Report on test in accordance with
OECD STANDARD CODE I for the Official
Testing of Agricultural Tractor Performance

Full Code

OECD No. 1339



Agricultural Tractor
JOHN DEERE 3055 (2WD)

Manufacturer
John Deere Werke Mannheim
D-6800 Mannheim

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This is a report on a tractor test in accordance with OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance (C(87)53(Final), Code I).

It does not contain an evaluation of the tractor on practical work.

Duration of tests: June 1991 till August 1991

DLG-Testing Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-6114 Groß-Umstadt

This report has been approved by the OECD Co-Ordinating Centre (CEMAGREF, France) as being in accordance with the OECD STANDARD CODE.

Date of approval: 10th December 1991

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In this report all performance characteristics are given corresponding to the International System of Units.

The reference to the former used Technical System of Units is given by the following relations:

Forces	1 kN	=	1000 N	=	102 kp
Powers			1 kW	=	1,36 PS
Pressures	1 MPa	=	10 bar	=	10,2 kp/cm²
	100 kPa	=	1000 mbar	=	750,10 mm Hg

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TABLE OF CONTENTS

		Page
SPECIFICATION OF TRACTOR		4 to 13
TEST CONDITIONS		13 to 16
COMPULSORY TESTS		
1	Main power take-off performance	17 to 20
2	Hydraulic power and lifting force	21
3	Drawbar performance	22 and 23
	Drawbar performance (additional test with 2nd tyre set)	24 and 25
4	Turning area and turning circle	26
5	Location of centre of gravity	26
6	Braking	27
7	Measurement of external noise level	28
ADDITIONAL TESTS UNDER THE RESPONSIBILITY OF THE DLG-TESTING STATION		
8	Measurements of noise in the protective structure	29
9	Lugging ability	30

Tractor manufacturer:	JOHN DEERE D-6800 Mannheim
Location of tractor assembly:	D-6800 Mannheim
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running in:	Mannheim and Groß-Umstadt
Duration of running in:	100 hours, engine appr. 50 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	JOHN DEERE
Trade name:	3055
Type:	Wheel tractor, unit construction, rear wheel driven
Serial no.:	731837
1st Serial no.:	600 001

Engine

Make:	JOHN DEERE
Model:	6.359 DL 011
Type:	Watercooled 4 stroke Diesel-engine, direct injection, naturally aspirated
Serial no.:	992224
Cylinders:	6, in line, bore 106,5 mm, stroke 110 mm, displacement 5878 cm^3 compression ratio 17,8 : 1
Valves:	Overhead
Fuel system:	SOFABEX fuel supply pump, LUCAS distributor injection pump RE 50 055 DPA4-TS, serial no.: 12 691 MHG; manufacturer's production setting 50±2,0 mm^3/stroke at full load and rated speed; automatic injection timing device, injection timing: 13° +8° before TDC; STANADYNE multihole injection nozzles 27333 injection pressure 21,0 MPa±0,5 MPa; capacity of fuel tank 121 dm^3,
Governor:	LUCAS centrifugal variable speed governor, governed range of engine speed 800 ± 50 to 2515 rev/min; rated engine speed 2300 rev/min
Air cleaner:	KNECHT dry paper element filter without precleaner, replaceable cartridge; electric warning indicator lamp; air intake below bonnet

Exhaust silencer:	EBERSPÄCHER, AL 37167 multi-chamber expansion reflection type, 160x245 mm oval, 540 mm long, below bonnet, vertical pipe; mouth showing to the left upwards, 2735 mm above ground
Lubrication system:	Forced feed by internal gear pump, oil filter in full flow with replaceable cartridge, engine oil/cooling-water heat exchanger between oil filter and socket
Cooling system:	Water cooling with impeller pump, overpressure relief valve set to 60 kPa ± 10 kPa; thermostat and by-pass circuit; viscous drive fan EATON, model 610, V-belt driven, variable fan speed controlled by air flow temperature, with 6 blades with 560 mm dia; water capacity 19 dm^3
Starting system:	Electrical BOSCH solenoid pre engaged-drive starter motor 3,1 kW; cold starting aid: BERU heating spiral in air intake manifold
Safety device:	Range gear in neutral position
Electrical system:	12 Volt, negative earth; BOSCH 3-phase alternator K1-14 V/ 85 A 1190 W; 2 lead acid batteries, 88 Ah each at 20 hours rating

Transmission

Clutch:	LUK, AL 67184 dry single plate, 328 mm dia, hydraulically actuated by pedal, separate fluid tank
Gear box:	JOHN DEERE-POWER SYNCHRON synchromesh speed change gear with 4 speeds, range gear with 2 collar shifted forward ranges (I, II) and 1 reverse range (R), power shift range gear with 2 speeds (Lo, Hi); totally 16 forward and 8 reverse speeds, 3 hand levers, oil cooler in front of engine water cooler
Rear axle and final drives:	JOHN DEERE, bevel gear drive; bevel gear differential operated by lever, self- disengaging; planetary final drives
Front axle:	JOHN DEERE, not propelled

Total ratios and speeds

Range		Gear	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed 2300 rev/min km/h *)
I	Lo	1	273,26	2,60
		2	197,76	3,60
		3	137,58	5,17
		4	102,08	6,97
	Hi	1	222,66	3,19
		2	161,13	4,41
		3	112,10	6,34
		4	83,18	8,55
II	Lo	1	79,77	8,91
		2	57,73	12,32
		3	40,16	17,70
		4	29,80	23,86
	Hi	1	64,99	10,94
		2	47,04	15,12
		3	32,72	21,73
		4	24,28	29,28
R	Lo	1	177,94	4,00
		2	128,77	5,52
		3	89,59	7,94
		4	66,47	10,70
	Hi	1	144,99	4,90
		2	104,92	6,78
		3	73,00	9,74
		4	54,16	13,13

*) calculated with the radius index (ISO 4251/1-1984) 820 mm

Main p.t.o.

Independent; driven by wet multi-plate clutch, 133 mm dia; hydraulically operated by lever and control valve;
1 shaft at tractor's rear,
2 p.t.o. speeds by exchangeable shafts;
35 mm dia, 6 splines, ISO 500-1979 type 1 or
35 mm dia, 21 splines, ISO 500-1979 type 2;
749 mm above ground, 521 mm behind rear wheel centre, 25 mm to the left of tractor's median plane;
sense of rotation clockwise, viewed facing tractor's rear

p.t.o. type	p.t.o. speed rev/min	engine speed rev/min	p.t.o. transmission ratio	Power restriction kW
540	540 600	2071 2300	3,835	-
1000	1000 1059	2172 2300	2,1724	-

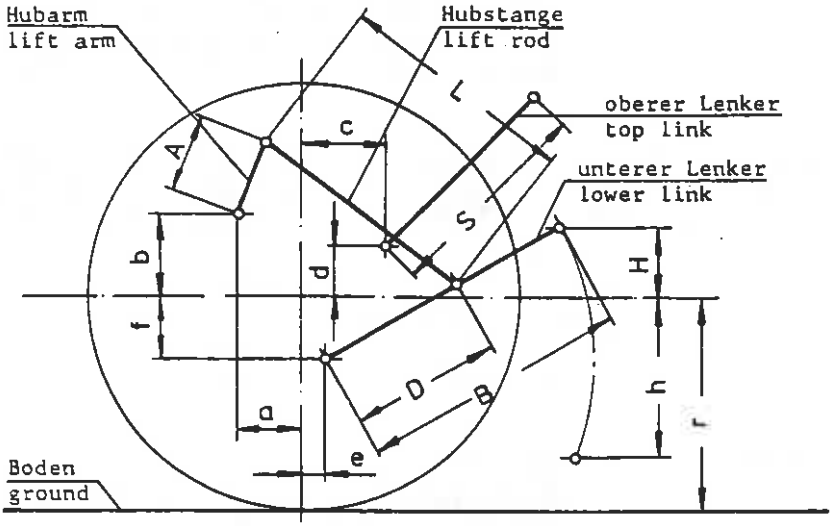
Power lift

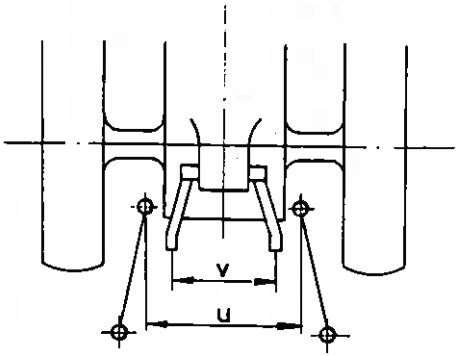
JOHN DEERE,
hydraulic power lift, unit construction;
draft, position and mixed control, floating position, lowering throttle

Hydraulic system:

Closed centre system;
JOHN DEERE AR 97 872 variable-capacity radial-piston pump, directly driven by engine, max. delivery 92 l/min at rated engine speed;
oil and oil filter in common with gearbox;
1 JOHN DEERE control valve,
relief valve pressure setting 16,0±0,3 MPa;
single acting cylinder with 96 mm bore and 162 mm stroke,
safety valve set to 23,0 MPa;
2 double acting additional JOHN DEERE control valves, 4 oil couplings at rear of tractor;
maximum volume of oil available to external cylinders:
25 l stationary and 10 l during driving operation, 31 l resp. 16 l with increased oil level, hydraulic oil reservoir in common with gearbox with 45 l capacity (resp. 51 l with increased oil level)

Three point-linkage: Category 2 acc. to ISO 730/1-1990





Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p. 21)

Rear tyres Front tyres	18.4 - 38 radius index +) static radius	(r) (r')	820 421
Length of lift arms		(A)	280
Length of lower links		(B)	975
Distance of lift arm pivot points from rear wheel centre	horizontal vertical	(a) (b)	-7 336
Horizontal distance between lower link pivot points		(u)	456
Horizontal distance between lift arm end points		(v)	494
Length of upper link		(S)	640 to 855, 742
Distance of upper link pivot point from rear wheel centre	horizontal vertical	(c) (d)	372 158
Distance of lower link pivot point from rear wheel centre	horizontal vertical	(e) (f)	115 251
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	623
Length of lift rods		(L)	760 to 900

Height of lower link hitch points relative to rear wheels' centre line (situated 820 mm above ground), these data are valid for unloaded power lift:

Length of lift rods	(L)	760	900
Linkage distance of lift rods	(D)	623	
Lowest position	(h)	290	566
Highest position	(H)	220	5
Transport position	(H')	220	5

+) Assuming r = tyre dynamic radius index of ISO 4251/1-1984

Pull attachment

Swinging drawbar:	Reversible, height above ground	480 and 579 mm
	distance of hitch point from rear wheel axis, horizontally	756, 797, 886, 927 mm
	distance of hitch point from p.t.o. shaft end, vertically	269, 170 mm
	horizontally	235, 276, 365, 406 mm
	distance of pivot point from rear wheel axis, horizontally	51 mm
	lateral swing to both sides at 756 mm distance from pivot point	180 mm
	hitch hole diameter	33 mm
	max. permissible load, longest position	12 kN
	shortest position	22 kN
Trailer hitch:	Not fitted	
Holed drawbar:	Short bar, length between joint balls	825 mm
	9 holes, 33 mm dia with 80 mm distance each, thickness/width of the drawbar	25/80 mm
	height above ground: minimum	267 mm
	maximum	1053 mm
	horizontal distance to p.t.o. shaft end (lower links in horizontal position)	569 mm
Towing hitch:	At front, height above ground	770 mm

Steering

JOHN DEERE/CHAR-LYNN 1002
hydrostatic steering,
2 WEBER single acting rams,
215 mm stroke, 50 mm bore and 50 mm dia of piston rod, directly acting on steering levers; working pressure 16,0 MPa

Brakes

Service brake:	JOHN DEERE pedal operated muscle power brake with hydraulic transmission, using oil of gearbox; oil-immersed disc brake with 1 ring-piston on each differential half shaft; disc diameter 304 mm
Parking brake:	Mechanical wet V-belt brake, acting on bevel gear of differential, 238 mm dia, 20 mm width, operated by lever with ratchet
Steering brake:	Divided pedal of service brake, for normal use locked together

Wheels

Front:	Steering, 2 pneumatics
Rear:	Driving, 2 pneumatics
Wheelbase:	2551 mm
Track width:	At front 1500 mm to 2000 mm, adjustable in steps of 100 mm; at rear 1600 mm to 2000 mm, adjustable in steps of 100 mm, each by adjustable gauge bowl wheels and by turning the wheels

Possible combinations of tyres sizes front/rear

Tyres sizes at front	at rear
10.00 - 16	12.4 - 38 15.5 - 38 23.1 - 26 18.4 - 34 23.1 - 30 16.9 - 38 18.4 - 38
7.50 - 20	15.5 - 38 23.1 - 26 18.4 - 34 16.9 - 38 18.4 - 38
11L - 16	18.4 - 30 15.5 - 38 18.4 - 34
7.50 - 18	18.4 - 30 15.5 - 38 23.1 - 26 18.4 - 34 23.1 - 30 16.9 - 38

Safety cab

JOHN DEERE, cab model SGB;
OSHA/SAE-tested driver's platform with integrated safety cab,
not tiltable, antivibration mounted by silent-blocks on tractor;
1 door at front left side and 3 steps,
steps 448, 728 mm and 1038 mm,
driver's platform 1158 mm above ground;
rear window and side windows tiltable;
door can be locked in open position;
combined heating/ventilation system with 3-step blower and cooling-water heat exchanger incorporated in roof;
air intake at both sides of the roof,
dry air filter; air outlet jets and defroster nozzles in the roof at front;
air conditioner optionally available,
fitted to tested tractor

Noise reduction materials:

Roof, front part:	foam with perforated vinyl-coating	25 mm
middle part, air filter cover:	foam with perforated vinyl-coating	32 mm
ventilation cover:	foam	20 mm
all other parts of the roof:	foam with perforated vinyl-coating on self-supporting web plate of plastics	15 mm
mudguards:	foam with vinyl-coating	25 mm
uprights:	foam with vinyl-coating	19 mm
floor:	molded rubber mat	40 mm
seat support:	foam with vinyl-coating	25 mm
rear wall, lower part:	foam with vinyl-coating	25 mm
instrument and steering support, outside:	foam with vinyl-coating	6 mm
inside:	foam with lead-vinyl intermediate layer	30 mm
bulk head, outside:	foam (polyether) with rubber-coating	25 mm
control box, right-hand inside mudguard's side	foam	25 mm
inside floor	molded rubber	3 mm

Driver's seat: GRAMMER/SEARS DS 85H upholstered seat with back rest and arm rests, hydraulic shock absorber, adjustable spring suspension; height of unloaded seat above platform adjustable in 2 steps from 520 to 580 mm, longitudinal adjustment 150 mm

Running-time meter: Electronic, counts real operating hours when engine is running

Lighting: Electrical, 12 Volt, as per US legislation

	Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlights 2 each	1700	100 dia	970 and 820
Auxiliary lights	1510	466x55	233
Rearlights oval	1730	165x66	860
Reflectors (ring-shaped)	1730	195x85	870

additional SMV-sign

TEST CONDITIONS

Overall dimensions

	Length mm	Width mm	Height at top of safety cab mm	Height at top of exhaust silencer mm
without ballast	4240	2260	2822	2735
with ballast	4660	2425		

Ground clearance: 440 mm below swinging drawbar

1st tyre set

Tractor mass

	unballasted		ballasted	
	without driver kg	with driver kg	without driver kg	with driver kg
Front	1705	1710	1990	2000
Rear	2615	2685	4635	4700
Total	4320	4395	6625	6700

Ballast

Front:	11 front end weights, total	550 kg
Rear:	9 weights per wheel, total	693 kg
	1 weight in 3-point linkage	652 kg
	water in the tyres	410 kg

Tyres and track widths specifications

	Front	Rear
Tyres:	GOODYEAR	ARMSTRONG
dimensions	10.00 - 16	18.4 - 38
type	cross-ply	cross-ply
ply rating/load index	8/-	8/-
speed index	-	-
maximum load	1190 kg	2712 kg
inflation pressure	280 kPa	140 kPa
radius index	421 mm (static)	820 mm
Chosen track width	1600 mm	1800 mm
Rims	W8Lx16	DW15x38
Technically permissible axle load	2000 kg	4700 kg
Technically permissible total weight	6700 kg	

2nd tyre set (used for additional drawbar tests only)

Tractor mass

	unballasted		ballasted	
	without driver kg	with driver kg	without driver kg	with driver kg
Front	1705	1710	1990	2000
Rear	2730	2800	4635	4700
Total	4435	4510	6625	6700

Ballast

Front:	11 front end weights, total	550 kg
Rear:	9 weights per wheel, total	693 kg
	1 weight in 3-point linkage	652 kg
	water in the tyres	295 kg

Tyres and track widths specifications

	Front	Rear
Tyres:	GOODYEAR	PIRELLI TM 300
dimensions	10.00 - 16	18.4 R 38
type	cross-ply	radial-ply
ply rating/load index	8/-	-/146
speed index	-	A8
maximum load	1190 kg	3000 kg
inflation pressure	280 kPa	160 kPa
radius index	421 mm (static)	820 mm
Chosen track width	1600 mm	1800 mm
Rims	W8Lx16	DW15x38
Technically permissible axle load	2000 kg	4700 kg
Technically permissible total weight	6700 kg	

Oils and lubrication

Capacity and change interval:

	Capacity dm^3	Oil change h	Filter change h
Engine	11,5	200	200
Gearbox, hydraulic system, rear axle and final drives, steering and braking	45,0	1200	600

Specifications:

	Recommended	Used during test
Engine oil: used in: Engine Type Viscosity Winter Summer Tropics Classification	 Engine oil SAE 10W/20 SAE 15W/40 SAE 20W/40 API SF-CD or MIL-L 2104 C	 FUCHS TITAN UNIVERSAL SAE 15W/40 API-CD
Transmission oil: used in: Gearbox with rear axle incl. final drives, hydraulic-, steering- and braking system Type Viscosity Classification	 Transmission oil SAE 75 JD specif.- J20A	 FUCHS RENOGEAR SAE 75 J20A

Grease: Multi purpose grease,
number of lubrication points: 17

Fuel

Type: ARAL Diesel-fuel in conformity with DIN 51601

Density at 15°C: At p.t.o. test 0,828 g/cm^3
at drawbar power test 0,825 g/cm^3

COMPULSORY TESTS

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

Date of tests: 6th June 1991
Location of tests: DLG-Testing Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power	Speed		Fuel consumption			Specific
	Engine	P.t.o.	hourly		specific	energy
kW	rev/min	rev/min	l/h	kg/h	g/kWh	kWh/l
Maximum power						
1.1 At 2-hour test						
70,4	2300	1059	20,33	16,84	239	3,46
1.2 At rated speed						
70,4	2300	1059	20,33	16,84	239	3,46
1.3 At standard p.t.o. speed						
69,6	2172	1000	19,84	16,44	236	3,51
1.4 Part loads, the governor hand lever in the position corresponding to maximum power at full load (curve a)						
1.4.1 the torque corresponding to maximum power at rated speed						
70,4	2300	1059	20,33	16,84	239	3,46
1.4.2 85% of the torque obtained in 1.4.1						
62,1	2385	1098	18,40	15,25	246	3,37
1.4.3 75% of the torque defined in 1.4.2						
47,1	2414	1111	15,13	12,53	266	3,12
1.4.4 50% of the torque defined in 1.4.2						
31,7	2441	1124	12,00	9,94	313	2,64
1.4.5 25% of the torque defined in 1.4.2						
16,2	2472	1138	8,99	7,44	460	1,80
1.4.6 unloaded						
-	2515	1158	6,10	5,05	-	-

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
1.5 Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
1.5.1 the torque corresponding to maximum power						
69,6	2172	1000	19,84	16,44	236	3,51
1.5.2 85% of the torque obtained in 1.5.1						
61,2	2247	1034	17,79	14,74	241	3,44
1.5.3 75% of the torque defined in 1.5.2						
46,6	2283	1051	14,52	12,03	258	3,21
1.5.4 50% of the torque defined in 1.5.2						
31,5	2313	1065	11,52	9,54	303	2,73
1.5.5 25% of the torque defined in 1.5.2						
16,1	2350	1082	8,44	6,99	435	1,91
1.5.6 unloaded						
-	2390	1100	6,08	5,03	-	-

No load maximum engine speed: 2515 rev/min
Equivalent flywheel torque at rated engine speed: 292 Nm
Maximum equivalent flywheel torque: 387 Nm at 1201 rev/min of the engine

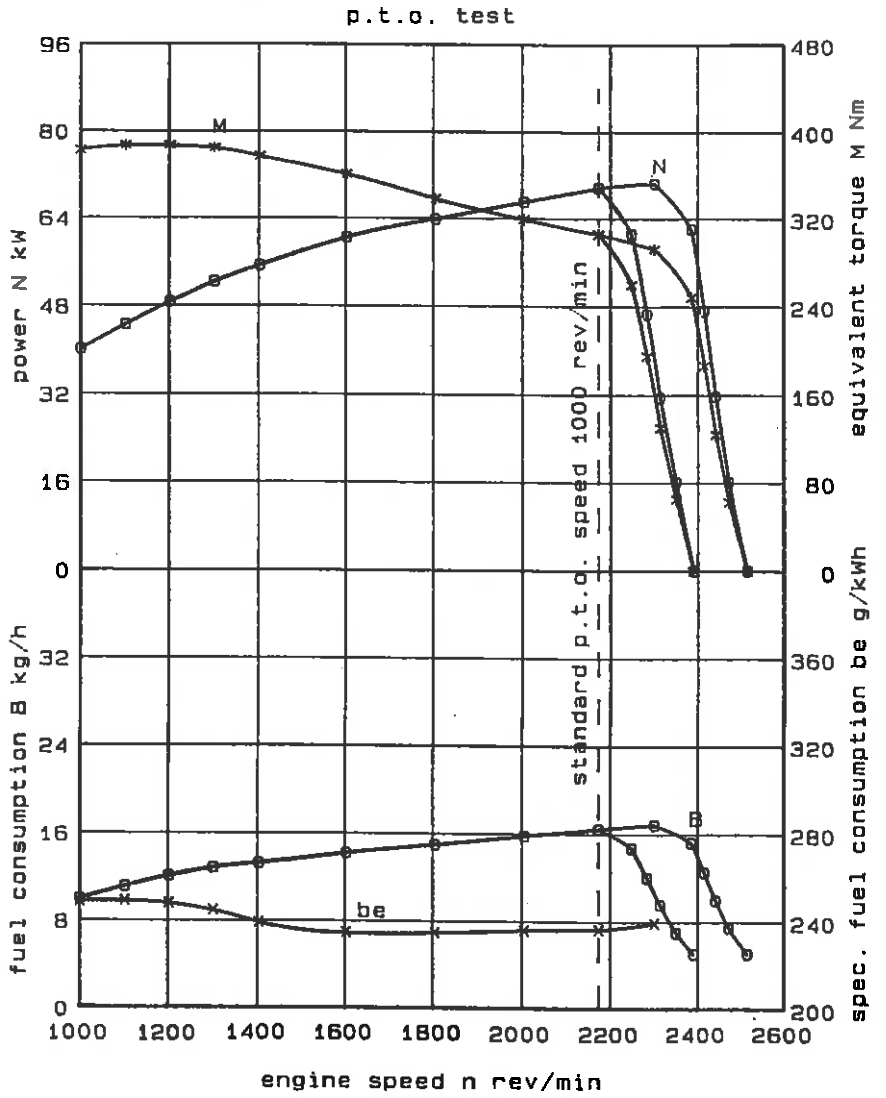
Mean atmospheric conditions

temperature	21 °C
pressure	99 kPa
rel. humidity	31 %

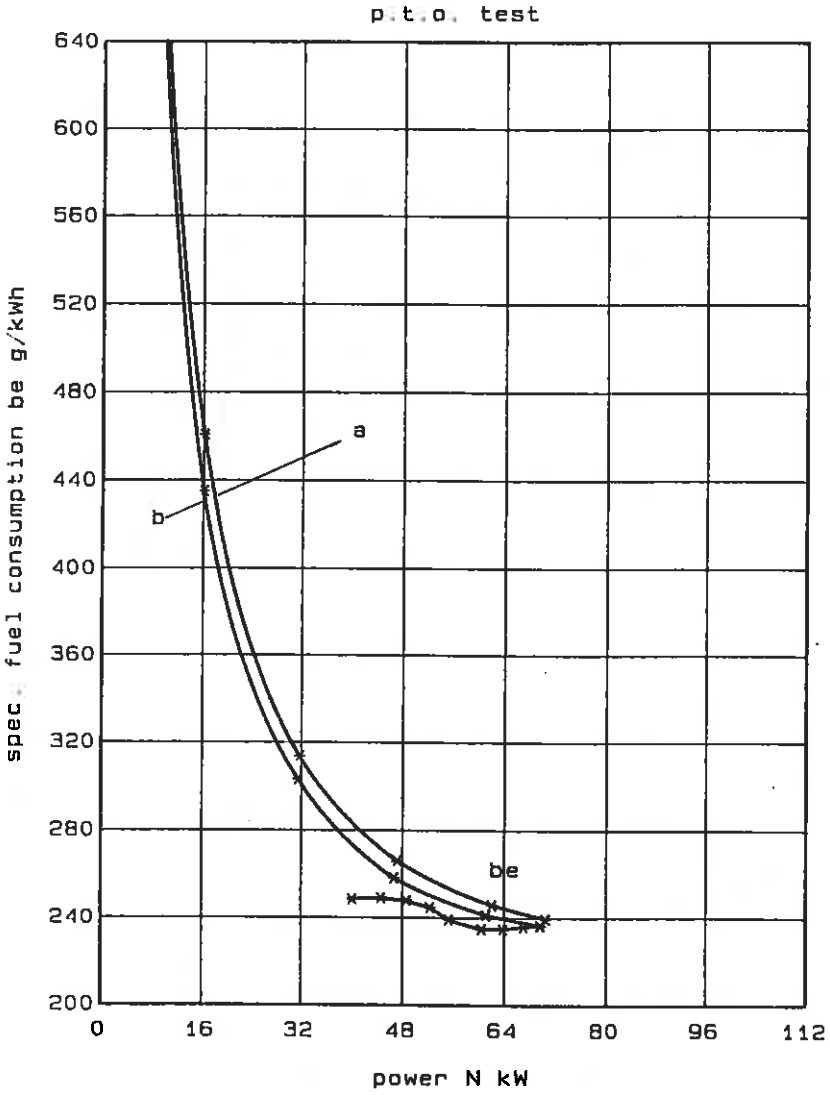
Maximum temperatures

coolant	87 °C
oil	107 °C
fuel	26 °C
air intake	26 °C

John Deere 3055 Test-No.91-151



John Deere 3055 Test-No.91-151



2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 10th and 11th June 1991

2.1 Hydraulic power test

Sustained pressure with relief valve open 16,0 MPa
Pump delivery rate at minimum pressure 91,5 l/min

	Hydraulic power kW	Flow rate l/min	Pressure MPa	Oil temperature °C
At 90% of the actual relief valve setting	6,5	27,2	14,4	70
At max. power	13,1	82,6	9,5	70

Tapping point used for test: At rear of tractor

2.2 Power lift test

Main linkage dimensions see on pages 8 and 9

	At the hitch points	On the frame
Height of lower hitch points above ground in down position	254+)	
Vertical movement without lifting forces with lifting forces	571 mm 551 mm	709 mm 677 mm
Max. corrected forces exerted through full range	23,2 kN	20,8 kN
Corresponding pressure	14,4 MPa	
Moment about rear axle	-	35,4 kNm
Max. tilt angle of mast from vertical	-	8°

+) 200 mm not available due to limitation of lift rods' length

Lifting heights relative to horizontal lower links

mm	-361	-315	-300	-200	-100	0	+100	+200	+236	+316

Lifting forces at hitch points, corrected to 14,4 MPa

kN	-	23,2	23,8	26,6	28,1	29,5	29,7	30,8	31,3	-

Lifting forces at standard frame, corrected to 14,4 MPa

kN	20,8	-	22,0	23,1	23,3	23,3	23,2	22,6	-	22,2

3 DRAWBAR PERFORMANCE (1st tyre set, see page 14)

Date of tests: 16th July, 7th and 8th August 1991
Type of track: Concrete

Gear and range	Speed km/h	Drawbar pull kN	Power kW	Engine speed rev/min	Slip of wheels %
3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)					
3 I Lo	4,59	37,9	48,3	2364	15,0
3 I Hi	5,57	35,4	54,8	2303	13,6
4 I Lo	6,18	33,2	56,9	2296	12,3
4 I Hi	7,82	26,5	57,7	2301	9,7
1 II Lo	8,20	26,1	59,4	2301	9,2
1 II Hi	10,23	20,7	58,8	2301	7,4
2 II Lo	11,70	18,5	60,2	2307	6,3
2 II Hi	14,48	14,5	58,4	2298	4,9
3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)					
1 I Lo	2,31	52,6	33,8	2398	14,9
1 I Hi	2,82	53,4	41,8	2381	15,1
2 I Lo	3,20	53,6	47,7	2368	15,0
2 I Hi	3,88	50,3	54,3	2305	13,5
3 I Lo	4,66	43,5	56,3	2301	11,1
3 I Hi	5,87	35,0	57,1	2300	8,6
4 I Lo	6,49	33,3	60,0	2303	8,2
4 I Hi	8,11	26,3	59,2	2298	6,1
1 II Lo	8,48	25,6	60,3	2301	6,0
1 II Hi	10,58	20,2	59,4	2300	4,7
2 II Lo	11,89	18,5	61,0	2294	4,3
2 II Hi	14,77	14,4	59,2	2303	3,4
3.3.1 FIVE-HOUR-TEST at 75% of pull at maximum power					
3 I Hi	6,23	26,3	45,4	2379	6,2
3.3.2 FIVE-HOUR-TEST at pull corresponding to 15% wheel slip					
2 I Lo	3,17	53,6	47,2	2377	-

Oil consumption during ten hours duration of tests 3.3.1
those figures not quoted are irrelevant due to the additional ballast

	Height of drawbar above ground	Tyre inflation pressure Front	Rear
unballasted	900 mm	180 kPa	100 kPa
ballasted	690 mm	230 kPa	150 kPa

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure kPa
313	2,64	40	80	91	27	59	100,0
306	2,71	40	80	91	27	59	100,0
293	2,84	40	80	90	26	73	100,0
290	2,86	40	80	93	22	80	100,0
283	2,93	28	80	93	23	75	100,0
286	2,89	35	80	93	21	68	100,0
279	2,96	40	80	92	25	70	100,0
287	2,88	37	83	88	25	67	100,0
357	2,31	40	85	91	26	85	99,4
333	2,48	42	85	91	26	86	99,4
313	2,65	40	80	85	26	80	99,4
309	2,68	39	80	85	26	76	99,4
296	2,79	44	82	85	26	76	99,4
292	2,84	38	82	84	25	85	100,0
278	2,99	37	80	60	22	80	99,9
282	2,94	38	82	85	25	85	100,0
272	2,99	39	82	85	25	83	100,0
282	2,93	39	82	85	25	83	100,0
276	3,01	39	82	85	25	85	100,0
284	2,92	39	82	85	25	85	100,0
305	2,72	40	83	88	26	63	100,0
-	-	40	94	84	28	65	99,8

and 3.3.2 : 7 g/h

DRAWBAR PERFORMANCE (2nd tyre set, see page 15)

Date of tests: 20th till 23rd August 1991
Type of trackk: Concrete

Gear and range	Speed	Drawbar pull	Power	Engine speed	Slip of wheels
	km/h	kN	kW	rev/min	%
MAXIMUM POWER IN TESTED GEARS (unballasted tractor)					
2 I Hi	3,88	41,0	44,2	2374	15,1
3 I Lo	4,52	41,2	51,8	2355	14,9
3 I Hi	5,66	35,8	56,3	2303	11,2
4 I Lo	6,32	33,0	58,0	2298	9,6
4 I Hi	8,03	26,2	58,4	2305	6,8
1 II Lo	8,35	25,8	59,8	2298	6,6
1 II Hi	10,43	20,5	59,5	2301	5,2
2 II Lo	11,74	18,3	59,7	2298	4,8
2 II Hi	14,59	13,5	54,5	2298	3,6
3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)					
1 I Lo	2,31	57,2	36,7	2392	15,1
1 I Hi	2,81	57,6	44,9	2368	14,9
2 I Lo	3,15	57,5	50,3	2355	15,0
2 I Hi	3,98	51,1	56,5	2311	10,7
3 I Lo	4,79	44,0	58,5	2301	7,9
3 I Hi	6,00	34,9	58,1	2303	5,8
4 I Lo	6,63	32,4	59,6	2303	5,4
4 I Hi	8,23	25,8	59,0	2303	4,2
1 II Lo	8,61	25,3	60,5	2301	3,9
1 II Hi	10,64	20,1	59,4	2303	3,2
2 II Lo	12,02	17,9	59,7	2301	2,9
2 II Hi	14,83	14,0	57,8	2298	2,3

	Height of drawbar above ground	Tyre inflation pressure Front	Rear
unballasted	828 mm	180 kPa	80 kPa
ballasted	690 mm	230 kPa	110 kPa

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure kPa
322	2,56	29	80	80	18	69	100,2
311	2,65	29	80	80	18	65	100,2
300	2,75	29	80	84	20	70	100,2
288	2,86	40	81	84	28	55	100,2
286	2,88	36	84	85	25	55	100,3
279	2,96	36	82	86	25	55	100,3
283	2,92	38	82	83	25	52	100,2
280	2,95	38	80	83	25	52	100,2
307	2,69	38	80	83	25	53	100,2
342	2,41	35	80	83	26	86	99,8
324	2,54	35	81	84	27	84	99,8
313	2,63	35	81	84	27	84	99,8
297	2,78	35	80	84	25	83	99,8
287	2,88	34	80	80	25	70	99,8
289	2,86	40	81	83	27	70	99,8
282	2,92	40	82	83	28	65	99,8
288	2,86	33	81	83	29	62	99,8
278	2,97	35	80	84	25	74	99,8
283	2,92	35	80	84	25	76	99,8
281	2,93	36	81	84	25	79	99,8
291	2,84	36	81	84	25	80	99,8

4 TURNING AREA AND TURNING CIRCLE

Wheel equipment front: 10.00 - 16
rear: 18.4 - 38

Track of wheels front: 1600 mm
rear: 1800 mm

	With brakes		Without brakes	
	right-hand mm	left-hand mm	right-hand mm	left-hand mm
Radius of turning area	4,01	4,10	4,56	4,60
Radius of turning circle	3,81	3,88	4,36	4,38

5 LOCATION OF CENTRE OF GRAVITY

Height above ground	989 mm
Distance forward from rear axle centre	992 mm
Distance from tractor's median plane, to the right	5 mm

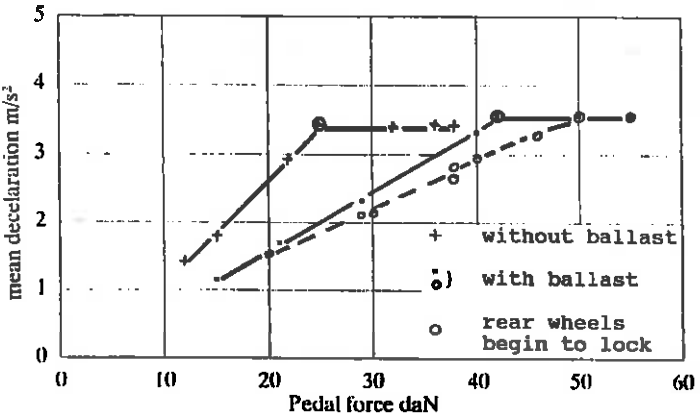
6 BRAKING

Date of tests: 30th July and 6th August 1991

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	1710	2685	4395	31,8
With ballast	2000	4700	6700	31,4

6.1 Cold service braking device test

6.2 Fade test



No significant deviation of tractor from original course and no abnormal vibrations

Brakes-heating: Actuating of brake for 1 km with pedal force corresponding to 1 m/s²

6.3 Parking braking device test

	Ballasted tractor on 18% - slope up	down
Braking device control force	250 N	300 N

7 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test:	17th July 1991
Type of track:	Concrete
Type of sound level meter:	BRÜEL & KJAER model 2209

Results of test

Gearnumber:	4 II Hi
Travelling speed before acceleration:	23,5 km/h
Sound level:	87,0 dB(A)

ADDITIONAL TESTS UNDER THE RESPONSIBILITY OF THE DLG-TESTING-STATION

8 MEASUREMENTS OF NOISE IN THE SAFETY CAB

Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2233
Date of tests: 17th and 18th July 1991

According to OECD CODE V

Gear number	Drawbar pull kN	Measured travelling speed km/h	Sound level dB(A)
Unloaded test in the gear giving the speed nearest to 7,5 km/h			
4 I Lo	-	7,63	76,0
Unloaded test in the gear giving the maximum speed			
4 II Hi	-	31,30	76,0
Tests with the drawbar pull for which the tractor gives the maximum sound level (combination of gear giving the nearest nominal speed to 7,5 km/h and also in any gear with a sound level increase of at least 1 dB(A)			
4 I Lo	33,4	6,14	79,5

According to NEBRASKA-TEST CODE

SOUND LEVEL	dB(A)
At maximum available power in 4 I Lo gear	79,5
At 75% of pull at max. power in 4 I Lo gear	78,5
At 50% of pull at max. power in 4 I Lo gear	77,5
At 50% of pull at reduced engine speed in 4 I Hi gear	77,0

Lugging ability in 4 I Lo gear (ballasted tractor)

Engine speed rev/min	Speed km/h	Drawbar pull kN	Drawbar power kW	Slip of wheels %	Increase of pull %
2303	6,49	33,29	60,0	8,2	-
2001	5,58	36,25	56,2	9,2	8,9
1790	4,97	38,49	53,1	9,6	15,6
1595	4,38	41,46	50,4	10,6	24,5
1401	3,82	43,22	45,9	11,2	29,8
1198	3,26	44,30	40,2	11,3	33,1
1100	3,00	45,95	37,5	11,5	35,0
1000	2,71	43,90	33,0	11,4	31,9

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