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2013

## Test 2054: New Holland T4.75

Nebraska Tractor Test Lab

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# NEBRASKA TRACTOR TEST 2054

## NEW HOLLAND T4.75 POWERSTAR 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
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—575 rpm)					
67.92 (50.65)	2300	4.49 (16.98)	0.463 (0.282)	15.14 (2.98)	
Standard Power Take-off Speed(540 rpm)					
68.22 (50.87)	2159	4.33 (16.38)	0.444 (0.270)	15.77 (3.11)	
Maximum Power (1 hour)					
68.43 (51.03)	2000	4.18 (15.81)	0.428 (0.260)	16.38 (3.23)	

#### VARYING POWER AND FUEL CONSUMPTION

67.92 (50.65)	2300	4.49 (16.98)	0.463 (0.282)	15.14 (2.98)	Air temperature
61.50 (45.86)	2453	4.25 (16.10)	0.485 (0.295)	14.46 (2.85)	72°F (22°C)
46.60 (34.75)	2477	3.63 (13.73)	0.545 (0.332)	12.85 (2.53)	Relative humidity
31.40 (23.41)	2496	2.76 (10.46)	0.617 (0.375)	11.36 (2.24)	16%
16.10 (12.01)	2553	1.76 (6.67)	0.767 (0.467)	9.14 (1.80)	Barometer
0.60 (0.45)	2585	1.14 (4.31)	13.283 (8.080)	0.53 (0.10)	28.95"Hg (98.03 kPa)

Maximum Torque - 221 lb.-ft. (300 Nm) at 1302 rpm  
Maximum Torque rise - 43.2%  
Torque rise at 1840 rpm - 22%

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 8th (II-4) gear	83.5	83.4
Bystander		---

#### 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 420/85R30; \*\*, 12 (85)  
Two 280/85R24; \*\*, 12 (85)  
17.5 in (445 mm)  
3635 lb (1649 kg)  
2450 lb (1111 kg)  
6085 lb (2760 kg)

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

**Dates of tests:** March 12-14, 2013

**Manufacturer:** Turk Traktor ve Ziraat Makinalari A.S. Guvercin Yolu 111-112 Gazi, Ankara Turkey

**FUEL, OIL and TIME:** Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8417 Fuel weight 7.008 lbs/gal (0.840 kg/l) Oil SAE 15W40 API service classification CI-4 Transmission and hydraulic lubricant New Holland 410B hydraulic fluid Front axle lubricant New Holland 410B hydraulic fluid Total time engine was operated 7.5 hours

**ENGINE:** Make FPT Diesel Type four cylinder vertical with turbocharger Serial No. 0076028 Crankshaft lengthwise Rated engine speed 2300 Bore and stroke 3.898" x 4.094" (99.0 mm x 104.0 mm) Compression ratio 17.0 to 1 Displacement 195 cu in (3200 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements Oil filter one full flow cartridge Fuel filter one paper element Oil cooler radiator for hydraulic and transmission oil Muffler underhood Exhaust vertical Cooling medium temperature control one thermostat and variable speed fan

**ENGINE OPERATING PARAMETERS:** Fuel rate: 29.2 - 32.1 lb/h (13.2 - 14.6 kg/h) High idle: 2500 - 2600 rpm Turbo boost: nominal 18.1 - 20.3 psi (125 - 140 kPa) as measured 19.8 psi (136 kPa)

**CHASSIS:** Type front wheel assist Serial No. ZCAE01884 Tread width rear 52.2" (1327 mm) to 76.0" (1930 mm) front 60.8" (1545 mm) to 76.6" (1945 mm) Wheelbase 82.8" (2102 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 0.48 (0.78) second 0.74 (1.19) third 1.08 (1.74) fourth 1.48 (2.39) fifth 1.58 (2.54) sixth 2.41 (3.88) seventh 3.53 (5.68) eighth 4.86 (7.82) ninth 6.55 (10.54) tenth 10.00 (16.09) eleventh 14.64 (23.57) twelfth 20.14 (32.42) reverse 0.48 (0.78), 0.74 (1.19), 1.08 (1.74), 1.49 (2.39), 1.58 (2.54), 2.41 (3.88), 3.53 (5.69), 4.86 (7.82), 6.55 (10.55), 10.01 (16.11), 14.65 (23.58), 20.16 (32.44) 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 2160 engine rpm Unladen tractor mass 5910 lb (2681 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 2855 lbs (12.7 kN)

i) Sustained pressure of the open relief valve: 2733 psi (188 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed: 13.1 GPM (49.4 l/min)

iii) Pump delivery rate at maximum hydraulic power: 12.8 GPM (48.6 l/min)

Delivery pressure: 2337 psi (161 bar)

Power: 17.5 HP (13.1 kW)

**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 3 point lift claim of 3664 lbs (1662 kg). For the maximum power tests, the fuel temperature at the primary fuel filter was maintained at 120°F (49°C).

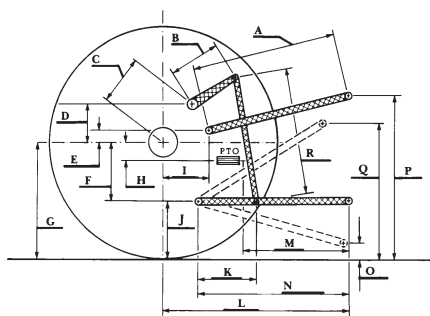
We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2054**, May 13, 2013.

Roger M. Hoy  
Director

M.R. Riley  
P.J. Jasa  
J.D. Luck  
Board of Tractor Test Engineers

### HITCH DIMENSIONS AS TESTED - NO LOAD

	inch	mm
A	28.7	730
B	9.1	230
C	12.4	314
D	12.2	310
E	9.8	250
F	5.9	150
G	27.6	700
H	0.0	0
I	9.1	230
J	21.7	550
K	13.8	350
L	37.8	960
M	24.3	618
N	33.1	840
O	10.9	276
P	45.7	1160
Q	38.2	971
R	20.1	510



**New Holland T4.75 Powerstar Diesel**

Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln