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Date of approval: February 15, 1990

CENTER FOR AGRICULTURAL EQUIPMENT
DEPARTMENT OF AGRICULTURAL ENGINEERING
INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA - EAST CAMPUS
LINCOLN, NEBRASKA 68583-0832, USA

REPORT ON TEST IN ACCORDANCE WITH OECD STANDARD CODE FOR THE
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OFFICIAL TESTING OF AGRICULTURAL TRACTOR PERFORMANCE
=====

RESTRICTED TEST-CODE II
=====

JOHN DEERE 4355 POWERSHIFT WITH MECHANICAL
FRONT WHEEL DRIVE (4 WD)



MANUFACTURED BY: John Deere Waterloo Works
P.O.Box 3500
Waterloo, Iowa 50706, USA

NEBRASKA TEST NO.1620

Test date: April-May 1989

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 February 15, 1990

John Deere 4555 Powershift with MFWD

OECD # 1235

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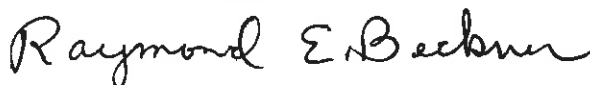


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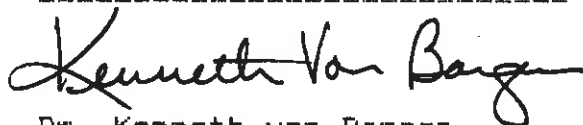


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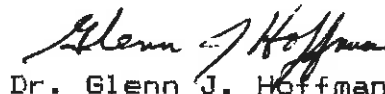


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Date: 27 April 1990

LINCOLN, NEBRASKA 68583-0832, USA

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SPECIFICATIONS OF TRACTOR.

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Manufacturers name/address	: John Deere Tractor Works P.O. Box 3500 Waterloo, Iowa
Submitted for test by	: The manufacturer
Selected for test by	: The manufacturer in agreement with the test station.
Place of running in	: John Deere P.E.C. Waterloo, Iowa
Duration of running in	: 55.0 hours
Location of Test	: Center for Agricultural Equip- ment, Lincoln, Nebraska, USA.

TRACTOR SPECIFICATIONS.

Make	John Deere
Model	4555
Type	Unit construction, mechanical front wheel drive (4WD)
Number of driving wheels	4
Serial Number	*RW4555P001019*
1st Serial number	*RW4555P001001*

ENGINE.

Make	John Deere
Model	6076TRW07
Type	Diesel, turbocharged.
Serial Number	*RG6076T102916*

Cylinders

Number/Disposition	6, in-line, vertical
Bore/stroke	115.8 mm x 120.7 mm (4.56 in x 4.75 in)
Capacity	7634 ml (466 cu in)
Compression Ratio	16.0 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet, replacable

Super charging

Make/Model/Type	Air Research/RE29308/ exhaust gas driven
Pressure	100-125 kPa (15-18 psi) 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	386 liter (102 US gallons)

Make/Model/Type Injection Pump	Nippondenso/RE36654/In line
Pump Serial number	9H0029
Production setting of pump	
Flow Rate (Rated Eng.Spd & Full Load)	28.4 +/- 1.3 kg/hr 62.6 +/- 2.8 lb/hr
Make/Model/Type Injectors	Nippondenso/RE30084/21 mm
Injection pressure	29.0 MPa (4200 psi)
Timing	27 degrees before TDC
 <u>Governor</u>	
Make/Model/Type	Nippondenso/RSV200/mechanical
Governed engine speed range	From 800 to 2400 rev/min
Rated engine speed	2200 rev/min
High-idle speed range	2375 +/-25 rev/min
 <u>Air Cleaner.</u>	
Pre-cleaner	
Make/Model/Type	Donaldson/plastic mesh chaff screen top of air stack
Air intake location	
Primary Cleaner	
Make/Model/Type	Donaldson/AR80652/ pleated paper
Secondary element	
Make/Model/Type	Donaldson/AR80653/ pleated paper
Maintenance indicator	Dash mounted light and horn
 <u>Lubrication system.</u>	
Type of feed pump	Full pressure, positive displacement
Type of filters	Full flow with bypass
Number	one
Oil cooler	Heat exchanger with engine coolant
 <u>Cooling system.</u>	
Type of coolant	Liquid
Type of pump	Centrifugal
Fan specification	Belt driven, variable speed
Number of fan blades	8
Fan diameter	660 mm (26.0 in)
Coolant system capacity	30.3 l (32 qt)
Type of temperature control	2 thermostats and variable speed fan
Superpressure system	69 kPa (10 psi)
 <u>Starting system.</u>	
Make/Model/Type of starter	Nippondenso/RE38336/electric
Power Rating	4.75 kW (6.4 hp)
Cold starting aid	Ether spray in intake manifold.
Safety device	Electrical lockout on gearshift

Electrical system.

Voltage & grounding.

12 Volt DC;negative ground

Generator

Make/Model/Type

Nippondenso/RE37201/belt driven

Power rating

120 Amp @ 2200 engine rev/min.

Batteries

Number & connection

2-12 V batteries in parallel

Rating

175 Ampere-hours per battery

at 20 hour rating

925 cold crank amps per battery

Exhaust system.

Make/Model/Type

Donaldson/RE35449/

expansion chamber

Location

vertical above hood,

left of centerline

TRANSMISSION.

=====

Clutch. (travel)

Make/Model/Type

John Deere/multiple plate

oil cooled

Number of plates

3,4, or 7(depending on gear)

Plate diameter

279.4 mm (11.0 in)

Method of operation

Hydraulically actuated

by foot pedal

Gear Box.

Make/Model/Type

John Deere/full powershift

Arrangement

planetary design consisting of:

one input planetary gearset,

one 2 speed planetary gearset,

two compound planetary gearsets,

all with multiple wet disc

clutches and brakes

Number of gears

15 forward and 4 reverse

controlled by single

hand lever

Oil cooler

Heat exchanger with air

Available options

None

Rear axle and final drives.

Make/Model/Type

John Deere/crown wheel and

pinion, differential and

inboard planetary reduction

Differential Lock

Type

Hydraulic

Method of engagement

Foot pedal

Method of disengagement

Self disengaging with

foot pedal

Front Axle and final drives.

Make/Model/Type

John Deere/crown wheel and
pinion, differential and
outboard 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 892 mm (35.1 in) ISO 4251/1-1984)

=====				
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]	[mph]	
1 fwd	333.84	2.22	1.38	
2 fwd	233.05	3.18	1.97	
3 fwd	192.81	3.84	2.38	
4 fwd	153.52	4.82	3.00	
5 fwd	133.25	5.55	3.45	
6 fwd	117.40	6.30	3.92	
7 fwd	101.95	7.26	4.51	
8 fwd	88.71	8.34	5.18	
9 fwd	77.00	9.61	5.97	
10 fwd	67.84	10.91	6.78	
11 fwd	58.89	12.57	7.81	
12 fwd	52.64	14.06	8.74	
13 fwd	42.54	17.40	10.81	
14 fwd	30.41	24.34	15.12	
15 fwd	24.58	30.11	18.71	
1 rev	240.96	3.07	1.91	
2 rev	168.32	4.40	2.73	
3 rev	110.89	6.67	4.15	
4 rev	73.60	10.06	6.25	
=====				

Number of front wheel revolutions
for one rear wheel revolution. 1.3115

POWER - TAKE - OFF.

=====

Main Power-Take-Off.

Type

Method of engagement

Number of shafts

Independent

Hydraulically actuated multi-plate wet clutch operated by hand lever, independent of main drive clutch.

One.

Standard PTO. 1000 rev/min.

Location

Diameter of shaft

Number of splines

Height above ground

Distance from median plane
of tractor

Distance behind rear axle

PTO Speed @ rated engine speed

Engine speed @ Std. PTO Speed

Engine speed/PTO speed ratio

Direction of rotation when

viewed from shaft end

Rear of tractor, vertical center plane.

44.5 mm (1.75 in)

20; conforms to ISO 500/1979.

714 mm (28.1 in)

0 mm

559 mm (22.0 in)

998 rev/min

2205 rev/min

2.2045

Clockwise.

POWER LIFT.

=====

Make	John Deere
Type of hydraulic system	Hydraulic lift with variable mix of draft and position control; Lower link sensing with adjustable speed of drop closed center
Number/Type of cylinders	One internal with one or two optional external, all single acting
Type of linkage lock for transport	Hydraulic
Relief valve setting	17.5 +/- 0.30 MPa 2535 +/- 45 psi
Opening pressure of cylinder safety valve	20.7 MPa (3000 psi)
Lift pump type	Radial piston, variable delivery constant pressure
Power transmission to pump	Direct drive
Type/Number of filters	paper element/one
Location of oil reservoir	Transmission housing
Number/Type/Location of tapping points.	3 pairs of ISO standard couplings at rear of tractor. (a 4th set is optional)
Max. oil volume available for external cylinders.	6.0 l (6.3 qt) 13.0 l (13.7 qt) with 7.0 l (7.4 qt) allowable overfill

THREE POINT LINKAGE.

=====

- Category 3 in conformity with ISO 730/1-1977
- Category adaptor - Quick Coupler

THREE POINT LINKAGE.

Figure 1.1

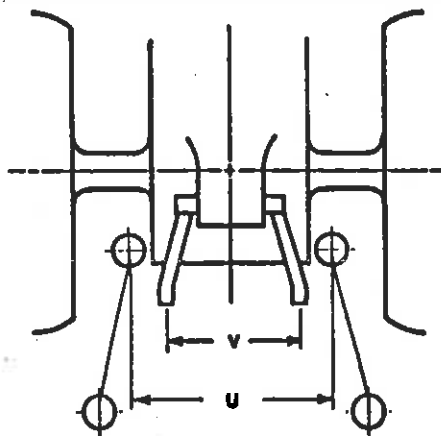
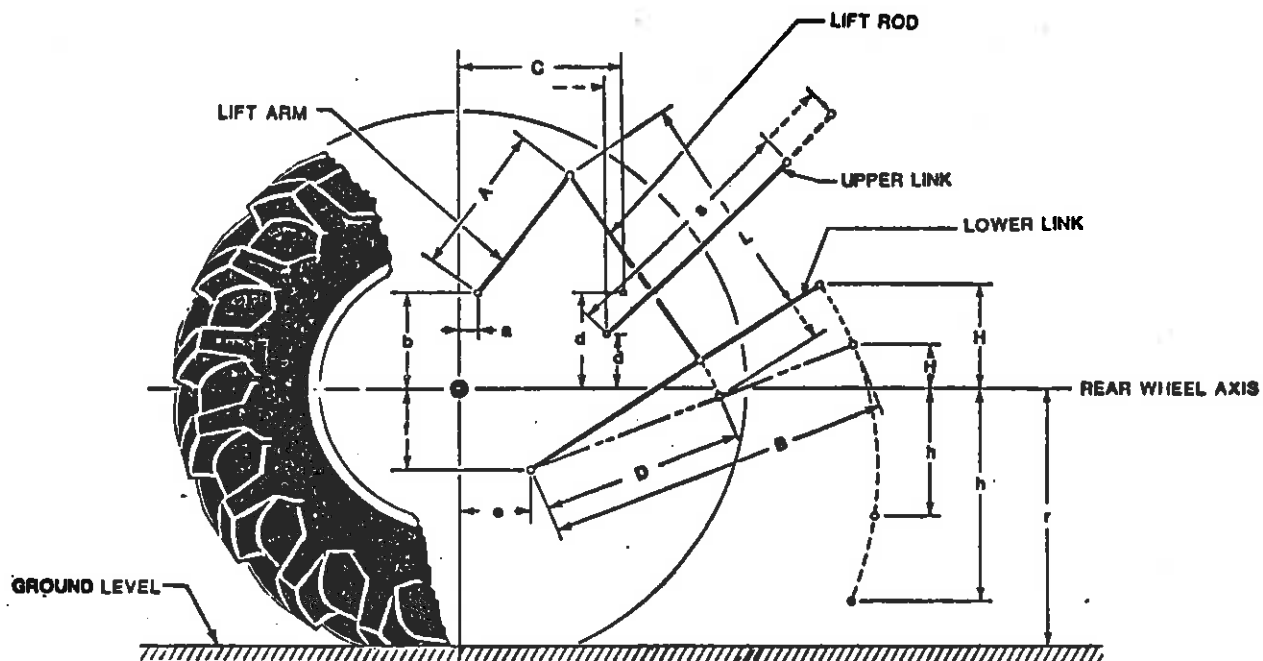


Figure 1.2

Table 1.1 --*Linkage geometry dimensions.

		Dimension or range		Settings used on test	
		[mm]	[in]	[mm]	[in]
Lift category		III			
Rear Tire - Radius Index	(r)	892	35.1		
Front Tire - Radius Index	(r')	684	26.9		
Length of lift arms	(A)	468	18.4	same	
Length of lower links	(B)	968	38.1	same	
Distance of lift					
arm pivot from: horizontal	(a)	0	0	same	
rear wheel axis: vertical	(b)	327	12.9	same	
Horizontal distance between the					
2 lower link points	(u)	582	22.9	same	
Horizontal distance between the					
2 lift arm end points	(v)	746	29.4	same	
Length of upper link	(S)	705	27.8		
	to	825	32.5	714	28.1
Distance of upper					
link pivot from: horizontal	(c)	384	15.1	same	
rear wheel axis: vertical	(d)	172	6.8	same	
Distance of lower					
link pivot from: horizontal	(e)	156	6.1	same	
rear wheel axis: vertical	(f)	330	13.0	same	
Distance of lower link pivot					
points to lift rod pivot pts					
on lower links.	(D)	716	28.2	same	
Length of lift rods	(L)	860	33.8		
	to	947	37.3	947	37.3
Height of lower hitch points					
relative to rear wheel axis					
In low position	(h)	554	21.8		
	to	678	26.7	660	26.0
In high position	(H)	147	5.8		
	to	249	9.8	162	6.4
Height above ground of lower					
hitch points when locked in					
transport position.		1039	40.9		
	to	1140	44.9	1054	41.5
*Assuming (r) with a tire dynamic index of 892 mm (35.1 in)					
ISO 4251/1-1984					

SWINGING DRAWBAR.

=====

Type	Oscillating
Height above ground	Minimum: 455 mm (17.9) Maximum: 580 mm (22.9)
Adjustments	Inverting drawbar and repositioning clevis.
Distance of hitch point from rear wheel axis, horizontal	1003 mm (39.5 in), 1067 mm (42.0 in)
Distance of hitch point from PTO shaft end	
Vertical	127 mm (5.0 in), 222 mm (8.7 in)
Horizontal	444 mm (17.5 in), 508 mm (20.0 in)
Lateral adjustment; Right hand	229 mm (9.0 in)
Left hand	229 mm (9.0 in)
Distance of pivot point from rear wheel axis; horizontal	511 mm (20.1 in) forward.
Diameter of drawbar pin hole	37 mm (1.5 in)
Maximum vertical static permissible load	16.4 kN (3650 lb)

STEERING

=====

Make/Model/Type	John Deere/Hydrostatic
Method of operation	Steering wheel
Pump	Same as main hydraulic pump
Ram(s)	Two internal
Working pressure	Same as main hydraulic pressure

BRAKES.

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Service brake.

Make/Model/Type	John Deere/oil immersed disc
Method of operation	Hydraulically actuated from main system; operated by two pedals which can be locked together.

Parking brake.

Type	Transmission lock
Method of operation	Gear selector lever

Trailer Brake (optional)

Type	Hydraulic
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WHEELS.

=====

Number.	
Front	Two; Driving and steering
Rear	Two or four; Driving
Wheelbase	2974 mm (117.1 in)

Track width adjustment

	Minimum		Maximum		Adjustment method
	[mm]	[in]	[mm]	[in]	
Front	1603	63.1	2166	85.3	Reversing wheels and offset lug rims
Rear	1574	62.0	2938	115.7	Rack and pinion axle reversing wheels and offset lug rims

PROTECTIVE STRUCTURE.

=====

Make/Model/Type	John Deere/SG025/ Sound-Gard Body
Manufacturer's name/address	John Deere Tractor Works Waterloo, Iowa
Protective device	Cab, not tiltable.
DECD approval number	CSS 001/10

DRIVER'S SEAT.

=====

Make/Model/Type	John Deere/HydraCushioned
Type of damping and suspension	Gas charged accumulator and spring loaded attenuator
Range of adjustment:	
Longitudinal	150 mm (5.9 in)
Vertical	64 mm (2.5 in)
Rotation	25 degrees each way

LIGHTING.

=====

	Height above ground of center		Size	Distance from out - side edge to median plane of tractor.	
	[mm]	[in]		[mm]	[in]
Headlights	1814	71.4	50 x 125	317	12.5
	1961	77.2	100 dia.	978	38.5
Rearlights	2814	110.8	100 dia.	813	32.0
	2096	82.5	100 dia.	813	32.0
Rear reflectors	2951	116.2	50 x 197	554	21.8
	1948	76.7	50 x 190	870	34.3

TEST CONDITIONS.

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Overall dimensions.

Length		5461 mm (215.0 in)
Width	Minimum	2758 mm (108.6 in)
	Maximum	2997 mm (118.0 in)
Height - Top of cab		3099 mm (122.0 in)
- Top of exhaust		3226 mm (127.0 in)
Ground clearance. (unballasted)		394 mm (15.5 in)
Clearance-limiting part		Hitch sway blocks

Tractor Mass (with cab, full fuel tank).

=====

		without driver		with driver	
		[kg]	[lb]	[kg]	[lb]
Unballasted	Front	2898	6390	2898	6390
	Rear	5155	11365	5230	11530
	Total	8053	17755	8128	17920
Ballasted	Front	3590	7915	3590	7915
	Rear	6278	13840	6353	14005
	Total	9868	21755	9943	21920

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Ballast.

=====

		Number of weights	Mass (total)		Water	
			[kg]	[lb]	[kg]	[lb]
Front	none				none	
Rear	2		454	1000	none	
Duals (rear)	2		776	1710		
Additional						
front frame	1		45	100		
+ weights	10		454	1000		
test equipment			86	190		

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Tire Specifications.

	Front Wheels	Rear Wheels
Make	Firestone	Firestone
Dimensions	14.9R30	18.4R42
Ply rating	3 star (10 ply)	3 star (10 ply)
Type	Radial	Radial
Max.load (tire manufacturer)	2240 kg/tire (4940 lb/tire)	3355 kg/tire (7400 lb/tire)
Max.load (tractor manufacturer)	2270 kg/tire (5010 lb/tire)	3355 kg/tire (7400 lb/tire)
Inflation pressure (tire mfr)	205 kPa (30 psi)	165 kPa (24 psi)
Dynamic Radius Index	684 mm (26.9 in)	892 mm (35.1 in)
Chosen track width - singles	1755 mm (69.1 in)	1765 mm (69.5 in)
- duals		3277 mm (129.0 in)

Oils and Lubrication.

	Capacity and change interval:		Oil change hrs	Filter change hrs
	Capacity liter	quart		
Engine (w/o filter)	21	22	250	250
Gear Box (includes rear axle and rear final drive)	75	80	1500	annually
Front axle housing	9	9.5		NA
Final drive, front	4.5	4.8		NA
Hydraulic system	common with gear box			

Oil and Lubricant specifications:

	Recommended	Used during test
Engine oil		
Type	John Deere Torq-Gard Supreme	same
Viscosity	102 cSt	
Classification	API - CD Mil-L-2104D	
Transmission		
Type	John Deere Hy-Gard	same
Viscosity	58 cSt	
Classification	NA	
Hydraulic fluid	same as transmission oil	same
Steering oil	same as transmission oil	same
Front axle and hubs		
Type	Gear Lubricant	same
Viscosity	85W-140	
Classification	GL-5	
Grease		
Number of lubrication points	23	

Fuel

Type/grade	Diesel Fuel "Premier"; grade 2-D
Density (Pto test)	0.828 g/cubic-cm (6.912 lb/gallon) at 15 °C (59 °F)
(Drawbar test)	same as Pto test.
Cetane number	51.1
Viscosity	2.31 cSt at 38 °C (100 °F)

Remarks: This tractor is equipped with a variable speed cooling fan. Since engine power is influenced by fan speed, all power tests were conducted at approximately the same ambient air temperatures.

COMPULSORY TESTS.

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(1) MAIN POWER TAKE-OFF PERFORMANCE (1000 rev/min).

Date of tests : April 17, 1989
Location of tests : Center for Agricultural Equipment,
University of Nebraska, Lincoln, Nebraska.
Type of Dynamometer: Eaton Dynamatic 2025 D.G.
=====

Power kW (hp)	Speeds		Fuel Consumption			Specific
	engine	PTO	hourly	specific	energy	
	rev/min	rev/min	l/h (gal/h)	kg/h (lb/h)	kg/kW.h (lb/hp.h)	kW.h/l (hp.h/gal)

1.1 Maximum Power- 2 hour test.						

121.15 (162.47)	1900	862	32.99 (8.72)	27.33 (60.25)	0.226 (0.371)	3.67 (18.64)

1.2 Power at rated engine speed. (1 hour)						

116.99 (156.89)	2200	998	33.83 (8.94)	28.02 (61.78)	0.240 (0.394)	3.46 (17.55)

1.3 Maximum power at standard PTO speed. (1000 rev/min)						

116.99 (156.89)	2200	998	33.83 (8.94)	28.02 (61.78)	0.240 (0.394)	3.46 (17.55)

1.4 Part Loads - governor hand lever set for maximum power at rated engine speed

Power kW (hp)	Speeds		Fuel Consumption			Specific energy kW.h/l (hp.h/gal)
	engine rev/min	PTO rev/min	hourly	specific		
			l/h (gal/h)	kg/h (lb/h)	kg/kW.h (lb/hp.h)	
i. Torque corresponding to maximum power at rated engine speed.						
116.99 (156.89)	2200	998	33.83 (8.94)	28.02 (61.78)	0.240 (0.394)	3.46 (17.55)
ii. 85% of the torque obtained in (i)						
101.14 (135.63)	2242	1017	30.23 (7.99)	25.04 (55.20)	0.248 (0.407)	3.35 (16.98)
iii. 75% of the torque defined in (ii)						
77.32 (103.69)	2276	1033	24.97 (6.60)	20.68 (45.60)	0.268 (0.440)	3.10 (15.72)
iv. 50% of the torque defined in (ii)						
52.61 (70.56)	2325	1055	19.88 (5.25)	16.47 (36.30)	0.313 (0.514)	2.65 (13.43)
v. 25% of the torque defined in (ii)						
26.51 (35.55)	2358	1070	14.46 (3.82)	11.97 (26.40)	0.452 (0.743)	1.83 (9.31)
vi. unloaded						
0.58 (0.77)	2389	1084	2.43 (9.20)	7.62 (16.80)	13.203 (21.706)	0.06 (0.32)

1.5 Part Loads - governor hand lever set for maximum power at standard pto speed

Power kW (hp)	Speeds		Fuel Consumption			Specific energy kW.h/l (hp.h/gal)
	engine	PTO	hourly	specific		
	rev/min	rev/min	l/h (gal/h)	kg/h (lb/h)	kg/kW.h (lb/hp.h)	
i. Torque corresponding standard PTO rpm						
116.99 (156.89)	2200	998	33.83 (8.94)	28.02 (61.78)	0.240 (0.394)	3.46 (17.55)
ii. 85% of the torque obtained in (i)						
101.14 (135.63)	2242	1017	30.23 (7.99)	25.04 (55.20)	0.248 (0.407)	3.35 (16.98)
iii. 75% of the torque defined in (ii)						
77.32 (103.69)	2276	1033	24.97 (6.60)	20.68 (45.60)	0.268 (0.440)	3.10 (15.72)
iv. 50% of the torque defined in (ii)						
52.61 (70.56)	2325	1055	19.88 (5.25)	16.47 (36.30)	0.313 (0.514)	2.65 (13.43)
v. 25% of the torque defined in (ii)						
26.51 (35.55)	2358	1070	14.46 (3.82)	11.97 (26.40)	0.452 (0.743)	1.83 (9.31)
vi. Unloaded						
0.58 (0.77)	2389	1084	9.20 (2.43)	7.62 (16.80)	13.203 (21.706)	0.06 (0.32)
No-load maximum engine speed					2389 rev/min	
Equivalent engine torque:						
at rated engine speed					508 Nm (2200 rev/min)	
at maximum power					609 Nm (1900 rev/min)	
at maximum torque					672 Nm (1600 rev/min)	
Mean atmospheric conditions:						
Temperature-dry bulb					25 °C (76 °F)	
Relative humidity					33 %	
Barometric pressure					98.54 kPa (29.10 in Hg)	

Maximum Temperatures :

Thermostat housing	87 °C (189 °F)
Engine oil	108 °C (226 °F)
Fuel at injection pump	46 °C (114 °F)
Engine air intake	31 °C (88 °F)
Trans./Hydr. Oil	54 °C (130 °F)

Turbocharger boost pressure

at rated engine speed	114 kPa (16.5 psi)
at maximum power	107 kPa (15.5 psi)

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2. HYDRAULIC POWER AND LIFTING FORCE.

Date of test: 18 April 1989

Location: CAE/UNL, Lincoln, Nebr.

2.1 HYDRAULIC POWER TEST - HYDRAULIC PUMP PERFORMANCE

Sustained pressure with
pump stalled 17.58 MPa (2550 psi)
Pump delivery rate @ minimum
pressure & rated engine speed 124.2 l/m (32.8 gpm)

	Flow Rate l/min (gal/min)	Pressure MPa (psi)	Power kW (hp)
At 90% of relief valve setting	24.6 (6.5)	15.86 (2300)	6.5 (8.7)
At maximum hydraulic power.	120.0 (31.7)	12.07 (1750)	24.1 (32.4)

Tapping point(s)

Two hydraulic outlets combined

Hydraulic fluid temperature
in oil reservoir
at flow meter

66 °C (152 °F)
64 °C (146 °F)

2.2 POWER LIFT TEST.

		Hitch Points		Frame		
Lower hitch points above ground - down position. [mm/in]		257/10.1		250/9.8		
Vertical movement						
without load	[mm/in]	822/32.4		940/37.0		
with load	[mm/in]	787/31.0		897/35.3		
Maximum corrected force through full range [kN/lbf]		27.3/6129		25.9/5821		
Corresponding pressure [kPa/psi]		12066/1750				
Moment about rear axle [kN.m/ft.lb]		34.1/25127		48.1/35511		
Maximum mast tilt angle [degrees]		--		9.6		
=====						
Lifting height relative to the horizontal position of lower links						
[mm]	-312	-305	-226	-127	0	102
[in]	-12.3	-12.0	-8.9	-5.0	0	4.0
Corrected lift forces.						
hitch [kN]	--	27.3	29.2	30.9	33.0	33.9
points [lb]	--	6129	6557	6936	7414	7621
at [kN]	27.2	--	28.1	28.8	29.5	29.5
frame [lb]	6114	--	6307	6486	6643	6629
Lifting height relative to the horizontal position of lower links						
[mm]	203	305	406	483	584	
[in]	8.0	12.0	16.0	19.0	23.0	
Corrected lift forces.						
hitch [kN]	34.9	35.7	36.3	37.7	--	
points [lb]	7850	8029	8164	8480	--	
at [kN]	29.0	28.0	--	26.9	25.9	
frame [lb]	6521	6286	--	6057	5821	
=====						

THREE POINT LIFT PERFORMANCE
(With 44 mm. lift assist cylinder)
(for settings used see p.8)

		Hitch Points	Frame
Lower hitch points above ground - down position. [mm/in]		257/10.1	244/9.6
Vertical movement			
without load	[mm/in]	822/32.4	940/37.0
with load	[mm/in]	787/31.0	899/35.4
Maximum corrected force through full range [kN/lbf]		30.9/6957	29.4/6614
Corresponding pressure [kPa/psi]		12066/1750	
Moment about rear axle [kN.m/ft.lb]		38.7/28524	54.7/40347
Maximum mast tilt angle [degrees]		--	9.4
Lifting height relative to the horizontal position of lower links			
[mm]	-318 -305 -229 -127 0 102		
[in]	-12.5 -12.0 -9.0 -5.0 0 4.0		
Corrected lift forces.			
hitch [kN]	30.9 32.8 35.4 37.8 39.1		
points [lb]	-- 6957 7379 7950 8500 8800		
at [kN]	30.8 -- 32.2 33.0 33.9 33.9		
frame [lb]	6930 --- 7236 7429 7629 7629		
Lifting height relative to the horizontal position of lower links			
[mm]	203 305 406 483 582		
[in]	8.0 12.0 16.0 19.0 22.9		
Corrected lift forces.			
hitch [kN]	39.9 40.4 41.3 42.5 --		
points [lb]	8971 9079 9293 9559 --		
at [kN]	33.3 32.0 -- 30.8 29.4		
frame [lb]	7486 7186 --- 6914 6614		

THREE POINT LIFT PERFORMANCE
(With 55 mm. lift assist cylinder)
(for settings used see p.8)

		Hitch Points	Frame
Lower hitch points above ground - down position.	[mm/in]	257/10.1	250/9.8
Vertical movement			
without load	[mm/in]	822/32.4	940/37.0
with load	[mm/in]	787/31.0	894/35.2
Maximum corrected force through full range	[kN/lbf]	33.3/7479	31.4/7057
Corresponding pressure	[kPa/psi]	12066/1750	
Moment about rear axle	[kN.m/ft.lb]	41.6/30662	58.4/43049
Maximum mast tilt angle	[degrees]	9.4	

Lifting height relative to the horizontal position of lower links

[mm]	-312	-305	-229	-127	0	102
[in]	-12.3	-12.0	-9.0	-5.0	0	4.0

Corrected lift forces.

hitch [kN]	--	33.3	35.5	38.2	40.7	41.7
points [lb]	--	7479	7979	8586	9150	9386
at [kN]	32.9	--	33.8	35.7	36.2	36.2
frame [lb]	7392	--	7602	8036	8129	8136

Lifting height relative to the horizontal position of lower links

[mm]	203	305	406	478	582	
[in]	8.0	12.0	16.0	18.8	22.9	

Corrected lift forces.

hitch [kN]	42.9	43.4	44.1	45.7	--	
points [lb]	9636	9764	9921	10274	--	
at [kN]	34.8	33.6	--	32.2	31.4	
frame [lb]	7826	7546	--	7231	7057	

3. DRAWBAR POWER AND FUEL CONSUMPTION (UNBALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 20-Apr-89 04-May-89 Fuel density: 0.828 kg/l														
Type of track: Concrete Test # 1620														
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg C					Rel	Pressure
	kW	kN	km/h	Speed rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	hum %	kPa
I. Maximum Power (unballasted, fwa @ 1900 rev/min)						Tire pressure:		124 kPa, rear		207 kPa, front				
Drawbar height: 470 mm														
4th	77.39	67.22	4.14	2243	14.92%	0.329	2.52	45	84	104	17	13	64%	96.99
5th	89.74	69.37	4.66	2160	13.92%	0.312	2.65	44	84	103	14	12	79%	96.95
6th	95.52	62.50	5.50	2140	9.59%	0.293	2.83	45	84	105	16	12	63%	96.95
7th	98.89	56.90	6.26	2049	6.82%	0.282	2.93	46	84	105	14	9	51%	97.63
8th	97.64	52.43	6.70	1900	6.11%	0.281	2.95	45	84	104	18	13	49%	96.99
9th	99.94	45.69	7.87	1901	4.80%	0.274	3.02	45	85	105	15	10	53%	97.63
10th	99.96	40.07	8.98	1902	4.05%	0.274	3.02	45	85	104	19	14	58%	96.99
11th	99.22	34.19	10.45	1902	3.21%	0.276	3.00	45	86	104	19	13	50%	97.60
12th	103.24	31.69	11.73	1902	2.95%	0.264	3.14	45	85	103	21	13	39%	97.60
13th	101.02	24.87	14.62	1903	2.26%	0.271	3.05	46	86	104	22	13	34%	97.60

OECD Drawbar Data (US)

Date of tests: 20-Apr-89 04-May-89 Fuel density: 6.912 lb/gal														
Type of track: Concrete Test # 1620														
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg F					Rel	Pressure
	hp	lb	mph	Speed rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	hum %	in Hg
I. Maximum Power (unballasted, fwa @ 1900 rev/min)						Tire pressure:		18 psi, rear			30 psi, front			
Drawbar height: 18.5 in														
4th	103.78	15113	2.58	2243	14.92%	0.541	12.77	113	183	220	62	55	64%	28.64
5th	120.34	15595	2.89	2160	13.92%	0.513	13.48	111	183	217	58	53	79%	28.63
6th	128.09	14051	3.42	2140	9.59%	0.482	14.34	113	183	221	60	54	63%	28.63
7th	132.62	12792	3.89	2049	6.82%	0.464	14.88	114	183	221	58	49	51%	28.83
8th	130.94	11786	4.17	1900	6.11%	0.462	14.96	114	184	219	64	56	49%	28.64
9th	134.03	10273	4.89	1901	4.80%	0.451	15.32	113	185	221	59	50	53%	28.83
10th	134.04	9008	5.58	1902	4.05%	0.451	15.34	113	186	220	66	57	58%	28.64
11th	133.06	7687	6.49	1902	3.21%	0.453	15.25	113	186	220	67	55	50%	28.82
12th	138.45	7124	7.29	1902	2.95%	0.434	15.94	114	186	218	70	56	39%	28.82
13th	135.47	5592	9.08	1903	2.26%	0.446	15.49	114	186	219	71	56	34%	28.82

OECD Drawbar Data (SI)

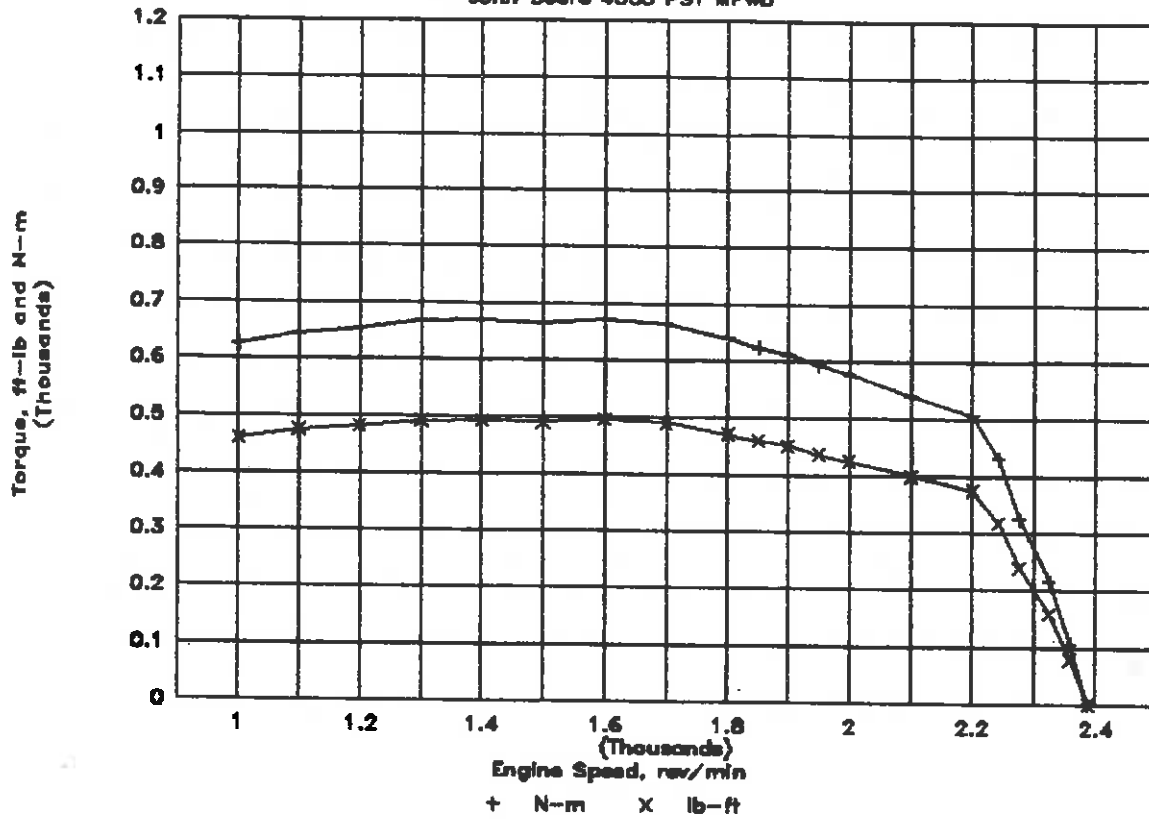
Date of tests: 20-Apr-89 04-May-89 Fuel density: 0.828 kg/l														
Type of track: Concrete Test # 1620														
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg C					Rel	Pressure
	kW	kN	km/h	Speed rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	hum %	kPa
II. Part Loads (unballasted, fwa)														
Drawbar height: 470 mm								Tire pressure:		124 kPa, rear		207 kPa, front		
II.1 in selected gear at maximum power														
12th	103.24	31.69	11.73	1902	2.95%	0.264	3.14	45	85	103	21	13	39%	97.60
II.1.1 75% of pull at maximum power at rated speed														
12th 75%	75.90	19.38	14.10	2257	1.64%	0.307	2.70	43	84	104	24	15	37%	97.56
II.1.2 50% of pull at maximum power at rated speed														
12th 50%	51.93	12.93	14.46	2301	1.02%	0.365	2.27	42	82	103	24	15	37%	97.56
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13th 75%	75.74	19.37	14.08	1822	1.64%	0.285	2.91	43	84	103	24	15	37%	97.56
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13th 50%	52.08	12.97	14.46	1858	1.02%	0.322	2.57	41	83	102	24	15	37%	97.56
II.2 in selected gear nearest to 7.5 km/h														
7th	98.89	56.90	6.26	2049	6.82%	0.282	2.93	46	84	105	14	9	51%	97.63
II.2.1 75% of pull at maximum power at rated speed														
7th 75% @	74.77	37.69	7.14	2262	3.72%	0.311	2.66	49	84	104	29	18	38%	97.32
II.2.2 50% of pull at maximum power at rated speed														
7th 50% @	51.43	25.14	7.37	2297	2.26%	0.356	2.33	46	83	103	29	18	38%	97.29
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
9th 75% @	74.83	37.69	7.15	1710	3.63%	0.290	2.86	47	85	103	29	18	38%	97.32
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
9th 50% @	51.43	25.13	7.37	1735	2.08%	0.311	2.66	45	83	101	29	18	38%	97.29

OECD Drawbar Data (US)

Date of tests: 20-Apr-89 04-May-89 Fuel density: 6.912 lb/gal														
Type of track: Concrete Test # 1620														
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg F					Rel	Pressure
	hp	lb	mph	Speed rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	hum %	in Hg
II. Part Loads (unballasted, fwa)						Tire pressure:		18 psi, rear			30 psi, front			
Drawbar height: 18.5 in														
II.1 in selected gear at maximum power														
12th	138.45	7124	7.29	1902	2.95%	0.434	15.94	114	186	218	70	56	39%	28.82
II.1.1 75% of pull at maximum power at rated speed														
12th 75%	101.78	4357	8.76	2257	1.64%	0.504	13.70	110	184	219	76	59	37%	28.81
II.1.2 50% of pull at maximum power at rated speed														
12th 50%	69.64	2906	8.99	2301	1.02%	0.600	11.53	107	180	217	76	59	37%	28.81
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13th 75%	101.57	4354	8.75	1822	1.64%	0.468	14.76	109	183	218	76	59	37%	28.81
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13th 50%	69.85	2916	8.98	1858	1.02%	0.530	13.05	106	181	216	76	59	37%	28.81
II.2 in selected gear nearest to 4.6 mph														
7th	132.62	12792	3.89	2049	6.82%	0.464	14.88	114	183	221	58	49	51%	28.83
II.2.1 75% of pull at maximum power at rated speed														
7th 75% @ 100.27		8474	4.44	2262	3.72%	0.512	13.51	120	184	220	85	64	38%	28.74
II.2.2 50% of pull at maximum power at rated speed														
7th 50% @ 68.97		5652	4.58	2297	2.26%	0.585	11.81	115	181	217	84	64	38%	28.73
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
9th 75% @ 100.35		8474	4.44	1710	3.63%	0.477	14.50	117	185	217	85	64	38%	28.74
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
9th 50% @ 68.97		5651	4.58	1735	2.08%	0.512	13.51	113	181	214	84	64	38%	28.73

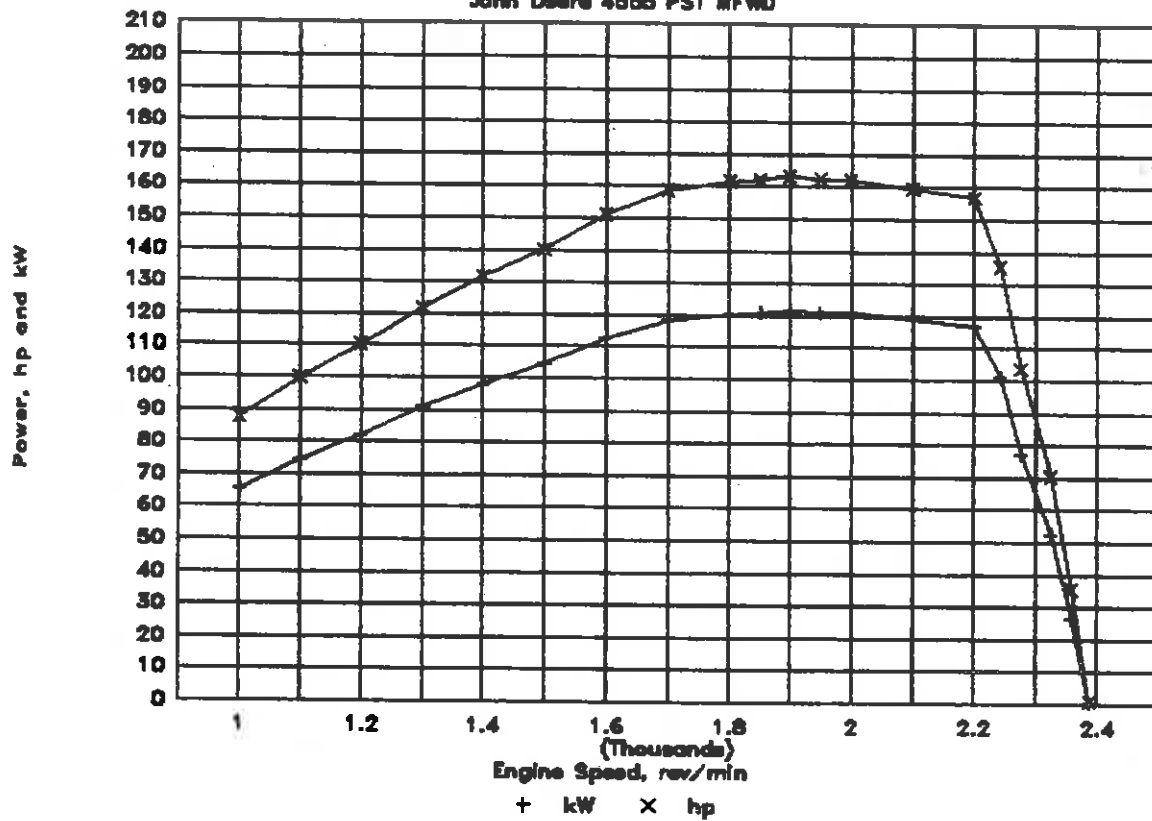
Equivalent Crankshaft Torque

John Deere 4555 PST MFWD



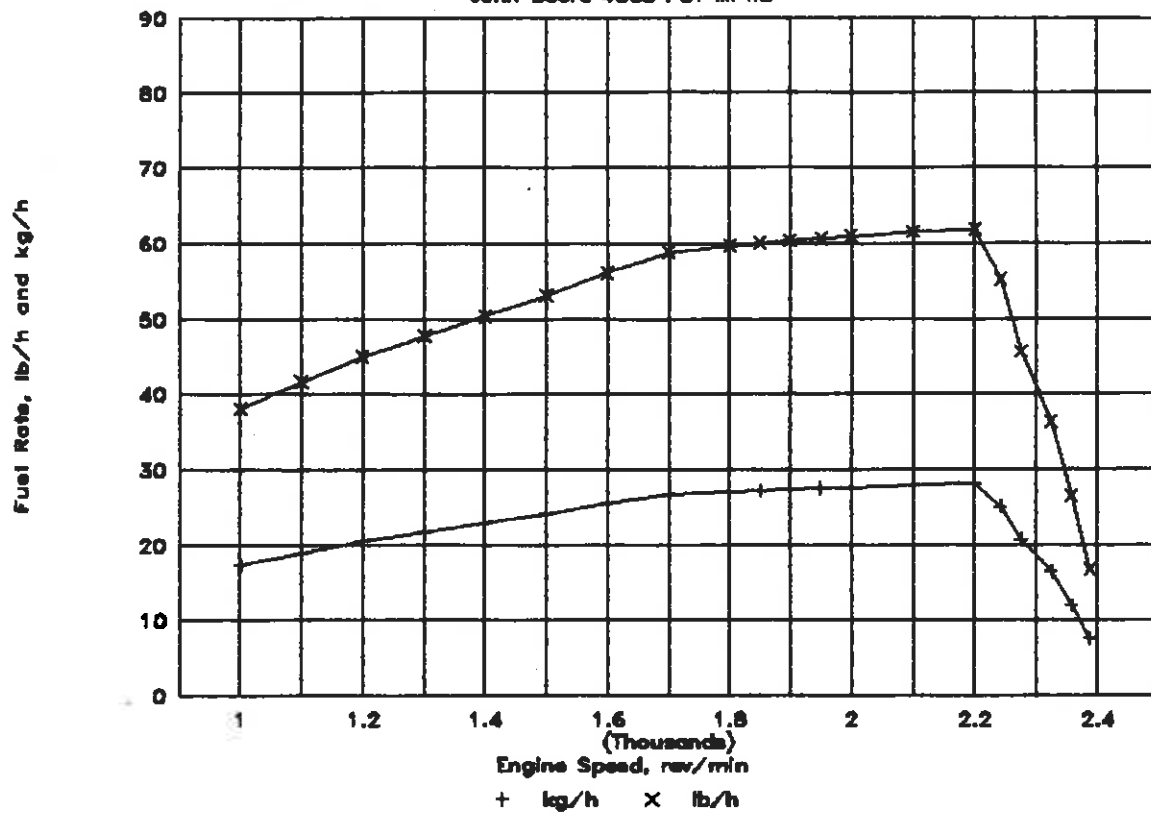
PTO Power

John Deere 4555 PST MFWD



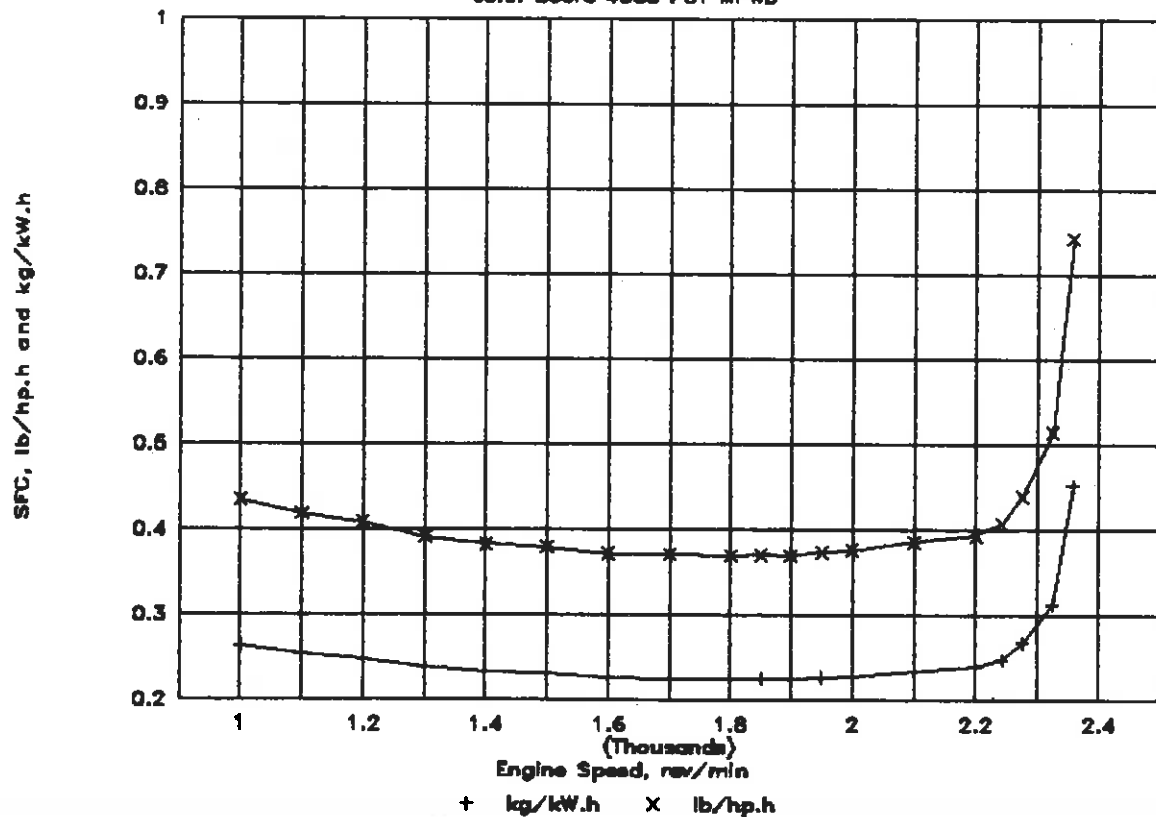
PTO Fuel Consumption

John Deere 4555 PST MFWD



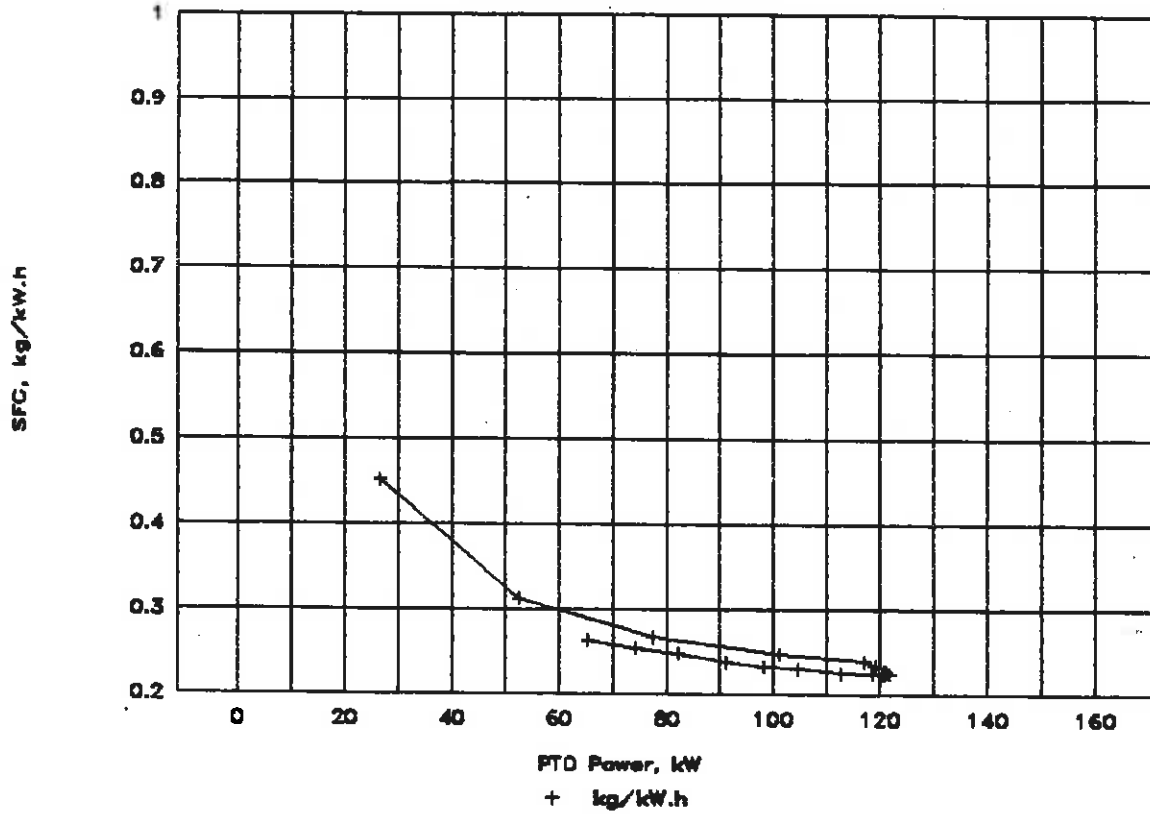
PTO Specific Fuel Consumption

John Deere 4555 PST MFWD



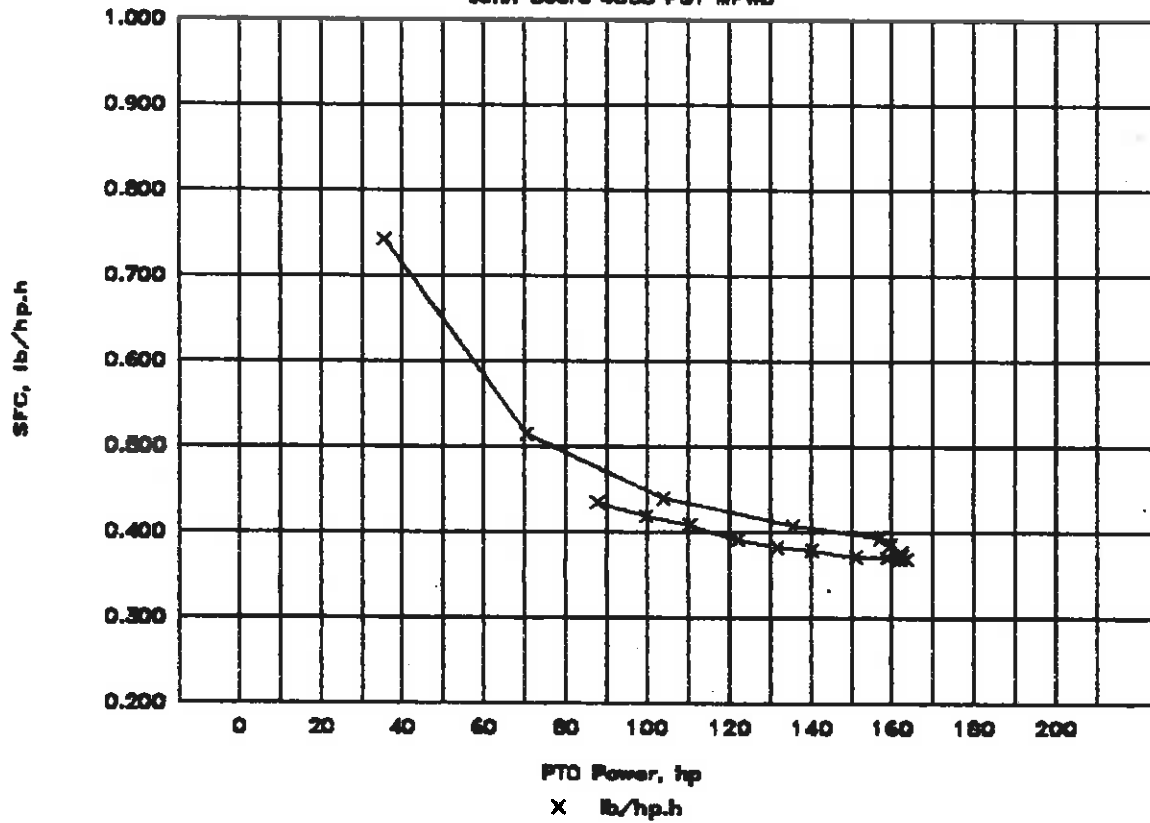
SFC vs PTO Power

John Deere 4555 PST MFWD



SFC vs PTO Power

John Deere 4555 PST MFWD



5 OPTIONAL TESTS.

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5.1 MEASUREMENT OF EXTERNAL NOISE LEVEL.

Date of test : April 18, 1989
Location of test : CAE/UNL, Lincoln, Nebr.
Sound level meter : B & K 2203
Type of track : Concrete oval
Gear number : 15th
Speed prior to acceleration : 23.5 km/h (14.6 mph)
Sound level : 88.0 dB(A)

5.2 MAXIMUM POWER AT 1900 REV/MIN (BALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 02-May-89 02-May-89		Fuel density: 0.828 kg/l											
Type of track: Concrete		Test # 1620											
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg C					Rel Pressure
	kW	kN	km/h	Speed rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	hum % kPa
1b. Maximum Power (ballasted, fwa @ 1900 rev/min)				Tire pressure:				83 kPa, rear (inner)		207 kPa, front			
Drawbar height: 470 mm								83 kPa, rear (outer)					
2nd	70.77	92.31	2.76	2263	14.71%	0.326	2.54	44	84	103	10	8	77% 98.31
3rd	84.84	92.85	3.29	2233	14.85%	0.319	2.60	45	84	104	10	8	77% 98.24
4th	98.02	83.31	4.24	2126	8.38%	0.287	2.89	44	84	105	10	8	77% 98.44
5th	98.71	79.97	4.44	1926	7.85%	0.281	2.95	45	84	105	12	8	58% 98.41
6th	102.54	72.95	5.06	1899	6.19%	0.270	3.07	45	85	105	12	9	68% 98.41
7th	104.48	63.47	5.93	1901	4.81%	0.265	3.13	44	85	105	12	8	58% 98.44
8th	100.63	52.66	6.88	1903	3.81%	0.276	3.00	44	85	105	13	10	69% 98.21
9th	100.02	45.16	7.97	1903	3.22%	0.276	3.00	44	85	106	13	10	69% 98.17
10th	101.07	40.12	9.07	1901	2.88%	0.272	3.04	45	85	104	12	9	68% 98.41
11th	100.34	34.42	10.50	1902	2.36%	0.272	3.04	45	85	105	14	10	60% 98.17
12th	103.86	31.77	11.77	1902	2.27%	0.265	3.13	45	85	105	14	10	60% 98.14
13th	100.81	24.85	14.60	1899	2.01%	0.272	3.05	45	85	104	14	10	60% 98.14

OECD Drawbar Data (US)

Date of tests: 02-May-89 02-May-89		Fuel density: 6.912 lb/gal											
Type of track: Concrete		Test # 1620											
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg F					Rel Pressure
	hp	lb	mph	rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	hum % in Hg
1b. Maximum Power (ballasted, fwa @ 1900 rev/min)				Tire pressure:				12 psi, rear (inner)		30 psi, front			
Drawbar height: 18.5 in								12 psi, rear (outer)					
2nd	94.90	20753	1.71	2263	14.71%	0.535	12.91	111	183	217	50	46	77% 29.03
3rd	113.78	20873	2.04	2233	14.85%	0.525	13.18	113	184	220	50	46	77% 29.01
4th	131.44	18729	2.63	2126	8.38%	0.472	14.66	112	184	221	50	46	77% 29.07
5th	132.37	17978	2.76	1926	7.85%	0.461	14.98	113	184	221	53	47	58% 29.06
6th	137.51	16401	3.14	1899	6.19%	0.443	15.60	113	185	222	54	48	68% 29.06
7th	140.10	14269	3.68	1901	4.81%	0.436	15.86	112	185	222	53	47	58% 29.07
8th	134.95	11840	4.27	1903	3.81%	0.453	15.25	112	185	222	56	50	69% 29.00
9th	134.13	10152	4.95	1903	3.22%	0.454	15.21	112	186	222	56	50	69% 28.99
10th	135.54	9019	5.64	1901	2.88%	0.448	15.43	112	185	220	54	48	68% 29.06
11th	134.55	7737	6.52	1902	2.36%	0.448	15.43	113	185	222	57	50	60% 28.99
12th	139.28	7143	7.31	1902	2.27%	0.435	15.88	113	185	221	58	50	60% 28.98
13th	135.19	5587	9.07	1899	2.01%	0.447	15.48	113	185	220	58	50	60% 28.98

MAXIMUM POWER AT 2200 REV/MIN (BALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 02-May-89 02-May-89 Fuel density: 0.828 kg/l														
Type of track: Concrete Test # 1620														
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg C					Rel	Pressure
	kW	kN	km/h	Speed rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	hum %	kPa
Ic.	Maximum Power (ballasted, fwa @ 2200 rev/min)					Tire pressure:		83 kPa, rear (inner)			207 kPa, front			
	Drawbar height: 470 mm							83 kPa, rear (outer)						
3rd	85.43	93.07	3.30	2233	14.38%	0.318	2.61	45	84	104	10	8	77%	98.17
4th	97.49	79.00	4.44	2200	6.99%	0.288	2.87	45	84	104	10	8	77%	98.37
5th	98.70	68.12	5.22	2201	5.30%	0.284	2.92	45	84	105	12	8	58%	98.44
6th	100.16	60.39	5.97	2201	4.56%	0.279	2.97	45	84	106	12	8	58%	98.41
7th	100.73	52.29	6.94	2201	3.64%	0.280	2.96	44	84	105	11	8	67%	98.44
8th	96.38	43.35	8.00	2198	3.22%	0.293	2.83	45	84	105	13	10	69%	98.21
9th	95.77	37.20	9.27	2199	2.70%	0.292	2.83	44	84	106	13	10	69%	98.21
10th	96.74	33.05	10.54	2198	2.62%	0.289	2.87	45	84	105	13	9	59%	98.34
11th	95.65	28.25	12.19	2199	2.10%	0.294	2.82	45	84	106	14	10	60%	98.17
12th	98.03	25.82	13.67	2201	2.01%	0.284	2.91	45	84	105	14	10	60%	98.14

OECD Drawbar Data (US)

Date of tests: 02-May-89 02-May-89 Fuel density: 6.912 lb/gal															
Type of track: Concrete Test # 1620															
Gear	Power	Pull	Speed	Engine	Slip	SFC		Temperature, deg F					Rel	Pressure	
	hp	lb	mph	Speed rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	hum %	in Hg	
Ic.	Maximum Power (ballasted, fwa @ 2200 rev/min)						Tire pressure:		12 psi, rear (inner)			30 psi, front			
	Drawbar height: 18.5 in								12 psi, rear (outer)						
3rd	114.57	20923	2.05	2233	14.38%	0.522	13.23	113	183	219	50	46	77%	28.99	
4th	130.73	17759	2.76	2200	6.99%	0.474	14.59	113	183	220	50	46	77%	29.05	
5th	132.35	15315	3.24	2201	5.30%	0.467	14.81	113	184	221	53	47	58%	29.07	
6th	134.32	13576	3.71	2201	4.56%	0.458	15.09	113	184	222	53	47	58%	29.06	
7th	135.08	11755	4.31	2201	3.64%	0.460	15.03	112	183	221	52	47	67%	29.07	
8th	129.25	9745	4.97	2198	3.22%	0.482	14.35	112	184	222	56	50	69%	29.00	
9th	128.43	8362	5.76	2199	2.70%	0.481	14.38	111	183	222	56	50	69%	29.00	
10th	129.73	7430	6.55	2198	2.62%	0.474	14.57	113	184	222	55	49	59%	29.04	
11th	128.27	6352	7.57	2199	2.10%	0.483	14.30	112	183	222	57	50	60%	28.99	
12th	131.46	5805	8.49	2201	2.01%	0.467	14.79	112	184	221	57	50	60%	28.98	

5.3 POWER LIFT TEST

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*Linkage geometry dimensions.
(Tractor equipped with Walterscheid lower link ends)

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		Dimension or range		Settings used on test	
		[mm]	[in]	[mm]	[in]
Lift category		III			
Rear Tire - Radius Index	(r)	892	35.1		
Front Tire - Radius Index	(r')	684	26.9		
Length of lift arms	(A)	468	18.4	same	
Length of lower links	(B)	1060	41.7	same	
Distance of lift					
arm pivot from: horizontal	(a)	0	0	same	
rear wheel axis: vertical	(b)	327	12.9	same	
Horizontal distance between the					
2 lower link points	(u)	582	22.9	same	
Horizontal distance between the					
2 lift arm end points	(v)	746	29.4	same	
Length of upper link					
	(S)	635	25.0		
	to	790	31.0	673	26.5
Distance of upper					
link pivot from: horizontal	(c)	516	20.3	same	
rear wheel axis: vertical upper	(d)	326	12.8		
lower		201	7.9		
Distance of lower					
link pivot from: horizontal	(e)	156	6.1	same	
rear wheel axis: vertical	(f)	330	13.0	same	
Distance of lower link pivot					
points to lift rod pivot pts					
on lower links	(D)	716	28.2	same	
Length of lift rods					
	(L)	860	33.8		
	to	947	37.3	947	37.3
Height of lower hitch points					
relative to rear wheel axis					
In low position	(h)	533	21.0		
	to	686	27.0	660	26.0
In high position	(H)	140	5.5		
	to	312	12.3	211	8.3
Height above ground of lower					
hitch points when locked in					
transport position.		1029	40.5		
	to	1217	47.9	1105	43.5

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*Assuming (r) with a tire dynamic index of 892 mm (35.1 in)
ISO 4251-1/1984

THREE POINT LIFT PERFORMANCE
(Upper link in bottom hole on tractor)
(with 2-44 mm dia. lift assist cylinders)

		Hitch point	Frame				
Lower hitch points above ground - down position.							
	[mm/in]	258/10.2	268/10.6				
Vertical movement							
without load	[mm/in]	871/34.3	1019/40.1				
with load	[mm/in]	787/31.0	904/35.6				
Maximum corrected force through full range							
	[kN/lbf]	31.5/7077	29.5/6636				
Corresponding pressure		[kPa/psi] 12066/1750					
Moment about rear axle		[kN.m/ft.lb] 38.2/28190	53.8/39705				
Maximum mast tilt angle		[degrees] --	12.0				
=====							
Lifting height relative to the horizontal position of lower links							
[mm]	-304	-294	-228	-126	1	102	
[in]	-12.0	-11.6	-9.0	-5.0	0	4.0	
=====							
Corrected lift forces.							
hitch	[kN]	31.5	--	33.5	36.2	38.5	40.2
points	[lb]	7077	--	7532	8141	8652	9037
at	[kN]	--	36.5	36.2	36.7	36.6	35.8
frame	[lb]	--	8197	8141	8246	8232	8050
=====							
Lifting height relative to the horizontal position of lower links							
[mm]	204	305	407	483	610		
[in]	8.0	12.0	16.0	19.0	24.0		
=====							
Corrected lift forces.							
hitch	[kN]	41.7	42.8	44.1	45.3	--	
points	[lb]	9366	9618	9919	10192	--	
at	[kN]	35.0	33.4	--	31.3	29.5	
frame	[lb]	7861	7504	--	7028	6636	
=====							

THREE POINT LIFT PERFORMANCE
(Upper link in bottom hole on tractor)
(with 2-55 mm. dia. lift assist cylinders)
(for settings used see p.29)

		Hitch point	Frame
Lower hitch points above ground - down position.	[mm/in]	263/10.4	268/10.6
Vertical movement without load	[mm/in]	871/34.3	1019/40.1
with load	[mm/in]	782/30.8	904/35.6
Maximum corrected force through full range	[kN/lbf]	36.0/8099	32.6/7336
Corresponding pressure	[kPa/psi]	12066/1750	
Moment about rear axle	[kN.m/ft.lb]	43.7/32261	59.5/43894
Maximum mast tilt angle	[degrees]	--	12.0

Lifting height relative to the horizontal position of lower links

[mm]	-299	-294	-228	-126	1	102
[in]	-12.0	-11.6	-9.0	-5.0	0	4.0

Corrected lift forces.

hitch [kN]	36.0	--	37.6	40.2	43.2	45.0
points [lb]	8099	--	8463	9037	9702	10122
at [kN]	--	41.0	40.7	40.5	40.4	40.1
frame [lb]	--	9226	9156	9107	9093	9016

Lifting height relative to the horizontal position of lower links

[mm]	204	305	407	483	610
[in]	8.0	12.0	16.0	19.0	24.0

Corrected lift forces.

hitch [kN]	46.7	48.0	49.4	50.5	--
points [lb]	10507	10787	11102	11347	--
at [kN]	39.0	37.1	--	34.7	32.6
frame [lb]	8771	8330	--	7791	7336

THREE POINT LIFT PERFORMANCE
(Upper link in top hole on tractor)
(With 2-44 mm. dia. lift assist cylinders)
(for settings used see p.29)

		Hitch point	Frame		
Lower hitch points above ground - down position.		[mm/in]	258/10.2	352/13.9	
Vertical movement					
without load	[mm/in]	871/34.3	889/35.0		
with load	[mm/in]	787/31.0	701/27.6		
Maximum corrected force through full range		[kN/lbf]	31.5/7077	37.3/8386	
Corresponding pressure		[kPa/psi]	12066/1750		
Moment about rear axle		[kN.m/ft.lb]	38.2/28190	68.0/50176	
Maximum mast tilt angle [degrees]		--	5.7*		
*Tilt angle of mast from vertical position to uppermost position - 0.7'					
Lifting height relative to the horizontal position of lower links					
[mm]	-304	-210	-126	1	102
[in]	-12.0	-8.3	-5.0	0	4.0
Corrected lift forces.					
hitch [kN]	31.5	33.5	36.2	38.5	40.2
points [lb]	7077	7532	8141	8652	9037
at [kN]	--	54.2	46.3	44.5	43.3
frame [lb]	---	12194	10416	9996	9723
Lifting height relative to the horizontal position of lower links					
[mm]	204	305	407	483	491
[in]	8.0	12.0	16.0	19.0	19.3
Corrected lift forces.					
hitch [kN]	41.7	42.8	44.1	45.3	--
points [lb]	9366	9618	9919	10192	--
at [kN]	42.4	41.0	39.2	--	37.3
frame [lb]	9541	9226	8806	--	8386

THREE POINT LIFT PERFORMANCE
(Upper link in top hole on tractor)
(With 2-55 mm. dia. lift assist cylinders)
(for settings used see p.29)

		Hitch point	Frame		
Lower hitch points above ground - down position.					
	[mm/in]	263/10.4	354/13.9		
Vertical movement					
without load	[mm/in]	871/34.3	889/35.0		
with load	[mm/in]	782/30.8	701/27.6		
Maximum corrected force through full range					
	[kN/lbf]	36.0/8099	41.7/9366		
Corresponding pressure		12066/1750			
Moment about rear axle [kN.m/ft.lb]		43.7/32261	76.0/56040		
Maximum mast tilt angle [degrees]		--	6.5*		
=====					
*Tilt angle of mast from vertical position to uppermost position - 1.0°					
Lifting height relative to the horizontal position of lower links					
[mm]	-299	-208	-126	1	102
[in]	-11.8	-8.2	-5.0	0	4.0
Corrected lift forces.					
hitch [kN]	36.0	37.6	40.2	43.2	45.0
points [lb]	8099	8463	9037	9702	10122
at [kN]	--	60.4	51.5	49.5	48.8
frame [lb]	--	13573	11571	11130	10969
Lifting height relative to the horizontal position of lower links					
[mm]	204	305	407	483	493
[in]	8.0	12.0	16.0	19.0	19.4
Corrected lift forces.					
hitch [kN]	46.7	48.0	49.4	50.5	--
points [lb]	10507	10787	11102	11347	--
at [kN]	47.4	45.6	43.8	--	41.7
frame [lb]	10661	10241	9856	--	9366
=====					

Repairs: None
Remarks: None