

# NEBRASKA TRACTOR TEST 1939

## NEW HOLLAND T2420 DIESEL

## ALSO NEW HOLLAND BOOMER 4060 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
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#### MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed—(PTO speed—611 rpm)					
51.57 (38.46)	2800	3.76 (14.23)	0.514 (0.313)	13.72 (2.70)	
Standard Power Take-off Speed(540 rpm)					
51.80 (38.63)	2475	3.50 (13.25)	0.476 (0.290)	14.80 (2.92)	

#### VARYING POWER AND FUEL CONSUMPTION

51.57 (38.46)	2800	3.76 (14.23)	0.514 (0.313)	13.72 (2.70)	Air temperature
45.27 (33.76)	2891	3.30 (12.48)	0.514 (0.312)	13.73 (2.71)	78°F (26°C)
34.37 (25.63)	2923	2.66 (10.08)	0.546 (0.332)	12.91 (2.54)	Relative humidity
23.06 (17.20)	2953	2.12 (8.04)	0.650 (0.395)	10.86 (2.14)	6%
11.66 (8.70)	2986	1.66 (6.28)	1.002 (0.610)	7.03 (1.39)	Barometer
0.63 (0.47)	3017	1.22 (4.62)	13.737 (8.356)	0.51 (0.10)	29.1"Hg (98.5 kPa)

Maximum Torque - 126 lb.-ft. (170 Nm) at 1600 rpm  
 Maximum Torque rise - 29.9%  
 Torque rise at 2200 rpm - 22%  
 Power increase at 2475 rpm - 0.4%

#### TRACTOR SOUND LEVEL WITHOUT CAB

	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (M3) gear	90.2	90.2
Bystander in 12th (H3) gear		81.7

#### TRACTOR SOUND LEVEL WITH CAB

	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (M3) gear	82.5	82.9
Bystander in 12th (H3) gear		80.4

#### 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 14.9-28; 6:12 (85)  
 Two 9.5-16; 6:20 (135)  
 17.0 in (430 mm)  
 2450 lb (1111 kg)  
 1780 lb (807 kg)  
 4230 lb (1918 kg)

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

**Dates of tests:** September 23, 2008 to March 11, 2009

**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) 0.8470 Fuel weight 7.052 lbs/gal (0.845 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 25.5 hours

**ENGINE:** Make ISM Diesel Type four cylinder vertical with turbocharger Serial No. 56021 Crankshaft lengthwise Rated engine speed 2800 Bore and stroke 3.307" x 3.937" (84.0 mm x 100.0 mm) Compression ratio 22.5 to 1 Displacement 135 cu in (2216 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 Fuel filter one paper element Muffler underhood Exhaust horizontal Cooling medium temperature control one thermostat

**ENGINE OPERATING PARAMETERS:** Fuel rate: 25.7 - 29.1 lb/h (11.7 - 13.2 kg/h) High idle: 2975 - 3075 rpm Turbo boost: nominal 6.5 - 8.0 psi (45 - 55 kPa) not measured

**CHASSIS:** Type front wheel assist Serial No. Z7NCE1030 Tread width rear 52.8" (1341 mm) to 76.3" (1939 mm) front 55.9" (1419 mm) Wheelbase 74.8" (1900 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.13 (1.81) second 1.52 (2.45) third 1.99 (3.21) fourth 2.55 (4.12) fifth 2.83 (4.56) sixth 3.84 (6.18) seventh 5.02 (8.09) eighth 6.45 (10.38) ninth 7.98 (12.84) tenth 10.80 (17.39) eleventh 14.14 (22.76) twelfth 18.15 (29.21) reverse 1.21 (1.95), 1.64 (2.64), 2.15 (3.46), 2.76 (4.44), 3.05 (4.91), 4.13 (6.65), 5.41 (8.70), 6.94 (11.17), 8.58 (13.81), 11.62 (18.71), 15.22 (24.49), 19.53 (31.43) 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 2475 engine rpm Unladen tractor mass 4055 lb (1839 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: I, II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range:	4028 lbs	(17.9 kN) Category I
	3254 lbs	(14.5 kN) Category II
i) Sustained pressure of the open relief valve:	2477 psi	(171 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	10.9 GPM	(41.1 l/min)
iii) Pump delivery rate at maximum hydraulic power:	10.3 GPM	(38.8 l/min)
Delivery pressure:	1899 psi	(131 bar)
Power:	11.4 HP	(8.5 kW)

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

Observed maximum pressure psi. (bar)	2520 (174)
Location:	hydraulic manifold
Hydraulic oil temperature: °F (°C)	145 (63)
Location:	pump inlet
Category:	II
Quick attach:	none

#### Category II

System pressure 2320 psi (160 Bar)

Hitch point distance to ground level in. (mm)	7.3 (184)	14.4 (364)	21.3 (540)	28.3 (718)	35.3 (896)
Lift force on frame lb	4409	4558	4354	4073	3849
" " " " " " (kN)	(19.6)	(20.3)	(19.4)	(18.1)	(17.1)

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

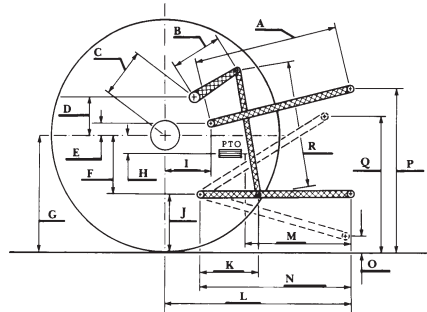
**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's claim of 12.0 GPM (45.4 lpm) hydraulic flow. For the maximum power tests, the fuel temperature at the primary filter was maintained at 100°F (38°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1939**, May 1, 2009.

Roger M. Hoy  
Director

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

	Category I		Category II	
	inch	mm	inch	mm
A	26.3	667	25.4	644
B	11.8	300	11.8	300
C	13.5	344	13.5	344
D	13.5	342	13.5	342
E	12.1	307	12.1	307
F	5.2	132	5.2	132
G	26.0	660	26.0	660
H	0.5	13	0.5	13
I	8.8	223	8.8	223
J	20.8	528	20.8	528
K	19.3	490	19.3	490
L	34.6	879	34.6	879
M	22.9	582	22.9	582
N	31.5	800	31.5	800
O	7.3	184	7.3	184
P	38.8	986	39.8	1011
Q	31.6	803	31.5	800
R	24.1	613	24.1	613



**HITCH DIMENSIONS AS TESTED - NO LOAD**



**New Holland T2420 Diesel**  
Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln