings at rear of tractor.
Max. oil volume available for external cylinders.	20 liters additional 10 liters allowable overfill for total of 30 liters

THREE POINT LINKAGE.

- Category 3 in conformity with ISO 730/1-1990
- Category adaptor Walterscheid lower links



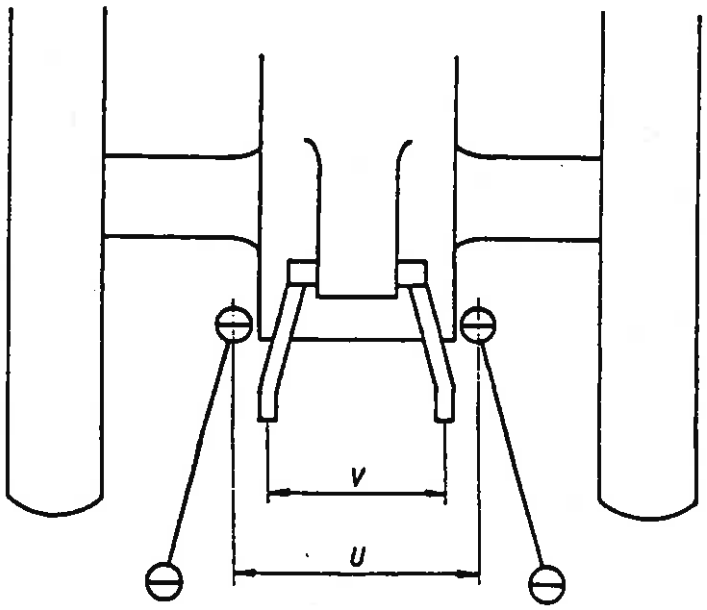


Table 1.1 - Linkage geometry dimensions.

(with Walterscheidt lower links)		Dimension or range [mm]	Settings used on test [mm]
Lift category		III	III
Rear Tire - Radius Index	(r)	905	same
Front Tire - Radius Index	(r')	695	same
Length of lift arms	(A)	495	same
Length of lower links	(B)	1059	
Distance of lift arm pivot from: horizontal	(a)	-240	same
rear wheel axis: vertical	(b)	495	same
Horizontal distance between the 2 lower link points	(U)	600	same
Horizontal distance between the 2 lift arm end points	(V)	750	same
Length of upper link	(S)	730 to 900	806
Distance of upper link pivot point from rear wheel axis - horizontal	(c)	515 and 528	528
- vertical	(d)	123,186,247	247
Distance of lower link pivot from: horizontal	(e)	275	same
rear wheel axis: vertical	(f)	350	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	716	same
Length of lift rods	(L)	968 to 1063	1045
Height of lower hitch points relative to rear wheel axis In low position	(h)	709 to 559	676
In high position	(H)	283 to 162	175
Height above ground of lower hitch points when locked in transport position		1193 to 1073	1080

Tire dynamic index of 905 mm ISO 4251/1-1992

SWINGING DRAWBAR.

	Version I (tested)	Version II (not tested)	
Type	Oscillating	same	
Height above ground	490 mm	460	mm
Adjustments	Removable clevis	same	
Distance of hitch point from rear wheel axis-horizontal	1090,1141,1192 mm	1184	mm
Distance of hitch point from PTO shaft end: Vertical	220 mm	250	mm
Horizontal	406,457,508 mm	506,595	mm
Lateral adjustment-Right side	210 mm	223	mm
Left side	210 mm	223	mm
Distance of pivot point from rear wheel axis-horizontal	191 mm	same	
Diameter of drawbar pin hole	36.5 mm	33.0	mm
Maximum vertical static permissible load-short position	16.2 kN	23.6	kN
-intermediate position	16.2 kN	----	
-extended position	16.2 kN	16.2	kN

STEERING

Make/Model/Type	Eaton 450 series hydrostatic gerotor metering unit with load sensing
Method of operation	Steering wheel
Pump(s)	Gear pump
Ram(s)	Two external; double acting
Working pressure	18.5 +/- 0.5 MPa

BRAKE SYSTEM.

Service brake.

Make/Model/Type	Vickers-John Deere load pressure sensing power with manual backup
Method of operation	Hydraulic/oil immersed disc operated by two pedals which can be locked together.

Parking brake.

Type	Spring applied, hydraulically released multi-disc
Method of operation	Gear selector lever

Trailer Brake — None

WHEELS.

Number - Front	Two; Driving and steering
Rear	Two or four; Driving
Wheel base	2950 mm

Track width adjustment

	Minimum [mm]	Maximum [mm]	Adjustment method
Front	1524	2235	Reversing wheels and offset lug rims
Rear	1588	2752	Rack and Pinion axle Reversing wheels and offset lug rims

PROTECTIVE STRUCTURE.

Make/Model/Type	John Deere/SG-052/SoundGard SG 052
Manufacturer's name/address	John Deere Tractor Works Waterloo, Iowa, USA
Protective device	Cab; not tiltable
OECD approval number	John Deere 8300 PS-MFWD (4WD) CSS 0287/2

DRIVER'S SEAT.

Make/Model/Type	Sears/RE62264/JDAir suspension Personal posture cushioning
Type of suspension	Air
Type of damping	Air
Range of adjustment	
Longitudinal	167 mm
Vertical	80 mm
Rotation	20 degrees right 15 degrees left

LIGHTING.

		Height above ground of center [mm]	Size [mmxmm]	Distance from outside edge to median plane of tractor. [mm]
Head lights				
Hood	inner	1721	70x127	200
	outer	1721	70x127	335
Roof	inner	2985	51x127	350
	outer	2985	51x127	501
Side lights		1030	70x127	930
Rear lights	-roof	2943	70x127	460
	-fender	2105	70x127	950
Tail lights		1980	89x210	895
Reflectors				
-front		1714	71x117	947
-rear	-inner	1975	100x 53	790
	-outer	1985	80x 52	947

TEST CONDITIONS.

Overall dimensions.

Length-Overall - without front weights	5447 mm
with front weights	5942 mm
Width - Minimum	3012 mm
- Maximum	3312 mm
Height - Top protective structure	3064 mm
- Top of exhaust	3039 mm
Ground clearance	405 mm
Clearance-limiting part	Rear hitch frame

Tractor Mass (with cab,full fuel tank).

		without driver [kg]	with driver [kg]
Unballasted	Front	3465	3475
	Rear	5133	5198
	Total	8598	8673
Ballasted	Front	4720	4730
	Rear	7102	7167
	Total	11822	11897

Ballast Added

	Number of weights	Total mass [kg]	Liquid [kg]
Front	18	832	----
Rear (duals)	2	894	----
Rear (weights)	16	1394	----
Additional test equipment		104	----

Tire Specifications.

	Front Wheels	Rear Wheels
Make	Goodyear	Goodyear
Dimensions	16.9R30	20.8R42
Number/Ply rating	2 star	2 star
Type	Radial	Radial
Max.load	2470 kg/tire	4154 kg/tire
Inflation pressure(tire mfr)-max	165 kPa	165 kPa
-min	50 kPa	40 kPa
as tested	117 kPa	90 kPa
Dynamic Radius Index	695 mm	905 mm
Chosen track width - singles	1625 mm	1720 mm
- duals		3350 mm

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Oil change hours	Filter change hours
Engine (with filter)	23.5	250	250
Front axle	8.5	1500	As required
Transmission, final drive, rear axle and hydraulics	140	1500	or 750
Final drive, front	3.0	1500	

Oil and Lubricant specifications:

	Recommended	Used during test
Engine oil		
Type	John Deere, Torq-Gard Supreme Plus 50; SAE 15W-40	same
Viscosity	12.8 cSt at 100°C	
Classification	API CE or CD; CCMC specification D5 or D4	
Transmission		
Type	John Deere Hy-Gard (J20C) SAE 10W-30	same
Viscosity	58 cSt at 40°C	
Classification	NA	
Hydraulic fluid	Same as transmission	same
Front axle and hubs		
Type	John Deere EXTREME-GARD SAE 80W-90	same
Viscosity	13.5 cSt at 100°C	
Classification	API GL-5	
Steering system	Same as transmission	same
Grease	John Deere MOLY HIGH TEMPERATURE EP GREASE	same
Number of lube points	23	

Fuel

Type/grade	Premier; Grade 2-D, in conformity with the national standard
Density (Pto test)	0.8355 kg/l at 15° C
(Drawbar test)	same as Pto test.
Cetane number	50.6
Viscosity	2.51 cSt at 38° C

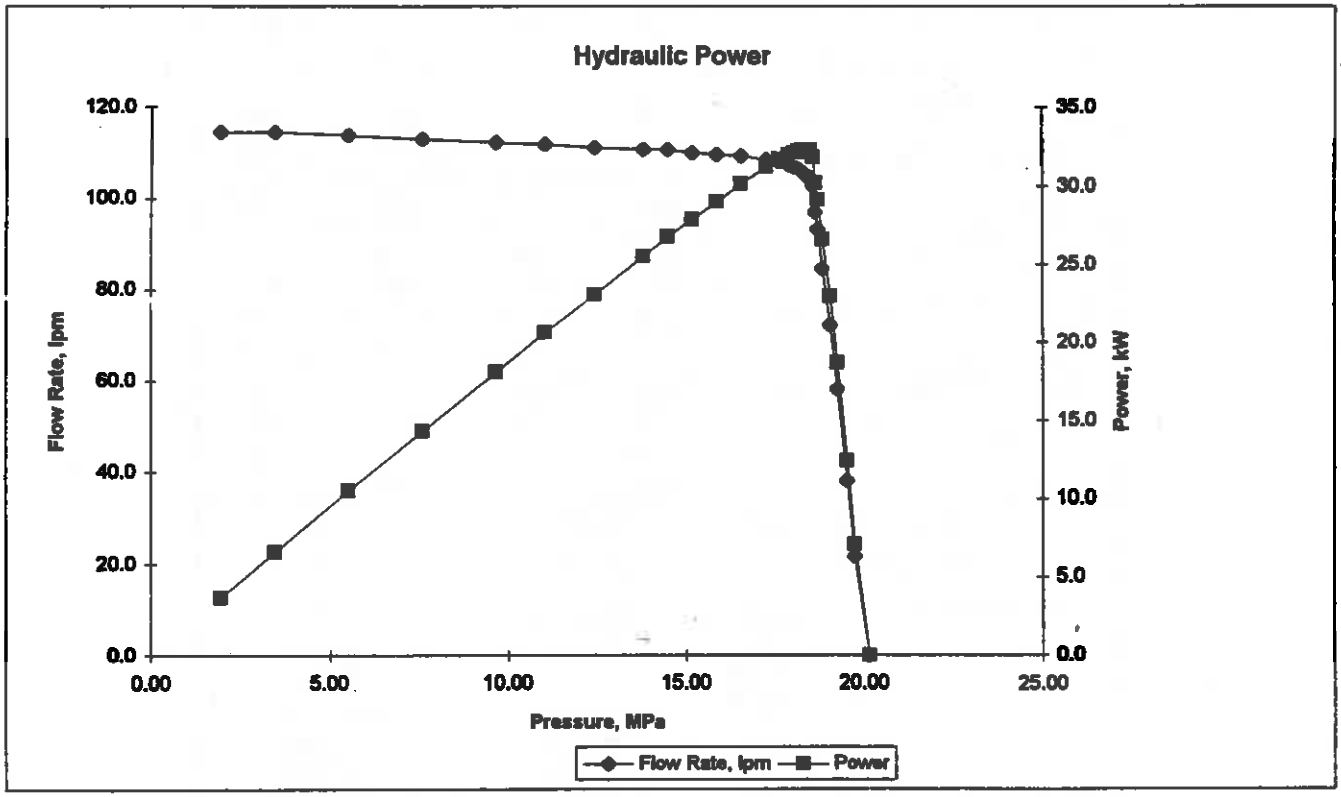
COMPULSORY TESTS

1. MAIN POWER TAKE OFF

Date: 13-Apr-95 Location: UNL Tractor Test Lab, Lincoln, NE, USA						
Type of dynamometer: Eddy current, Eaton				Fuel Density:	0.835 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						
167.72	2000	917	45.96	38.40	0.229	3.65
224.92			*12.14*	*84.65*	*0.376*	*18.52*
1.2 Power at Rated Engine Speed - 1 hour						
151.32	2199	1009	43.75	36.55	0.242	3.46
202.92			*11.56*	*80.59*	*0.397*	*17.56*
1.3 Power at Standard Power Take Off Speed - 1 hour						
151.32	2199	1009	43.75	36.55	0.242	3.46
202.92			*11.56*	*80.59*	*0.397*	*17.56*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
151.32	2199	1009	43.75	36.55	0.242	3.46
202.92			*11.56*	*80.59*	*0.397*	*17.56*
1.4.2 85% of torque obtained in 1.4.1						
132.15	2255	1034	39.25	32.79	0.248	3.37
177.22			*10.37*	*72.30*	*0.408*	*17.09*
1.4.3 75% of torque defined in 1.4.2						
99.62	2266	1040	31.60	26.40	0.265	3.15
133.60			*8.35*	*58.20*	*0.436*	*16.00*
1.4.4 50% of torque defined in 1.4.2						
66.76	2278	1045	24.11	20.14	0.302	2.77
89.53			*6.37*	*44.40*	*0.496*	*14.06*
1.4.5 25% of torque defined in 1.4.2						
33.50	2286	1049	16.61	13.88	0.414	2.02
44.92			*4.39*	*30.60*	*0.681*	*10.23*
1.4.6 unloaded						
0.75	2295	1053	9.61	8.03	10.745	0.08
1.00			*2.54*	*17.70*	*17.665*	*0.39*
1.5 Part Loads at Standard Power Take Off Speed						
1.5.1 Torque at maximum power						
151.32	2199	1009	43.75	36.55	0.242	3.46
202.92			*11.56*	*80.59*	*0.397*	*17.56*
1.5.2 85% of torque obtained in 1.5.1						
132.15	2255	1034	39.25	32.79	0.248	3.37
177.22			*10.37*	*72.30*	*0.408*	*17.09*
1.5.3 75% of torque defined in 1.5.2						
99.62	2266	1039	31.60	26.40	0.265	3.15
133.60			*8.35*	*58.20*	*0.436*	*16.00*
1.5.4 50% of torque defined in 1.5.2						
66.76	2278	1045	24.11	20.14	0.302	2.77
89.53			*6.37*	*44.40*	*0.496*	*14.06*
1.5.5 25% of torque defined in 1.5.2						
33.50	2295	1052	16.61	13.88	0.414	2.02
44.92			*4.39*	*30.60*	*0.681*	*10.23*
1.5.6 unloaded						
0.75	2295	1053	9.61	8.03	10.745	0.08
1.00			*2.54*	*17.70*	*17.665*	*0.39*

