OECD APPROVAL # 1495
(Restricted code)
Date of approval: 25 November, 1993

NEBRASKA TRACTOR TESTING LABORATORY
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INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
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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 7800 POWERSHIFT MFWD 40 km/h (4WD)





MANUFACTURED BY: John Deere Waterloo Works Tractor Division
P.O.Box 270
Waterloo, Iowa 50704-0270

NEBRASKA TEST NO. 1669
Test dates: May-July 1993

This test report provides the results of the tests conductedin 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 25 November 1993

John Deere 7800 Powershift MFWD 40 km/h (4WD) OECD # 1495

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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	216 hours
Location of Test	Tractor Testing Laboratory Lincoln, Nebraska,USA.

TRACTOR SPECIFICATIONS.

Make	John Deere
Model	7800P Powershift, 40 km/h
Type	Unit construction, mechanical front wheel drive (MFWD)
Number of driving wheels	2 or 4
Serial Number	*RW7800P003109*
1st Serial number	*RW7800P001000*

ENGINE.

Make	John Deere
Model	6076TRW30
Type	Diesel; 4-stroke; turbocharged direct injection
Serial Number	*RG6076T505638*
Cylinders	
Number/Disposition	6, in-line, vertical
Bore/stroke	115.8 mm x 120.7 mm (4.56 in x 4.75 in)
Capacity	7627 ml (465.43 in^3)
Compression Ratio	15.5 - 1
Arrangement of valves	Overhead
Cylinder liners	Wet; replaceable
Super charging	
Make/Model/Type (used on test)	Garret/RE42682/Exh. driven Schwitzer/RE47828/Exh. driven
Pressure	104 kPa (15.1 psi)-Garrett 125 kPa (18.1 psi)-Schwitzer
Fuel System	
Feed system	Electronic transfer pump
Make/Type/Model of filters	Stanadyne/paper element
Fuel tank capacity	344 l (91 gallon)

Fuel Cooler	Heat exchanger with air
Make/Model/Type Injection Pump	Bosch/A2000(RE41833)/Inline electric shutoff
Pump Serial number	26618493
Production setting of pump Flow Rate (Rated Eng.Spd & Full Load)	27.8 +/-0.9 kg/hour (61.3+/-2.0 lb/hour)
Make/Model/Type Injectors	Nippondenso/RE30083
Injection pressure	42 MPa (2896 psi)
Timing	27 degrees BTDC
Governor	
Make/Model/Type	Bosch/RSV/mechanical
Governed engine speed range	From 850 to 2275 rev/min
Rated engine speed	2100 rev/min
High-idle speed range	2275 +/- 50 rpm
Air Cleaner.	
Pre-cleaner Make/Model/type	Donaldson/RE34941/Strato-tube precleaner with aspirator
Air intake location	Under hood, front of tractor
Main Cleaner Make/Model/Type	Donaldson/RE34966/pleated paper
Location	Under hood
Secondary cleaner	Donaldson/RE34967/pleated paper
Maintenance indicator	Dash mounted warning light and audio signal
Lubrication system.	
Type of feed pump	Full pressure; positive displacement
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, belt driven
Fan specification	Belt driven; Suction type; variable speed
Number of fan blades	6
Fan diameter	582 mm (22.9 in)
Coolant system capacity	26 l (26.9 US qt)
Type of temperature control	Two thermostats and variable speed fan
System pressure	69 kPa (10.0 psi)

Starting system.	
Make/Model/Type of starter	Nippondenso/RE43266/Solenoid engaged
Power Rating	4.0 kW (5.36 hp)
Cold starting aid	Electrical resistance plug in air intake
Safety device	Electrical lockout on gearshift
Electrical system.	
Voltage & grounding.	12 Volt DC;negative ground
Generator	
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/RE34315/Expansion chamber
Location	Horizontal muffler; under hood
Exhaust stack location	Vertical; right side of cab

TRANSMISSION.

Clutch. (travel)	
Make/Model/Type	John Deere/Multiple plate/oil cooled
Number of plates	3, 5, or 8 depending on gear
Plate diameter	225 mm (8.86 in)
Method of operation	Hydraulic; pedal actuated
Gear Box.	
Make/Model/Type	John Deere/Full powershift/ mechanical
Arrangement	Planetary design; one input planetary gearset, one 2-speed planetary gearset, two compound planetary gearsets, all with multiple wet disc clutches and brakes
Number of gears	19 forward and 7 reverse operated by a single lever
Oil cooler	Heat exchanger with air
Available options	MFWD
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	Pedal operated switch
Method of disengagement	Self-disengaging by brake pedal operation

Front Axle and final drives.

Make/Model/Type	John Deere/1150/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 870 mm (34.3 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 2100 rev/min [km/h]	[mph]
Forward			
1	429.52	1.60	1.00
2	300.01	2.30	1.44
3	239.52	2.88	1.80
4	197.65	3.48	2.18
5	171.56	4.01	2.51
6	151.17	4.56	2.78
7	131.18	5.25	3.28
8	110.17	6.25	3.91
9	95.67	7.20	4.50
10	84.29	8.17	5.11
11	73.18	9.41	5.88
12	63.76	10.80	6.75
13	55.36	12.44	7.78
14	48.79	14.12	8.83
15	42.35	16.26	10.16
16	37.81	18.22	11.39
17	30.56	22.54	14.09
18	21.89	31.46	19.66
19	17.68	38.96	24.35
Reverse			
1	267.37	2.58	1.61
2	186.74	3.69	2.31
3	122.98	5.60	3.50
4	106.79	6.45	4.03
5	94.05	7.32	4.58
6	81.65	8.44	5.28
7	42.15	16.34	10.21

Number of front wheel revs for one rear wheel revolution: 1.3188

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	One
Method of changing speeds	
Option JDP I (tested option)	Reversible shaft
Option JDP II	Reversible shaft with 2 speeds selectable by hand lever

PTO Proportional to engine speed - Reversible shaft

Standard PTO-540 rev/min.

Location	Rear of tractor;center plane
Diameter of shaft	34.9 mm (1.375 in)
Number of splines	6; conforms to ISO 500/1979.
Height above ground	765 mm (30.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	620 mm (24.41 in)
PTO Speed at rated engine spd	547 rev/min
Engine speed at Std. PTO spd	2072 rev/min
Engine speed/PTO speed ratio	3.837:1
Power restriction	56 kW (75 hp)
Direction of rotation when viewed from shaft end	Clockwise.

Standard PTO-1000 rev/min.

Location	Rear of tractor;center plane
Diameter of shaft	35 mm (1.375 in)
Number of splines	21; conforms to ISO 500/1979.
Height above ground	765 mm (30.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	620 mm (24.41 in)
PTO Speed at rated engine spd	1007 rev/min
Engine speed at Std. PTO spd	2086 rev/min
Engine speed/PTO speed ratio	2.086:1
Power restriction	None
Direction of rotation when viewed from shaft end	Clockwise.

PTO Proportional to engine speed - Reversible shaft with two speeds

Standard PTO-540 rev/min.	
Location	Rear of tractor;center plane
Diameter of shaft	35 mm (1.375 in)
Number of splines	6 or 21; conforms to ISO 500/1979.
Height above ground	765 mm (30.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	620 mm (24.41 in)
PTO Speed at rated engine spd	656 rev/min
Engine speed at Std. PTO spd	1730 rev/min
Engine speed/PTO speed ratio	3.204:1
Power restriction	56 kW (75 hp)
Direction of rotation when viewed from shaft end	Clockwise.

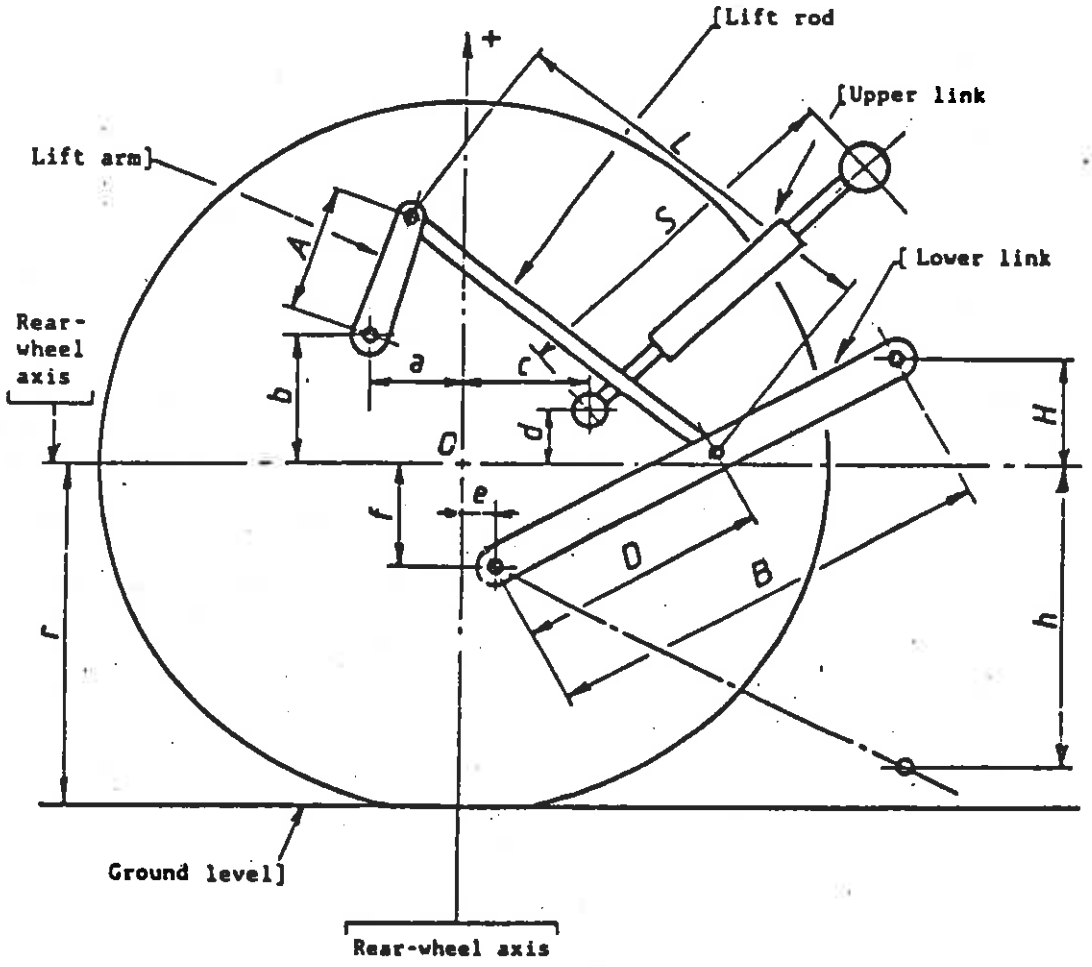
Standard PTO-1000 rev/min.	
Location	Rear of tractor;center plane
Diameter of shaft	35 mm (1.375 in)
Number of splines	6 or 21; conforms to ISO 500/1979.
Height above ground	765 mm (30.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	620 mm (24.41 in)
PTO Speed at rated engine spd	1064 rev/min
Engine speed at Std. PTO spd	1973 rev/min
Engine speed/PTO speed ratio	1.973:1
Power restriction	None
Direction of rotation when viewed from shaft end	Clockwise.

POWER LIFT.

Make/Model/Type	John Deere/Electronic lower link sensing; variable mix of draft and position control; adjustable rate of drop
Type of hydraulic system	Closed center;pressure and flow compensated
Number/Type of cylinders	Two external, single acting
Type of linkage lock for transport	
Relief valve spressure setting	197-207 bar (2858-3003 psi)
Opening pressure of cylinder safety valve	240+/-10 bar (3483+/-146 psi)
Lift pump type	Axial piston, variable delivery and flow, pressure and flow compensated
Power transmission to pump	Spiral bevel 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 4 pairs of ISO standard couplings at rear of tractor.
Max. oil volume available for external cylinders.	19 liters (5.0 gal) regular; additional 11 liters (2.90 gallon) allowable overfill for total of 30 liters (7.9 gallons)

THREE POINT LINKAGE.

- Category 3N/2 or 2 in conformity with ISO 730/1-1990
- Category adaptor None



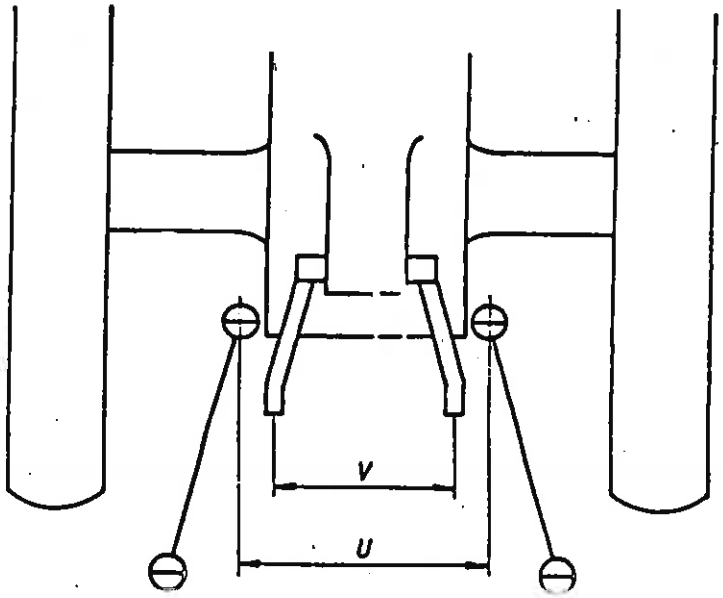


Table 1.1 - Linkage geometry dimensions *.
ISO Category III Hook Type Draft Link Ends

		Dimension or range [mm]	Dimension or range [in]	Settings used [mm]	Settings used [in]
Lift category		III		III	
Rear Tire - Radius Index	(r)	870	34.3	905	35.6
Front Tire - Radius Index	(r')	665	26.2	695	27.4
Length of lift arms	(A)	375	14.8	same	
Length of lower links	(B)	1011	39.8	same	
Distance of lift arm pivot from: horizontal	(a)	205	8.1	same	
rear wheel axis: vertical	(b)	588	23.1	same	
Horizontal distance between the 2 lower link points	(U)	520	20.5	same	
Horizontal distance between the 2 lift arm end points	(V)	680	26.8	same	
Length of upper link	(S)	609	24.0	692	27.3
	to	808	31.8		
Distance of upper link pivot point from rear wheel axis					
Top hole - horizontal	(c)	504	19.8	same	
- vertical	(d)	353	13.9	283	11.1
	and	283	11.1		
	and	200	7.9		
Distance of lower link pivot from: horizontal	(e)	195	7.7	same	
rear wheel axis: vertical	(f)	275	10.8	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	612	24.1	612	24.1
	or	688	27.1		
Length of lift rods	(L)	842	33.1	968	38.1
	to	1051	41.4		
Height of lower hitch points relative to rear wheel axis					
In low position	(h)	409	16.1	648	25.5
	to	802	31.6		
In high position	(H)	281	11.1	79	3.2
	to	49	1.9		
Height above ground of lower hitch points when locked in transport position.		792	31.2	984	38.2
	to	1123	44.2		

* tire dynamic index of 905 mm (35.6 inch) - ISO 4251/1-1984

SWINGING DRAWBAR.

Type	Oscillating
Height above ground - maximum	579 mm (22.8 in)
- minimum	515 mm (20.3 in)
Adjustments	Invert drawbar; reposition clevis
Distance of hitch point from rear wheel axis-horizontal	920, 970, 1020 mm (36.2, 38.2, 40.2 in)
Distance of hitch point from PTO shaft end: Vertical	250 mm (9.8 in)
Horizontal	250-350-400 mm (9.8-13.8-15.7 in)
Lateral adjustment-Right side	190 mm (7.5 in)
Left side	190 mm (7.5 in)
Distance of pivot point from rear wheel axis-horizontal	27 mm (1.1 in)
Diameter of drawbar pin hole	33 mm (1.3 in)
Maximum vertical static permissible load	28 kN (6300 lb)-short position 21 kn (4725 lb)-intermediate 14 kN (3150 lb)-extended

STEERING.

Make/Model/Type	Eaton/RE4138/Hydrostatic
Method of operation	Steering wheel
Pump(s)	Power mode-same as main pump Manual mode-ground driven hydraulic pump
Ram(s)	Two external; double acting
Working pressure	170+/-5 bar (2466+\-72 psi)

BRAKE SYSTEM.

Service brake.	
Make/Model/Type	Vickers/RE29826/John Deere oil immersed disc
Method of operation	Hydraulic; operated by two pedals which can be locked together.
Parking brake.	
Type	Transmission lock.
Method of operation	Gear selector lever
Trailer Brake	None

WHEELS.

Number.	
Front	Two; Driving and steering
Rear	Two or four; Driving
Wheel base	2800 mm (110.3 in)

Track width adjustment

	Minimum [mm]	Minimum [in]	Maximum [mm]	Maximum [in]	Adjustment method
Front	1524	60.0	2135	80.0	Reversing wheels and offset lug rims
Rear	1518	5987	2752	108.3	Reversing wheels and offset lug rims

PROTECTIVE STRUCTURE.

Make/Model/Type	John Deere/SG-050/ComfortGard
Manufacturer's name/address	John Deere Tractor Works Waterloo, Iowa, USA
Protective device	Cab; not tiltable
OECD approval number	CSS 0217/11

DRIVER'S SEAT.

Make/Model/Type	Sears/FS92-01/Air suspension; Personal posture cushioning
Type of suspension	Air
Type of damping	Air
Range of adjustment	
Longitudinal	167 mm (6.6 in)
Vertical	80 mm (3.1 in)

LIGHTING.

	Height above ground of center [mm]	Height above ground of center [in]	Size [mm]	Distance from outside edge to median plane of tractor. [mm]	Distance from outside edge to median plane of tractor. [in]
Head lights	1110	43.7	162x102	232	9.1
Side lights	1110	43.7	152x102	277	10.9
Rear lights	1980	78.0	127x76	892	35.1
Rear reflectors					
outside	1980	78.0	43x70	934	36.8
inside			43x80	807	31.8

TEST CONDITIONS.

Overall dimensions.

Length	Overall		4755 mm (187.2 in)	
Width		Minimum	Maximum (singles)	(duals)
Short axle	mm/inch	2438/96.0	2645/104.1	NA
Medium axle	mm/inch	2808/110.6	3015/118.7	3581/141.0
Long axle	mm/inch	3012/118.6	3219/126.7	3785/149.0
Height - Top protective structure			3023 mm (119.0 in)	
- Top of exhaust			2968 mm (116.8 in)	
Ground clearance			515 mm (20.3 in)	
Clearance-limiting part			Drawbar	

Tractor Mass (with cab,full fuel tank).

		without driver [kg]	without driver [lb]	with driver [kg]	with driver [lb]
Unballasted	Front	2412	5318	2427	5250
	Rear	4571	10077	4631	10210
	Total	6983	15395	7058	15560
Ballasted	Front	2408	5309	2423	5342
	Rear	6233	13741	6293	13824
	Total	8641	19050	8716	19216

Max.load permissible load-front 4800 kg (10580 lb
-rear 10000 kg (22050 lb)

Ballast.

	Number of weights	Mass (total) [kg]	Mass (total) [lb]	Water [kg]	Water [lb]
Front	0	--	--	--	--
Rear	4	904	2000	--	--
Duals	2	754	1670	--	--

Tire Specifications.

	Front Wheels	Rear Wheels
Make	Goodyear	Goodyear
Dimensions	14.9R30	18.4R42
Number/Ply rating	2/3 star	2 or 4/2 star
Type	Radial	Radial
Max.load (tire mfg - 40 km/h)	2120 kg/tire (4675 lb/tire)	3150 kg/tire (6945 lb/tire)
(tire mfg - 30 km/h)	2270 kg/tire (5010 lb/tire)	3375 kg/tire (7440 lb/tire
Inflation pressure(tire mfr)-max	210 kPa (30 psi)	170 kPa (24 psi)
-min	40 kPa (6 psi)	40 kPa (6 psi)
Dynamic Radius Index	665 mm/26.2 in	870 mm/34.3 in
Chosen track width-singles	1625 mm/64.0 in	1650 mm/65.0 in
-duals		3050 mm/120.1 in

Oils and Lubrication.

Capacity and change interval:

	Capacity liter	Capacity quart	Oil change hours	Filter change hours
Engine (w/o filter)	17.0	18.0	250	250
Front axle	8.5	9.0	1500	
Transmission, final drive, rear axle and hydraulics	102.3	108.2	1500	Annually or as required
Final drive, front	1.9	2.0	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; CCMD specification D5 or D6	
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	24	

Fuel

Type/grade	Premier; Grade 2-D, in conformity with the national standard
Density (Pto test)	0.834 kg/l at 15° C
(Drawbar test)	same as Pto test.
Cetane number	53.9
Viscosity	2.31 cSt at 37.8° C

COMPULSORY TESTS

1. MAIN POWER TAKE-OFF

Date: 07-May-93 Location: UNL Tractor Test Lab, Lincoln, NE, U.S.A.

Type of dynamometer: Eddy current, Eaton Fuel density: 6.958 lb/gal

Power kW / hp	Eng rev/min	PTO rev/min	l/h / gal/h	kg/h / lb/h	kg/kW-hr / lb/hp-hr	kW-hr/l / hp-hr/gal
1.1 Maximum Power – 2 hours						
118.55	1700	815	33.58	27.99	0.236	3.53
158.97			*8.87*	*61.72*	*0.388*	*17.92*
1.2 Power at Rated Engine Speed – 1 hour						
109.42	2102	1008	32.52	27.11	0.248	3.36
146.73			*8.59*	*59.77*	*0.407*	*17.08*
1.3 Power at Standard Power Take-Off Speed – 1 hour						
109.41	2102	1008	32.52	27.11	0.248	3.36
146.73			*8.59*	*59.77*	*0.407*	*17.08*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
109.42	2102	1008	32.52	27.11	0.248	3.36
146.73			8.59	59.77	0.407	17.08
1.4.2 85% of torque obtained in 1.4.1						
96.33	2177	1044	29.21	24.36	0.253	3.30
129.18			*7.72*	*53.70*	*0.416*	*16.74*
1.4.3 75% of torque defined in 1.4.2						
73.31	2209	1059	24.48	20.41	0.278	2.99
98.31			*6.47*	*45.00*	*0.458*	*15.20*
1.4.4 50% of torque defined in 1.4.2						
49.47	2236	1072	19.59	16.33	0.330	2.53
66.34			*5.17*	*36.00*	*0.543*	*12.82*
1.4.5 25% of torque defined in 1.4.2						
25.03	2262	1085	14.36	11.97	0.478	1.74
33.56			*3.79*	*26.40*	*0.787*	*8.85*
1.4.6 unloaded						
1.16	2280	1093	9.47	7.89	6.779	0.12
1.56			*2.50*	*17.40*	*11.145*	*0.62*
1.5 Part Loads at Standard Power Take-off Speed						
1.5.1 Torque at maximum power						
109.41	2102	1008	32.52	27.11	0.248	3.36
146.73			*8.59*	*59.77*	*0.407*	*17.08*
1.5.2 85% of torque obtained in 1.5.1						
96.33	2177	1044	29.21	24.36	0.253	3.30
129.18			*7.72*	*53.70*	*0.416*	*16.74*
1.5.3 75% of torque defined in 1.5.2						
73.31	2209	1059	24.48	20.41	0.278	2.99
98.31			*6.47*	*45.00*	*0.458*	*15.20*
1.5.4 50% of torque defined in 1.5.2						
49.47	2236	1072	19.59	16.33	0.330	2.53
66.34			*5.17*	*36.00*	*0.543*	*12.82*
1.5.5 25% of torque defined in 1.5.2						
25.03	2262	1085	14.36	11.97	0.478	1.74
33.56			*3.79*	*26.40*	*0.787*	*8.85*
1.5.6 unloaded						
1.16	2280	1093	9.47	7.89	6.779	0.12
1.56			*2.50*	*17.40*	*11.145*	*0.62*

No load maximum engine speed:	2280 rev/min	
Equivalent torque at rated speed:	497 N-m	*367 lb-ft*
Equivalent torque at maximum power:	666 N-m	*491 lb-ft*
(engine speed:	1700 rev/min)	
Maximum equivalent crankshaft torque:	720 N-m	*531 lb-ft*
(engine speed:	1305 rev/min)	
Mean Dry bulb:	24 deg C	*76 deg F*
Wet bulb:	21 deg C	*69 deg F*
Relative humidity:	77 %	
Pressure:	97.17 kPa	*28.69 in Hg*
Maximum Coolant:	99 deg C	*210 deg F*
Engine oil:	110 deg C	*230 deg F*
Fuel:	48 deg C	*119 deg F*
Air intake:	28 deg C	*82 deg F*
Transmission/hydraulic oil:	54 deg C	*129 deg F*
Intake manifold pressure at rated speed:	103 kPa	*15.0 psig*
Intake manifold pressure at maximum power:	103 kPa	*15.0 psig*

Hydraulic Power Test

Date of test:	10–May–93
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:

19.93 MPa
2890 psi

II. Pump delivery rate at minimum pressure and rated engine speed:

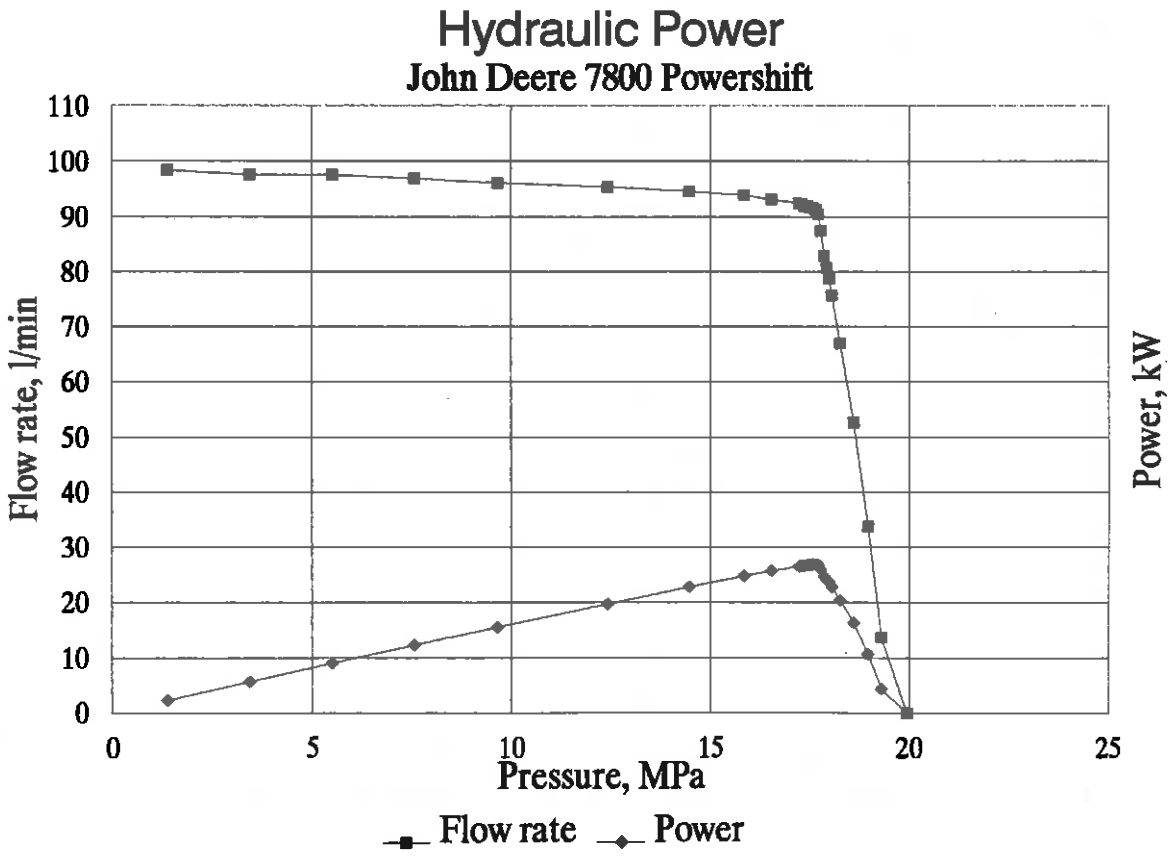
98.4 l/min
26.0 gpm

III. Flow rate, pressure, power:

90% of relief valve setting:					
80.6	l/min	17.93	MPa	24.09	kW
21.3	*gpm*	*2600*	*psi*	*32.31*	*hp*
Maximum hydraulic power:					
91.6	l/min	17.58	MPa	26.85	kW
24.2	*gpm*	*2550*	*psi*	*36.00*	*hp*

IV. Hydraulic fluid temperature at flow meter:

66 C
150 F



2.2 POWER LIFT TEST. Test A-Upper link in middle hole on tractor (for settings see p. 9)

Date of test: 15 June 1993

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	257/10.1	206/8.1
Vertical movement: without load:	[mm/in]	757/29.8	889/35.0
Vertical movement: with load:	[mm/in]	729/28.7	878/34.6
Maximum corrected force through full range:	[kN/lb]	49.4/11111	45.2/10161
Corresponding pressure:	[kPa/psi]	17871/2592	
Moment about rear axle:	[kN.m/lb.ft]	59.6/43979	82.1/60543
Maximum mast tilt angle:	[deg]	--	6.9

Lifting height relative to horizontal position of lower links.

	[mm]	-424	-373	-300	-201	-99
	[in]	-16.7	-14.7	-11.8	-7.9	-3.9
Corrected lift forces						
Hitch point.	[kN]	--	49.4	52.8	56.5	59.0
	[lb]	--	11111	11867	12704	13253
at frame	[kN]	48.6	--	49.8	51.5	52.4
	[lb]	10935	--	11196	11583	11772

Lifting height relative to horizontal position of lower links.

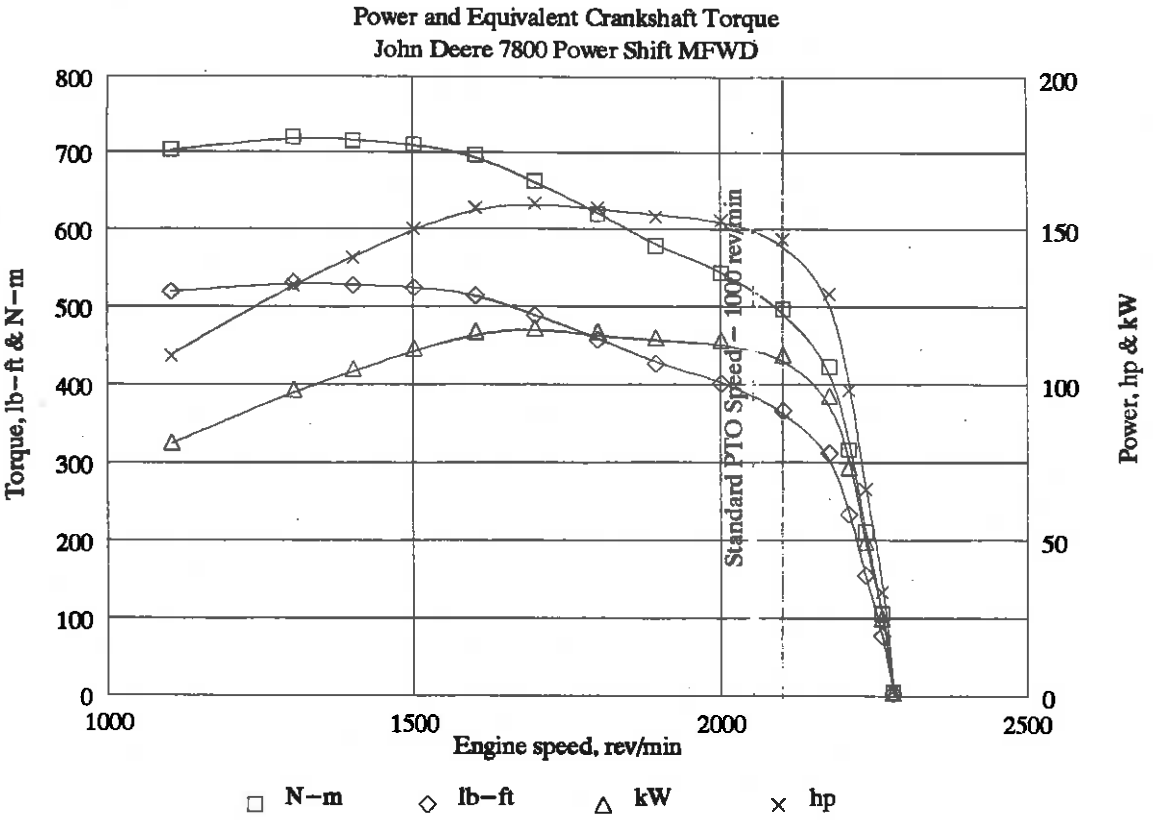
	[mm]	0	99	200	290	356	454
	[in]	0	3.9	7.9	11.4	14.0	17.9
Corrected lift forces							
Hitch point	[kN]	61.4	62.9	64.8	66.8	67.7	--
	[lb]	13793	14144	14558	15026	15215	--
at frame	[kN]	52.4	51.7	50.4	49.8	48.7	45.2
	[lb]	11772	11619	11340	11196	10944	10161

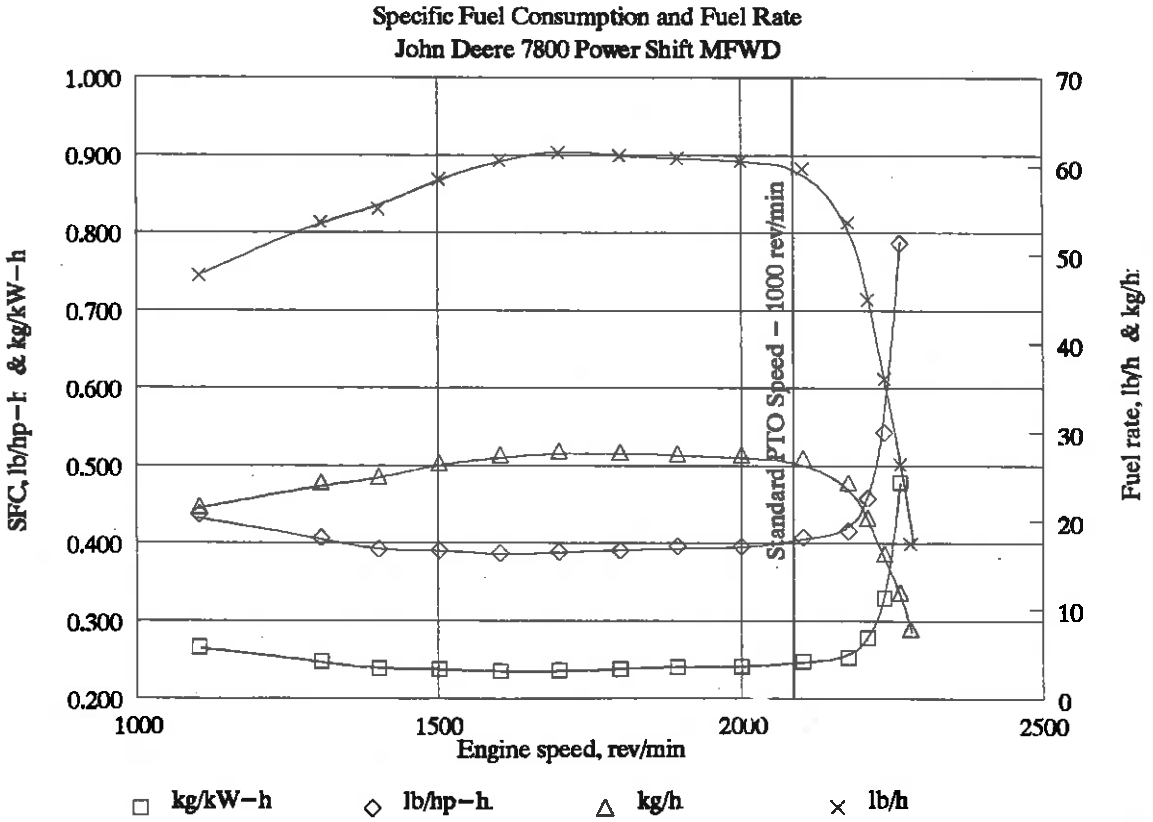
OECD Drawbar Data (SI)

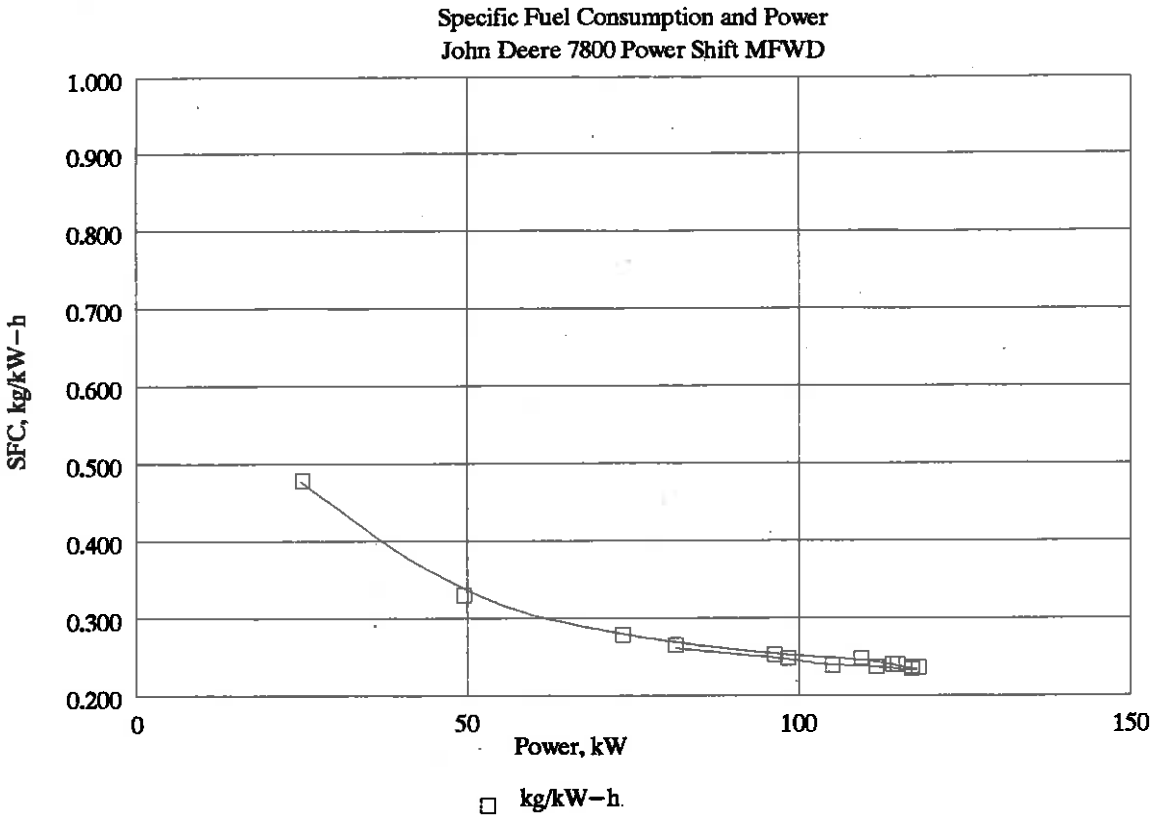
Date of tests:	24-May-93		Fuel density:		0.834 kg/l								
Type of track:	Concrete		Test number:		1669								
Gear	**Power**	**Pull**	**Speed**	**Engine speed**	**Slip**	**SFC**	**SFE**	**Temperature, deg C**					**Rel humidity**	**Pressure**
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, fwa at 1700 rev/min					Tire pressure:		110 kPa, rear		159 kPa, front		Drawbar height:		546 mm	
5	67.00	65.60	3.68	2189	14.04%	0.343	2.43	46	83	99	16	12	63%	97.90
6	75.92	66.13	4.13	2169	14.11%	0.333	2.50	46	84	101	16	12	63%	97.90
7	85.73	62.18	4.96	2156	9.95%	0.308	2.71	48	88	103	17	13	64%	97.93
8	92.40	60.39	5.51	1981	8.67%	0.299	2.79	47	88	105	17	13	64%	97.93
9	97.30	57.82	6.06	1868	7.35%	0.286	2.91	46	88	103	17	13	64%	97.93
10	99.07	56.51	6.31	1707	6.88%	0.283	2.95	45	89	104	17	13	64%	97.93
11	101.44	49.46	7.38	1700	5.10%	0.275	3.03	45	92	106	17	13	64%	97.93
12	100.52	42.15	8.59	1702	4.11%	0.278	3.00	44	90	106	17	13	64%	97.93
13	100.68	36.45	9.94	1699	3.60%	0.278	3.00	44	91	106	17	13	64%	97.93
14	99.70	31.68	11.33	1698	2.83%	0.281	2.97	45	91	106	17	13	64%	97.93
15	100.32	27.56	13.10	1698	2.39%	0.280	2.98	44	90	105	19	14	58%	97.90
II. Part loads (unballasted, fwa)														
II.1 in selected gear at maximum power														
11	92.33	35.76	9.30	2099	3.34%	0.294	2.84	47	88	105	19	14	58%	97.90
II.1.1 75% of pull at maximum power at rated speed														
11	72.75	26.79	9.78	2188	2.57%	0.315	2.65	47	87	101	20	14	51%	97.97
II.1.2 50% of pull at maximum power at rated speed														
11	49.57	17.86	9.99	2220	1.69%	0.369	2.26	47	85	100	20	14	51%	97.97
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	72.76	26.81	9.77	1653	2.48%	0.286	2.91	44	86	99	20	14	51%	97.97
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	49.60	17.91	9.97	1675	1.61%	0.319	2.61	44	83	97	20	14	51%	97.97
II.2 in selected gear nearest to 7.5 km/h														
9	92.56	47.60	7.00	2101	4.94%	0.292	2.86	46	89	104	19	14	58%	97.90
II.2.1 75% of pull at maximum power at rated speed														
9	73.43	35.68	7.41	2187	3.34%	0.312	2.67	46	84	96	19	14	58%	97.90
II.2.2 50% of pull at maximum power at rated speed														
9	50.32	23.79	7.61	2223	2.13%	0.362	2.31	46	84	100	20	14	51%	97.97
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
11	73.35	35.69	7.40	1670	3.34%	0.280	2.98	45	88	101	19	14	58%	97.90
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
11	50.33	23.81	7.61	1699	2.22%	0.311	2.68	44	83	97	20	14	51%	97.97

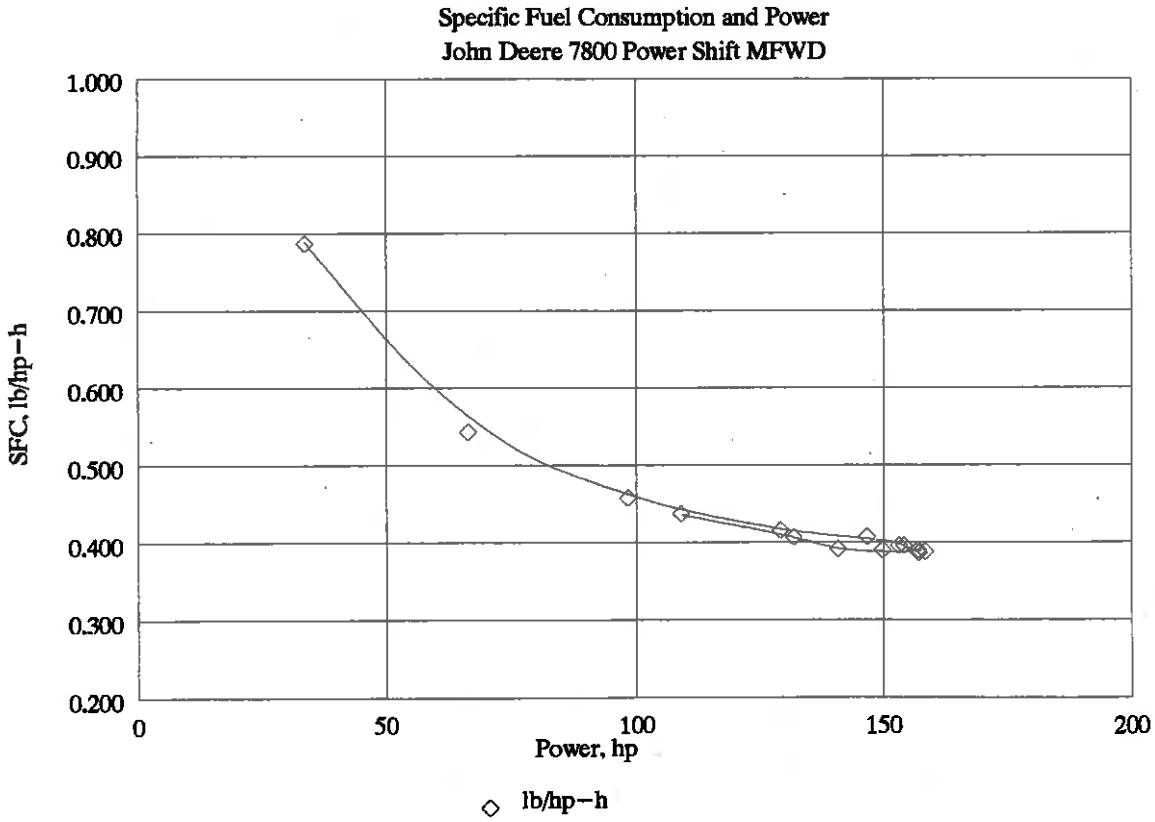
OECD Drawbar Data (US)

Date of tests:	24-May-93		Fuel density:		6.958 lb/gal								
Type of track:	Concrete		Test number:		1669								
Gear	**Power**	**Pull**	**Speed**	**Engine speed**	**Slip**	**SFC**	**SFE**	**Temperature, deg F**					**Rel humidity**	**Pressure**
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (unballasted, fwa at 1700 rev/min					Tire pressure:		16 psig, rear		23 psig, front		Drawbar height:		21.5 in	
5	89.85	14747	2.28	2189	14.04%	0.564	12.34	115	182	211	60	54	63%	28.91
6	101.81	14866	2.57	2169	14.11%	0.547	12.71	115	184	215	60	54	63%	28.91
7	114.96	13979	3.08	2156	9.95%	0.506	13.76	118	190	218	63	55	64%	28.92
8	123.91	13577	3.42	1981	8.67%	0.491	14.16	116	190	221	63	55	64%	28.92
9	130.48	12998	3.76	1868	7.35%	0.471	14.78	114	190	218	63	55	64%	28.92
10	132.86	12704	3.92	1707	6.88%	0.465	14.98	113	193	220	63	55	64%	28.92
11	136.04	11119	4.59	1700	5.10%	0.452	15.38	113	198	223	63	55	64%	28.92
12	134.80	9475	5.34	1702	4.11%	0.458	15.21	112	194	223	63	55	64%	28.92
13	135.01	8195	6.18	1699	3.60%	0.457	15.24	111	196	223	63	55	64%	28.92
14	133.69	7121	7.04	1698	2.83%	0.462	15.07	114	197	222	63	55	64%	28.92
15	134.53	6196	8.14	1698	2.39%	0.460	15.13	112	194	221	67	57	58%	28.91
II. Part loads (unballasted, fwa)														
II.1 in selected gear at maximum power														
11	123.81	8039	5.78	2099	3.34%	0.483	14.41	116	190	222	67	57	58%	28.91
II.1.1 75% of pull at maximum power at rated speed														
11	97.55	6023	6.07	2188	2.57%	0.517	13.45	117	188	213	68	57	51%	28.93
II.1.2 50% of pull at maximum power at rated speed														
11	66.48	4014	6.21	2220	1.69%	0.606	11.48	116	185	213	68	57	51%	28.93
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	97.57	6028	6.07	1653	2.48%	0.471	14.78	112	186	211	68	57	51%	28.93
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	66.51	4027	6.19	1675	1.61%	0.525	13.26	112	182	207	68	57	51%	28.93
II.2 in selected gear nearest to 4.6 mph														
9	124.12	10701	4.35	2101	4.94%	0.479	14.52	116	193	220	67	57	58%	28.91
II.2.1 75% of pull at maximum power at rated speed														
9	98.47	8021	4.60	2187	3.34%	0.513	13.55	114	184	205	67	57	58%	28.91
II.2.2 50% of pull at maximum power at rated speed														
9	67.48	5349	4.73	2223	2.13%	0.594	11.70	115	184	212	68	57	51%	28.93
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
11	98.36	8024	4.60	1670	3.34%	0.459	15.14	113	191	213	67	57	58%	28.91
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
11	67.50	5353	4.73	1699	2.22%	0.511	13.62	111	182	206	68	57	51%	28.93


Power and Equivalent Crankshaft Torque
John Deere 7800 Power Shift MFWD
Torque, lb–ft & N–m
Power, hp & kW
Engine speed, rev/min
Standard PTO Speed – 1000 rev/min
800
700
600
500
400
300
200
100
0
200
150
100
50
0
1000
1500
2000
2500
N–m
lb–ft
kW
hp


Specific Fuel Consumption and Fuel Rate
John Deere 7800 Power Shift MFWD
SFC, lb/hp–h & kg/kW–h
Fuel rate, lb/h & kg/h
Engine speed, rev/min
Standard PTO Speed – 1000 rev/min
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
70
60
50
40
30
20
10
0
1000
1500
2000
2500
kg/kW–h
lb/hp–h
kg/h
lb/h


Specific Fuel Consumption and Power
John Deere 7800 Power Shift MFWD
SFC, kg/kW−h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
Power, kW
kg/kW−h


Specific Fuel Consumption and Power
John Deere 7800 Power Shift MFWD
SFC, lb/hp−h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
200
Power, hp
lb/hp−h

OPTIONAL TEST - PTO Performance with Shiftable PTO

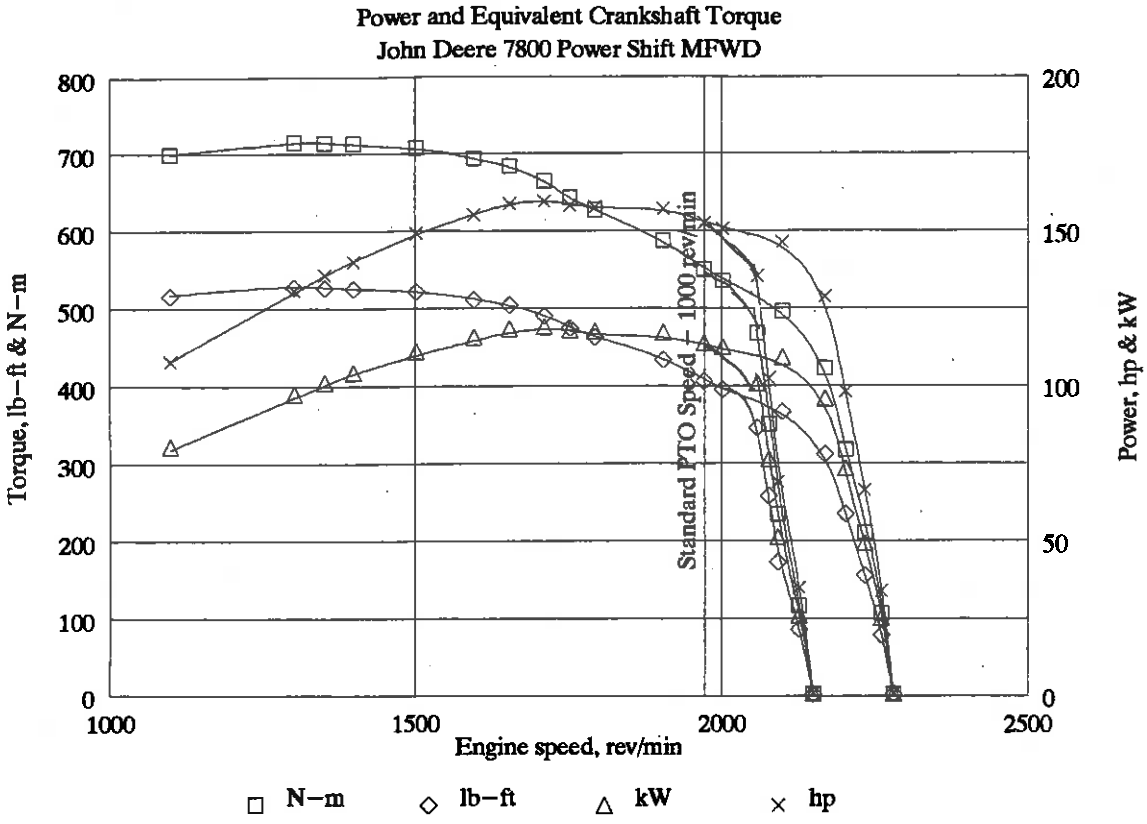
1. MAIN POWER TAKE-OFF

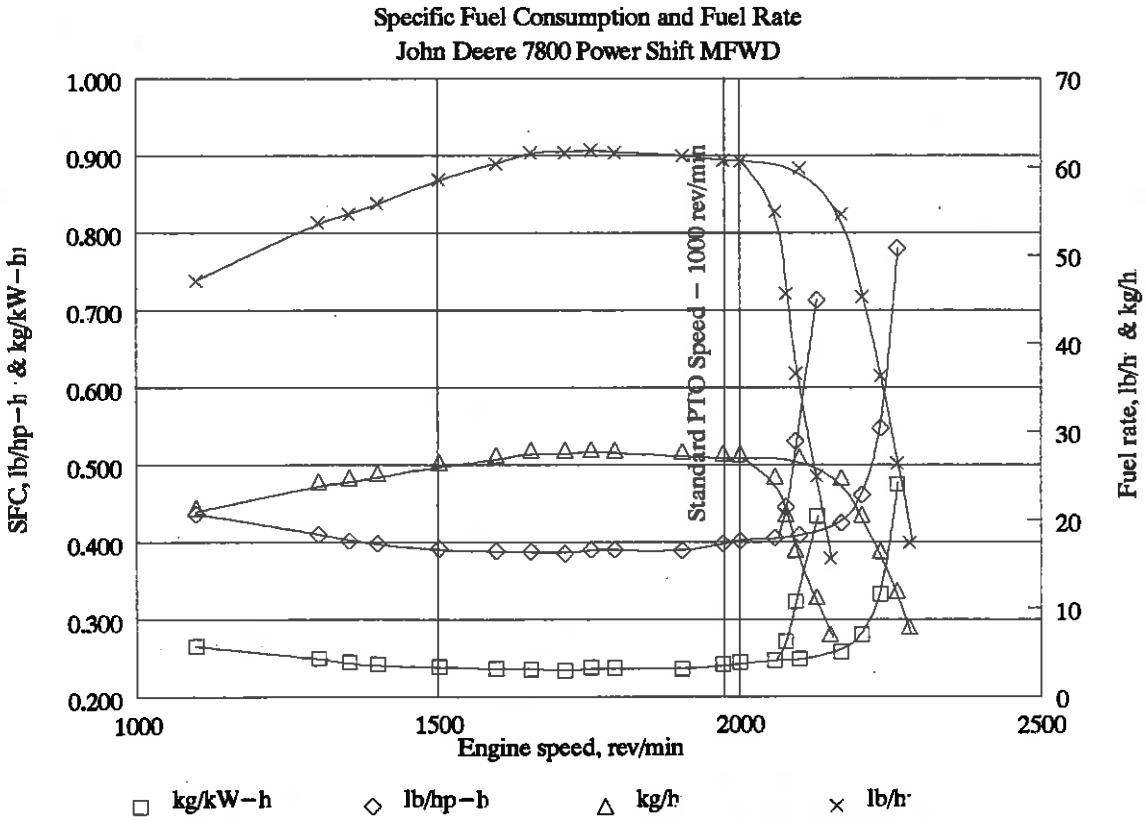
Date: 17-May-93 Location: UNL Tractor Test Lab, Lincoln, NE, U.S.A.

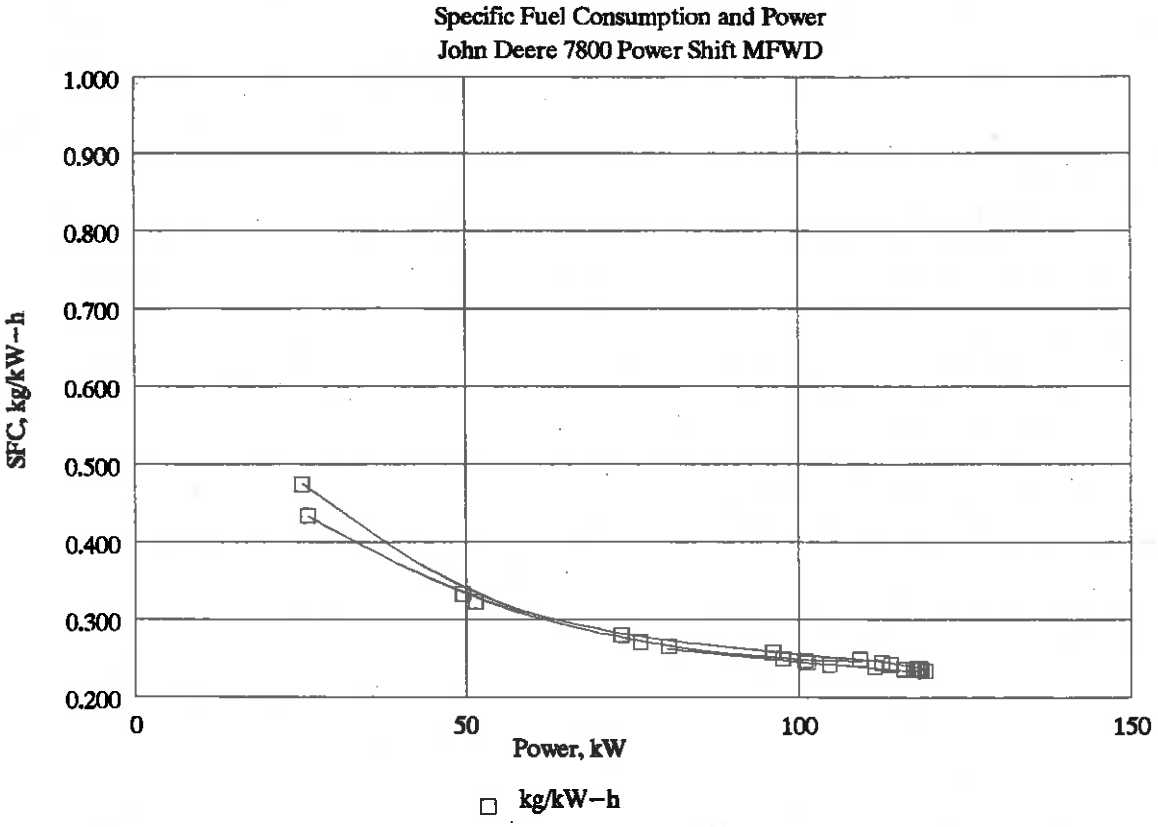
Type of dynamometer: Eddy current, Eaton Fuel density: 6.958 lb/gal

Power kW *hp*	Eng rev/min	PTO rev/min	l/h *gal/h*	kg/h *lb/h*	kg/kW-hr *lb/hp-hr*	kW-hr/l *hp-hr/gal*
1.1 Maximum Power--2 hours						
117.58	1700	862	33.46	27.90	0.237	3.51
157.67			*8.84*	*61.50*	*0.390*	*17.84*
1.2 Power at Rated Engine Speed--1 hour						
109.11	2100	1064	32.54	27.13	0.249	3.35
146.32			*8.60*	*59.81*	*0.409*	*17.02*
1.3 Power at Standard Power Take-Off Speed--1 hour						
113.73	1972	1000	33.03	27.54	0.242	3.44
152.51			*8.73*	*60.71*	*0.398*	*17.48*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
109.11	2100	1064	32.54	27.13	0.249	3.35
146.32			8.60	59.81	0.409	17.02
1.4.2 85% of torque obtained in 1.4.1						
95.99	2169	1099	29.70	24.77	0.258	3.23
128.72			*7.85*	*54.60*	*0.424*	*16.40*
1.4.3 75% of torque defined in 1.4.2						
73.30	2202	1116	24.64	20.55	0.280	2.97
98.30			*6.51*	*45.30*	*0.461*	*15.10*
1.4.4 50% of torque defined in 1.4.2						
49.43	2234	1132	19.75	16.47	0.333	2.50
66.29			*5.22*	*36.30*	*0.548*	*12.71*
1.4.5 25% of torque defined in 1.4.2						
25.22	2261	1146	14.36	11.97	0.475	1.76
33.82			*3.79*	*26.40*	*0.781*	*8.91*
1.4.6 unloaded						
0.82	2281	1156	9.47	7.89	9.615	0.09
1.10			*2.50*	*17.40*	*15.807*	*0.44*
1.5 Part Loads at Standard Power Take-off Speed						
1.5.1 Torque at maximum power						
113.73	1972	1000	33.03	27.54	0.242	3.44
152.51			*8.73*	*60.71*	*0.398*	*17.48*
1.5.2 85% of torque obtained in 1.5.1						
100.93	2059	1044	29.87	24.90	0.247	3.38
135.35			*7.89*	*54.90*	*0.406*	*17.15*
1.5.3 75% of torque defined in 1.5.2						
76.25	2077	1053	24.81	20.68	0.271	3.07
102.25			*6.55*	*45.60*	*0.446*	*15.60*
1.5.4 50% of torque defined in 1.5.2						
51.40	2093	1061	19.91	16.60	0.323	2.58
68.92			*5.26*	*36.60*	*0.531*	*13.10*
1.5.5 25% of torque defined in 1.5.2						
26.03	2128	1079	13.55	11.29	0.434	1.92
34.91			*3.58*	*24.90*	*0.713*	*9.75*
1.5.6 unloaded						
0.77	2150	1090	8.49	7.08	9.146	0.09
1.04			*2.24*	*15.60*	*15.036*	*0.46*

No load maximum engine speed:	2281 rev/min	
Equivalent torque at rated speed:	496 N-m	*366 lb-ft*
Equivalent torque at maximum power:	660 N-m	*487 lb-ft*
(engine speed:	1700 rev/min)	
Maximum equivalent crankshaft torque:	716 N-m	*528 lb-ft*
(engine speed:	1302 rev/min)	
Mean Dry bulb:	23 deg C	*74 deg F*
Wet bulb:	17 deg C	*62 deg F*
Relative humidity:	55 %	
Pressure:	97.50 kPa	*28.79 in Hg*
Maximum Coolant:	98 deg C	*209 deg F*
Engine oil:	111 deg C	*232 deg F*
Fuel:	50 deg C	*122 deg F*
Air intake:	29 deg C	*85 deg F*
Transmission/hydraulic oil:	54 deg C	*130 deg F*
Intake manifold pressure at rated speed:	103 kPa	*15.0 psig*
Intake manifold pressure at maximum power:	103 kPa	*15.0 psig*


Power and Equivalent Crankshaft Torque
John Deere 7800 Power Shift MFWD
Torque, lb−ft & N−m
Power, hp & kW
Engine speed, rev/min
Standard PTO Speed − 1000 rev/min
800
700
600
500
400
300
200
100
0
200
150
100
50
0
1000
1500
2000
2500
N−m
lb−ft
kW
hp


Specific Fuel Consumption and Fuel Rate
John Deere 7800 Power Shift MFWD
SFC, lb/hp−h & kg/kW−h
Fuel rate, lb/h & kg/h
Engine speed, rev/min
Standard PTO Speed − 1000 rev/min
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
70
60
50
40
30
20
10
0
1000
1500
2000
2500
kg/kW−h
lb/hp−h
kg/h
lb/h


Specific Fuel Consumption and Power
John Deere 7800 Power Shift MFWD
SFC, kg/kW−h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
Power, kW
kg/kW−h

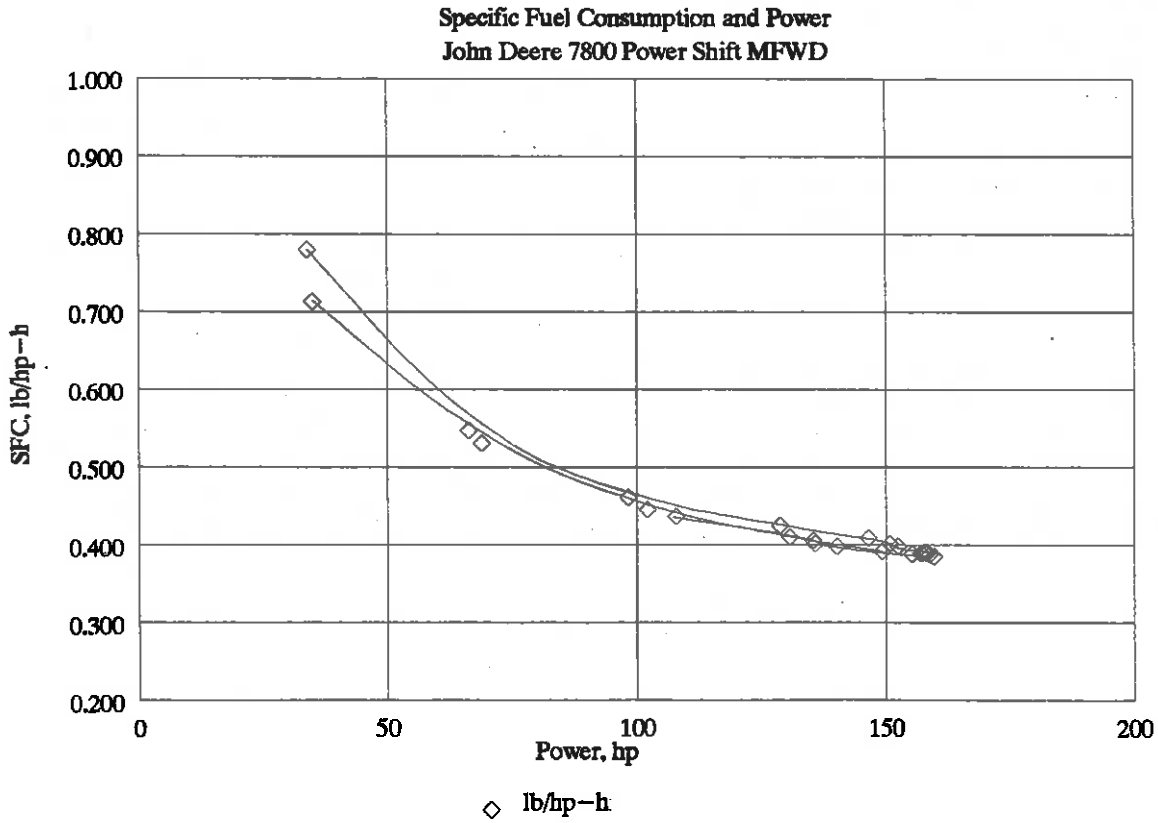

Specific Fuel Consumption and Power
John Deere 7800 Power Shift MFWD
SFC, lb/hp−h
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
50
100
150
200
Power, hp
lb/hp−h

Table 1.2 - Linkage geometry dimensions *.
ISO Category III Hook Type Draft Link Ends

		Dimension or range [mm]	Dimension or range [in]	Settings used [mm]	Settings used [in]
Lift category		III		III	
Rear Tire - Radius Index	(r)	870	34.3	905	35.6
Front Tire - Radius Index	(r')	665	26.2	695	27.4
Length of lift arms	(A)	375	14.8	same	
Length of lower links	(B)	1011	39.8	same	
Distance of lift arm pivot from: horizontal	(a)	205	8.1	same	
rear wheel axis: vertical	(b)	588	23.1	same	
Horizontal distance between the 2 lower link points	(U)	520	20.5	same	
Horizontal distance between the 2 lift arm end points	(V)	680	26.8	same	
Length of upper link	(S)	609	24.0	670	26.4
	to	808	31.8		
Distance of upper link pivot point from rear wheel axis					
Top hole - horizontal	(c)	504	19.8	same	
- vertical	(d)	353	13.9	353	13.9
	and	283	11.1		
	and	200	7.9		
Distance of lower link pivot from: horizontal	(e)	195	7.7	same	
rear wheel axis: vertical	(f)	275	10.8	same	
Distance of lower link pivot points to lift rod pivot pts on lower links.	(D)	612	24.1	688	27.1
	or	688	27.1		
Length of lift rods	(L)	842	33.1	1022	40.3
	to	1051	41.4		
Height of lower hitch points relative to rear wheel axis					
In low position	(h)	420	16.5	646	25.4
	to	745	29.3		
In high position	(H)	270	10.6	17	0.7
	to	37	1.5		
Height above ground of lower hitch points when locked in transport position.		784	30.9	920	36.3
	to	1111	43.7		

* tire dynamic index of 905 mm (35.6 inch) - ISO 4251/1-1984

2.2 POWER LIFT TEST. Test B - Upper link in top hole on tractor (for settings see p. 24)

Date of test: 15 June 1993

		Hitch points	Frame
Lower hitch points above ground - down position:	[mm/in]	259/10.2	261/10.3
Vertical movement:			
without load:	[mm/in]	692/27.3	740/29.1
with load:	[mm/in]	671/26.4	712/28.0
Maximum corrected force through full range:	[kN/lb]	55.5/12488	57.4/12915
Corresponding pressure:	[kPa/psi]	17871/2592	
Moment about rear axle:	[kN.m/lb.ft]	67.0/49430	104.3/76952
Maximum mast tilt angle:	[deg]	--	5.0

Lifting height relative to horizontal position of lower links.

	[mm]	-371	-369	-300	-201	-99
	[in]	-14.6	-14.5	-11.8	-7.9	-3.9
Corrected lift forces						
Hitch point.	[kN]	55.5	--	59.2	63.0	65.4
	[lb]	12488	--	13316	14162	14702
at frame	[kN]	--	63.3	63.0	63.5	63.4
	[lb]	--	14229	14153	14270	14256

Lifting height relative to horizontal position of lower links.

	[mm]	0	99	201	299	343
	[in]	0	3.9	7.9	11.8	13.5
Corrected lift forces						
Hitch point	[kN]	68.0	69.3	70.8	68.5	--
	[lb]	15278	15575	15908	15395	--
at frame	[kN]	62.9	61.8	60.1	58.6	57.4
	[lb]	14148	13887	13509	13176	12915

OPTIONAL TEST - Ballasted, Front Drive Disengaged

OECD Drawbar Data (SI)

Date of tests:		20-May-93		Fuel density:		0.834 kg/l								
Type of track:		Concrete		Test number:		1669								
Gear	**Power**	**Pull**	**Speed**	**Engine speed**	**Slip**	**SFC**	**SFE**	**Temperature, deg C**					**Rel hum-idity**	**Pressure**
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (ballasted, 2wd at 2100 rev/min)					Tire pressure:		83 kPa, rear		159 kPa, fron		Drawbar height:		572 mm	
6	84.10	75.05	4.03	2130	14.12%	0.323	2.58	47	85	103	14	10	60%	98.00
7	92.94	66.95	5.00	2098	6.29%	0.292	2.85	47	85	103	17	11	47%	97.97
8	92.51	54.54	6.11	2098	3.92%	0.295	2.83	47	87	104	17	11	47%	97.93
9	93.19	47.36	7.08	2099	3.15%	0.292	2.86	46	88	105	19	12	43%	97.93
10	94.11	42.00	8.07	2095	2.81%	0.288	2.89	46	89	101	18	12	49%	97.87
11	92.39	35.53	9.36	2101	2.21%	0.293	2.85	47	88	106	18	12	49%	97.87
12	89.80	29.96	10.79	2102	1.86%	0.302	2.76	47	88	105	19	12	43%	97.80
13	90.51	26.23	12.42	2095	1.59%	0.300	2.78	47	90	104	19	12	43%	97.80
14	88.69	22.53	14.17	2101	1.42%	0.304	2.74	47	88	103	19	12	43%	97.80
II. Part loads (ballasted, 2wd)														
II.1 in selected gear at maximum power														
10	94.11	42.00	8.07	2095	2.81%	0.288	2.89	46	89	101	18	12	49%	97.87
II.1.1 75% of pull at maximum power at rated speed														
10	74.02	31.43	8.48	2185	2.03%	0.313	2.67	47	86	99	21	13	39%	97.73
II.1.2 50% of pull at maximum power at rated speed														
10	50.50	20.98	8.66	2219	1.42%	0.367	2.27	47	86	101	20	12	37%	97.70
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	74.13	31.43	8.49	1655	1.86%	0.286	2.92	45	84	99	20	12	37%	97.70
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	50.54	20.96	8.68	1681	1.42%	0.316	2.64	44	83	97	20	13	37%	97.70

OECD Drawbar Data (US)

Date of tests:		20-May-93		Fuel density:		6.958 lb/gal								
Type of track:		Concrete		Test number:		1669								
Gear	**Power**	**Pull**	**Speed**	**Engine speed**	**Slip**	**SFC**	**SFE**	**Temperature, deg F**					**Rel hum-idity**	**Pressure**
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (ballasted, 2wd at 2100 rev/min)					Tire pressure:		12 psig, rear		23 psig, fror		Drawbar height:		22.5 in	
6	112.78	16873	2.51	2130	14.12%	0.532	13.09	117	185	217	58	50	60%	28.94
7	124.64	15052	3.11	2098	6.29%	0.480	14.49	116	186	218	62	52	47%	28.93
8	124.06	12261	3.79	2098	3.92%	0.484	14.36	116	189	219	63	51	47%	28.92
9	124.97	10648	4.40	2099	3.15%	0.480	14.50	115	190	221	66	53	43%	28.92
10	126.21	9442	5.01	2095	2.81%	0.474	14.68	115	192	214	64	53	49%	28.90
11	123.90	7988	5.82	2101	2.21%	0.481	14.47	117	190	222	64	53	49%	28.90
12	120.42	6736	6.70	2102	1.86%	0.497	14.01	117	190	222	67	54	43%	28.88
13	121.37	5897	7.72	2095	1.59%	0.494	14.10	117	194	219	67	54	43%	28.88
14	118.94	5066	8.81	2101	1.42%	0.500	13.91	117	191	217	67	54	43%	28.88
II. Part loads (ballasted, 2wd)														
II.1 in selected gear at maximum power														
10	126.21	9442	5.01	2095	2.81%	0.474	14.68	115	192	214	64	53	49%	28.90
II.1.1 75% of pull at maximum power at rated speed														
10	99.27	7065	5.27	2185	2.03%	0.514	13.54	117	187	210	69	55	39%	28.86
II.1.2 50% of pull at maximum power at rated speed														
10	67.72	4717	5.38	2219	1.42%	0.603	11.54	117	186	215	68	54	37%	28.85
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
12	99.41	7066	5.28	1655	1.86%	0.470	14.82	113	184	211	68	54	37%	28.85
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
12	67.77	4713	5.39	1681	1.42%	0.519	13.40	112	181	207	68	55	37%	28.85

OECD Drawbar Data (SI)

Date of tests:	20-May-93	Fuel density:	0.834 kg/l
Type of track:	Concrete	Test number:	1669

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SPE	Temperature, deg C					Rel humidity	Pressure
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (ballasted, fwa at 1700 rev/min)					Tire pressure:		83 kPa, rear		159 kPa, fron		Drawbar height:		572 mm	
5	83.65	84.16	3.58	2133	13.91%	0.321	2.59	48	84	101	14	10	60%	98.00
6	92.10	76.35	4.34	2112	6.97%	0.295	2.82	47	85	102	17	11	47%	97.97
7	97.59	74.05	4.74	1986	6.26%	0.283	2.95	46	86	103	17	11	47%	97.97
8	99.78	71.75	5.01	1749	5.45%	0.281	2.97	46	90	106	17	11	47%	97.93
9	101.08	64.02	5.68	1701	4.29%	0.276	3.02	46	94	107	17	11	47%	97.93
10	102.53	56.80	6.50	1698	3.45%	0.274	3.05	45	91	106	18	12	49%	97.87
11	102.03	48.66	7.55	1701	2.77%	0.275	3.03	45	87	105	18	12	49%	97.87
12	100.04	41.32	8.72	1702	2.42%	0.281	2.96	45	86	105	19	12	43%	97.80
13	101.02	36.04	10.09	1705	2.07%	0.278	3.00	45	89	104	19	12	43%	97.80
14	100.51	31.54	11.47	1703	1.72%	0.277	3.01	44	86	104	19	12	43%	97.80
15	98.49	26.79	13.23	1700	1.46%	0.284	2.94	45	86	103	19	12	43%	97.80

OECD Drawbar Data (US)

Date of tests:	20-May-93	Fuel density:	6.958 lb/gal
Type of track:	Concrete	Test number:	1669

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SPE	Temperature, deg F					Rel humidity	Pressure
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet		in Hg
I. Maximum Power (ballasted, fwa at 1700 rev/min)					Tire pressure:		12 psig, rear		23 psig, fror		Drawbar height:		22.5 in	
5	112.17	18921	2.22	2133	13.91%	0.528	13.17	118	184	215	58	50	60%	28.94
6	123.51	17164	2.70	2112	6.97%	0.486	14.33	116	186	216	62	52	47%	28.93
7	130.87	16647	2.95	1986	6.26%	0.465	14.96	115	186	218	62	52	47%	28.93
8	133.81	16130	3.11	1749	5.45%	0.462	15.08	115	194	223	63	51	47%	28.92
9	135.56	14393	3.53	1701	4.29%	0.454	15.33	115	202	225	63	51	47%	28.92
10	137.49	12770	4.04	1698	3.45%	0.450	15.47	113	197	223	64	53	49%	28.90
11	136.82	10939	4.69	1701	2.77%	0.453	15.38	113	188	222	64	53	49%	28.90
12	134.15	9289	5.42	1702	2.42%	0.463	15.04	112	187	221	67	54	43%	28.88
13	135.47	8101	6.27	1705	2.07%	0.457	15.22	114	193	220	67	54	43%	28.88
14	134.78	7090	7.13	1703	1.72%	0.455	15.29	112	187	219	67	54	43%	28.88
15	132.08	6024	8.22	1700	1.46%	0.467	14.91	113	187	217	67	54	43%	28.88

Repairs: None
Remarks: None