OECD APPROVAL # 1246
Date of approval: March 27,1990

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 OFFICIAL TESTING OF AGRICULTURAL TRACTOR PERFORMANCE

RESTRICTED TEST-CODE II

JOHN DEERE 4055 QUAD-RANGE (2 WD)



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

NEBRASKA TEST NO.1626

Test date: September 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 March 27, 1990

John Deere 4055 Quad-Range OECD # 1246

No reproduction of this report or any part of it can be made without prior approval by the Center for Agricultural Equipment.

Associate Director of the Center

Dr. Louis I. Leviticus

Chairman, Tractor Test Board

Dr. Kenneth von Bargen

Senior Test Engineer

David L. Morgan

Members, Tractor Test Board

Dr. Robert D. Grisso

Dr. Glenn J. Hoffman

Test Engineers

Brent T. Sampson

Raymond E. Beckner

Date: 24 May 1990

LINCOLN, NEBRASKA 68583-0832, USA

Table of Contents.
==========

	Page
1. SPECIFICATIONS	1
2. TEST CONDITIONS	11
3. COMPULSORY TESTS	
Main Power Take-Off Performance	13
Power Lift and Hydr. Pump Perf.	16
Drawbar Performance	19
4. GRAPHS	22
5. OPTIONAL TESTS	
External noise levels	25
Drawbar performance (ballasted)	26

SPECIFICATIONS OF TRACTOR.

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	:	75 hours
Location of Test	:	Center for Agricultural Equipment, Lincoln, Nebraska,USA.

TRACTOR.

Make	John Deere
Model	4055
Type	Unit construction
Number of driving wheels	2
Serial number	*RW4055H001731*
1st Serial number	*RW4055H001001*

ENGINE.

Make	John Deere
Model	6076TRW08
Type	Diesel, turbocharged.
Serial Number	*RG6076T109206*
Cylinders	
Number & Disposition	6, in-line, vertical
Bore x stroke	115.8 mm x 120.7 mm (4.56 in x 4.75 in)
Cubic capacity	7634 ml (466 cu.in.)
Compression Ratio	16.0:1
Arrangement of valves	Overhead
Cylinder liners	Wet, replacable
Super charging	
Make/Model/Type	Schwitzer/RE29310/ exhaust gas driven
Pressure	70-90 kPa (10-13 psi) at rated speed & load.
Fuel System	
Feed system	Transfer pump integral with injection pump
Make/Type/Model of filters	Stanadyne/RE27091/ paper element
Fuel Tank capacity	246 liter (65 US gallons)

Make/Model/Type Injection Pump	Bosch/RE36069/in line
Pump Serial number	94308513
Production setting of pump Flow Rate (Rated Eng.Spd & Full Load)	20.9 +/- 0.94 kg/hr 46.1 +/- 2.07 lb/hr
Make/Model/Type of injectors	Nippondenso/RE30084/21 mm
Injection pressure	29.0 MPa(4200 psi)
Timing	27 degrees before TDC

Governor

Make/Model/Type	Bosch/RSV425/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

Air Cleaner.

Pre-cleaner Make/Model/Type	Donaldson/plastic mesh chaff screen
Air intake location	top of air stack
Main Cleaner Make/Model/Type	Donaldson/AR79679/ pleated paper
Secondary element Make/Model/Type	Donaldson/AR79680/ pleated paper
Maintenance indicator	Dash mounted light and horn

Lubrication system.

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

Cooling system.

Type of coolant	Liquid
Type of pump	Centrifugal
Fan specification	Belt driven, variable speed
Number of fan blades	8
Fan diameter	610 mm (24.0 in)
Coolant system capacity	25.6 liter (27 qt)
Type of temperature control	2 thermostats and variable speed fan
Superpressure system	69 kPa (10 psi)

Starting system.

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 Ampere at 2200 engine rpm.
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/RE35448/ expansion chamber
Location	Vertical above hood, left of centerline

TRANSMISSION.

Clutch. (travel)	
Make/Type	John Deere/multiple plate oil cooled
Number of plates	2
Plate diameter	304.8 mm (12.0 in)
Method of operation	Hydraulically actuated by foot pedal.
Gear Box.	
Make/Type	John Deere/Quad-Range
Arrangement	Countershaft and planetary design consisting of: one 8 speed gear box with 4 non-synchronized ranges and 2 synchronized speeds in each range one 2 speed planetary gearset with a multiple wet disc clutch and brake
Number of gears	16 forward and 6 reverse controlled by 2 hand levers
Oil cooler	Heat exchanger with air
Available options	none
Rear axle and final drives.	
Make/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 brake pedal
Front Axle	
Make/Model/Type	John Deere/not propelled

Gear ratios and travel speeds.

(Tire dynamic radius of 842 mm (33.1 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]
Forward			
A1	202.76	3.44	2.14
A2	159.77	4.37	2.71
A3	122.77	5.69	3.53
A4	96.70	7.22	4.48
B1	88.21	7.92	4.92
C1	74.42	9.38	5.83
B2	69.44	10.06	6.25
C2	58.60	11.92	7.40
B3	53.39	13.08	8.12
D1	48.48	14.40	8.95
C3	45.05	15.50	9.63
B4	42.04	16.61	10.32
D2	38.18	18.29	11.36
C4	35.47	19.69	12.23
D3	29.34	23.80	14.78
D4	23.10	30.23	18.77
Reverse			
AR1	126.80	5.51	3.42
AR2	99.82	7.00	4.34
BR1	55.12	12.67	7.87
CR1	46.51	15.01	9.32
BR2	43.41	16.09	10.00
CR2	36.62	19.07	11.84

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
Method of changing PTO shaft ends and speeds	Interchangeable shafts

Standard PTO. 1000 rev/min.

Location	Rear of tractor, vertical center plane.
Diameter of shaft	34.9 mm (1.375 in)
Number of splines	21;conforms to ISO 500/1979
Height above ground	675 mm (26.6 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	498 mm (19.6 in)
PTO Speed @ rated engine speed	1002 rev/min
Engine speed @ Std. PTO Speed	2195 rev/min
Ratio of Engine rpm to PTO rpm	2.195
Direction of rotation (viewed facing driving end)	Clockwise.

Standard PTO 540 rev/min. (not tested)

Location	Rear of tractor, vertical center plane.
Diameter of PTO shaft end.	34.9 mm (1.375 in)
Number of splines	6;conforms to ISO 500/1979
Height above ground	675 mm (26.6 in)
Distance from median plane of tractor	0 mm
Distance behind rear wheels	521 mm (20.5 in)
PTO speed @ rated engine speed	540 rev/min
Engine speed @ Std PTO Speed	2201 rev/min
Ratio of Eng spd./PTO spd.	4.0758
Maximum allowed power	56 kW (75 hp)
Rotation direction when viewed from shaft end	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 optional external, all single acting
Type of linkage lock for transport	Hydraulic
Relief valve setting	17.5 +/-0.3 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.	2 pairs of ISO standard coup - lings at rear of tractor. (a third set is optional)
Max. oil volume available for external cylinders.	5.0 l (5.3 qt) 10.0 l (10.6 qt) with 5.0 l (5.3 qt) allowable overfill

THREE POINT LINKAGE

- Category 2 in conformity with ISO 730/1-1977
- Category adaptor - none

THREE POINT LINKAGE.

Figure 1.1

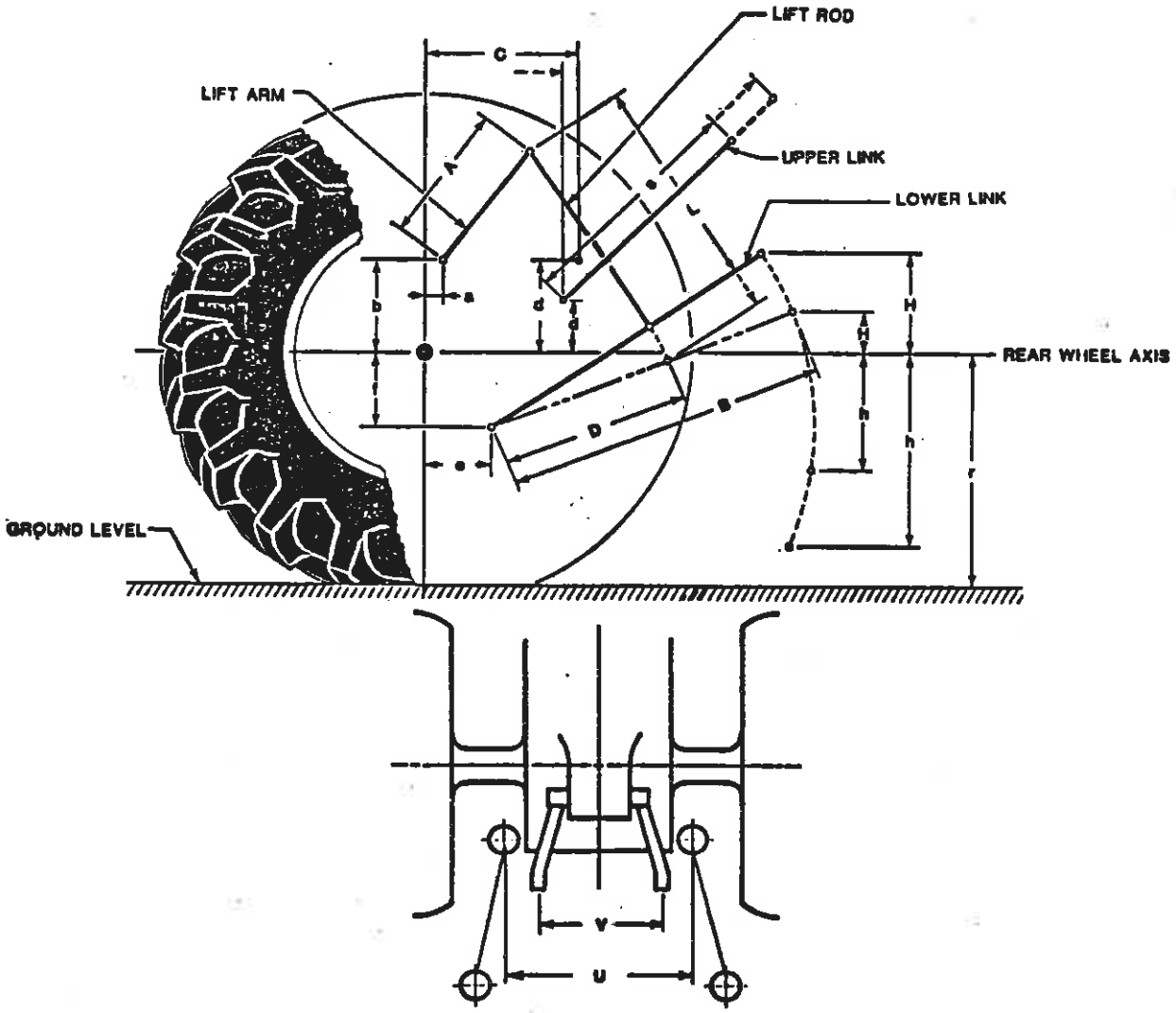


Figure 1.2

Table 1.1 -*Linkage geometry dimensions.

		Dimension or range [mm]	Dimension or range [in]	Settings used on test [mm]	Settings used on test [in]
Lift category		II			
Rear Tire - Radius Index	(r)	842	33.1		
Front Tire - Radius Index	(r')	628	24.7		
Length of lift arms	(A)	292	11.5	same	
Length of lower links	(B)	932	36.7	same	
Distance of lift arm pivot from: horizontal	(a)	70	2.8	same	
rear wheel axis: vertical	(b)	278	10.9	same	
Horizontal distance between the 2 lower link points	(u)	427	16.8	same	
Horizontal distance between the 2 lift arm end points	(v)	583	23.0	same	
Length of upper link	(S)	625 to 790	24.6 to 31.1	676	26.6
Distance of upper link pivot from: horizontal	(c)	343	13.5	same	
rear wheel axis: vertical	(d)	140	5.5	same	
Distance of lower link pivot from: horizontal	(e)	114	4.5	same	
rear wheel axis: vertical	(f)	259	10.2	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	587	23.1	same	
Length of lift rods	(L)	775 to 860	30.5 to 33.9	833	32.8
Height of lower hitch points relative to rear wheel axis In low position	(h)	638 to 478	25.1 to 18.8	630	24.8
In high position	(H)	165 to 48	6.5 to 1.9	62	2.5
Height above ground of lower hitch points when locked in transport position.		886 to 1006	34.9 to 39.6	894	35.2

*Assuming (r) with a dynamic tire index of 842 mm (33,1 in)
ISO 4251/1-1984

SWINGING DRAWBAR.

Type	Oscillating
Height above ground	Minimum: 417 mm (16.4 in) Maximum: 531 mm (20.9 in)
Adjustments	Inverting drawbar and repositioning clevis
Distance of hitch point from rear wheel axis,horizontal	727, 804, 870, 903 mm (28.6,31.7,34.3,35.6 in)
Distance of hitch point from PTO shaft end.....1000 rpm	
Vertical	108 mm (4.3 in) 223 mm (8.8 in)
Horizontal	228, 305, 371, 404 mm (9.0,12.0,14.6,15.9 in)
.....540 rpm	
Vertical	108 mm (4.3 in) 223 mm (8.8 in)
Horizontal	204, 281, 347, 380 mm (8.0,11.0,13.7,14.9 in)
Lateral adjustment;Right side	232 mm (9.1 in)
Left side	232 mm (9.1 in)
Distance of pivot point from rear wheel axis; horizontal	175 mm (6.9 in) forward.
Diamater of drawbar pin hole	33 mm (1.3 in)
Maximum vertical static permissible load	13.2 kN (2950 lb)

STEERING

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

BRAKE SYSTEM.

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.

Trailering Brake(optional)

Type	Hydraulic

WHEELS.

Number.	
Front	Two; Steering
Rear	Two or four; Driving
Wheelbase	2710 mm (106.7 in)

Track width adjustment

	Minimum [mm]	Minimum [in]	Maximum [mm]	Maximum [in]	Adjustment method
Front	1470	58.0	2080	82.0	Adjustable front axle
Rear	1574	62.0	2800	110.2	Rack and pinion axle, reversing wheels and offset lug rims

PROTECTIVE STRUCTURE.

Make/Model/Type	John Deere/SG0046/ Sound-Gard cab
Manufacturer's name/address	John Deere Tractor Works Waterloo, Iowa
Protective device	Cab, not tiltable.
OECD approval number	CSS 073/24

DRIVER'S SEAT.

Make/Model/Type	John Deere/HydraCushioned
Type of suspension and damping .	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 [mm]	Height above ground of center [in]	Size [mm]	Distance from out - side edge to median plane of tractor. [mm]	Distance from out - side edge to median plane of tractor. [in]
Headlights	1727	68.0	50 x 125	250	9.8
	1890	74.4	100 dia.	978	38.5
Rearlights	2675	105.3	100 dia	813	32.0
	2025	79.7	100 dia.	813	32.0
Rear reflectors	2855	112.4	50 x 197	554	21.8
	1880	74.0	83 x 190	870	34.3

TEST CONDITIONS.

Overall dimensions.

Length		4285 mm (168.7 in)
Width	Minimum	2438 mm (96.0 in)
	Maximum	2870 mm (113.0 in)
Height -	Top of cab	2970 mm (117.0 in)
-	Top of exhaust	3125 mm (123.0 in)
Ground clearance (unballasted)		424 mm (16.1 in)
Clearance-limiting part		bottom of drawbar

Tractor Mass (with Cab, full fuel tank)

		Without driver [kg]	Without driver [lb]	With driver [kg]	With driver [lb]
Unballasted	Front	1730	3815	1730	3815
	Rear	3771	8315	3846	8480
	Total	5501	12130	5576	12295
Ballasted	Front	1723	3800	1723	3800
	Rear	4472	9860	4547	10025
	Total	6195	13660	6270	13825

Ballast

	Number of weights	Mass(total) [kg]	Mass(total) [lb]	Water [kg]	Water [lb]
Front	none	none		none	
Rear	none	none		none	
Duals (rear)		639	1410		
Additional:					
test equipment		54	120		

Tire Specifications.

	Front wheels	Rear wheels
Make	Goodyear	Goodyear
Dimensions	11.00-16	18.4R38
Ply rating	(8 ply)	1 star (8 ply)
Type	Rib	Radial
Max.load (tire manufacturer)	1324 kg/tire (2920 lb/tire)	2758 kg/tire (6080 lb/tire)
Max.load(tractor manufacturer)	1324 kg/tire) (2920 lb/tire)	2722 kg/tire) (6000 lb/tire)
Inflation pressure (tire mfr)	280 kPa(40 psi)	124 kPa(18 psi)
Dynamic Radius Index	457 mm(18.0 in)	842 mm (33.1 in)
Chosen track width - singles	1475 mm(58.0 in)	1650 mm (65.0 in)
- duals		3100 mm(122.0 in)

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Capacity quart	Oil change hrs	Filter change hrs
Engine (w/o filter)	18.0	19.0	250	250
Gear Box (includes rear axle and rear final drive)	60.5	64.0	1500	Annually
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
Grease		
Number of lubrication points	17	

Fuel

Type/grade	Diesel Fuel "Premier";grade 2-D
Density (Pto test)	0.828 g/cubic-cm (6.910 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.

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

Date of tests : 8 September 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 engine rev/min	Speeds PTO rev/min	Fuel Consumption hourly l/h (gal/h)	Fuel Consumption hourly kg/h (lb/h)	Fuel Consumption specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
1.1 Maximum power- 2 hour test.						
85.09 (114.11)	1950	889	25.22 (6.66)	20.89 (46.05)	0.245 (0.404)	3.37 (17.12)
1.2 Power at rated engine speed - (1 hour)						
81.06 (108.70)	2200	1002	25.56 (6.75)	21.16 (46.66)	0.261 (0.429)	3.17 (16.10)
1.3 Maximum Power at standard PTO speed - (1000 rev/min)						
81.06 (108.70)	2200	1002	25.56 (6.75)	21.16 (46.66)	0.261 (0.429)	3.17 (16.10)

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

Power kW (hp)	Speeds engine rev/min	Speeds PTO rev/min	Fuel Consumption hourly l/h (gal/h)	Fuel Consumption hourly kg/h (lb/h)	Fuel Consumption specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
(i) Torque obtained at maximum power at rated engine speed.						
81.06 (108.70)	2200	1002	25.56 (6.75)	21.16 (46.66)	0.261 (0.429)	3.17 (16.10)
(ii) 85% of the torque obtained in (i)						
71.61 (96.03)	2289	1043	24.16 (6.38)	20.00 (44.10)	0.279 (0.459)	2.96 (15.05)
(iii) 75% of the torque defined in (ii)						
54.28 (72.79)	2308	1052	20.38 (5.38)	16.87 (37.20)	0.311 (0.511)	2.66 (13.52)
(iv) 50% of the torque defined in (ii)						
36.53 (48.99)	2328	1061	16.60 (4.38)	13.74 (30.30)	0.376 (0.619)	2.20 (11.17)
(v) 25% of the torque defined in (ii)						
18.37 (24.64)	2344	1068	12.82 (3.39)	10.61 (23.40)	0.578 (0.950)	1.43 (7.27)
(vi) Unloaded						
0.57 (0.77)	2366	1078	9.37 (2.47)	7.76 (17.10)	13.514 (22.217)	0.06 (0.31)

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

Power kW (hp)	Speeds engine rev/min	Speeds PTO rev/min	Fuel Consumption hourly l/h (gal/h)	Fuel Consumption hourly kg/h (lb/h)	Fuel Consumption specific kg/kW.h (lb/hp.h)	Specific energy kW.h/l (hp.h/gal)
(i) Torque obtained at standard pto speed.						
81.06 (108.70)	2200	1002	25.56 (6.75)	21.16 (46.66)	0.261 (0.429)	3.17 (16.10)
(ii) 85% of the torque obtained in (i)						
71.61 (96.03)	2289	1043	24.16 (6.38)	20.00 (44.10)	0.279 (0.459)	2.96 (15.05)
(iii) 75% of the torque defined in (ii)						
54.28 (72.79)	2308	1052	20.38 (5.38)	16.87 (37.20)	0.311 (0.511)	2.66 (13.52)
(iv) 50% of the torque defined in (ii)						
36.53 (48.99)	2328	1061	16.60 (4.38)	13.74 (30.30)	0.376 (0.619)	2.20 (11.17)
(v) 25% of the torque defined in (ii)						
18.37 (24.64)	2344	1068	12.82 (3.39)	10.61 (23.40)	0.578 (0.950)	1.43 (7.27)
(vi) Unloaded						
0.77 (0.57)	2366	1078	9.37 (2.47)	7.76 (17.10)	22.217 (13.514)	0.31 (0.06)

No-load maximum engine speed 2366 rev/min

Equivalent engine torque:

at rated engine speed	352 Nm(2200 rev/min)
at maximum power	417 Nm(1950 rev/min)
at maximum torque	473 Nm(1202 rev/min)

Mean atmospheric conditions:

Temperature-dry bulb	22 'C (72 'F)
Relative Humidity	83 %
Barometer -	97.30 kPa(28.73 in Hg)

Maximum temperatures:

Thermostat housing	89 °C (193 °F)
Engine oil pan	104 °C (220 °F)
Fuel at injection pump	49 °C (120 °F)
Engine air intake	34 °C (93 °F)
Trans./Hydr. Oil	59 °C (139 °F)

Turbocharger boost pressure	
at rated engine speed	86 kPa (12.5 psi)
at maximum power	79 kPa (11.5 psi)

2. HYDRAULIC POWER AND LIFTING FORCE.

Date of test: 26 September 1989
Location: CAE/UNL, Lincoln, Nebr.

2.1 HYDRAULIC POWER TEST - Hydraulic pump performance

i. Sustained pressure with pump stalled	17.51 MPa (2540 psi)
ii. Pump delivery rate @ minimum pressure & rated engine speed	104.5 l/m (27.6 gpm)

iii.

