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1991

Nebraska Summary: S100 John Deere 3055

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SUMMARY OF OECD TEST 1339—NEBRASKA SUMMARY 100
JOHN DEERE 3055 DIESEL
16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Fuel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1059 rpm)					
94.4 *(70.4)*	2300	5.37 *(20.33)*	0.393 *(0.239)*	17.56 *(3.46)*	
Standard Power Take-off Speed (1000 rpm)					
93.3 *(69.6)*	2172	5.24 *(19.84)*	0.388 *(0.236)*	17.82 *(3.51)*	Air temperature
VARYING POWER AND FUEL CONSUMPTION					70°F *(21°C)*
94.4 *(70.4)*	2300	5.37 *(20.33)*	0.393 *(0.239)*	17.56 *(3.46)*	
83.3 *(62.1)*	2385	4.86 *(18.40)*	0.404 *(0.246)*	17.11 *(3.37)*	Relative humidity
63.2 *(47.1)*	2414	4.00 *(15.13)*	0.437 *(0.266)*	15.84 *(3.12)*	31%
42.5 *(31.7)*	2441	3.17 *(12.00)*	0.515 *(0.313)*	13.40 *(2.64)*	Barometer
21.7 *(16.2)*	2472	2.37 *(8.99)*	0.756 *(0.460)*	9.14 *(1.80)*	29.2" Hg *(99.0 kPa)*
....	2515	1.61 *(6.10)*	....	....	

Maximum Torque 285 lb. ft *(387 Nm)* @ 1201 RPM
Maximum Torque Rise 32.5%

DRAWBAR PERFORMANCE

Power Hp *(kW)*	Drawbar pull *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power—Five Hours 6th (3IH) Gear									
60.9 *(45.4)*	5915 *(26.3)*	3.87 *(6.23)*	2379	6.2	0.501 *(0.305)*	13.81 *(2.72)*	181 *(83)*	79 *(26)*	29.5 *(100.0)*
MAXIMUM POWER IN SELECTED GEARS									
3rd (2IL) Gear									
64.0 *(47.7)*	12050 *(53.6)*	1.99 *(3.20)*	2368	15.0	0.515 *(0.313)*	13.45 *(2.65)*	176 *(80)*	79 *(26)*	29.4 *(99.4)*
4th (2IH) Gear									
72.8 *(54.3)*	11310 *(50.3)*	2.41 *(3.88)*	2305	13.5	0.508 *(0.309)*	13.60 *(2.68)*	176 *(80)*	79 *(26)*	29.4 *(99.4)*
5th (3IL) Gear									
75.5 *(56.3)*	9780 *(43.5)*	2.90 *(4.66)*	2301	11.1	0.487 *(0.296)*	14.16 *(2.79)*	180 *(82)*	79 *(26)*	29.4 *(99.4)*
6th (3IH) Gear									
76.6 *(57.1)*	7870 *(35.0)*	3.65 *(5.87)*	2300	8.6	0.480 *(0.292)*	14.42 *(2.84)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*
7th (4IL) Gear									
80.5 *(60.0)*	7485 *(33.3)*	4.03 *(6.49)*	2303	8.2	0.457 *(0.278)*	15.18 *(2.99)*	176 *(80)*	72 *(22)*	29.5 *(99.9)*
8th (4IH) Gear									
79.4 *(59.2)*	5915 *(26.3)*	5.04 *(8.11)*	2298	6.1	0.464 *(0.282)*	14.92 *(2.94)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*
9th (1IIL) Gear									
80.9 *(60.3)*	5755 *(25.6)*	5.27 *(8.48)*	2301	6.0	0.447 *(0.272)*	15.88 *(2.99)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*
10th (1IIH) Gear									
79.6 *(59.4)*	4540 *(20.2)*	6.57 *(10.58)*	2300	4.7	0.464 *(0.282)*	14.87 *(2.93)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*
11th (2IIL) Gear									
81.8 *(61.0)*	4160 *(18.5)*	7.39 *(11.89)*	2294	4.3	0.454 *(0.276)*	15.28 *(3.01)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*
12th (2IIH) Gear									
79.4 *(59.2)*	3235 *(14.4)*	9.18 *(14.77)*	2303	3.4	0.467 *(0.284)*	14.82 *(2.92)*	180 *(82)*	77 *(25)*	29.5 *(100.0)*

Location of Test: DLG Testing Station for Agricultural Machinery, Max-Eyth-Weg 1 D-6114 Grosz-Umstadt, Germany

Dates of Test: June to August 1991

Manufacturer: John Deere Werke, Mannheim D-6800 Manheim, Germany

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.829 **Fuel weight** 6.90 lbs/gal *(0.828 kg/l)* **Oil SAE** 15W40 **Oil consumption for 10 hours** 0.15 lb *(70 gm)* **Transmission and hydraulic lubricant** Fuchs Renogear SAE 75

ENGINE: Make John Deere Diesel **Type** six cylinder vertical **Serial No.** 992224 **Crankshaft** lengthwise **Rated engine speed** 2300 **Bore and stroke** 4.193" × 4.331" *(106.5 mm × 110 mm)* **Compression ratio** 17.8 to 1 **Displacement** 359 cu in *(5878 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan.

CHASSIS: Type standard **Serial No.** 731837 **Tread width** rear 63.0" *(1600 mm)* to 78.7" *(2000 mm)* front 59.1" *(1500 mm)* to 78.7" *(2000 mm)* **Wheel base** 100.4" *(2551 mm)* **Transmission** selective gear fixed ratio with partial (2) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.62 *(2.60)* second 1.98 *(3.19)* third 2.24 *(3.60)* fourth 2.74 *(4.41)* fifth 3.21 *(5.17)* sixth 3.94 *(6.34)* seventh 4.33 *(6.97)* eighth 5.31 *(8.55)* ninth 5.54 *(8.91)* tenth 6.80 *(10.94)* eleventh 7.66 *(12.32)* twelfth 9.40 *(15.12)* thirteenth 11.00 *(17.70)* fourteenth 13.50 *(21.73)* fifteenth 14.83 *(23.86)* sixteenth 18.19 *(29.28)* reverse 2.49 *(4.00)*, 3.04 *(4.90)*, 3.43 *(5.52)*, 4.21 *(6.78)*, 4.93 *(7.94)*, 6.05 *(9.74)*, 6.65 *(10.70)*, 8.16 *(13.13)* **Clutch** single dry disc hydraulically actuated by foot pedal **Brakes** multiple wet disc mechanically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2071 engine rpm and 1000 rpm at 2172 engine rpm **Unladen tractor mass** 9525 lb *(4320 kg)*.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers 3 point lift capacity claim of 5235 lb *(2374 kg)*. The performance figures on this summary are taken from a test conducted under the OECD standard test code procedure.

TRACTOR SOUND LEVEL WITH CAB	dB(A)
Maximum sound level in 7th (4IL) gear	79.5
Bystander in 16th (4IIH) gear	87.0

CENTER OF GRAVITY	
Horizontal distance forward from centerline of rear wheels	39.1″ in *(992 mm)*
Vertical distance above roadway	38.9″ in *(989 mm)*
Horizontal distance from center of rear wheel tread 0.2″ *(5 mm)* to the right	

TURNING ON A CONCRETE SURFACE

Turning radius—with brake applied right 150″ *(3.81 m)* left 153″ *(3.88 m)*
—without brake right 172″ *(4.36 m)* left 172″ *(4.38 m)*
Turning space radius—with brake applied right 158″ *(4.01 m)* left 161″ *(4.10 m)*
—without brake right 180″ *(4.56 m)* left 181″ *(4.60 m)*

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 18.4-38; 8; 22 *(150)*	Two 18.4-38; 8; 14 *(100)*
Ballast	—Liquid (total)	900 lb *(410 kg)*	None
	—Cast Iron (total)	3540 lb *(1605 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 10.00-16; 8; 34 *(230)*	Two 10.00-16; 8; 26 *(180)*
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	640 lb *(290 kg)*	None
Height of Drawbar		27.2 in *(690 mm)*	35.4 in *(900 mm)*
Static Weight with operator	—Rear	10360 lb *(4700 kg)*	5920 lb *(2685 kg)*
	—Front	4410 lb *(2000 kg)*	3770 lb *(1710 kg)*
	—Total	14770 lb *(6700 kg)*	9690 lb *(4395 kg)*

THREE POINT HITCH PERFORMANCE (OECD STATIC TEST)

CATEGORY: II
Quick Attach: Walterscheid lower link ends

Maximum Force Exerted Through Whole Range:	4675 lbs *(20.8 kN)*
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2320 psi *(160 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	24.2 GPM*(91.5 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	21.8 GPM*(82.6 l/min)*
Delivery pressure:	1380 psi *(95 bar)*
Power:	17.6 Hp *(13.1 kW)*

TESTS ACCORDING TO NEBRASKA PROCEDURES

SOUND LEVELS AT OPERATORS EAR	dB(A)
At maximum available power 7th (4IL) gear	79.5
At 75% of pull at maximum power 7th (4IL) gear	78.5
At 50% of pull at maxium power 7th (4IL) gear	77.5
At 50% of pull with reduced engine speed 8th (4IH) gear	77.0

LUGGING ABILITY IN 7TH (4IL) GEAR

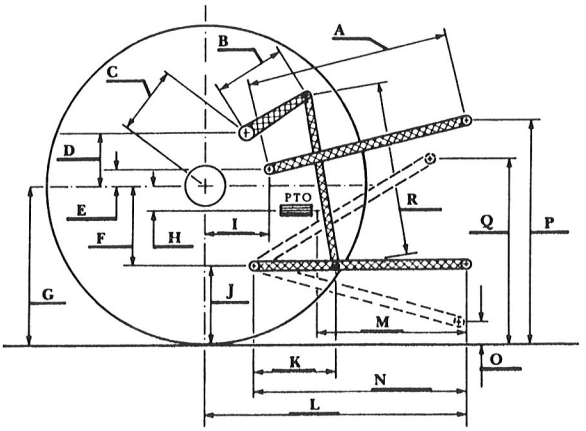
Crankshaft speed	rpm	2303	2001	1790	1595	1401	1198	1100	1000
Pull	lbs	7485	8150	8655	9320	9715	9960	10105	9870
	(kN)	*(33.3)*	*(36.3)*	*(38.5)*	*(41.5)*	*(43.2)*	*(44.3)*	*(45.0)*	*(43.9)*
Increase in pull	%	0	9	16	24	30	33	35	32
Power	Hp	80.5	75.4	71.2	67.6	61.6	53.9	50.3	44.3
	(kW)	*(60.0)*	*(56.2)*	*(53.1)*	*(50.4)*	*(45.9)*	*(40.2)*	*(37.5)*	*(33.0)*
Speed	mph	4.03	3.47	3.09	2.72	2.37	2.03	1.86	1.68
	(km/h)	*(6.49)*	*(5.58)*	*(4.97)*	*(4.38)*	*(3.82)*	*(3.26)*	*(3.00)*	*(2.71)*
Slip	%	8.2	9.2	9.6	10.6	11.2	11.3	11.5	11.4

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1339,** Nebraska Summary 100, December 5, 1991.

LOUIS I. LEVITICUS
Engineer-in-Charge

K. VON BARGEN
R. D. GRISSO
L. L. BASHFORD
Board of Tractor Test Engineers

	inch	*mm*
A	29.2	*742*
B	11.0	*280*
C	13.2	*336*
D	13.2	*336*
E	6.2	*158*
F	9.9	*251*
G	32.3	*820*
H	2.8	*71*
I	14.6	*372*
J	22.4	*569*
K	24.5	*623*
L	42.9	*1090*
M	22.4	*569*
N	38.4	*975*
O	10.0	*254*
P	46.4	*1179*
Q	32.5	*825*
R	35.4	*900*



HITCH DIMENSIONS AS TESTED—NO LOAD

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