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2004

## Nebraska Summary: S526 New Holland TL 100A

Nebraska Tractor Test Laboratory

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# SUMMARY OF OECD TESTS 2247 and 2271—NEBRASKA SUMMARY 526 NEW HOLLAND TL 100A DIESEL 12 SPEED

## POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed—1051 rpm)</b>					
87.2 (65.0)	2502	5.63 (21.32)	0.453 (0.275)	15.48 (3.05)	
<b>Maximum Power (2 hours)</b>					
88.0 (65.6)	2405	5.52 (20.88)	0.439 (0.267)	15.95 (3.14)	
<b>Standard Power Take-off speed (1010 rpm)</b>					
88.0 (65.6)	2405	5.52 (20.88)	0.439 (0.267)	15.95 (3.14)	
<b>VARYING POWER AND FUEL CONSUMPTION</b>					
87.2 (65.0)	2502	5.63 (21.32)	0.453 (0.275)	15.48 (3.05)	Air temperature
77.8 (58.0)	2617	5.33 (20.17)	0.479 (0.292)	14.60 (2.88)	79°F (26°C)
54.3 (40.5)	2629	4.35 (16.48)	0.562 (0.342)	12.48 (2.46)	Relative humidity
38.9 (29.0)	2633	3.65 (13.82)	0.658 (0.400)	10.66 (2.10)	40%
19.0 (14.2)	2650	2.78 (10.54)	1.026 (0.624)	6.83 (1.35)	Barometer
--	2667	2.04 (7.74)	--	--	28.9" Hg (98.0 kPa)
Maximum Torque -269.5 lb.-ft. (365.4 Nm) at 1300 rpm Maximum Torque Rise -47.2% Torque rise at 2000 engine rpm -21%					

**Location of tests:** Istituto Per La Macchine Agricole  
E Movimento Terra, Strada delle Cacce, 73-10135  
Torino, Italy

**Dates of test:** October to November, 2004

**Manufacturer:** New Holland Italia S.p.A., Viale delle Nazioni, 55-41100, Modena, Italy and New Holland UK Limited, Cranes Farm Road Basildon, Essex, United Kingdom

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.842 **Fuel weight** 7.01 lbs/gal (0.840 kg/l) **Oil SAE** 15W40 **API service classification** CH-4 **Oil consumption for 10 hours** 0.03 lb (12 gm) **Transmission and hydraulic lubricant** Ambra Multi G **Front axle lubricant** Ambra Multi G

**ENGINE:** Make CNH Diesel **Type** four cylinder vertical with turbocharger **Serial No.** 00129744 **Crankshaft** lengthwise **Rated engine speed** 2500 **Bore and stroke** 4.094" x 5.197" (104.0 mm x 132.0 mm) **Compression ratio** 17.5 to 1 **Displacement** 274 cu in (4485 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** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS:** **Type** 2WD and front wheel assist **Serial No.** HJS007230 **Tread width** rear 68.2" (1732 mm) to 83.9" (2132 mm) front: 2WD - 55.4" (1407 mm) to 85.6" (2175 mm), FWA - 56.1" (1425 mm) to 84.0" (2133 mm) **Wheel base** 2WD - 92.2" (2342 mm) FWA - 91.1" (2314 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.41 (2.27) second 2.05 (3.30) third 2.96 (4.76) fourth 3.30 (5.31) fifth 4.24 (6.82) sixth 4.79 (7.71) seventh 6.88 (11.07) eighth 7.76 (12.49) ninth 9.90 (15.93) tenth 11.28 (18.16) eleventh 16.27 (26.18) twelfth 23.30 (37.50) reverse 1.41 (2.27), 2.05 (3.30), 2.96 (4.76), 3.30 (5.31), 4.24 (6.82), 4.79 (7.71), 6.88 (11.07), 7.76 (12.49), 9.90 (15.93), 11.28 (18.16), 16.27 (26.18), 23.30 (37.50) **Clutch** dual dry disc operated by foot pedal **Brakes** wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2199 engine rpm or 1000 rpm at 2381 engine rpm **Unladen tractor mass** 2WD - 8530 lb (3870 kg), FWA - 8905 lb (4040 kg)

**DRAWBAR PERFORMANCE(40 km/h trans.)  
BALLASTED - FRONT DRIVE ENGAGED  
FUEL CONSUMPTION CHARACTERISTICS**

Power Hp (kW)	Drawbar pull lbs (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)
<b>75% of Pull at Maximum Power—Five Hours 6th (2 Med) Gear</b>									
59.0 (44.0)	4560 (20.3)	4.85 (7.80)	2620	2.7	0.606 (0.368)	11.57 (2.28)	189 (87)	52 (11)	28.6 (96.9)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
1st (1 Lo) Gear									
34.3 (25.6)	10365 (46.1)	1.24 (2.00)	2655	15.4	0.527 (0.320)	13.31 (2.62)	183 (84)	59 (15)	28.6 (96.9)
2nd (2 Lo) Gear									
50.7 (37.8)	10185 (45.3)	1.87 (3.00)	2635	14.9	0.492 (0.299)	14.26 (2.81)	185 (85)	64 (18)	28.6 (96.9)
3rd (3 Lo) Gear									
68.3 (50.9)	9800 (43.6)	2.61 (4.20)	2407	8.6	0.568 (0.346)	12.33 (2.43)	185 (85)	64 (18)	28.6 (96.9)
4th (1 Med) Gear									
70.8 (52.8)	8900 (39.6)	2.98 (4.80)	2404	6.7	0.545 (0.331)	12.86 (2.53)	187 (86)	59 (15)	28.6 (96.9)
5th (4 Lo) Gear									
70.0 (52.2)	6810 (30.3)	3.85 (6.20)	2394	4.5	0.551 (0.335)	12.71 (2.50)	187 (86)	57 (14)	28.6 (96.9)
6th (2 Med) Gear									
70.9 (52.9)	6025 (26.8)	4.42 (7.11)	2397	3.9	0.544 (0.331)	12.89 (2.54)	187 (86)	53 (12)	28.6 (96.9)
7th (3 Med) Gear									
69.7 (52.0)	4045 (18.0)	6.46 (10.40)	2396	2.5	0.553 (0.337)	12.67 (2.50)	183 (84)	53 (12)	28.6 (96.9)
8th (1 Hi) Gear									
68.9 (51.4)	3550 (15.8)	7.28 (11.71)	2395	2.2	0.561 (0.341)	12.49 (2.46)	187 (86)	52 (11)	28.6 (96.9)
9th (4 Med) Gear									
66.0 (49.2)	2655 (11.8)	9.33 (15.01)	2399	1.6	0.585 (0.356)	11.99 (2.36)	185 (85)	53 (12)	28.6 (96.9)
10th (2 Hi) Gear									
64.4 (48.0)	2270 (10.1)	10.63 (17.11)	2390	1.3	0.596 (0.363)	11.77 (2.32)	185 (85)	50 (10)	28.6 (96.9)

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance results on this summary were taken from OECD tests conducted under the Code I Test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **2247** and **2271**, Nebraska Summary 526, May 26, 2006.

Leonard L. Bashford  
Director

M.F. Kocher  
V.I. Adamchuk  
J.A. Smith  
Board of Tractor Test Engineers

**FWA - 40 km/h transmission**

	With Ballast	Without Ballast
<b>TIRES, BALLAST AND WEIGHT</b>		
<b>Rear Tires</b>	-No., size, ply & psi (kPa) Two 600/65R34; **,13 (90)	Two 600/65R34; **,13 (90)
<b>Ballast</b>	-Liquid (total) None	None
	-Cast Iron (total) 660 lb (300 kg)	None
<b>Front Tires</b>	-No., size, ply & psi (kPa) Two 480/65R24; **,17 (120)	Two 480/65R24; **,17 (120)
<b>Ballast</b>	-Liquid (total) None	None
	-Cast Iron (total) 1170 lb (530 kg)	None
<b>Height of Drawbar</b>	19.1 in (485 mm)	19.3 in (490 mm)
<b>Static Weight with Operator</b>	- Rear 5785 lb (2625 kg)	5480 lb (2485 kg)
	- Front 5115 lb (2320 kg)	3590 lb (1630 kg)
	- Total 10900 lb (4945 kg)	9070 lb (4115 kg)

## DRAWBAR PERFORMANCE(30 km/h trans.)

### BALLASTED - 2WD

#### FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (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 dry bulb	Barom. inch Hg (kPa)	
<b>75% of Pull at Maximum Power—Five Hours 7th (3 Med) Gear</b>									
58.6 (43.7)	3890 (17.3)	5.65 (9.10)	2620	4.6	0.608 (0.370)	11.52 (2.27)	187 (86)	66 (19)	29.1 (98.4)

#### MAXIMUM POWER IN SELECTED GEARS

6th (2 Med) Gear									
60.9 (45.4)	6680 (29.7)	3.42 (5.50)	2591	15.2	0.623 (0.379)	11.25 (2.22)	183 (84)	66 (19)	29.1 (98.5)
7th (3 Med) Gear									
70.3 (52.4)	5240 (23.3)	5.03 (8.10)	2392	6.4	0.548 (0.334)	12.78 (2.52)	187 (86)	64 (18)	29.1 (98.5)
8th (1 Hi) Gear									
69.6 (51.9)	4515 (20.1)	5.78 (9.30)	2398	5.4	0.555 (0.337)	12.64 (2.49)	185 (85)	64 (18)	29.1 (98.5)
9th (4 Med) Gear									
68.8 (51.3)	3460 (15.4)	7.46 (12.00)	2415	4.0	0.564 (0.343)	12.44 (2.45)	183 (84)	64 (18)	29.1 (98.5)
10th (2 Hi) Gear									
69.5 (51.8)	3085 (13.7)	8.45 (13.60)	2371	3.4	0.550 (0.334)	12.75 (2.51)	183 (84)	64 (18)	29.1 (98.5)
11th (3 Hi) Gear									
59.0 (44.0)	1800 (8.0)	12.30 (19.80)	2374	2.2	0.650 (0.395)	10.78 (2.12)	180 (82)	63 (17)	29.1 (98.5)

## 2WD - 30km/h transmission

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
<b>Rear Tires</b>	-No., size, ply & psi (kPa)	Two 600/65R34;**,13 (90)	Two 600/65R34;**,13 (90)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	660 lb (300 kg)	None
<b>Front Tires</b>	-No., size, ply & psi (kPa)	Two 10.00-16;8;35 (240)	Two 10.00-16; 8;35 (240)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	1170 lb (530 kg)	None
<b>Height of Drawbar</b>		19.1 in (485 mm)	19.3 in (490 mm)
<b>Static Weight with Operator - Rear</b>		6285 lb (2850 kg)	5875 lb (2665 kg)
	- Front	4240 lb (1925 kg)	2820 lb (1280 kg)
	- Total	10525 lb (4775 kg)	8695 lb (3945 kg)

TRACTOR SOUND LEVEL WITH CAB	FWA dB(A)	2WD dB(A)
At no load in 6th (2Med) gear	78.0	78.0
Bystander in 12th (4 Hi) gear	86.9	86.8

**CENTER OF GRAVITY - 2WD**

Horizontal distance forward from centerline of rear wheels	29.9" (760 mm)
Vertical distance above roadway	37.0" (940 mm)
Horizontal distance from center of rear wheel tread	0.1" (3 mm) to the left

**CENTER OF GRAVITY - FWA**

Horizontal distance forward from centerline of rear wheels	36.1" (917 mm)
Vertical distance above roadway	37.5" (953 mm)
Horizontal distance from center of rear wheel tread	0" (0 mm) to the left/right

**TURNING ON A CONCRETE SURFACE (2WD)**

Turning radius—without brake right 156" (3.96 m) left 155" (3.94 m)
Turning space radius—without brake right 161" (4.09 m) left 160" (4.07 m)

**TURNING ON A CONCRETE SURFACE (FWA)**

Turning radius—without brake right 209" (5.30 m) left 207" (5.25 m)
Turning space radius—without brake right 219" (5.55 m) left 217" (5.50 m)

**THREE POINT HITCH PERFORMANCE (OECD Static Test)**

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range: 5955 lbs (26.5 kN)

i) Opening pressure of relief valve: NA  
Sustained pressure with relief valve open: 2830 psi (195 bar)

ii) Pump delivery rate at minimum pressure: 16.5 GPM (62.4 l/min)

iii) Pump delivery rate at maximum  
hydraulic power: 14.4 GPM (54.6 l/min)  
Delivery pressure: 2465 psi (170 bar)  
Power: 20.7 HP (15.5 kW)

	inch	mm
A	27.8	705
B	10.0	255
C	13.9	352
D	11.7	296
E	10.1	257
F	8.1	205
G	30.3	770
H	0.4	9
I	15.7	400
J	22.2	565
K	17.7	450
L	42.1	1070
M	21.6	548
N	37.0	940
O	7.9	200
P	46.3	1175
Q	34.8	885
R	25.2	640

**HITCH DIMENSIONS AS TESTED—NO LOAD**