	Flow Rate l/min (gal/min)	Pressure MPa (psi)	Power kW (hp)
At 90% of relief valve setting.	62.8 (16.6)	15.79 (2290)	16.5 (22.2)
At maximum hydraulic power.	98.8 (26.1)	14.48 (2100)	23.8 (32.0)

Tapping point(s)	Two hydraulic outlets combined
Hydraulic fluid temperature	
in oil reservoir	68 °C (154 °F)
at flow meter	71 °C (161 °F)

2.2 POWER LIFT TEST.

		Hitch Points	Frame
Lower hitch points above ground - down position.	[mm/in]	236/9.3	175/6.9
Vertical movement without load	[mm/in]	692/27.2	810/31.9
Vertical movement with load	[mm/in]	551/21.7	666/26.2
Maximum corrected force through full range	[kN/lbf]	28.4/6385	24.5/5504
Corresponding pressure	[kPa/psi]	14479/2100	
Moment about rear axle	[kN.m/ft.lb]	29.7/21923	40.5/29903
Maximum mast tilt angle	[degrees]	--	5.0

Lifting height relative to the horizontal position of lower links

[mm]		-408	-347	-269	-170	-68
[in]		-16.1	-13.7	-10.6	-6.7	-2.7
Corrected lifting forces.						
hitch points	[kN]	--	28.4	28.9	30.6	31.7
	[lb]	--	6385	6507	6880	7134
at frame	[kN]	28.3	--	27.6	28.1	27.7
	[lb]	6367	--	6195	6310	6236

Lifting height relative to the horizontal position of lower links

[mm]	1	102	204	257	
[in]	0	4.0	8.0	10.1	
Corrected lift forces.					
hitch points [kN]	32.1	32.2	32.6	--	
[lb]	7207	7248	7329	--	
at frame [kN]	27.0	25.8	--	24.5	
[lb]	6071	5808	--	5504	

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

		Hitch Points	Frame
Lower hitch points above ground - down position.	[mm/in]	243/9.6	182/7.2
Vertical movement without load	[mm/in]	692/27.2	810/31.9
Vertical movement with load	[mm/in]	543/21.4	660/26.0
Maximum corrected force through full range	[kN/lbf]	36.9/8287	32.4/7281
Corresponding pressure	[kPa/psi]	14479/2100	
Moment about rear axle	[kN.m/ft.lb]	38.6/28451	53.6/39558
Maximum mast tilt angle	[degrees]	--	5.3

Lifting height relative to the horizontal position of lower links

	[mm]	-401	-340	-264	-162	-60
	[in]	-15.8	-13.4	-10.4	-6.4	-2.4
Corrected lifting forces.						
hitch points	[kN]	--	36.9	38.5	40.6	42.0
hitch points	[lb]	--	8287	8663	9137	9440
at frame	[kN]	36.9	--	36.7	37.0	36.9
at frame	[lb]	8293	--	8251	8325	8284

Lifting height relative to the horizontal position of lower links

[mm]	-2	102	204	260	
[in]	-0.1	4.0	8.0	10.2	
Corrected lift forces.					
hitch points	[kN]	43.1	43.3	43.9	--
hitch points	[lb]	9694	9726	9865	--
at frame	[kN]	35.8	34.1	--	32.4
at frame	[lb]	8046	7667	--	7281

3. DRAWBAR POWER AND FUEL CONSUMPTION (UNBALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 13-Sep-89 14-Sep-89 Fuel density: 0.828 kg/l
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg C					Rel hum	Pressure
	kW	kN	km/h	rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	%	kPa
I. Maximum Power (unballasted, 2wd @ 1950 rev/min) Tire pressure: 110 kPa, rear 276 kPa, front Drawbar height: 572 mm														
2nd(A2)	51.42	46.64	3.97	2300	12.69%	0.351	2.36	54	82	100	15	12	71%	98.48
3rd(A3)	63.80	46.76	4.91	2232	14.37%	0.331	2.50	56	84	100	12	11	89%	98.44
4th(A4)	73.10	41.69	6.31	2072	6.65%	0.287	2.89	54	86	101	16	12	63%	98.65
5th(B1)	74.62	40.85	6.58	1952	5.90%	0.280	2.95	54	86	99	14	11	70%	98.75
6th(C1)	75.71	34.44	7.91	1953	4.58%	0.276	3.00	53	85	98	14	11	70%	98.75
7th(B2)	76.52	32.35	8.52	1950	3.95%	0.272	3.05	55	85	99	14	11	70%	98.81
8th(C2)	76.47	27.07	10.17	1951	3.31%	0.271	3.05	54	85	99	14	11	70%	98.78
9th(B3)	76.02	24.47	11.19	1950	3.07%	0.274	3.02	53	86	98	15	12	71%	98.71
10th(D1)	75.63	22.06	12.34	1947	2.74%	0.276	3.00	53	86	98	15	12	71%	98.71
11th(C3)	75.22	20.29	13.35	1952	2.33%	0.276	3.00	53	86	98	16	12	63%	98.68

OECD Drawbar Data (US)

Date of tests: 13-Sep-89 14-Sep-89 Fuel density: 6.910 lb/gal
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg F					Rel hum	Pressure
	hp	lb	mph	rpm	%	lb/hp.hr	hp.hr/gal	Fuel	Coolant	Oil	Dry	Wet	%	in Hg
I. Maximum Power (unballasted, 2wd @ 1950 rev/min) Tire pressure: 16 psi, rear 40 psi, front Drawbar height: 22.5 in														
2nd(A2)	68.95	10486	2.47	2300	12.69%	0.576	11.99	129	179	212	59	54	71%	29.08
3rd(A3)	85.56	10511	3.05	2232	14.37%	0.544	12.71	133	183	213	54	51	89%	29.07
4th(A4)	98.03	9373	3.92	2072	6.65%	0.472	14.65	130	187	213	60	53	63%	29.13
5th(B1)	100.07	9185	4.09	1952	5.90%	0.461	15.00	129	187	210	58	52	70%	29.16
6th(C1)	101.53	7743	4.92	1953	4.58%	0.453	15.25	128	185	209	58	52	70%	29.16
7th(B2)	102.62	7273	5.29	1950	3.95%	0.447	15.48	131	185	211	58	52	70%	29.18
8th(C2)	102.55	6085	6.32	1951	3.31%	0.446	15.50	129	186	210	58	52	70%	29.17
9th(B3)	101.95	5500	6.95	1950	3.07%	0.451	15.32	128	187	209	59	53	71%	29.15
10th(D1)	101.42	4960	7.67	1947	2.74%	0.454	15.24	128	188	209	59	53	71%	29.15
11th(C3)	100.87	4562	8.29	1952	2.33%	0.454	15.23	128	187	208	60	53	63%	29.14

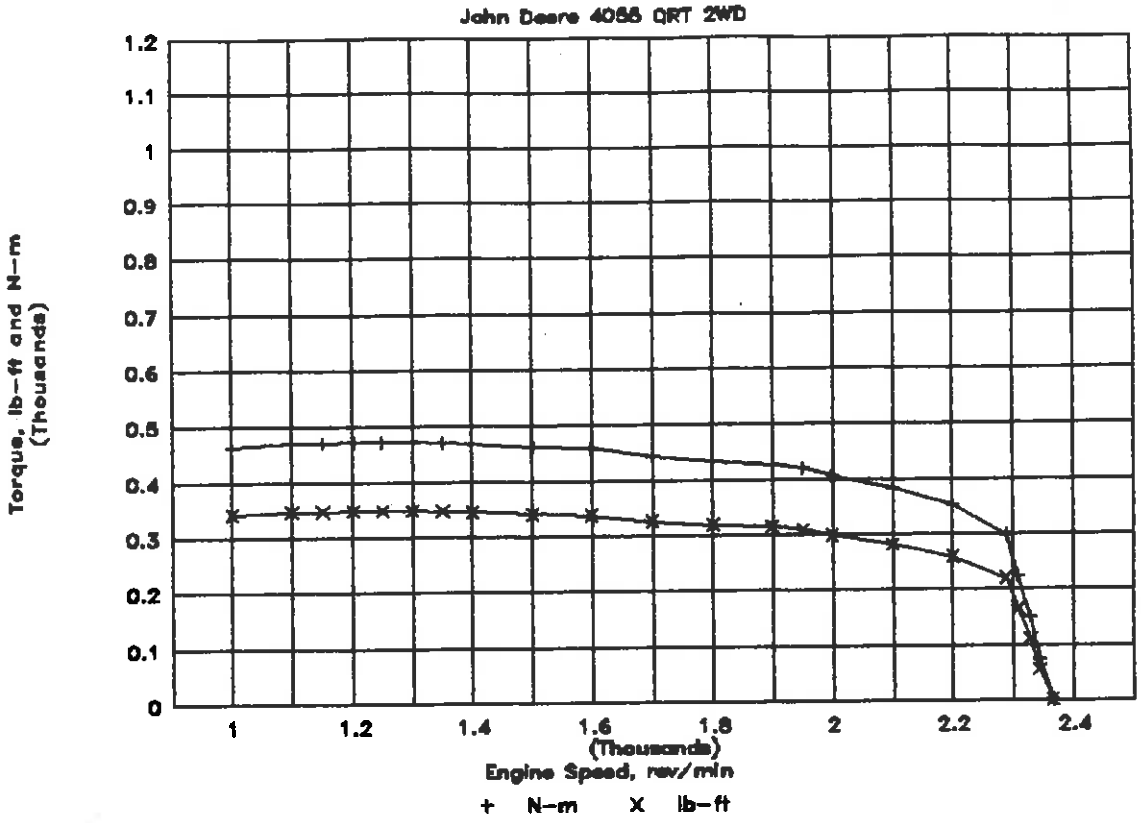
Date of tests: 13-Sep-89 14-Sep-89 Fuel density: 0.828 kg/l
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg C					Rel hum	Pressure
	kW	kN	km/h	rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	%	kPa
II. Part Loads (unballasted)						Tire pressure:		110 kPa, rear			276 kPa, front			
				Drawbar height:	572 mm									
II.1 in selected gear at maximum power														
7th(B2)	76.52	32.35	8.52	1950	3.95%	0.272	3.05	55	85	99	14	11	70%	98.81
II.1.1 75% of pull at maximum power at rated speed														
7th 75%	59.07	20.82	10.22	2305	2.58%	0.314	2.64	47	82	97	16	12	63%	98.58
II.1.2 50% of pull at maximum power at rated speed														
7th 50%	39.95	13.85	10.38	2325	1.67%	0.374	2.21	47	81	98	16	12	63%	98.58
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
9th 75% @	58.98	20.80	10.21	1770	2.41%	0.282	2.93	44	83	94	16	12	63%	98.54
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
9th 50% @	40.08	13.88	10.39	1789	1.92%	0.322	2.58	43	79	94	16	12	63%	98.54
II.2 in selected gear nearest to 7.5 km/h														
5th(B1)	74.62	40.85	6.58	1952	5.90%	0.280	2.95	54	86	99	14	11	70%	98.75
II.2.1 75% of pull at maximum power at rated speed														
5th 75%	57.83	26.13	7.97	2301	3.31%	0.320	2.59	51	85	101	16	12	63%	98.61
II.2.2 50% of pull at maximum power at rated speed														
5th 50%	39.36	17.42	8.13	2323	2.25%	0.375	2.21	46	81	98	16	12	63%	98.61
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7th 75% @	57.77	26.15	7.95	1808	3.31%	0.282	2.94	47	81	97	16	12	63%	98.61
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7th 50% @	39.39	17.43	8.13	1829	2.08%	0.322	2.57	46	80	95	16	12	63%	98.61

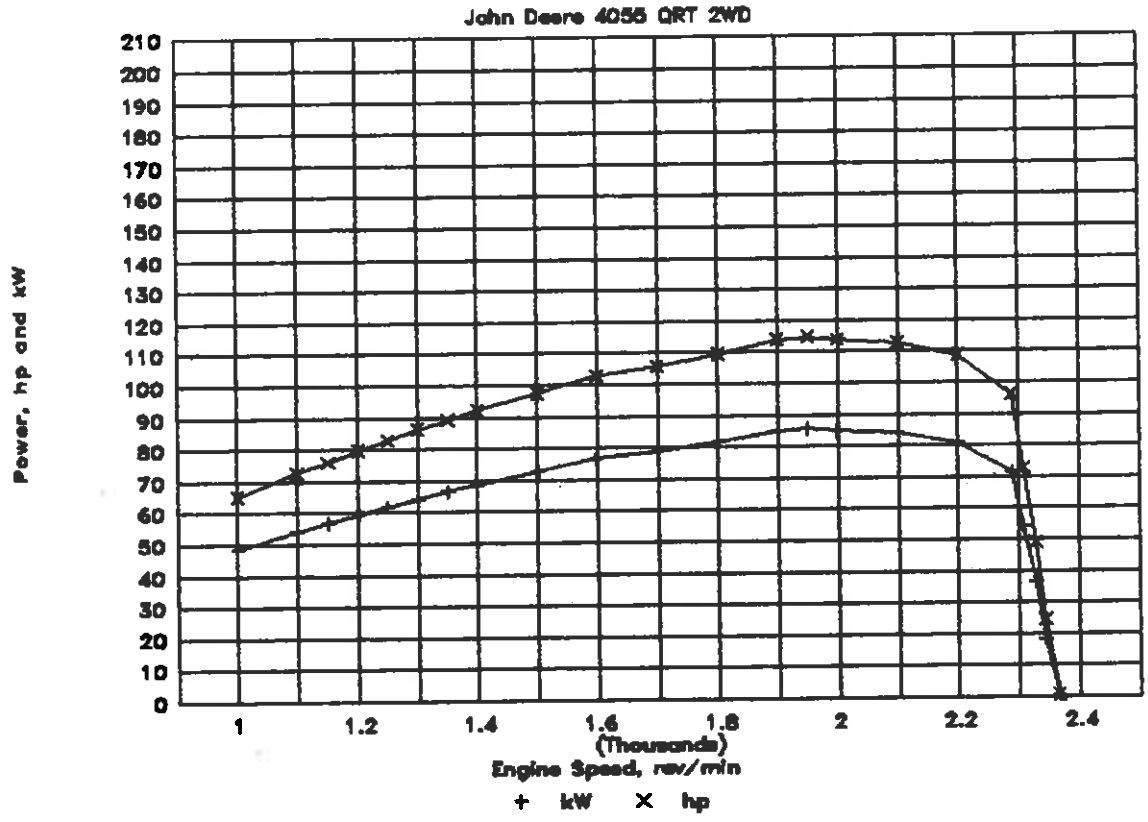
Date of tests: 13-Sep-89 14-Sep-89 Fuel density: 6.910 lb/gal
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg F					Rel hum	Pressure
	hp	lb	mph	rpm	%	lb/hp.hr	hp.hr/gal	Fuel	Coolant	Oil	Dry	Wet	%	in Hg
II. Part Loads (unballasted)						Tire pressure:		16 psi, rear			40 psi, front			
				Drawbar height: 22.5 in										
II.1 in selected gear at maximum power														
7th(B2)	102.62	7273	5.29	1950	3.95%	0.447	15.48	131	185	211	58	52	70%	29.18
II.1.1 75% of pull at maximum power at rated speed														
7th 75%	79.21	4680	6.35	2305	2.58%	0.516	13.40	116	180	207	61	54	63%	29.11
II.1.2 50% of pull at maximum power at rated speed														
7th 50%	53.57	3115	6.45	2325	1.67%	0.615	11.23	117	178	209	61	54	63%	29.11
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
9th 75% @	79.09	4677	6.34	1770	2.41%	0.464	14.89	112	181	202	61	54	63%	29.10
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
9th 50% @	53.75	3121	6.46	1789	1.92%	0.529	13.07	110	175	201	61	54	63%	29.10
II.2 in selected gear nearest to 4.6 mph														
5th(B1)	100.07	9185	4.09	1952	5.90%	0.461	15.00	129	187	210	58	52	70%	29.16
II.2.1 75% of pull at maximum power at rated speed														
5th 75%	77.55	5875	4.95	2301	3.31%	0.526	13.13	124	185	214	60	53	63%	29.12
II.2.2 50% of pull at maximum power at rated speed														
5th 50%	52.78	3916	5.05	2323	2.25%	0.616	11.22	116	178	208	61	54	63%	29.12
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
7th 75% @	77.47	5879	4.94	1808	3.31%	0.463	14.92	117	179	206	61	54	63%	29.12
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
7th 50% @	52.82	3919	5.05	1829	2.08%	0.529	13.06	116	177	204	61	54	63%	29.12

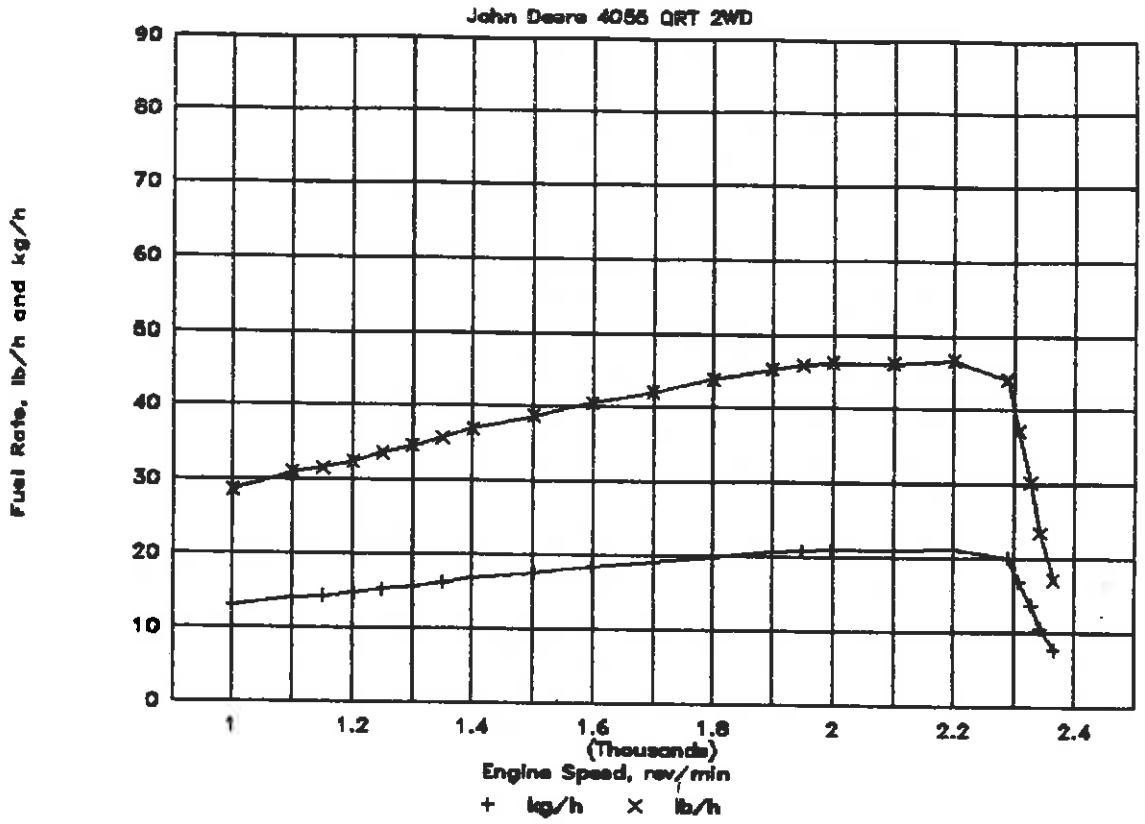
Equivalent Crankshaft Torque



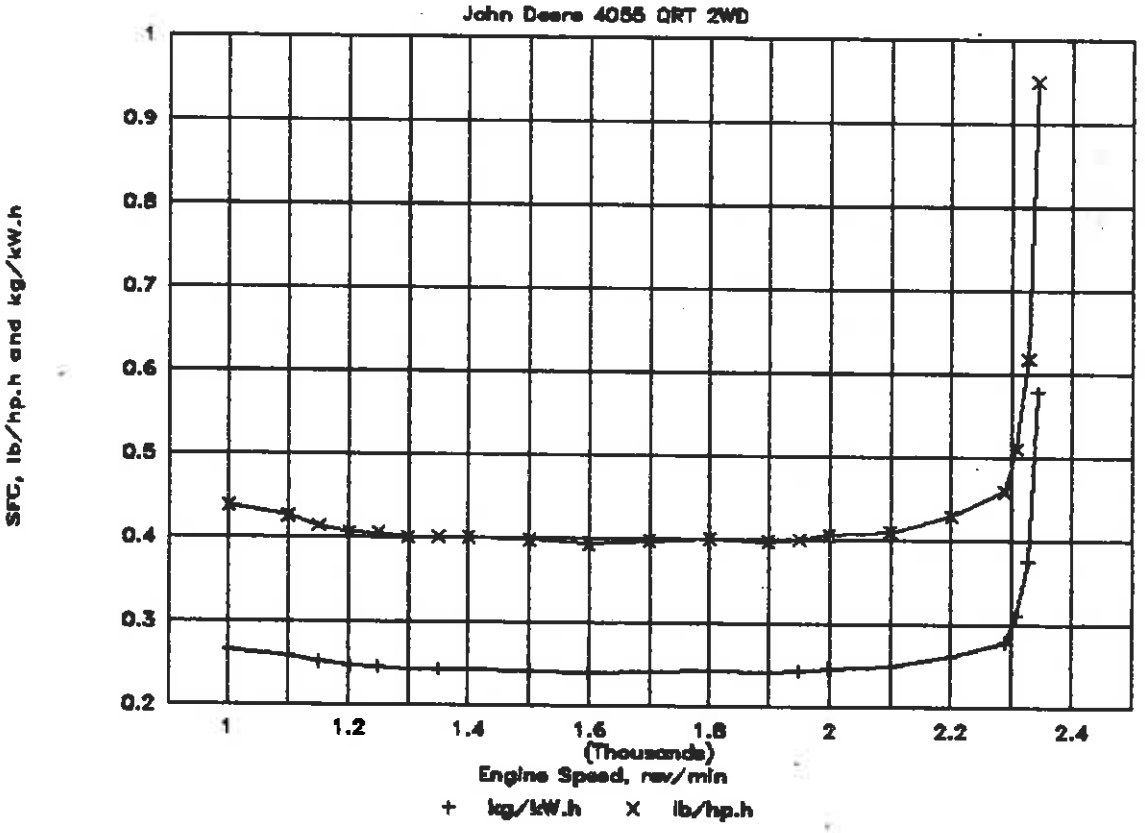
PTO Power



PTO Fuel Consumption

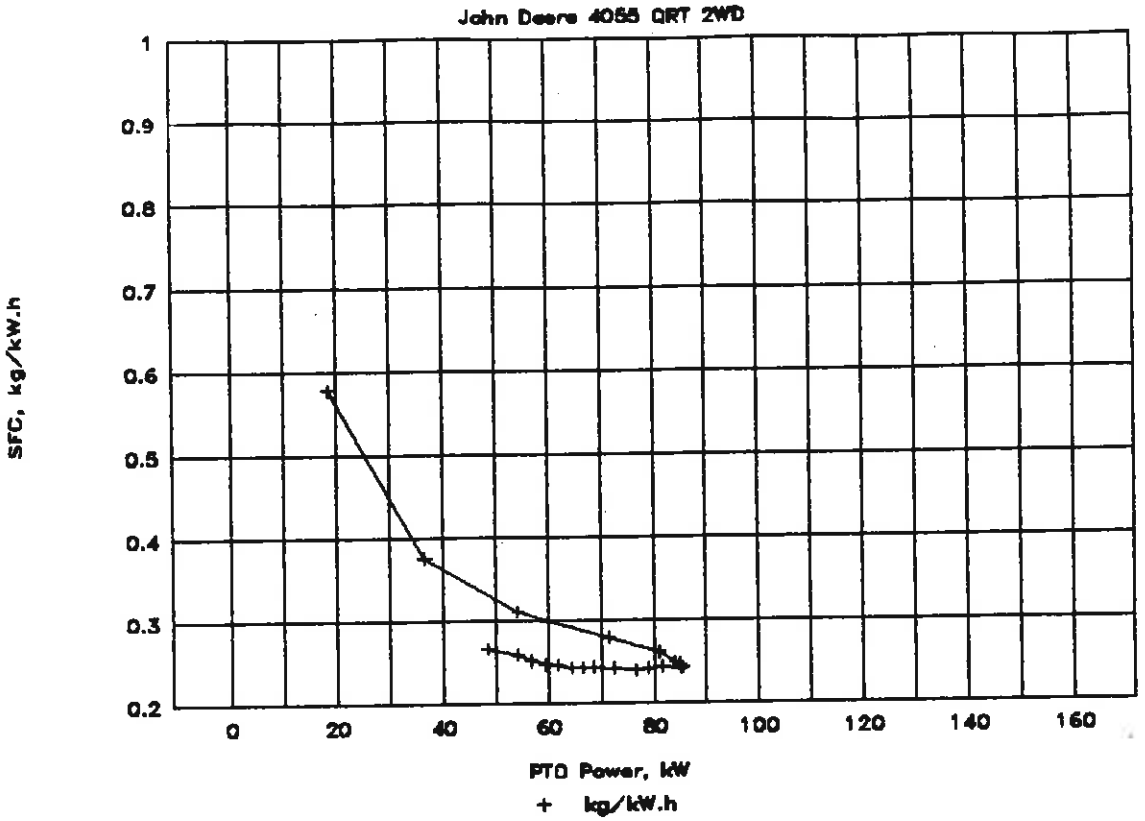


PTO Specific Fuel Consumption



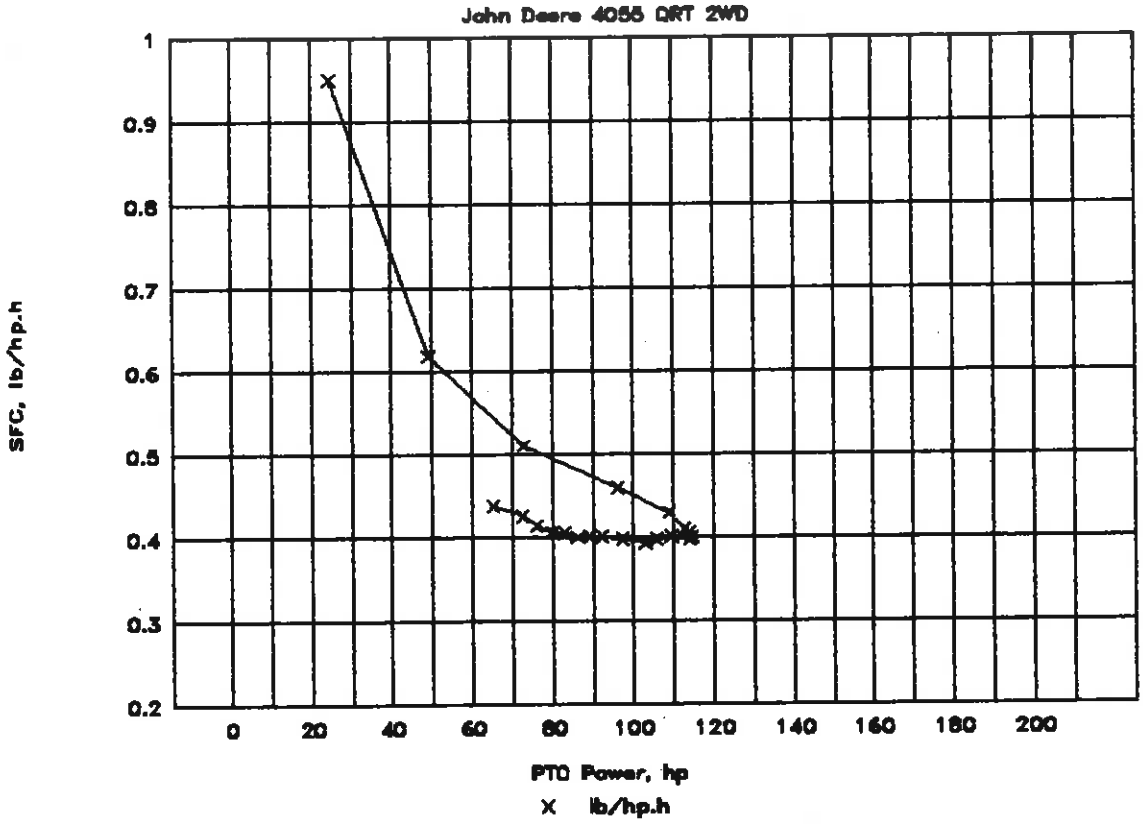
SFC vs PTO Power

John Deere 4055 QRT 2WD



SFC vs PTO Power

John Deere 4055 QRT 2WD



5. OPTIONAL TESTS.

5.1 MEASUREMENT OF EXTERNAL NOISE LEVEL.

Date of test	:	15 September 1989
Location of test	:	CAE/UNL, Lincoln, Nebr.
Sound level meter	:	B & K 2203
Type of track	:	Concrete oval
Gear number	:	16th(D4)
Speed prior to acceleration	:	24.1 km/h (15.0 mph)
Sound level	:	86.5 dB(A)

5.2 MAXIMUM POWER AT 1950 REV/MIN (BALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 20-Sep-89 20-Sep-89 Fuel density: 0.828 kg/l
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg C					Rel hum	Pressure
	kW	kN	km/h	rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	%	kPa
Ib. Maximum Power (ballasted, 2wd @ 1950 rev/min) Tire pressure: 85 kPa, rear (inner) 276 kPa, front Drawbar height: 584 mm 85 kPa, rear (outer)														
1st(A1)	50.39	59.37	3.06	2302	14.53%	0.363	2.28	54	84	101	20	17	74%	97.97
2nd(A2)	63.36	59.29	3.85	2279	14.40%	0.335	2.47	55	86	102	19	16	74%	97.93
3rd(A3)	72.89	52.45	5.00	2076	6.25%	0.291	2.84	53	87	101	22	17	61%	97.97
4th(A4)	75.18	43.10	6.28	2015	4.32%	0.279	2.97	53	87	101	23	18	62%	97.93
5th(B1)	75.04	40.31	6.70	1956	3.93%	0.279	2.97	53	87	101	23	19	69%	97.93
6th(C1)	75.08	33.82	7.99	1951	3.45%	0.278	2.98	53	87	99	24	19	62%	97.90
7th(B2)	76.71	32.18	8.58	1953	3.13%	0.274	3.02	53	87	99	24	19	62%	97.90
8th(C2)	75.80	26.66	10.23	1954	2.72%	0.277	2.99	53	86	100	27	20	52%	97.90
9th(B3)	73.58	23.53	11.26	1952	2.15%	0.284	2.91	53	85	99	27	20	52%	97.87
10th(D1)	72.97	21.17	12.41	1949	2.07%	0.286	2.90	53	85	99	27	20	52%	97.87
11th(C3)	73.38	19.75	13.38	1949	2.07%	0.285	2.90	53	88	99	27	20	52%	97.87

OECD Drawbar Data (US)

Date of tests: 20-Sep-89 20-Sep-89 Fuel density: 6.910 lb/gal
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg F					Rel hum	Pressure
	hp	lb	mph	rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	%	in Hg
Ib. Maximum Power (ballasted, 2wd @ 1950 rev/min) Tire pressure: 12 psi, rear (inner) 40 psi, front Drawbar height: 23 in 12 psi, rear (outer)														
1st(A1)	67.58	13347	1.90	2302	14.53%	0.597	11.58	130	184	214	68	62	74%	28.93
2nd(A2)	84.96	13330	2.39	2279	14.40%	0.550	12.56	131	186	216	66	61	74%	28.92
3rd(A3)	97.75	11791	3.11	2076	6.25%	0.479	14.42	128	188	214	71	63	61%	28.93
4th(A4)	100.82	9689	3.90	2015	4.32%	0.459	15.07	128	188	214	73	65	62%	28.92
5th(B1)	100.63	9062	4.16	1956	3.93%	0.458	15.08	128	189	213	74	66	69%	28.92
6th(C1)	100.68	7603	4.97	1951	3.45%	0.456	15.14	128	189	211	76	67	62%	28.91
7th(B2)	102.87	7234	5.33	1953	3.13%	0.451	15.33	127	189	210	76	67	62%	28.91
8th(C2)	101.65	5994	6.36	1954	2.72%	0.455	15.19	128	186	212	80	68	52%	28.91
9th(B3)	98.67	5289	7.00	1952	2.15%	0.468	14.78	128	185	210	80	68	52%	28.90
10th(D1)	97.86	4760	7.71	1949	2.07%	0.470	14.70	128	186	211	80	68	52%	28.90
11th(C3)	98.40	4440	8.31	1949	2.07%	0.469	14.74	128	190	211	80	68	52%	28.90

MAXIMUM POWER AT 2200 REV/MIN (BALLASTED TRACTOR)

OECD Drawbar Data (SI)

Date of tests: 20-Sep-89 20-Sep-89 Fuel density: 0.828 kg/l
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg C					Rel hum	Pressure
	kW	kN	km/h	rev/min	%	kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	%	kPa
Ic. Maximum Power (ballasted, 2wd @ 2200 rev/min) Drawbar height: 584 mm								Tire pressure:		85 kPa, rear (inner) 85 kPa, rear (outer)	276 kPa, front			
2nd(A2)	64.80	59.51	3.92	2277	12.86%	0.327	2.53	54	85	102	19	16	74%	97.93
3rd(A3)	71.60	48.04	5.37	2199	4.95%	0.297	2.78	55	86	101	21	17	67%	97.97
4th(A4)	73.96	38.59	6.90	2201	3.77%	0.292	2.84	53	87	103	22	18	68%	97.93
5th(B1)	73.20	34.62	7.61	2203	3.21%	0.294	2.82	53	87	102	23	19	69%	97.93
6th(C1)	73.08	29.07	9.05	2199	2.80%	0.294	2.82	53	87	102	24	19	62%	97.90
7th(B2)	73.89	27.41	9.71	2197	2.64%	0.291	2.85	53	87	102	24	19	62%	97.90
8th(C2)	73.43	22.88	11.55	2197	2.31%	0.291	2.85	54	87	102	26	19	51%	97.90
9th(B3)	72.14	20.40	12.73	2200	1.99%	0.297	2.79	53	87	101	27	20	52%	97.90
10th(D1)	71.60	18.38	14.03	2197	1.90%	0.299	2.77	53	87	101	27	20	52%	97.87

OECD Drawbar Data (US)

Date of tests: 20-Sep-89 20-Sep-89 Fuel density: 6.910 lb/gal
Type of track: Concrete Test # 1626

Gear	Power	Pull	Speed	Engine Speed	Slip	SFC		Temperature, deg F					Rel hum	Pressure
	hp	lb	mph	rpm	%	lb/hp-hr	hp-hr/gal	Fuel	Coolant	Oil	Dry	Wet	%	in Hg
Ic. Maximum Power (ballasted, 2wd @ 2200 rev/min) Drawbar height: 23 in								Tire pressure:		12 psi, rear (inner) 12 psi, rear (outer)	40 psi, front			
2nd(A2)	86.90	13378	2.44	2277	12.86%	0.537	12.87	130	186	215	66	61	74%	28.92
3rd(A3)	96.02	10800	3.33	2199	4.95%	0.489	14.14	131	188	213	70	63	67%	28.93
4th(A4)	99.19	8677	4.29	2201	3.77%	0.479	14.42	128	188	217	72	64	68%	28.92
5th(B1)	98.17	7783	4.73	2203	3.21%	0.483	14.30	128	188	215	74	66	69%	28.92
6th(C1)	98.00	6535	5.62	2199	2.80%	0.483	14.30	128	189	216	75	66	62%	28.91
7th(B2)	99.09	6161	6.03	2197	2.64%	0.478	14.46	128	189	216	76	67	62%	28.91
8th(C2)	98.47	5145	7.18	2197	2.31%	0.478	14.46	129	189	215	79	67	51%	28.91
9th(B3)	96.75	4587	7.91	2200	1.99%	0.488	14.16	128	189	214	80	68	52%	28.91
10th(D1)	96.02	4131	8.72	2197	1.90%	0.491	14.08	128	189	215	80	68	52%	28.90

Repairs: None
Remarks: None