No load maximum engine speed:	2295 rev/min	
Equivalent torque at rated speed:	657 N.m	*485 lb-ft*
Equivalent torque at maximum power:	801 N.m	*591 lb-ft*
(engine speed:	2000 rev/min)	
Maximum equivalent crankshaft torque:	945 N.m	*697 lb-ft*
(engine speed:	1400 rev/min)	
Mean Dry bulb:	24 deg C	*75 deg F*
Wet bulb:	15 deg C	*59 deg F*
Relative Humidity	37 %	
Pressure:	97.94 kPa	*28.92 in Hg*
Maximum Coolant:	99 deg C	*211 deg F*
Engine Oil:	110 deg C	*230 deg F*
Fuel:	70 deg C	*158 deg F*
Air Intake:	23 deg C	*74 deg F*
Transmission/hydralic oil:	55 deg C	*131 deg F*
Intake manifold pressure at rated speed:	163 kPa	*23.6 psig*
Intake manifold pressure at maximum power:	174 kPa	*25.3 psig*

Date of Test	21-Apr-95		
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:			
	114.7 l/min		
	30.3 gpm		
III. Flow rate, pressure, power:			
90% of relief valve setting			
	106.7 l/min	18.13 MPa	32.3 kW
	28.2 gpm	*2630 psi*	*43.3 hp*
Maximum hydraulic power:			
	106.0 l/min	18.27 MPa	32.3 kW
	28.0 gpm	*2650 psi*	*43.3 hp*
IV. Hydraulic fluid temperature at flow meter			
	64.2 °C		
	148 °F		



Note: 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, ISO hook type lower link arms with lifting cylinders - (2)100 mm dia.
Date of test: 10 July 1995

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	206/8.1
Vertical movement:			
without load:	[mm/in]	851/33.5	975/38.4
with load:	[mm/in]	833/32.8	950/37.4
Maximum corrected force through full range:	[kN/lb]	60.1/13500	59.3/13338
Corresponding pressure:	[kPa/psi]	18200/2633	
Moment about rear axle:	[kN.m/lb.ft]	80.0/59063	115.3/85030
Maximum mast tilt angle:	[deg]	--	8.9

Lifting height relative to horizontal position of lower links.

	[mm]	-353	-330	-297	-198	-97	3
	[in]	-13.9	-13.0	-11.7	-7.8	-3.8	0.1
Corrected lift forces							
Hitch point.	[kN]	--	60.1	63.5	65.0	68.5	71.5
	[lb]	--	13500	14279	14612	15395	16074
at frame	[kN]	59.3	62.0	--	61.9	63.6	64.9
	[lb]	13338	13928	--	13905	14297	14585

Lifting height relative to horizontal position of lower links.

	[mm]	102	203	302	401	503	597
	[in]	4.0	8.0	11.9	15.8	19.8	23.5
Corrected lift forces							
Hitch point	[kN]	74.4	77.5	83.4	83.5	87.1	--
	[lb]	16731	17433	18756	18774	19584	--
at frame	[kN]	65.5	65.9	65.3	--	64.5	61.5
	[lb]	14733	14819	14733	--	14495	13820

OECD Drawbar Data (SI)

Date of tests:		17,25-May-95		Fuel density:		0.835 kg/l								
Type of track:		Concrete		Test number:		1690								
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 2000 rev/min)						Tire pressure:		90 kPa, rear		117 kPa, front		Drawbar height:		508 mm
*4	96.31	84.76	4.09	2264	14%	0.322	2.60	66	87	102	13	9	67%	97.53
*5	116.59	85.01	4.94	2250	14%	0.304	2.75	69	89	105	13	9	67%	97.53
6	127.88	81.74	5.63	2191	11%	0.288	2.90	69	92	107	14	10	59%	97.46
7	135.07	79.16	6.14	2078	10%	0.277	3.02	69	93	110	14	10	59%	97.46
8	145.74	76.81	6.83	2003	8%	0.263	3.18	68	94	108	15	10	55%	97.46
9	147.19	67.48	7.85	2002	6%	0.260	3.22	69	95	112	15	10	55%	97.46
10	147.65	59.39	8.95	1998	5%	0.259	3.23	69	96	111	17	11	49%	97.39
11	147.46	51.96	10.22	2000	4%	0.259	3.23	69	96	112	17	11	49%	97.39
12	146.75	45.63	11.58	1997	3%	0.261	3.21	68	96	110	19	12	47%	97.29
13	143.76	34.80	14.87	1999	3%	0.265	3.16	68	96	111	19	12	47%	97.39
* 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														
10	133.25	48.24	9.94	2197	3%	0.273	3.06	70	93	110	17	11	49%	97.39
II.1.1 75% of pull at maximum power at rated engine speed														
10	103.83	36.18	10.33	2259	3%	0.293	2.85	65	90	102	22	13	36%	97.16
II.1.2 50% of pull at maximum power at rated engine speed														
10	70.05	24.13	10.45	2272	2%	0.338	2.48	63	86	101	22	13	36%	97.16
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	103.41	36.19	10.29	1766	3%	0.264	3.17	58	89	103	22	13	36%	97.16
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	69.55	24.12	10.38	1765	2%	0.289	2.89	55	87	99	22	13	36%	97.16
II.2 in selected gear nearest to 7.5 km/h at rated engine speed														
8	133.93	62.58	7.70	2199	5%	0.272	3.07	70	93	110	15	10	55%	97.46
II.2.1 75% of pull at maximum power at rated engine speed														
8	104.90	46.94	8.05	2259	3%	0.289	2.89	65	90	103	21	13	45%	97.22
II.2.2 50% of pull at maximum power at rated engine speed														
8	71.10	31.30	8.18	2272	2%	0.329	2.54	63	86	101	21	13	45%	97.22
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
10	104.85	46.89	8.05	1777	3%	0.258	3.24	58	89	103	21	13	45%	97.22
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
10	71.00	31.26	8.18	1787	3%	0.283	2.95	56	87	100	21	13	45%	97.22

OECD Drawbar Data (US)

Date of tests:		17,25-May-95		Fuel density:		6.972 lb/gal								
Type of track:		Concrete		Test number:		1690								
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 2000 rev/min)						Tire pressure:		13 psig, rear		17 psig, front		Drawbar height:		20.0 in
*4	129.16	19054	2.54	2264	14%	0.529	13.18	150	189	216	55	49	67%	28.80
*5	156.34	19112	3.07	2250	14%	0.499	13.96	156	192	221	55	49	67%	28.80
6	171.49	18376	3.50	2191	11%	0.474	14.71	157	198	225	58	50	59%	28.78
7	181.14	17796	3.82	2078	10%	0.455	15.32	157	200	231	58	50	59%	28.78
8	195.44	17267	4.24	2003	8%	0.432	16.13	154	201	226	59	50	55%	28.78
9	197.38	15171	4.88	2002	6%	0.427	16.34	157	203	233	59	50	55%	28.78
10	198.00	13351	5.56	1998	5%	0.426	16.38	156	205	233	63	52	49%	28.76
11	197.75	11681	6.35	2000	4%	0.425	16.39	156	205	234	63	52	49%	28.76
12	196.80	10258	7.19	1997	3%	0.429	16.27	154	205	231	66	54	47%	28.73
13	192.78	7824	9.24	1999	3%	0.435	16.02	155	205	232	66	54	47%	28.76
* 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														
10	178.69	10845	6.18	2197	3%	0.449	15.52	158	200	231	63	52	49%	28.76
II.1.1 75% of pull at maximum power at rated engine speed														
10	139.23	8133	6.42	2259	3%	0.482	14.46	149	194	216	71	55	36%	28.69
II.1.2 50% of pull at maximum power at rated engine speed														
10	93.94	5424	6.49	2272	2%	0.555	12.57	145	186	214	71	55	36%	28.69
II.1.3 higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	138.68	8135	6.39	1766	3%	0.433	16.09	137	192	218	71	55	36%	28.69
II.1.4 higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	93.27	5422	6.45	1765	2%	0.475	14.69	131	188	210	71	55	36%	28.69
II.2 in selected gear nearest to 4.6 mph at rated engine speed														
8	179.60	14068	4.79	2199	5%	0.448	15.58	159	200	230	59	50	55%	28.78
II.2.1 75% of pull at maximum power at rated engine speed														
8	140.67	10552	5.00	2259	3%	0.475	14.69	150	194	218	69	56	45%	28.71
II.2.2 50% of pull at maximum power at rated engine speed														
8	95.34	7038	5.08	2272	2%	0.540	12.91	145	186	215	69	56	45%	28.71
II.2.3 higher gear at reduced engine speed, same pull and travel speed as II.2.1														
10	140.61	10541	5.00	1777	3%	0.425	16.42	137	192	217	69	56	45%	28.71
II.2.4 higher gear at reduced engine speed, same pull and travel speed as II.2.2														
10	95.22	7029	5.08	1787	3%	0.465	15.00	133	188	212	69	56	45%	28.71

John Deere 8300

Power and Equivalent Crankshaft Torque

John Deere 8300

Specific Fuel Consumption and Fuel Rate

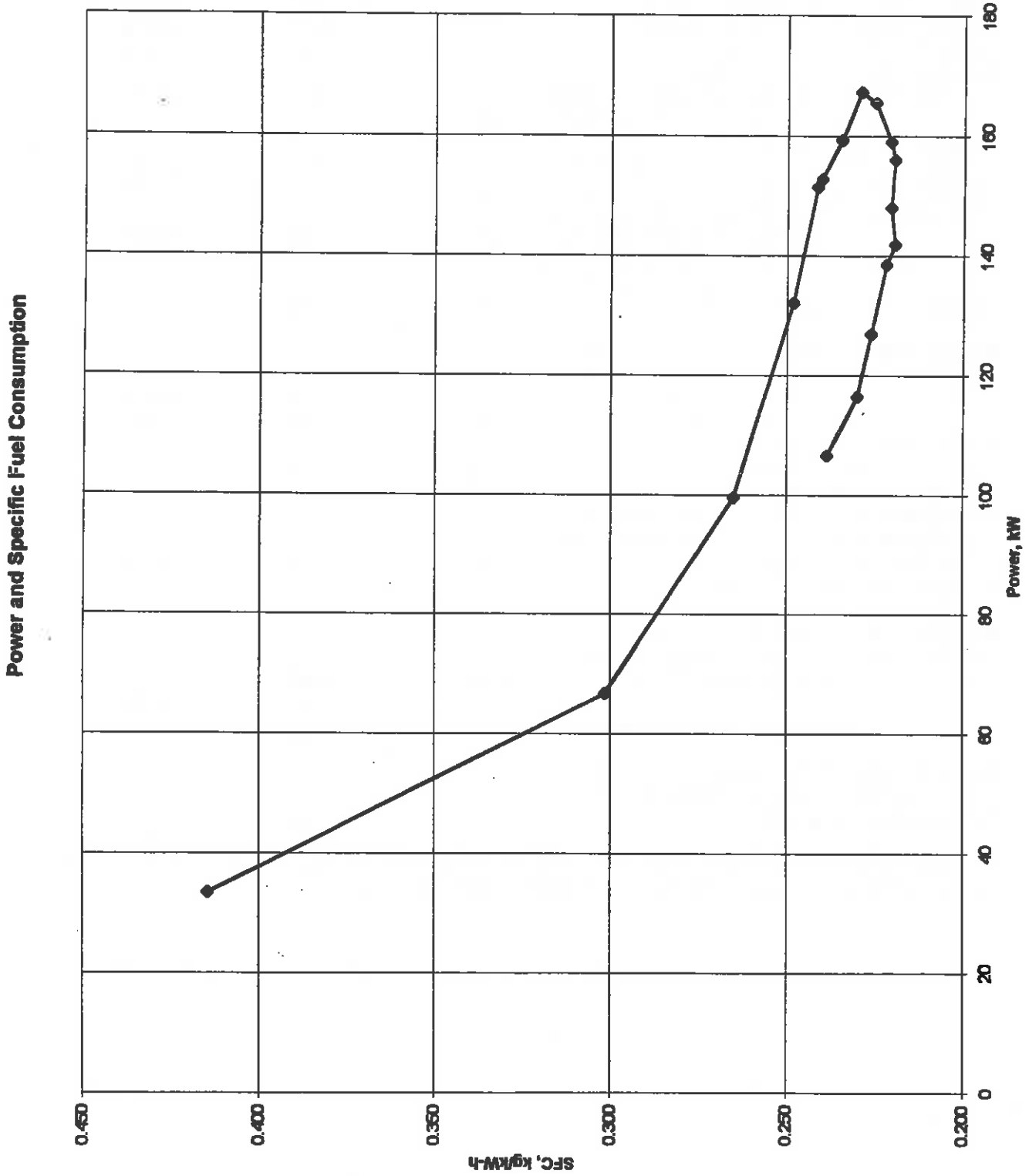

Power and Specific Fuel Consumption
SFC, kg/kW-h
0.450
0.400
0.350
0.300
0.250
0.200
Power, kW
0
20
40
60
80
100
120
140
160
180

Table 1.2 - Linkage geometry dimensions-North Amarican version - Standard setting

(with Quick-Attach hitch)			Dimension or range [mm]	Settings used on test [mm]
Lift category			III	III
Rear Tire - Radius Index	(r)		905	same
Front Tire - Radius Index	(r')		695	same
Length of lift arms	(A)		495	same
Length of lower links				
without Quick-Attach hitch	(B)		967	same
with Quick-Attach hitch	(B)		1056	
Distance of lift				
arm pivot from: horizontal	(a)		-240	same
rear wheel axis: vertical	(b)		495	same
Horizontal distance between the 2 lower link points	(U)		600	same
Horizontal distance between the 2 lift arm end points	(V)		750	same
Length of upper link	(S)		695	
		to	813	718
Distance of upper link pivot point from rear wheel axis				
- horizontal	(c)		515	same
- vertical	(d)		123	same
Distance of lower				
link pivot from: horizontal	(e)		275	same
rear wheel axis: vertical	(f)		350	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)		716	same
Length of lift rods	(L)		968	
		to	1063	1054
Height of lower hitch points relative to rear wheel axis				
In low position	(h)		689	
		to	552	676
In high position	(H)		243	
		to	96	114
Height above ground of lower hitch points when locked in transport position			1126	
		to	1022	1092

Tire dynamic index of 905 mm ISO 4251/1-1992

2.2 POWER LIFT TEST. Cat III, N.A. quick attaching coupler with lifting cylinders - (2)90 mm dia
(for dimensions see p.22)
Date of test: 11 July 1995

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	198/7.8
Vertical movement:			
without load:	[mm/in]	795/31.3	940/37.0
with load:	[mm/in]	769/30.3	899/35.4
Maximum corrected force through full range:	[kN/lb]	52.1/11709	48.2/10827
Corresponding pressure:	[kPa/psi]	18000/2614	
Moment about rear axle:	[kN.m/lb.ft]	69.3/51129	93.5/68932
Maximum mast tilt angle:	[deg]	--	9.4

Lifting height relative to horizontal position of lower links.

	[mm]	-361	-330	-297	-198	-97	3
	[in]	-14.2	-13.0	-11.7	-7.8	-3.8	0.1
Corrected lift forces							
Hitch point.	[kN]	--	52.1	55.5	56.7	59.5	61.8
	[lb]	--	11709	12483	12749	13365	13883
at frame	[kN]	50.7	53.0	--	52.1	52.7	52.8
	[lb]	11394	12925	--	11705	11840	11867

Lifting height relative to horizontal position of lower links.

	[mm]	102	203	302	401	439	538
	[in]	4.0	8.0	11.9	15.8	17.3	21.2
Corrected lift forces							
Hitch point	[kN]	63.9	66.1	67.8	69.6	70.1	--
	[lb]	14364	14859	15233	15651	15768	--
at frame	[kN]	52.5	54.4	--	50.9	48.9	48.2
	[lb]	11795	12222	--	11439	10998	10827

Table 1.3 - Linkage geometry dimensions-North American Optional High Lift version and setting.

(with Quick-Attach hitch)			Dimension or range [mm]	Settings used on test [mm]
Lift category			III	III
Rear Tire - Radius Index	(r)		905	same
Front Tire - Radius Index	(r')		695	same
Length of lift arms	(A)		495	same
Length of lower links				
without Quick-Attach hitch	(B)		967	same
with Quick-Attach hitch	(B)		1056	
Distance of lift arm pivot from: horizontal	(a)		-240	same
rear wheel axis: vertical	(b)		495	same
Horizontal distance between the 2 lower link points	(U)		600	same
Horizontal distance between the 2 lift arm end points	(V)		750	same
Length of upper link	(S)		695	
		to	813	724
Distance of upper link pivot point from rear wheel axis				
- horizontal	(c)		515	same
- vertical	(d)		186	same
Distance of lower link pivot from: horizontal	(e)		275	same
rear wheel axis: vertical	(f)		350	same
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)		716	same
Length of lift rods	(L)		968	
		to	1063	1054
Height of lower hitch points relative to rear wheel axis				
In low position	(h)		689	
		to	552	676
In high position	(H)		243	
		to	96	114
Height above ground of lower hitch points when locked in transport position			1126	
		to	1022	1092

Tire dynamic index of 905 mm ISO 4251/1-1992

2.2 POWER LIFT TEST. Cat III, N.A. quick attaching coupler with lifting cylinders - (2)100 mm dia
(for dimensions see p.24)
Date of test: 11 July 1995

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	229/9.0	208/8.2
Vertical movement:			
without load:	[mm/in]	782/30.8	848/33.4
with load:	[mm/in]	770/30.3	826/32.5
Maximum corrected force through full range:	[kN/lb]	65.6/14747	67.4/15147
Corresponding pressure:	[kPa/psi]	18100/2618	
Moment about rear axle:	[kN.m/lb.ft]	87.3/64393	130.7/96436
Maximum mast tilt angle:	[deg]	--	3.3

Lifting height relative to horizontal position of lower links.

	[mm]	-351	-330	-297	-198	-97	3
	[in]	-13.8	-13.0	-11.7	-7.8	-3.8	0.1
Corrected lift forces							
Hitch point.	[kN]	--	65.6	66.7	71.2	73.8	77.6
	[lb]	--	14747	14990	16011	16592	17438
at frame	[kN]	73.3	74.9	--	75.5	73.7	73.7
	[lb]	16470	16830	--	16979	16569	16574

Lifting height relative to horizontal position of lower links.

	[mm]	102	203	302	401	439	475
	[in]	4.0	8.0	11.9	15.8	17.3	18.7
Corrected lift forces							
Hitch point	[kN]	80.5	83.2	85.7	88.2	88.3	--
	[lb]	18095	18693	19269	19818	19850	--
at frame	[kN]	75.1	72.7	71.3	--	69.1	67.4
	[lb]	16880	16344	16034	--	15530	15147

(Tests conducted under the supervision of the Nebraska Tractor Testing Laboratory)

OECD Drawbar Data (SI)

Date of tests: 27-May-95 | Fuel density: 0.835 kg/l
Type of track: Concrete | Test number: 1690

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel humidity	Baro. Pres
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (ballasted, 4wd at 2000 rev/min)						Tire pressure:		55 kPa, rear		159 kPa, front		Drawbar height:		508 mm
*3	107.49	113.77	3.40	2257	9%	0.298	2.81	64	86	100	12	7	49%	98.27
4	128.93	108.68	4.27	2202	8%	0.284	2.94	68	87	104	12	7	49%	98.27
5	143.13	106.50	4.84	2044	8%	0.266	3.15	68	89	107	13	7	38%	98.27
6	146.72	97.39	5.42	1999	6%	0.261	3.20	69	92	109	14	7	35%	98.24
7	148.22	85.63	6.23	2002	5%	0.258	3.23	69	94	109	14	7	35%	98.24
8	148.44	75.62	7.07	1998	4%	0.256	3.26	68	93	109	14	7	35%	98.24
9	148.07	66.27	8.04	2005	4%	0.259	3.23	68	94	110	16	8	34%	98.24
10	147.57	58.45	9.09	2000	3%	0.258	3.23	68	92	109	16	8	34%	98.17
11	146.30	51.08	10.31	1997	3%	0.260	3.21	68	94	109	16	8	34%	98.17
12	145.35	44.77	11.69	2001	3%	0.263	3.17	68	94	110	17	9	32%	98.17
13	141.05	33.98	14.94	2000	2%	0.271	3.08	67	94	106	17	9	32%	98.10
* Note: Pull limited to avoid excessive tractor bouncing														
II. Maximum Power (ballasted, 4wd at 2200 rev/min)						Tire pressure:		55 kPa, rear		159 kPa, front		Drawbar height:		508 mm
*3	106.86	113.29	3.40	2257	9%	0.299	2.80	65	84	100	12	7	49%	98.27
4	128.84	107.50	4.31	2208	8%	0.285	2.93	69	87	104	12	7	49%	98.27
5	134.88	90.87	5.34	2199	5%	0.272	3.07	69	89	106	13	7	38%	98.24
6	134.53	79.69	6.08	2200	4%	0.272	3.07	70	89	107	14	7	35%	98.24
7	134.66	70.12	6.91	2198	4%	0.270	3.09	69	92	104	14	7	35%	98.24
8	133.46	61.21	7.85	2203	3%	0.273	3.06	70	91	109	14	7	35%	98.24
9	133.37	54.11	8.87	2199	3%	0.273	3.06	70	93	109	14	7	35%	98.24
10	131.46	47.11	10.05	2200	3%	0.279	3.00	70	90	108	16	8	34%	98.17
11	130.06	41.00	11.42	2202	3%	0.280	2.99	69	92	108	16	8	34%	98.17
12	127.61	35.59	12.91	2201	2%	0.286	2.92	70	92	109	17	9	32%	98.10
* Note: Pull limited to avoid excessive tractor bouncing														

OECD Drawbar Data (US)

Date of tests: 27-May-95 | Fuel density: 6.972 lb/gal
Type of track: Concrete | Test number: 1690

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel humidity	Baro. Pres
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (ballasted, 4wd at 2000 rev/min)						Tire pressure:		8 psig, rear		23 psig, front		Drawbar height:		20.0 in
*3	144.15	25576	2.11	2257	9%	0.489	14.25	148	186	213	53	44	49%	29.02
4	172.90	24432	2.65	2202	8%	0.468	14.91	155	189	219	53	44	49%	29.02
5	191.94	23943	3.01	2044	8%	0.437	15.97	154	193	224	56	44	38%	29.02
6	196.76	21894	3.37	1999	6%	0.430	16.23	156	198	228	58	45	35%	29.01
7	198.77	19250	3.87	2002	5%	0.425	16.41	156	202	229	58	45	35%	29.01
8	199.06	17001	4.39	1998	4%	0.422	16.54	154	199	229	58	45	35%	29.01
9	198.56	14898	5.00	2005	4%	0.425	16.39	155	202	231	61	47	34%	29.01
10	197.89	13141	5.65	2000	3%	0.425	16.41	154	198	228	61	47	34%	28.99
11	196.19	11483	6.41	1997	3%	0.428	16.30	155	202	229	61	47	34%	28.99
12	194.92	10065	7.26	2001	3%	0.433	16.11	154	201	230	63	48	32%	28.99
13	189.15	7640	9.28	2000	2%	0.446	15.64	152	201	222	63	48	32%	28.97
* Note: Pull limited to avoid excessive tractor bouncing														
II. Maximum Power (ballasted, 4wd at 2200 rev/min)						Tire pressure:		8 psig, rear		23 psig, front		Drawbar height:		20.0 in
*3	143.30	25469	2.11	2257	9%	0.491	14.19	149	184	212	53	44	49%	29.02
4	172.77	24168	2.68	2208	8%	0.469	14.88	156	189	220	53	44	49%	29.02
5	180.88	20429	3.32	2199	5%	0.447	15.60	156	192	223	56	44	38%	29.01
6	180.41	17916	3.78	2200	4%	0.448	15.58	158	193	224	58	45	35%	29.01
7	180.58	15764	4.30	2198	4%	0.445	15.68	156	197	219	58	45	35%	29.01
8	178.97	13760	4.88	2203	3%	0.449	15.53	158	196	228	58	45	35%	29.01
9	178.85	12166	5.51	2199	3%	0.449	15.52	157	199	228	58	45	35%	29.01
10	176.29	10591	6.24	2200	3%	0.458	15.22	157	194	227	61	47	34%	28.99
11	174.41	9217	7.10	2202	3%	0.460	15.17	157	198	226	61	47	34%	28.99
12	171.13	8000	8.02	2201	2%	0.470	14.83	157	198	229	63	48	32%	28.97
* Note: Pull limited to avoid excessive tractor bouncing														

MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test	19 April, 1995
Location of test	Nebraska Tractor Test, Lincoln, NE. USA
Sound level meter	Bruel and Kjär 2203
Type of track	Concrete oval
Gear number	16th
Speed prior to acceleration	27.9 km/h
Measured noise level	89.0 dB(A)

Remarks : None
Repairs : None