

# NEBRASKA TRACTOR TEST 1982

## NEW HOLLAND TS6030 DIESEL

### 8 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
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#### MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed—(PTO speed—628 rpm)					
97.76 (72.90)	2198	6.82 (25.81)	0.488 (0.297)	14.34 (2.82)	
Standard Power Take-off Speed(540 rpm)					
99.50 (74.20)	1890	6.37 (24.11)	0.448 (0.272)	15.62 (3.08)	
Maximum Power(1 hour)					
99.55 (74.23)	1799	6.24 (23.61)	0.438 (0.267)	15.96 (3.14)	

#### VARYING POWER AND FUEL CONSUMPTION

97.76 (72.90)	2198	6.82 (25.81)	0.488 (0.297)	14.34 (2.82)	Air temperature
87.15 (64.99)	2303	6.40 (24.21)	0.513 (0.312)	13.63 (2.68)	73°F(23°C)
66.15 (49.33)	2329	5.43 (20.54)	0.574 (0.349)	12.19 (2.40)	Relative humidity
44.59 (33.25)	2355	4.10 (15.53)	0.643 (0.391)	10.87 (2.14)	1%
22.64 (16.88)	2392	2.88 (10.89)	0.889 (0.541)	7.87 (1.55)	Barometer
1.30 (0.97)	2413	1.98 (7.48)	10.658 (6.483)	0.66 (0.13)	29.08"Hg (98.48kPa)

Maximum Torque - 391 lb.-ft. (530 Nm) at 1051 rpm  
 Maximum Torque rise - 66.9%  
 Torque rise at 1799 rpm - 24%

#### TRACTOR SOUND LEVEL WITHOUT CAB

	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 4th (4L) gear	94.0	94.1
Bystander in 8th (8H) gear		87.9

#### TIRES AND WEIGHT

**Rear Tires**—No., size, ply & psi (kPa)  
**Front Tires**—No., size, ply & psi (kPa)  
**Height of Drawbar**  
**Static Weight with operator**—Rear  
 — Front  
 — Total

#### Tested Without Ballast

Two 18.4-34; 8:16 (110)  
 Two 14.9-24; 8:18 (125)  
 21.0 in (535 mm)  
 5450 lb (2472 kg)  
 3425 lb (1554 kg)  
 8875 lb (4026 kg)

**Location of tests:** Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832

**Dates of tests:** December 7 - 13, 2010

**Manufacturer:** CNH America LLC, 700 State Street, Racine, Wi. 53404

**FUEL, OIL and TIME:** Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8402 Fuel weight 6.996 lbs/gal (0.838 kg/l) Oil SAE 15W40 API service classification CI-4 Transmission and hydraulic lubricant New Holland M2C134D fluid Front axle lubricant New Holland M2C134D fluid Total time engine was operated 19.0 hours

**ENGINE:** Make F.P.T NEF series Diesel Type four cylinder vertical with turbocharger and air to air intercooler Serial No. 738118 Crankshaft lengthwise Rated engine speed 2200 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 one thermostat

**ENGINE OPERATING PARAMETERS:** Fuel rate: 46.3 - 49.1 lb/h (21.0 - 22.3 kg/h) High idle: 2350 - 2450 rpm Turbo boost: nominal 17.4 - 20.3 psi (120 - 140 kPa) as measured 18.9 psi (130 kPa)

**CHASSIS:** Type front wheel assist Serial No. N50135M Tread width rear 64.0" (1626 mm) to 80.0" (2032 mm) front 64.0" (1626 mm) to 80.0" (2032 mm) Wheelbase 99.2" (2520 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.82 (2.92) second 2.27 (3.65) third 3.96 (6.36) fourth 5.44 (8.76) fifth 6.50 (10.47) sixth 8.12 (13.07) seventh 14.22 (22.90) eighth 19.36 (31.15) reverse 2.65 (4.27), 9.36 (15.06) Clutch single dry disc operated by foot pedal Brakes single wet disc operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 540 rpm at 1890 engine rpm or 1000 at 2049 engine rpm Unladen tractor mass 8700 lb (3946 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: II		
Quick Attach: None		
OECD Static test		
Maximum force exerted through whole range:	3096 lbs (13.77 kN) 4608 lbs (20.50 kN)(1 external lift cylinder) 6174 lbs (27.46 kN)(2 external lift cylinders)	
<b>Single pump system    Two pump system</b> <b>two outlet sets combined</b>		
i) Sustained pressure of the open relief valve:	2754 psi (190 bar)	2652 psi (183 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	13.4 GPM (50.8 l/min)	18.8 GPM (71.2 l/min)
iii) Pump delivery rate at maximum hydraulic power:	11.2 GPM (42.3 l/min)	17.2 GPM (65.1 l/min)
Delivery pressure:	2553 psi (176 bar)	1881 psi (130 bar)
Power:	16.6 HP (12.4 kW)	18.9 HP (14.1 kW)
<b>single outlet set</b>		
i) Sustained pressure of the open relief valve:	2748 psi (190 bar)	2657 psi (183 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	13.4 GPM (50.8 l/min)	15.1 GPM (57.3 l/min)
iii) Pump delivery rate at maximum hydraulic power:	11.9 GPM (45.2 l/min)	14.4 GPM (54.3 l/min)
Delivery pressure:	2456 psi (169 bar)	1860 psi (128 bar)
Power:	17.1 HP (12.8 kW)	15.6 HP (11.6 kW)

### THREE POINT HITCH PERFORMANCE(SAE Static test)

Observed maximum pressure psi.(bar)	2480 (171)
Location:	lift cylinder
Hydraulic oil temperature: °F(°C)	145 (63)
Location:	pump inlet
Category:	II
Quick attach:	none

System pressure 2210 psi (152 Bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	4374	4244	4127	4257	3735
" " " " " " (kN)	(19.5)	(18.9)	(18.4)	(18.9)	(16.6)

#### One external cylinder

System pressure 2210 psi (152 Bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	6764	6444	6174	6300	5499
" " " " " " (kN)	(30.1)	(28.7)	(27.5)	(28.0)	(24.5)

#### Two external cylinders

System pressure 2210 psi (152 Bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	9270	8622	8199	8361	7326
" " " " " " (kN)	(41.2)	(38.4)	(36.5)	(37.2)	(32.6)

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

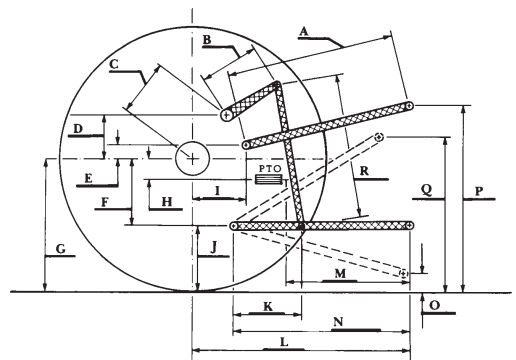
**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's claim of 22.0 GPM (83 lpm) hydraulic flow with optional pump. For the maximum power tests, the fuel temperature at the primary filter was maintained at 102°F (39°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1982**, January 18, 2011.

Roger M. Hoy  
Director

M.F. Kocher  
D.R. Keshwani  
J.A. Smith  
Board of Tractor Test Engineers

	SAE Test		OECD Test	
	inch	mm	inch	mm
A	27.7	705	28.5	724
B	9.8	250	9.8	250
C	14.1	357	14.1	357
D	13.5	342	13.5	342
E	8.1	205	8.1	205
F	9.0	229	9.0	229
G	30.3	770	30.3	770
H	0.4	10	0.4	10
I	12.7	323	12.7	323
J	21.3	541	21.3	541
K	18.1	460	18.1	460
L	40.8	1037	40.8	1037
M	22.9	581	22.9	581
N	36.6	930	36.6	930
O	8.0	203	8.0	203
P	40.3	1024	45.3	1151
Q	34.0	864	34.0	864
R	32.5	826	32.5	826



HITCH DIMENSIONS AS TESTED - NO LOAD



**New Holland TS6030 Diesel**

Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln