

January 1999

Test 1886: New Holland TV-140 Diesel

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SUMMARY OF OECD TEST 1886-NEBRASKA SUMMARY 323

NEW HOLLAND TV-140 DIESEL HYDROSTATIC

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 - 1074 rpm)					
103.3 (77.0)	2200	7.74 (29.29)	0.531 (0.323)	13.35 (2.63)	
Standard Power Take-off Speed(1000 rpm)					
109.0 (81.3)	2049	7.51 (28.45)	0.488 (0.297)	14.51 (2.86)	
Maximum Power (2 hours)					
111.8 (83.4)	1800	7.10 (26.87)	0.450 (0.274)	15.75 (3.10)	

VARYING POWER AND FUEL CONSUMPTION

103.3 (77.0)	2200	7.74 (29.29)	0.531 (0.323)	13.35 (2.63)	Air temperature
90.4 (67.4)	2265	7.28 (27.56)	0.571 (0.348)	12.41 (2.44)	50°F (10°C)
68.4 (51.0)	2295	6.21 (23.51)	0.643 (0.391)	11.01 (2.17)	Relative humidity
46.3 (34.6)	2324	5.26 (19.92)	0.806 (0.490)	8.80 (1.73)	28%
23.3 (17.4)	2348	4.22 (15.99)	1.282 (0.780)	5.52 (1.09)	Barometer
0.3 (0.2)	2370	3.11 (11.79)	82.218 (50.013)	0.10 (0.02)	29.9" Hg (101.4 kPa)

Maximum Torque - 395 lb.-ft. (535 Nm) at 1200 rpm

Maximum Torque Rise - 60.2%

Torque rise at 1800 engine rpm - 32%

DRAWBAR PERFORMANCE 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)
Maximum Power Low range									
81.3 (60.6)	5360 (23.84)	5.69 (9.15)	2200	0.93	0.689 (0.419)	10.30 (2.03)	187 (86)	36 (2)	30.1 (101.9)
75% of Pull at Maximum Power Low range									
64.1 (47.8)	4020 (17.89)	5.98 (9.62)	2268	0.73	0.778 (0.473)	9.12 (1.80)	185 (85)	37 (3)	29.6 (100.4)
50% of Pull at Maximum Power Low range									
44.2 (33.0)	2680 (11.93)	6.18 (9.94)	2300	0.33	0.938 (0.570)	7.56 (1.49)	185 (85)	37 (3)	29.6 (100.4)
75% of Pull at Reduced Engine Speed Mid range									
64.4 (48.0)	4030 (17.92)	5.99 (9.64)	2072	0.66	0.709 (0.431)	10.00 (1.97)	185 (85)	37 (3)	29.6 (100.4)
50% of Pull at Reduced Engine Speed Mid range									
44.2 (33.0)	2680 (11.94)	6.18 (9.94)	2030	0.41	0.820 (0.499)	8.65 (1.71)	185 (85)	39 (4)	29.6 (100.4)

Location of Test: Prairie Agricultural Machinery Institute (PAMI), Portage La Prairie, Manitoba, Canada R1N 3C5

Dates of Test: November, 1999

Manufacturer: New Holland Canada Ltd. Versatile Farm Equipment Operations, Box 7300, 1260 Clarence Ave., Winnipeg, Manitoba, Canada R3C 4E8

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.852 **Fuel weight** 7.09 lbs/gal (0.850 kg/l) **Oil SAE 10W30 API service classification** CF-4/SG **Hydraulic and hydrostatic lubricant** ESN-M2C 134-D fluid **Final drive lubricant** ESN - M2C 134-D fluid

ENGINE: Make New Holland Diesel **Type** six cylinder vertical with turbocharger **Serial No.** WV836018 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.40" x 5.00" (111.8 mm x 127.0 mm) **Compression ratio** 17.5 to 1 **Displacement** 456 cu in (7480 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and hydrostatic oil **Fuel filter** one element **Muffler** vertical **Cooling medium temperature control** thermostat

CHASSIS: Type Four wheel drive **Serial No.** D204266 **Tread width** rear 60.0" (1525 mm) to 80.0" (2030 mm) front 60.0" (1525 mm) to 80.0" (2030 mm) **Wheelbase** 118.1" (3000 mm) **Hydraulic control system** direct engine drive **Transmission** infinitely variable hydrostatic - using a variable displacement pump and motor. A mechanical section provides 3 ranges **Nominal travel speeds mph (km/h)** Forward: Low 0-4.8 (0-7.7), mid 0-7.6 (0-12.3), high 0-18.3 (0-29.5) reverse: low 0-4.8 (0-7.7), mid 0-7.6 (0-12.3), high 0-18.3 (0-29.5) **Clutch** none **Brakes** caliper disc hydraulically operated by foot pedal **Steering** hydrostatic and articulated **Power take-off** 540 rpm at 1890 engine rpm or 1000 rpm at 2049 engine rpm **Unladen tractor mass** 14715 lb (6674 kg)

**DRAWBAR PERFORMANCE
MAXIMUM POWER AT SELECTED TRAVEL SPEEDS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Low Range									
70.9 (52.9)	11010 (48.98)	2.42 (3.89)	1800	3.07	0.730 (0.444)	9.72 (1.92)	187 (86)	37 (3)	30.1 (101.8)
Low Range									
80.9 (60.3)	9625 (42.81)	3.15 (5.07)	1803	2.18	0.631 (0.384)	11.24 (2.22)	187 (86)	37 (3)	30.1 (101.8)
Low Range									
86.6 (64.6)	8700 (38.71)	3.73 (6.01)	1799	1.78	0.610 (0.371)	11.62 (2.29)	185 (85)	35 (2)	30.1 (101.9)
Low Range									
87.8 (65.5)	7410 (32.96)	4.44 (7.15)	1803	1.51	0.596 (0.363)	11.90 (2.35)	185 (85)	34 (1)	30.1 (102.0)
Mid Range									
80.9 (60.3)	6625 (29.48)	4.57 (7.36)	1802	1.39	0.637 (0.388)	11.14 (2.20)	185 (85)	43 (6)	30.0 (101.7)
Mid Range									
86.4 (64.4)	5875 (26.14)	5.51 (8.87)	1801	1.14	0.598 (0.364)	11.85 (2.34)	185 (85)	49 (9)	30.0 (101.6)
Mid Range									
86.1 (64.2)	4885 (21.74)	6.61 (10.63)	1800	0.90	0.597 (0.363)	11.88 (2.34)	183 (84)	49 (9)	30.0 (101.6)

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 drawbar pull in low range was limited due to stalling of the hydrostatic drive. The performance figures on this summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1886**, Nebraska Summary 323, August 11, 2000.

Brent T. Sampson
Test Engineer

L.L. Bashford
M.F. Kocher
R.D. Grisso Jr.
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB

dB(A)

At 75% load in Mid Range	79.0
Bystander	--

TIRES, BALLAST 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 480/85R34; **; 12(83)
 Two 480/85R34; **; 10(69)
 19.2 in (488 mm)
 7895 lb (3582 kg)
 6985 lb (3167 kg)
 14880 lb (6749 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum Force Exerted Through Whole Range: 5440 lbs (24.2 kN) (cab end)
 4450 lbs (19.8 kN) (engine end)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 3090 psi (213 bar)
- ii) Pump delivery rate at minimum pressure: 30.1 GPM (113.8 l/min)
- iii) Pump delivery rate at maximum
 - hydraulic power: 26.0 GPM (98.6 l/min)
 - Delivery pressure: 2595 psi (179 bar)
 - Power: 39.4 HP (29.4 kW)

THREE POINT HITCH PERFORMANCE (SAE Static Test)

Observed Maximum Pressure psi (bar) 3090 (213)
 Location lift cylinder
 Hydraulic oil Temperature °F (°C) 150 (65)
 Location hydraulic sump
 Category II
 Quick Attach None

System Pressure - 2770 psi (191 bar)

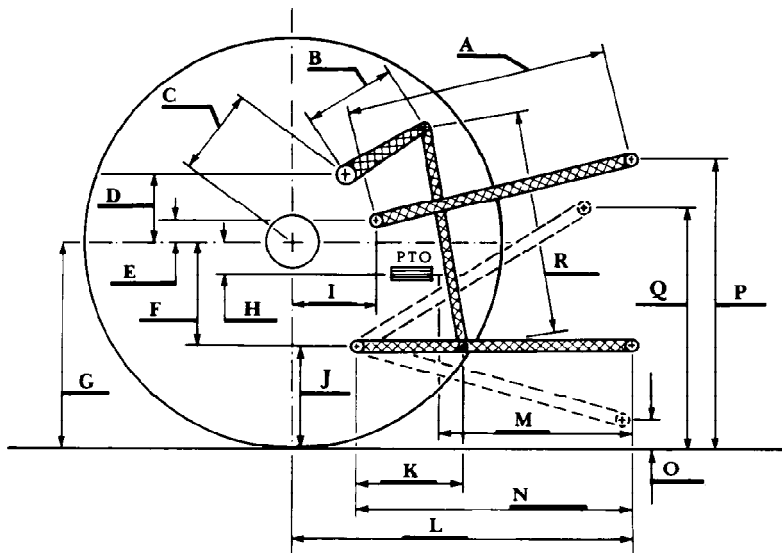
Cab End

Hitch point distance to ground level in. (mm)	8.0 (203)	13.4 (341)	21.3 (541)	29.2 (741)	37.0 (941)
Lift force on frame lb.	9395	9330	8275	7935	6720
" " " " " (kN)	(41.8)	(41.5)	(38.8)	(35.3)	(29.9)

Engine End

Hitch point distance to ground level in. (mm)	8.0 (203)	14.1 (359)	22.0 (559)	29.9 (759)	37.8 (959)
Lift force on frame lb.	12115	9035	7060	5825	5150
" " " " " (kN)	(53.9)	(40.2)	(31.4)	(25.9)	(22.9)

HITCH DIMENSIONS AS TESTED - NO LOAD



	Cab End		Engine End	
	inch	mm	inch	mm
A	27.8	705	20.7	525
B	10.0	254	16.9	430
C	14.0	356	15.1	383
D	13.4	341	9.4	240
E	8.5	215	15.6	395
F	9.0	229	8.3	211
G	30.3	770	30.3	770
H	3.8	96	3.8	96
I	12.8	325	31.0	788
J	21.3	541	22.0	559
K	16.2	412	18.3	465
L	40.0	1017	51.7	1313
M	22.1	561	NA	NA
N	36.0	915	36.0	915
O	7.9	200	7.9	200
P	45.3	1151	46.0	1169
Q	37.2	945	36.4	925
R	30.3	770	22.5	572