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(Restricted code)
Date of approval: 23 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 7700 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. 1667
Test dates: April - May, 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 23 November 1993

John Deere 7700 Powershift MFWD 40 km/h (4WD) OECD # 1493

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

TRACTOR SPECIFICATIONS.

Make	John Deere
Model	7700P Powershift, 40 km/h
Type	Unit construction, mechanical front wheel drive (MFWD)
Number of driving wheels	2 or 4
Serial Number	*RW7700P001877*
1st Serial number	*RW7700P001000*

ENGINE.

Make	John Deere
Model	6076TRW31
Type	Diesel; 4-stroke; turbocharged direct injection
Serial Number	*RG6076T505871*
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 (465.43in ^{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 or Schwitzer/RE47828/Exh. driven
Pressure	90 kPa (13.1 psi) - Garrett 110 kPa (16.0 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	Stanadyne/DB4(RE41233)/Inline electric shutoff
Pump Serial number	7169830
Production setting of pump Flow Rate (Rated Eng.Spd & Full Load)	24.5+/-0.8 kg/hour (54.0+/-1.8 lb/hour)
Make/Model/Type Injectors	Nippondenso/RE30084
Injection pressure	48 MPa (3310 psi)
Timing	14.5 degrees BTDC

Governor

Make/Model/Type	Stanadyne/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/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	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	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	0.97
2	300.01	2.30	1.40
3	239.52	2.88	1.76
4	197.65	3.48	2.12
5	171.56	4.01	2.45
6	151.17	4.56	2.78
7	131.18	5.25	3.20
8	110.17	6.25	3.81
9	95.67	7.20	4.40
10	84.29	8.17	4.99
11	73.18	9.41	5.74
12	63.76	10.80	6.60
13	55.36	12.44	7.59
14	48.79	14.12	8.61
15	42.35	16.26	9.93
16	37.81	18.22	11.12
17	30.56	22.54	13.76
18	21.89	31.46	19.20
19	17.68	38.96	23.78
Reverse			
1	267.37	2.58	1.57
2	186.74	3.69	2.25
3	122.98	5.60	3.42
4	106.79	6.45	3.04
5	94.05	7.32	4.47
6	81.65	8.44	5.15
7	42.15	16.34	9.98

NO. of front wheel revs for one rear wheel rev: 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	
JDP I option (tested)	Reversible shaft
JDP II option	Reversible shaft with 2 speeds selectable by handd 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.

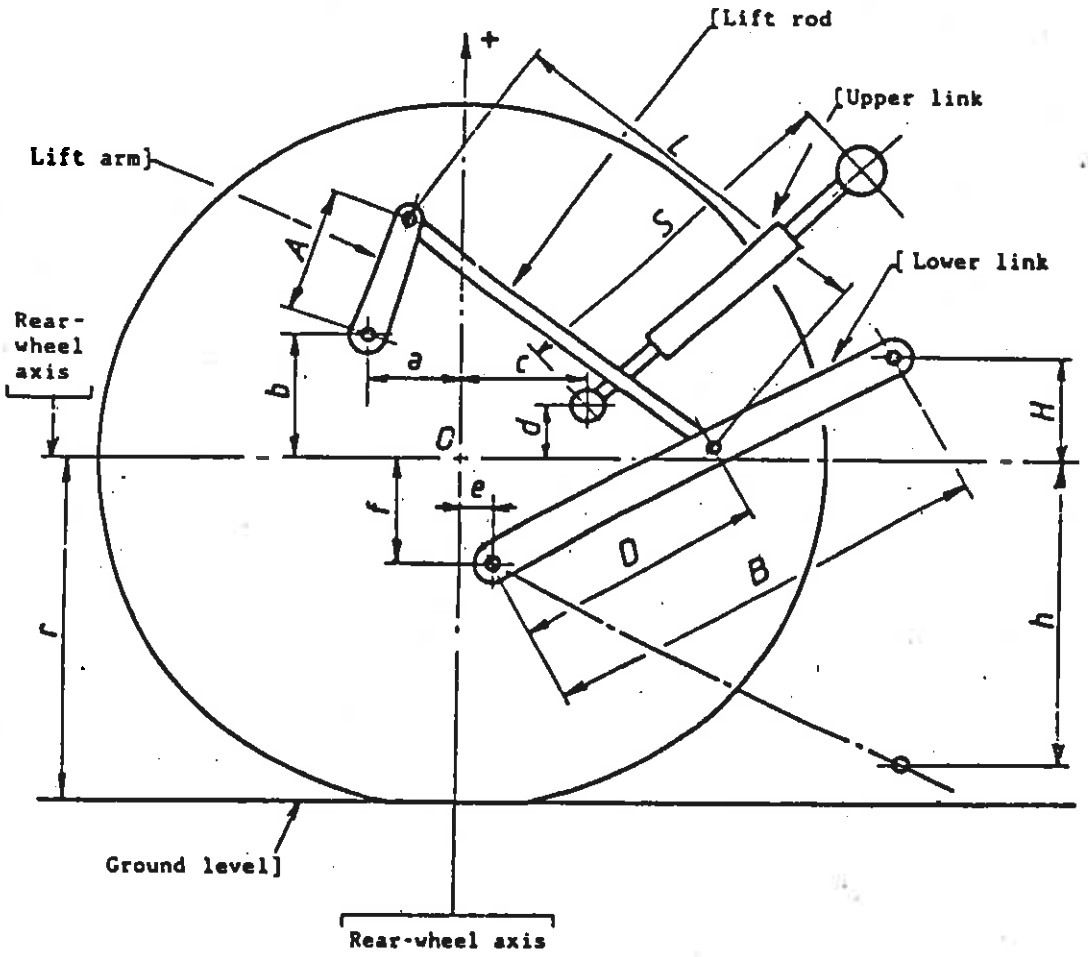
Location	Rear of tractor;center plane
Diameter of shaft	35 mm (1.375 in)
Number of splines	6 or 21; conforms to ISO 500/1979.
Height above ground	765 mm (30.1 in)
Distance from median plane of tractor	0 mm
Distance behind rear axle	620 mm (24.41 in)
PTO Speed at rated engine spd	1064 rev/min
Engine speed 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



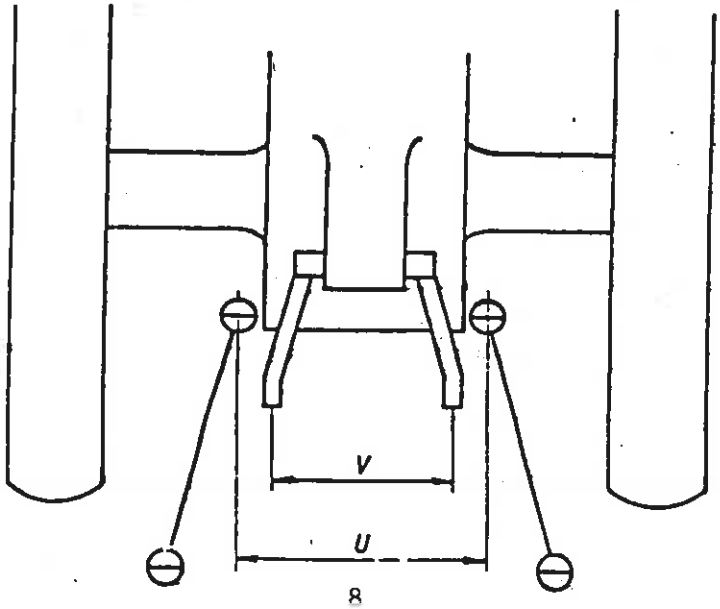


Table 1.1 - Linkage geometry dimensions *.
ISO Category III Hook Type Draft Link Ends

		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
Height above ground of lower hitch points when locked in transport position.		792	31.2	984	38.8
	to	1123	44.2		

* Tire dynamic index of 905 mm (35.6 in) - 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	2235	80.0	Reversing wheels and offset lug rims
Rear	1518	59.8	2548	100.3	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 0217/15

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 dimenensions

Length			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	2808/110.1	3015/118.7	3581/141.0
Long Sxle mm/inch	3012/118.6	3219/126.7	3785/149.0
Height - Top protective structure		3023 mm (119.0 in)	
- Top of exhaust		2958 mm (116.5 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	2416	5326	2431	5359
	Rear	4542	10013	4602	10146
	Total	6958	15340	7033	15505
Ballasted	Front	2401	5293	2416	5326
	Rear	5340	11773	5400	11905
	Total	7741	17066	7816	17231

Max. permissible axle load-front 4800 kg (10580 lb)
-rear 10000 kg (22046 lb)

Ballast.

	Number of weights	Mass (total) [kg]	Mass (total) [lb]	Water [kg]	Water [lb]
Front	0	--	--	--	--
Rear (Duals)	2	757	1670		
Additional test equipment	--	26	57	--	--

Tire Specifications.

	Front Wheels	Rear Wheels
Make	Goodyear	Goodyear
Dimensions	13.6R28	18.4R38
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 (31 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	1750 mm/68.9 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: 26-Apr-93 Location: UNL Tractor Test Lab, Lincoln, NE, U.S.A.

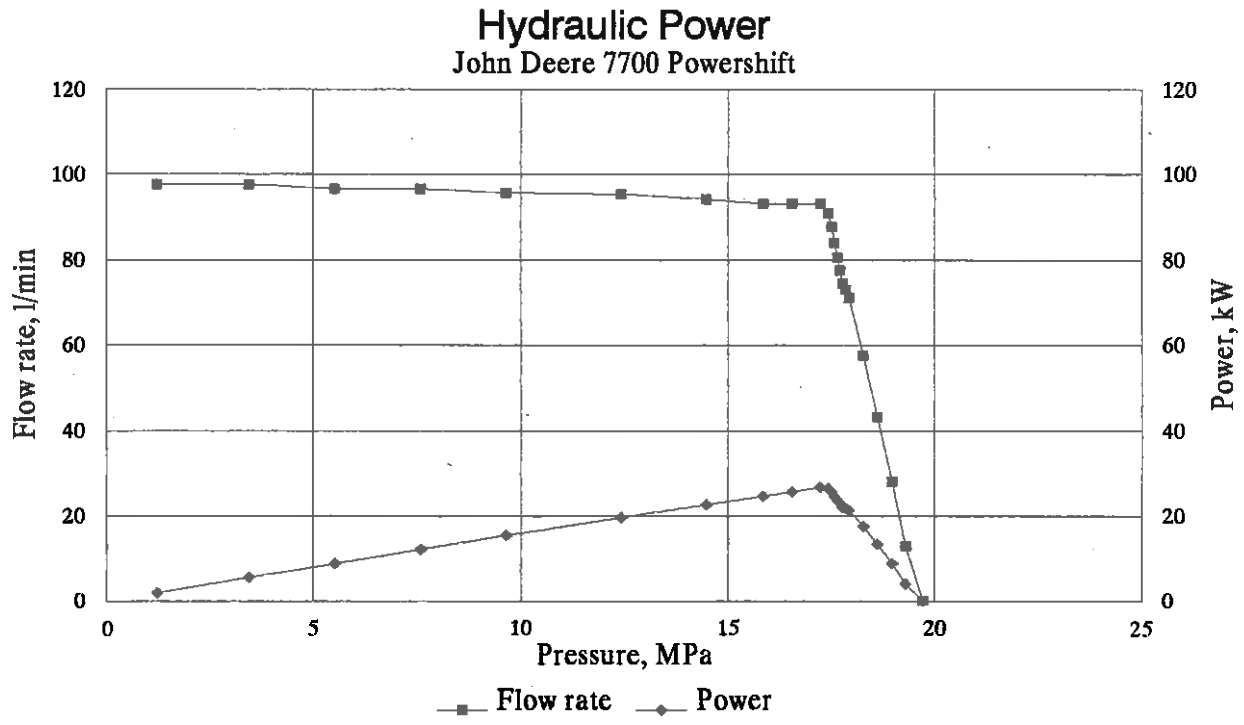
Type of dynamometer: Eddy current, Eaton Fuel density: 6.958 lb/gal

Power kW / *hp*	Eng rev/min	PTO rev/min	l/h / *gal/h*	kg/h / *lb/h*	kg/kW-h / *lb/hp-h*	kW-h / *hp-h* l / *gal*
1.1 Maximum Power – 2 hours						
97.54	1900	911	28.41	23.69	0.243	3.43
130.80			*7.51*	*52.22*	*0.399*	*17.43*
1.2 Power at Rated Engine Speed – 1 hour						
94.02	2101	1007	29.08	24.24	0.258	3.23
126.08			*7.68*	*53.45*	*0.424*	*16.41*
1.3 Power at Standard Power Take-Off Speed – 1 hour						
94.02	2101	1007	29.08	24.24	0.258	3.23
126.08			*7.68*	*53.45*	*0.424*	*16.41*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
94.02	2101	1007	29.08	24.24	0.258	3.23
126.08			7.68	53.45	0.424	16.41
1.4.2 85% of torque obtained in 1.4.1						
82.45	2166	1039	26.93	22.45	0.272	3.06
110.57			*7.11*	*49.50*	*0.448*	*15.54*
1.4.3 75% of torque defined in 1.4.2						
62.68	2203	1056	23.01	19.19	0.306	2.72
84.06			*6.08*	*42.30*	*0.503*	*13.83*
1.4.4 50% of torque defined in 1.4.2						
42.49	2229	1069	18.61	15.51	0.365	2.28
56.98			*4.92*	*34.20*	*0.600*	*11.59*
1.4.5 25% of torque defined in 1.4.2						
21.48	2254	1081	14.53	12.11	0.564	1.48
28.81			*3.84*	*26.70*	*0.927*	*7.51*
1.4.6 unloaded						
0.31	2282	1094	10.28	8.57	27.588	0.03
0.42			*2.72*	*18.90*	*45.354*	*0.15*
1.5 Part Loads at Standard Power Take-off Speed						
1.5.1 Torque at maximum power						
94.02	2101	1007	29.08	24.24	0.258	3.23
126.08			*7.68*	*53.45*	*0.424*	*16.41*
1.5.2 85% of torque obtained in 1.5.1						
82.45	2166	1039	26.93	22.45	0.272	3.06
110.57			*7.11*	*49.50*	*0.448*	*15.54*
1.5.3 75% of torque defined in 1.5.2						
62.68	2203	1056	23.01	19.19	0.306	2.72
84.06			*6.08*	*42.30*	*0.503*	*13.83*
1.5.4 50% of torque defined in 1.5.2						
42.49	2229	1069	18.61	15.51	0.365	2.28
56.98			*4.92*	*34.20*	*0.600*	*11.59*
1.5.5 25% of torque defined in 1.5.2						
21.48	2254	1081	14.53	12.11	0.564	1.48
28.81			*3.84*	*26.70*	*0.927*	*7.51*
1.5.6 unloaded						
0.31	2282	1094	10.28	8.57	27.588	0.03
0.42			*2.72*	*18.90*	*45.354*	*0.15*

No load maximum engine speed:	2282 rev/min	
Equivalent torque at rated speed:	427 N-m	*315 lb-ft*
Equivalent torque at maximum power:	490 N-m	*362 lb-ft*
(engine speed:	1900 rev/min)	
Maximum equivalent crankshaft torque:	607 N-m	*448 lb-ft*
(engine speed:	1255 rev/min)	
Mean Dry bulb:	25 deg C	*76 deg F*
Wet bulb:	17 deg C	*62 deg F*
Relative humidity:	44 %	
Pressure:	98.34 kPa	*29.04 in Hg*
Maximum Coolant:	100 deg C	*212 deg F*
Engine oil:	114 deg C	*237 deg F*
Fuel:	59 deg C	*139 deg F*
Air intake:	27 deg C	*81 deg F*
Transmission/hydraulic oil:	58 deg C	*136 deg F*
Intake manifold pressure at rated speed:	103 kPa	*15.0 psig*
Intake manifold pressure at maximum power:	100 kPa	*14.5 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:					
19.72	MPa				
2860	*psi*				
II. Pump delivery rate at minimum pressure and rated engine speed:					
97.7	l/min				
25.8	*gpm*				
III. Flow rate, pressure, power:					
90% of relief valve setting:					
77.6	l/min	17.72	MPa	22.92	kW
20.5	*gpm*	*2570*	*psi*	*30.74*	*hp*
Maximum hydraulic power:					
93.1	l/min	17.24	MPa	26.76	kW
24.6	*gpm*	*2500*	*psi*	*35.88*	*hp*
IV. Hydraulic fluid temperature at flow meter:					
65 C					
148 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

Ø 1630 mm

OECD Drawbar Data (SI)

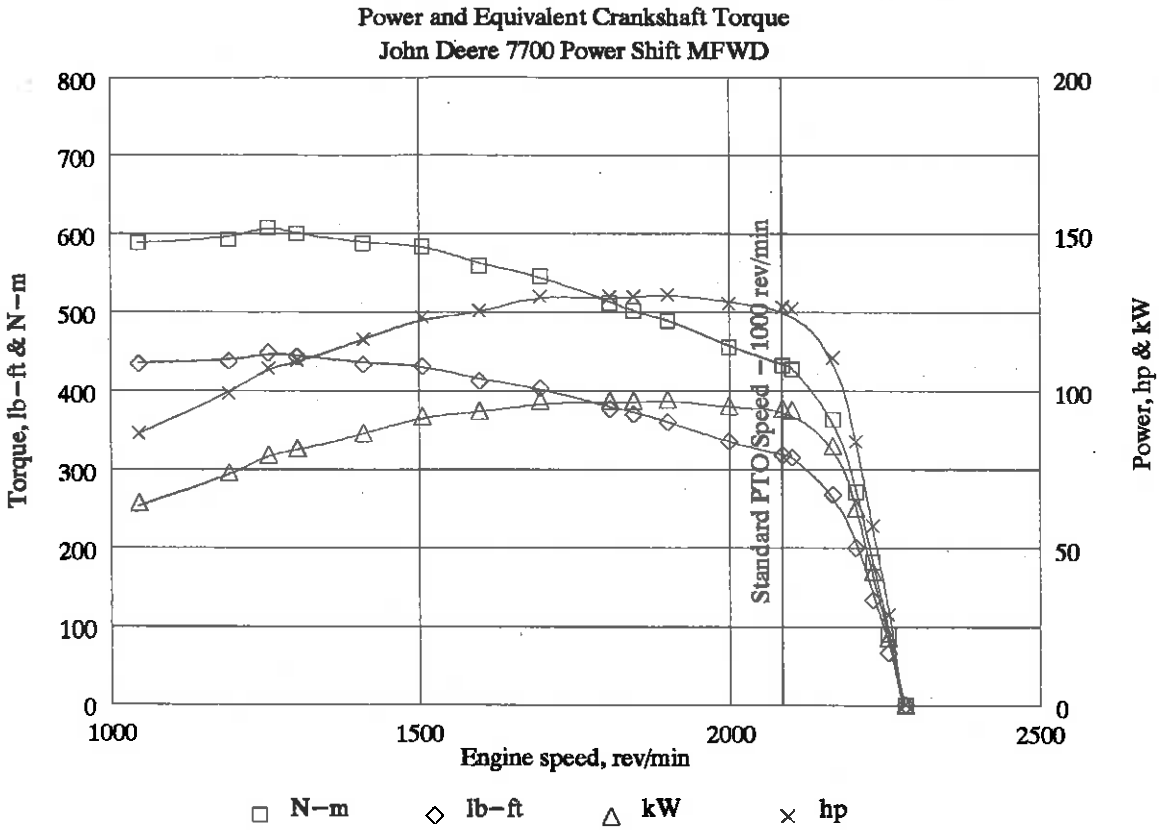
Date of tests:	29-Apr-93	Fuel density:	0.834 kg/l
Type of track:	Concrete	Test number:	1667

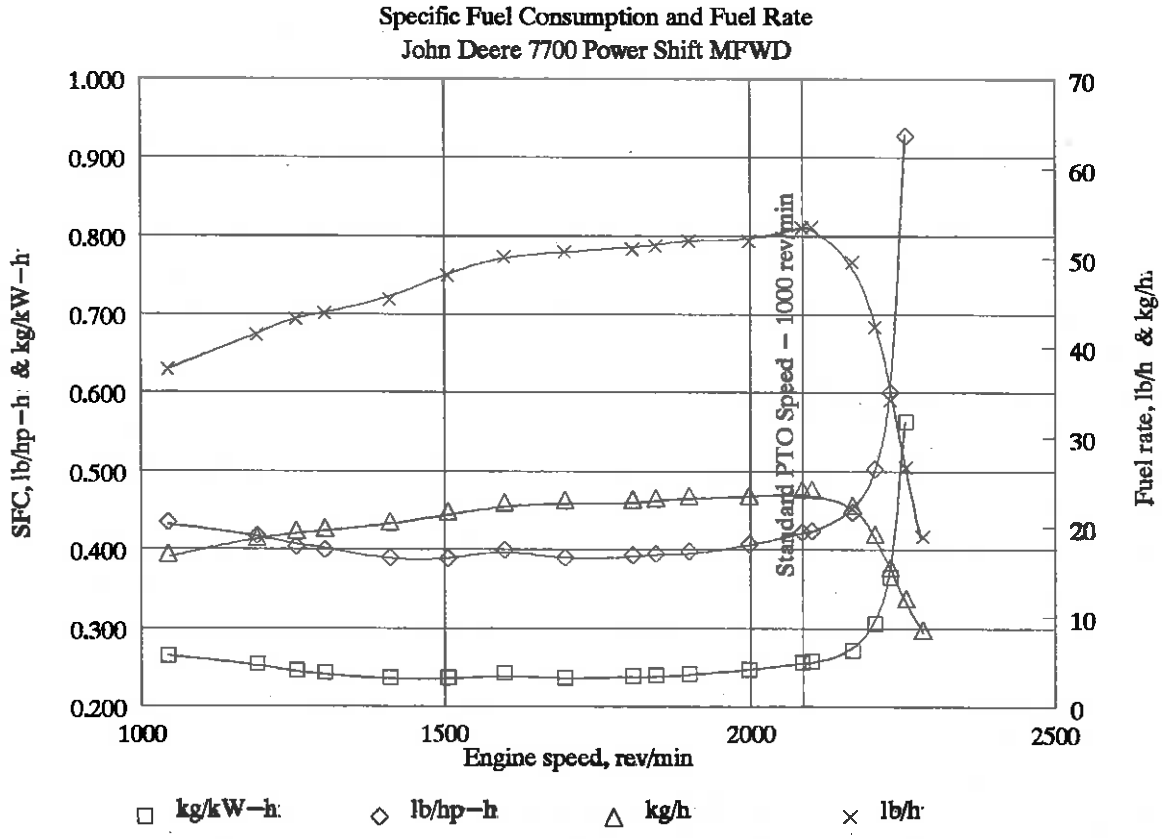
Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SPE	Temperature, deg C					Rel humidity	Pressure
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet		kPa
I. Maximum Power (unballasted, fwa at 1900 rev/min)						Tire pressure:		110 kPa, rear		159 kPa, front	Drawbar height:		546 mm	
4	57.76	65.51	3.17	2200	14.66%	0.370	2.25	56	89	104	12	10	78%	97.39
5	67.10	66.31	3.64	2180	14.12%	0.348	2.40	53	88	100	12	10	78%	97.39
6	74.60	62.16	4.32	2164	9.67%	0.321	2.60	56	92	106	13	11	79%	97.39
7	80.62	60.91	4.77	2057	9.07%	0.302	2.76	56	92	106	13	11	79%	97.39
8	82.19	54.72	5.41	1901	6.12%	0.291	2.87	56	94	108	13	11	79%	97.39
9	84.45	47.99	6.34	1902	4.56%	0.284	2.94	55	94	107	14	12	79%	97.39
10	84.16	41.76	7.25	1902	3.73%	0.284	2.94	56	93	108	16	13	71%	97.39
11	85.22	36.44	8.42	1904	3.05%	0.281	2.96	56	95	108	16	13	71%	97.39
12	83.50	30.92	9.72	1903	2.62%	0.287	2.90	55	93	107	17	13	64%	97.39
13	83.33	26.67	11.25	1904	2.09%	0.288	2.90	55	91	103	17	13	64%	97.39
14	81.78	23.03	12.79	1901	1.83%	0.292	2.85	55	95	109	17	13	64%	97.39
15	80.44	19.61	14.77	1900	1.57%	0.299	2.79	55	95	109	17	13	64%	97.39
II. Part loads (unballasted, fwa)														
II.1 in selected gear at maximum power														
11	83.19	32.09	9.33	2099	2.62%	0.296	2.82	56	95	109	17	13	64%	97.39
II.1.1 75% of pull at maximum power at rated speed														
11	65.90	24.10	9.84	2199	1.92%	0.332	2.51	55	93	104	19	15	65%	97.39
II.1.2 50% of pull at maximum power at rated speed														
11	44.96	16.07	10.07	2233	1.30%	0.400	2.08	54	89	102	19	15	65%	97.39
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	65.91	24.02	9.88	1673	2.01%	0.293	2.84	54	88	101	19	15	65%	97.39
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	44.98	16.01	10.11	1697	1.21%	0.333	2.50	54	84	99	19	15	65%	97.39
II.2 in selected gear nearest to 7.5 km/h														
9	82.81	42.24	7.06	2100	3.81%	0.297	2.81	57	95	109	14	12	79%	97.39
II.2.1 75% of pull at maximum power at rated speed														
9	65.79	31.66	7.48	2199	2.62%	0.331	2.52	56	93	103	18	14	65%	97.39
II.2.2 50% of pull at maximum power at rated speed														
9	45.02	21.13	7.67	2234	1.74%	0.396	2.11	56	89	102	19	15	65%	97.39
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
11	65.90	31.59	7.51	1690	2.70%	0.288	2.89	54	88	101	18	14	65%	97.39
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
11	45.01	21.11	7.68	1710	1.57%	0.327	2.55	54	83	98	19	15	65%	97.39

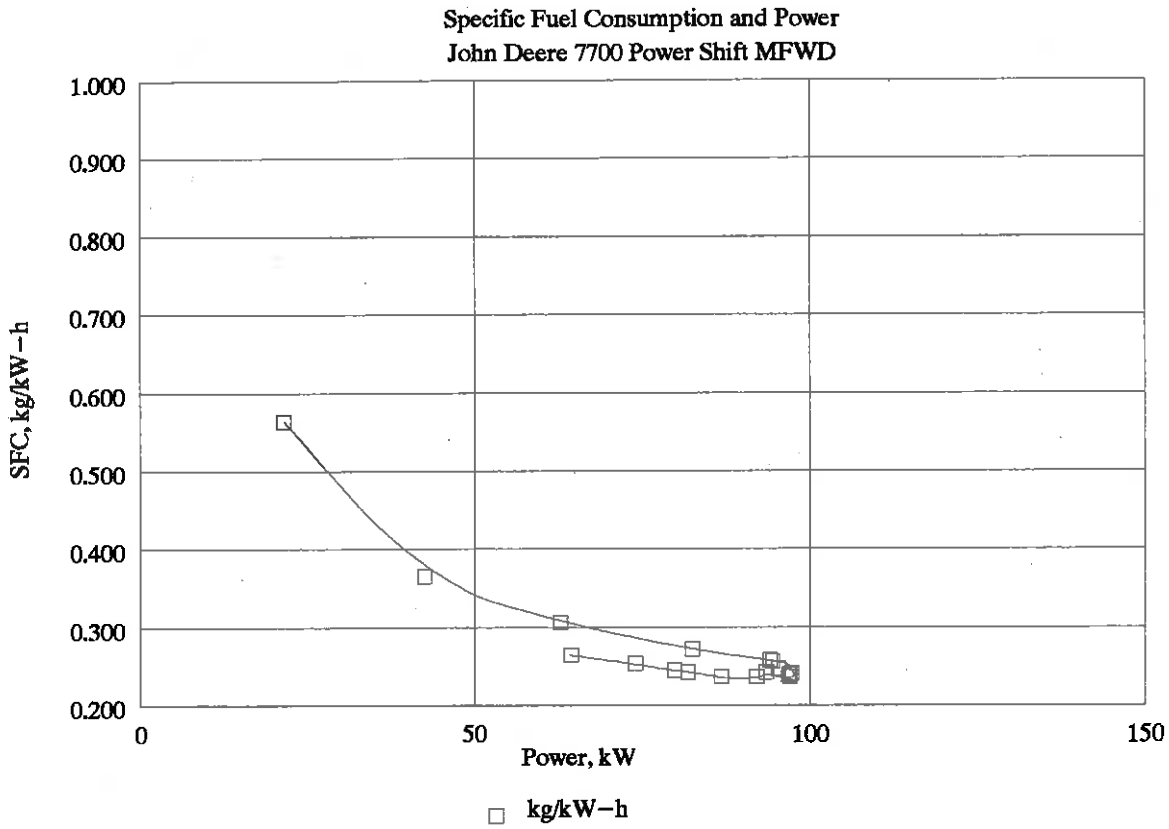
OECD Drawbar Data (US)

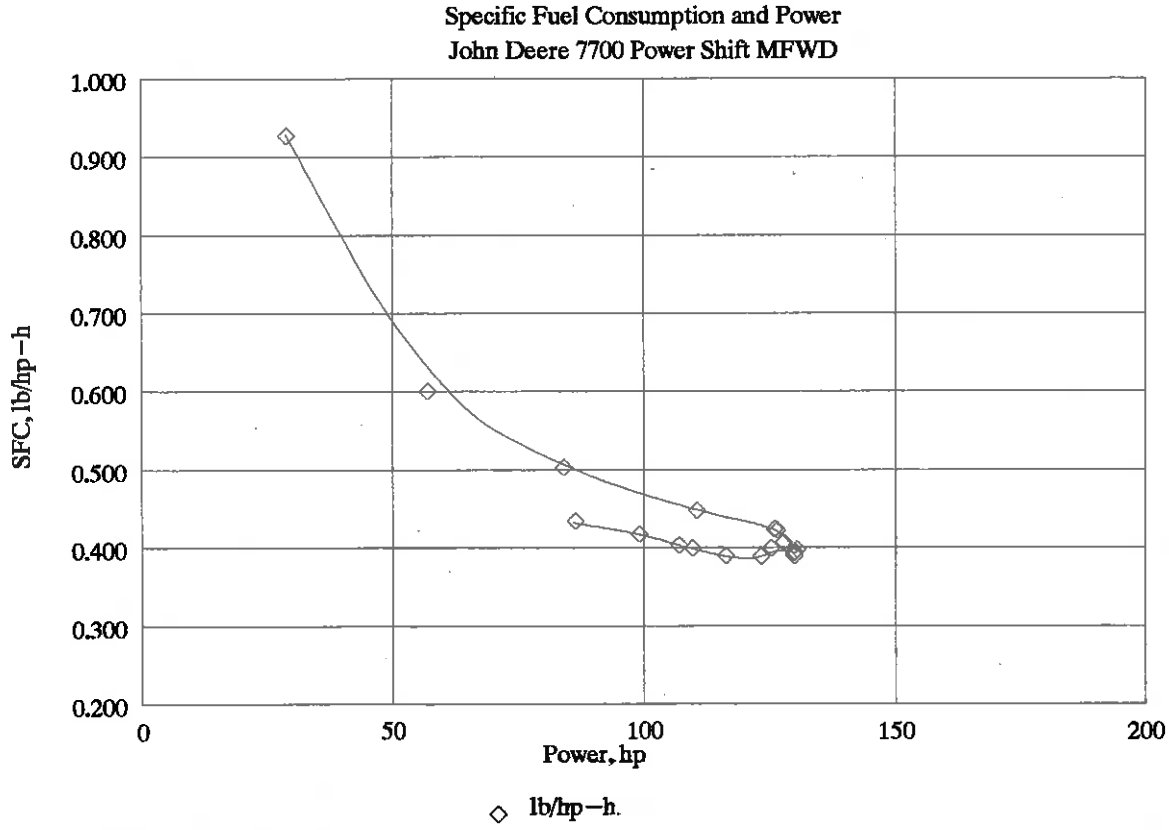
Date of tests:	29-Apr-93	Fuel density:	6.958 lb/gal
Type of track:	Concrete	Test number:	1667

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 (unballasted, fwa at 1900 rev/min)						Tire pressure:		16 psig, rear		23 psig, front	Drawbar height:		21.5 in	
4	77.46	14727	1.97	2200	14.66%	0.609	11.43	132	193	219	53	50	78%	28.76
5	89.99	14908	2.26	2180	14.12%	0.572	12.17	128	190	212	53	50	78%	28.76
6	100.04	13975	2.68	2164	9.67%	0.528	13.18	133	197	222	55	52	79%	28.76
7	108.12	13694	2.96	2057	9.07%	0.496	14.03	133	198	223	55	52	79%	28.76
8	110.22	12301	3.36	1901	6.12%	0.478	14.57	134	201	226	55	52	79%	28.76
9	113.25	10788	3.94	1902	4.56%	0.466	14.93	131	201	225	58	54	79%	28.76
10	112.86	9389	4.51	1902	3.73%	0.466	14.92	133	199	226	60	55	71%	28.76
11	114.28	8192	5.23	1904	3.05%	0.463	15.04	132	203	226	60	55	71%	28.76
12	111.98	6951	6.04	1903	2.62%	0.472	14.73	131	199	225	62	56	64%	28.76
13	111.75	5996	6.99	1904	2.09%	0.473	14.70	131	196	218	62	56	64%	28.76
14	109.67	5177	7.94	1901	1.83%	0.481	14.47	132	203	228	62	56	64%	28.76
15	107.88	4408	9.18	1900	1.57%	0.492	14.14	131	203	228	62	56	64%	28.76
II. Part loads (unballasted, fwa)														
II.1 in selected gear at maximum power														
11	111.56	7215	5.80	2099	2.62%	0.487	14.30	134	204	229	62	56	64%	28.76
II.1.1 75% of pull at maximum power at rated speed														
11	88.37	5419	6.12	2199	1.92%	0.546	12.75	131	199	220	66	59	65%	28.76
II.1.2 50% of pull at maximum power at rated speed														
11	60.29	3614	6.26	2233	1.30%	0.658	10.57	130	193	216	66	59	65%	28.76
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	88.39	5399	6.14	1673	2.01%	0.482	14.44	129	191	214	66	59	65%	28.76
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	60.33	3600	6.28	1697	1.21%	0.547	12.71	129	184	211	66	59	65%	28.76
II.2 in selected gear nearest to 4.6 mph														
9	111.05	9496	4.39	2100	3.81%	0.488	14.26	134	203	229	58	54	79%	28.76
II.2.1 75% of pull at maximum power at rated speed														
9	88.23	7119	4.65	2199	2.62%	0.545	12.77	133	199	218	65	58	65%	28.76
II.2.2 50% of pull at maximum power at rated speed														
9	60.37	4750	4.77	2234	1.74%	0.651	10.69	134	192	216	66	59	65%	28.76
II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1														
11	88.38	7102	4.67	1690	2.70%	0.474	14.69	129	190	213	65	58	65%	28.76
II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2														
11	60.36	4746	4.77	1710	1.57%	0.538	12.93	129	181	209	66	59	65%	28.76


Power and Equivalent Crankshaft Torque
John Deere 7700 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 7700 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 7700 Power Shift MFWD
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
SFC, kg/kW−h
0
50
100
150
Power, kW
kg/kW−h


Specific Fuel Consumption and Power
John Deere 7700 Power Shift MFWD
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
SFC, lb/hp−h
0
50
100
150
200
Power, hp
lb/hp−h.

OPTIONAL TEST - PTO performance with Shiftable PTO

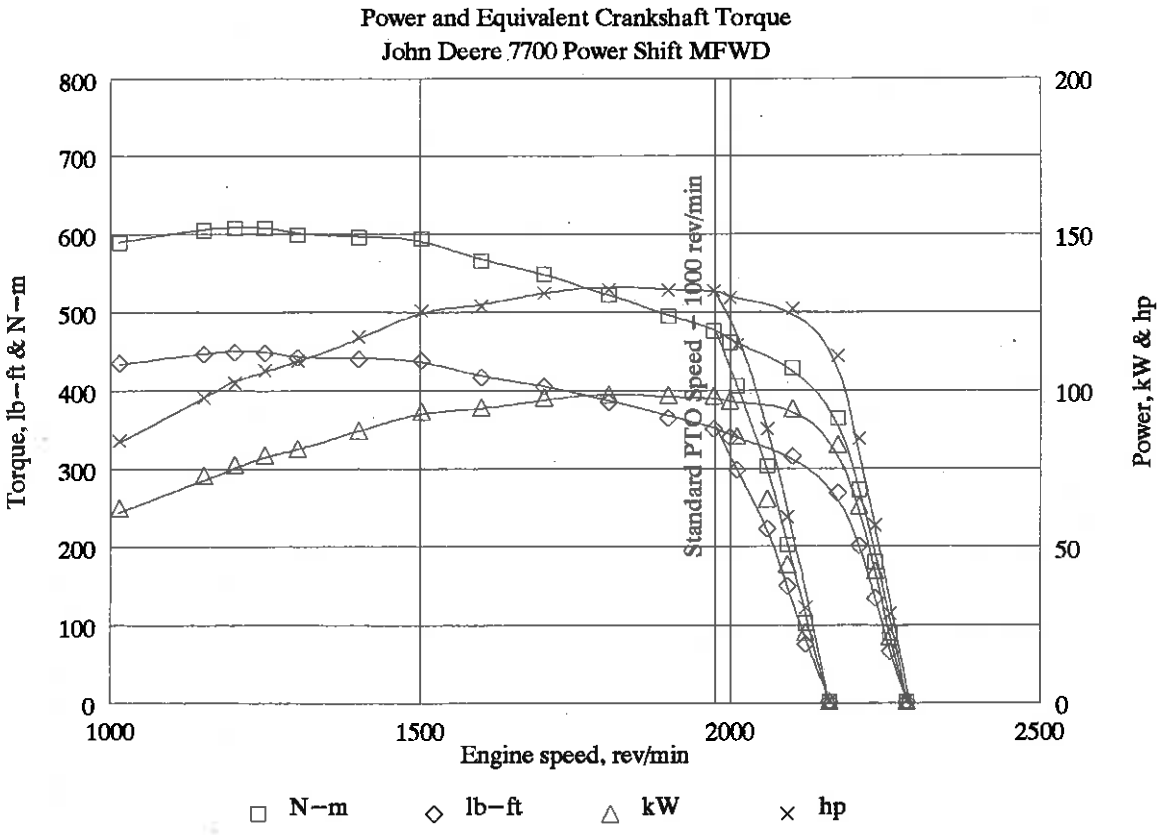
1. MAIN POWER TAKE-OFF

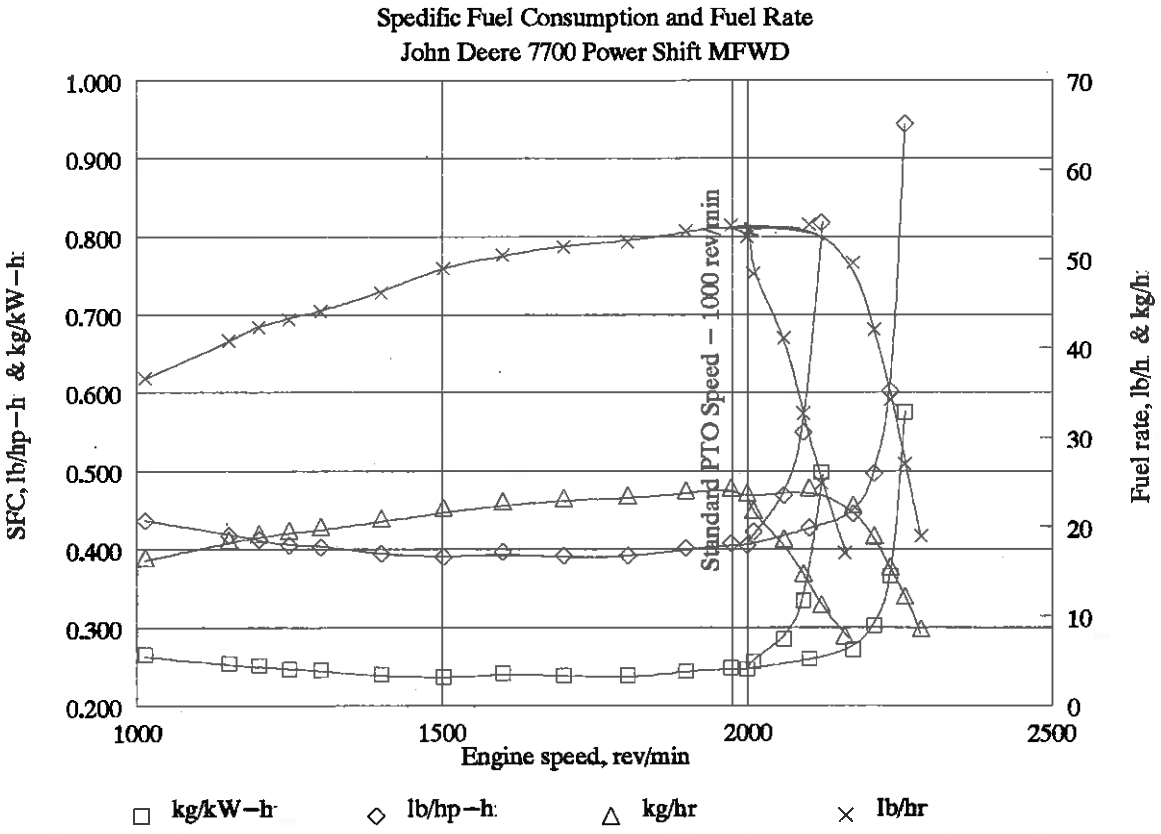
Date: 11-May-93 Location: UNL Tractor Test Lab, Lincoln, NE, U.S.A.

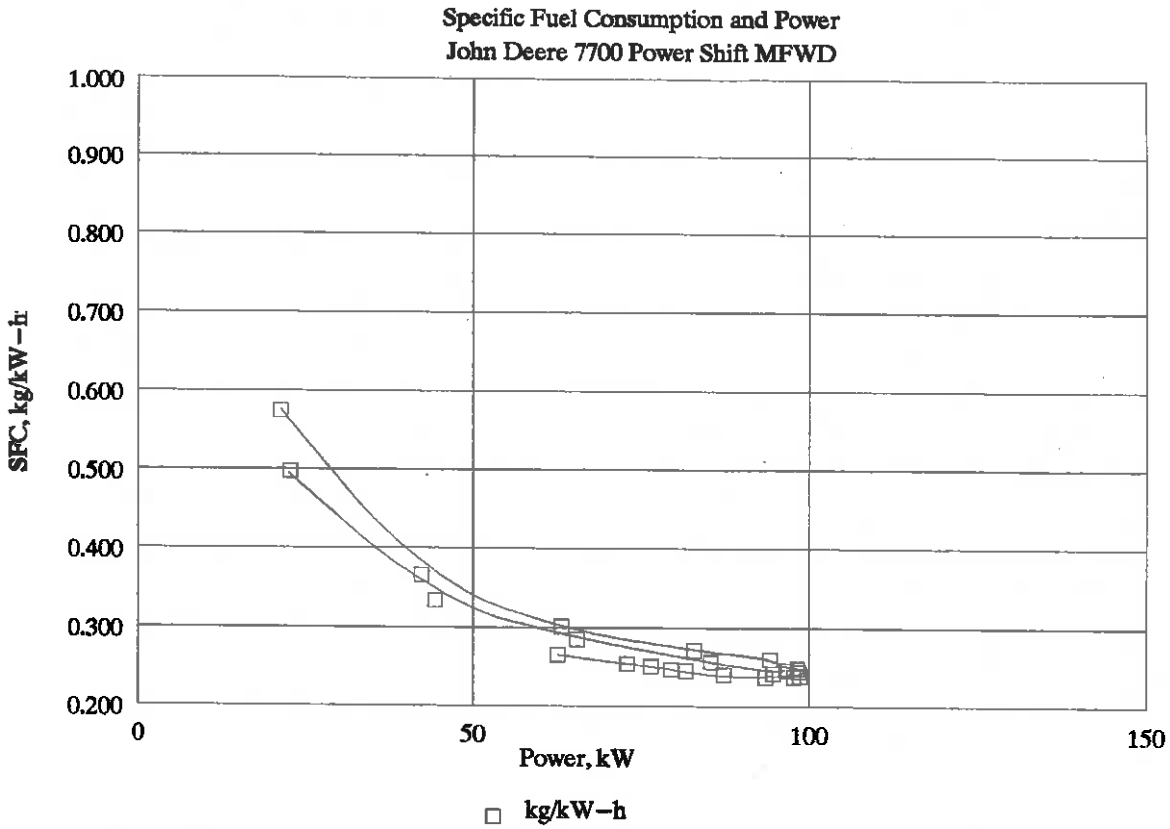
Type of dynamometer: Eddy current, Eaton Fuel density: 6.958 lb/gal

Power kW / *hp*	Eng rev/min	PTO rev/min	l/h / *gal/h*	kg/h / *lb/h*	kg/kW-h / *lb/hp-hr*	kW-h /l / *hp-h /gal*
1.1 Maximum Power - 2 hours						
98.43	1900	963	28.88	24.08	0.245	3.41
132.00			*7.63*	*53.09*	*0.402*	*17.30*
1.2 Power at Rated Engine Speed - 1 hour						
94.10	2100	1064	29.29	24.42	0.259	3.21
126.20			*7.74*	*53.83*	*0.427*	*16.31*
1.3 Power at Standard Power Take-Off Speed - 1 hour						
98.25	1973	1000	29.24	24.38	0.248	3.36
131.76			*7.72*	*53.74*	*0.408*	*17.06*
1.4 Part Loads						
1.4.1 Torque at maximum power at rated engine speed						
94.10	2100	1064	29.29	24.42	0.259	3.21
126.20			7.74	53.83	0.427	16.31
1.4.2 85% of torque obtained in 1.4.1						
82.85	2172	1101	26.93	22.45	0.271	3.08
111.10			*7.11*	*49.50*	*0.446*	*15.62*
1.4.3 75% of torque defined in 1.4.2						
63.13	2206	1119	22.85	19.05	0.302	2.76
84.65			*6.04*	*42.00*	*0.496*	*14.02*
1.4.4 50% of torque defined in 1.4.2						
42.38	2233	1132	18.61	15.51	0.366	2.28
56.84			*4.92*	*34.20*	*0.602*	*11.56*
1.4.5 25% of torque defined in 1.4.2						
21.32	2257	1144	14.69	12.25	0.574	1.45
28.59			*3.88*	*27.00*	*0.944*	*7.37*
1.4.6 unloaded						
0.62	2283	1157	10.28	8.57	13.917	0.06
0.83			*2.72*	*18.90*	*22.879*	*0.30*
1.5 Part Loads at Standard Power Take-off Speed						
1.5.1 Torque at maximum power						
98.25	1973	1000	29.24	24.38	0.248	3.36
131.76			*7.72*	*53.74*	*0.408*	*17.06*
1.5.2 85% of torque obtained in 1.5.1						
85.34	2010	1019	26.28	21.91	0.257	3.25
114.45			*6.94*	*48.30*	*0.422*	*16.49*
1.5.3 75% of torque defined in 1.5.2						
65.39	2059	1044	22.36	18.64	0.285	2.92
87.69			*5.91*	*41.10*	*0.469*	*14.85*
1.5.4 50% of torque defined in 1.5.2						
44.40	2091	1060	17.79	14.83	0.334	2.50
59.54			*4.70*	*32.70*	*0.549*	*12.67*
1.5.5 25% of torque defined in 1.5.2						
22.70	2120	1075	13.55	11.29	0.498	1.68
30.44			*3.58*	*24.90*	*0.818*	*8.51*
1.5.6 unloaded						
0.58	2158	1094	9.30	7.76	13.316	0.06
0.78			*2.46*	*17.10*	*21.892*	*0.32*

No load maximum engine speed:	2283 rev/min	
Equivalent torque at rated speed:	428 N-m	*316 lb-ft*
Equivalent torque at maximum power:	495 N-m	*365 lb-ft*
(engine speed:	1900 rev/min)	
Maximum equivalent crankshaft torque:	608 N-m	*449 lb-ft*
(engine speed:	1200 rev/min)	
Mean Dry bulb:	24 deg C	*76 deg F*
Wet bulb:	20 deg C	*68 deg F*
Relative humidity:	69 %	
Pressure:	98.15 kPa	*28.98 in Hg*
Maximum Coolant:	99 deg C	*211 deg F*
Engine oil:	113 deg C	*236 deg F*
Fuel:	56 deg C	*134 deg F*
Air intake:	28 deg C	*82 deg F*
Transmission/hydraulic oil:	57 deg C	*134 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 7700 Power Shift MFWD
Torque, lb−ft & N−m
Power, kW & hp
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


Spedific Fuel Consumption and Fuel Rate
John Deere 7700 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/hr
lb/hr


Specific Fuel Consumption and Power
John Deere 7700 Power Shift MFWD
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
SFC, kg/kW−h
0
50
100
150
Power, kW
kg/kW−h

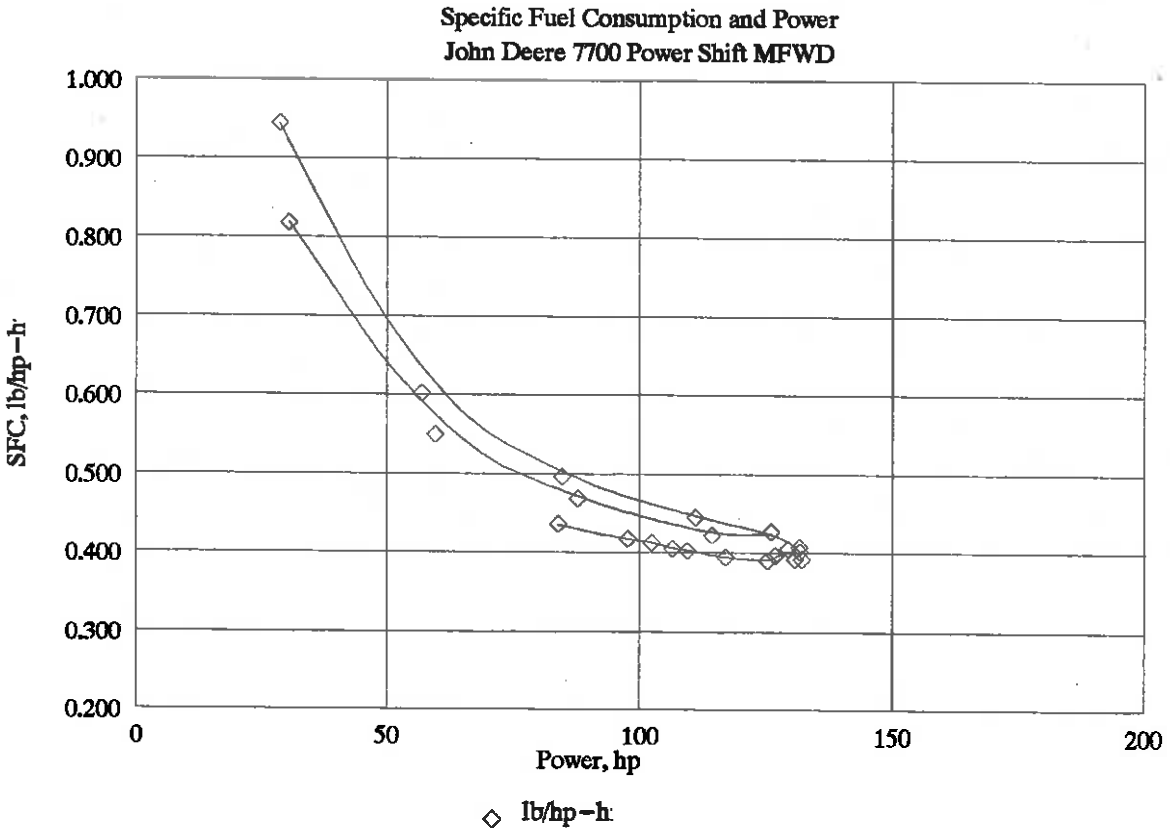

Specific Fuel Consumption and Power
John Deere 7700 Power Shift MFWD
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
SFC, lb/hp−h
0
50
100
150
200
Power, hp
lb/hp−h

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 in) - 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
Vertical movement: 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:	13-May-93	Fuel density:	0.834 kg/l
Type of track:	Concrete	Test number:	1667

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg C					Rel hum-	Pressure
	kW	kN	km/h	rev/min		kg/kW.h	kW.h/l	Fuel	Coolant	Oil	Dry	Wet	idity	kPa
I. Maximum Power (ballasted, 2wd at 2100 rev/min)					Tire pressure:		83 kPa, rear		159 kPa, front		Drawbar height:		572 mm	
5	67.88	67.78	3.61	2170	14.59%	0.344	2.42	57	89	104	17	12	55%	98.04
6	78.41	67.13	4.20	2104	9.45%	0.311	2.68	57	92	106	14	9	51%	98.04
7	82.70	59.15	5.03	2100	5.72%	0.296	2.82	57	93	107	16	11	54%	98.04
8	81.46	48.04	6.10	2100	3.99%	0.301	2.77	58	96	110	16	11	54%	98.04
9	82.65	41.95	7.09	2103	3.31%	0.298	2.80	56	96	110	18	13	57%	98.00
10	82.40	36.72	8.08	2101	2.89%	0.298	2.80	57	95	110	18	13	57%	98.00
11	82.90	31.93	9.35	2100	2.54%	0.297	2.80	56	95	109	18	13	57%	98.00
12	80.47	26.94	10.75	2098	2.11%	0.307	2.71	58	96	111	19	13	50%	98.00
13	79.11	22.90	12.44	2100	1.67%	0.313	2.67	57	96	110	19	13	50%	98.00
14	77.74	19.79	14.14	2099	1.49%	0.318	2.62	58	97	111	19	13	50%	98.00
II. Part loads (ballasted, 2wd)														
II.1 in selected gear at maximum power														
11	82.90	31.93	9.35	2100	2.54%	0.297	2.80	56	95	109	18	13	57%	98.00
II.1.1 75% of pull at maximum power at rated speed														
11	65.43	23.96	9.83	2197	1.93%	0.333	2.50	57	92	104	21	14	46%	98.00
II.1.2 50% of pull at maximum power at rated speed														
11	44.51	15.91	10.07	2238	1.23%	0.403	2.07	56	91	104	21	14	46%	98.00
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	65.49	23.93	9.85	1664	1.93%	0.293	2.84	55	89	102	21	14	46%	98.00
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	44.75	15.88	10.14	1704	1.32%	0.338	2.47	53	84	97	21	14	46%	98.00

OECD Drawbar Data (US)

Date of tests:	13-May-93	Fuel density:	6.958 lb/gal
Type of track:	Concrete	Test number:	1667

Gear	Power	Pull	Speed	Engine speed	Slip	SFC	SFE	Temperature, deg F					Rel hum-	Pressure
	hp	lb	mph	rev/min		lb/hp.h	hp.h/gal	Fuel	Coolant	Oil	Dry	Wet	idity	in Hg
I. Maximum Power (ballasted, 2wd at 2100 rev/min)					Tire pressure:		12 psig, rear		23 psig, front		Drawbar height:		22.5 in	
5	91.03	15238	2.24	2170	14.59%	0.566	12.29	134	193	220	62	53	55%	28.95
6	105.15	15092	2.61	2104	9.45%	0.511	13.62	135	197	223	57	49	51%	28.95
7	110.90	13297	3.13	2100	5.72%	0.486	14.32	135	199	224	60	52	54%	28.95
8	109.24	10799	3.79	2100	3.99%	0.495	14.07	136	204	230	60	52	54%	28.95
9	110.84	9430	4.41	2103	3.31%	0.490	14.20	133	205	230	65	55	57%	28.94
10	110.51	8256	5.02	2101	2.89%	0.490	14.21	135	203	230	65	55	57%	28.94
11	111.17	7178	5.81	2100	2.54%	0.489	14.24	134	203	229	65	55	57%	28.94
12	107.91	6056	6.68	2098	2.11%	0.505	13.77	136	206	231	66	55	50%	28.94
13	106.09	5148	7.73	2100	1.67%	0.514	13.53	135	205	231	66	55	50%	28.94
14	104.25	4448	8.79	2099	1.49%	0.523	13.30	136	206	231	66	55	50%	28.94
II. Part loads (ballasted, 2wd)														
II.1 in selected gear at maximum power														
11	111.17	7178	5.81	2100	2.54%	0.489	14.24	134	203	229	65	55	57%	28.94
II.1.1 75% of pull at maximum power at rated speed														
11	87.74	5386	6.11	2197	1.93%	0.548	12.69	134	198	219	70	57	46%	28.94
II.1.2 50% of pull at maximum power at rated speed														
11	59.69	3576	6.26	2238	1.23%	0.663	10.50	134	195	219	70	57	46%	28.94
II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1														
13	87.82	5380	6.12	1664	1.93%	0.482	14.42	130	193	216	70	57	46%	28.94
II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2														
13	60.01	3571	6.30	1704	1.32%	0.555	12.54	127	183	206	70	57	46%	28.94

OPTIONAL TEST - Ballasted, Front Drive Engaged

OECD Drawbar Data (SI)

Date of tests:	13-May-93	Fuel density:	0.834 kg/l
Type of track:	Concrete	Test number:	1667

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 (ballasted, fwa at 1900 rev/min)					Tire pressure:		83 kPa, rear		159 kPa, front		Drawbar height:		572 mm	
4	68.56	78.81	3.13	2167	14.62%	0.344	2.42	54	90	104	12	9	69%	98.00
5	79.35	75.42	3.79	2119	8.25%	0.307	2.71	55	91	106	14	9	51%	98.04
6	83.29	72.35	4.15	2013	6.92%	0.291	2.86	56	92	106	14	9	51%	98.04
7	84.56	66.98	4.54	1900	5.96%	0.282	2.96	58	94	108	16	11	54%	98.04
8	84.00	54.75	5.52	1898	4.07%	0.283	2.94	57	95	107	16	11	54%	98.04
9	85.06	47.60	6.43	1904	3.57%	0.281	2.96	55	94	108	18	13	57%	98.00
10	85.22	41.79	7.34	1904	2.80%	0.280	2.98	56	95	106	18	13	57%	98.00
11	84.45	35.89	8.47	1899	2.36%	0.283	2.95	57	94	109	19	13	50%	98.00
12	83.06	30.57	9.78	1904	2.01%	0.288	2.89	56	95	108	19	13	50%	98.00
13	82.05	26.16	11.29	1902	1.75%	0.291	2.86	56	94	108	19	13	50%	98.00
14	80.87	22.60	12.88	1907	1.49%	0.296	2.82	57	96	109	19	13	50%	98.00

OECD Drawbar Data (US)

Date of tests:	13-May-93	Fuel density:	6.958 lb/gal
Type of track:	Concrete	Test number:	1667

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 (ballasted, fwa at 1900 rev/min)					Tire pressure:		12 psig, rear		23 psig, front		Drawbar height:		22.5 in	
4	91.94	17718	1.95	2167	14.62%	0.566	12.29	130	194	220	54	48	69%	28.94
5	106.41	16955	2.35	2119	8.25%	0.505	13.77	131	197	222	57	49	51%	28.95
6	111.70	16266	2.58	2013	6.92%	0.479	14.53	134	198	224	57	49	51%	28.95
7	113.40	15058	2.82	1900	5.96%	0.464	15.01	136	202	227	60	52	54%	28.95
8	112.64	12308	3.43	1898	4.07%	0.466	14.94	134	203	224	60	52	54%	28.95
9	114.07	10701	4.00	1904	3.57%	0.463	15.04	132	202	227	65	55	57%	28.94
10	114.28	9395	4.56	1904	2.80%	0.461	15.10	134	203	223	65	55	57%	28.94
11	113.25	8068	5.26	1899	2.36%	0.465	14.96	134	202	228	66	55	50%	28.94
12	111.38	6873	6.08	1904	2.01%	0.474	14.67	133	204	226	66	55	50%	28.94
13	110.03	5881	7.02	1902	1.75%	0.479	14.53	133	202	227	66	55	50%	28.94
14	108.44	5081	8.00	1907	1.49%	0.486	14.31	134	205	229	66	55	50%	28.94

Repairs: None
Remarks: None