

January 1996

## Test 1791: New Holland 9882 Quadrasync Diesel

Follow this and additional works at: <http://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

---

"Test 1791: New Holland 9882 Quadrasync Diesel" (1996). *Nebraska Tractor Tests*. 263.  
<http://digitalcommons.unl.edu/tractormuseumlit/263>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

# SUMMARY OF OECD TEST 1791-NEBRASKA SUMMARY 284

## NEW HOLLAND 9882 QUADRASYNC DIESEL

### 12 SPEED

#### DRAWBAR PERFORMANCE (UNBALLASTED) 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)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)	
<b>Maximum Power 5th(M1) Gear</b>									
337.8 (251.9)	24670 (109.51)	5.15 (8.28)	2098	4.7	0.445 (0.271)	16.04 (3.16)	178 (81)	48 (9)	28.85 (97.70)
<b>75% of Pull at Maximum Power 5th(M1) Gear</b>									
271.9 (202.8)	18460 (82.12)	5.52 (8.89)	2226	3.6	0.487 (0.296)	14.67 (2.89)	178 (81)	48 (9)	28.83 (97.62)
<b>50% of Pull at Maximum Power 5th(M1) Gear</b>									
185.4 (138.3)	12300 (54.72)	5.65 (9.10)	2250	2.3	0.569 (0.346)	12.54 (2.47)	178 (81)	48 (9)	28.83 (97.62)
<b>75% of Pull at Reduced Engine Speed 6th(M2) Gear</b>									
270.8 (201.9)	18440 (82.02)	5.51 (8.86)	1894	3.3	0.434 (0.264)	16.45 (3.24)	178 (81)	48 (9)	28.83 (97.62)
<b>50% of Pull at Reduced Engine Speed 6th(M2) Gear</b>									
185.9 (138.6)	12320 (54.79)	5.66 (9.11)	1921	2.0	0.495 (0.301)	14.42 (2.84)	176 (80)	48 (9)	28.83 (97.62)

#### MAXIMUM POWER IN SELECTED GEARS

<b>3rd(L3) Gear</b>									
316.2 (235.8)	34195 (152.10)	3.47 (5.58)	2044	12.3	0.477 (0.290)	14.97 (2.95)	180 (82)	48 (9)	28.84 (97.66)
<b>4th(L4) Gear</b>									
329.8 (245.9)	31440 (139.85)	3.93 (6.33)	1901	8.0	0.441 (0.268)	16.19 (3.19)	178 (81)	48 (9)	28.84 (97.66)
<b>5th(M1) Gear</b>									
337.8 (251.9)	27505 (122.36)	4.61 (7.41)	1899	5.7	0.429 (0.261)	16.65 (3.28)	178 (81)	48 (9)	28.85 (97.70)
<b>6th(M2) Gear</b>									
342.4 (255.3)	23510 (104.58)	5.46 (8.79)	1899	4.4	0.425 (0.258)	16.80 (3.31)	178 (81)	48 (9)	28.85 (97.70)
<b>7th(M3) Gear</b>									
346.4 (258.3)	20140 (89.58)	6.45 (10.38)	1902	3.3	0.414 (0.252)	17.21 (3.39)	178 (81)	46 (8)	28.86 (97.74)
<b>8th(M4) Gear</b>									
338.5 (252.4)	16840 (74.92)	7.54 (12.13)	1899	2.7	0.432 (0.263)	16.50 (3.25)	176 (80)	45 (7)	28.89 (97.84)

#### TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At 75% load in 5th(M1) gear	78.0
Bystander	--

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

**Dates of Test:** October, 1996

**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)** 0.8570 **Fuel weight** 7.135 lbs/gal (0.855 kg/l) **Oil SAE 15W40 API service classification** CF-4 **Transmission and hydraulic lubricant** Esso Hydraul 56 fluid **Final drive lubricant** SAE 80W90 gear oil

**ENGINE: Make** Cummins Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** 11812387 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.50" x 6.00" (139.7 mm x 152.3 mm) **Compression ratio** 16.5 to 1 **Displacement** 855 cu in (14039 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 transmission oil **Fuel filter** one paper element **Muffler** vertical **Cooling medium temperature control** thermostat

**CHASSIS: Type** Four wheel drive with duals **Serial No.** D104109 **Tread width** rear 80.0" (2032 mm) and 150.6" (3825 mm) front 80.0" (2032 mm) and 150.6" (3825 mm) **Wheelbase** 133.0" (3380 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 3.01 (4.85) second 3.53 (5.68) third 4.11 (6.62) fourth 4.79 (7.70) fifth 5.47 (8.80) sixth 6.40 (10.30) seventh 7.46 (12.01) eighth 8.69 (13.98) ninth 11.34 (18.24) tenth 13.25 (21.33) eleventh 15.46 (24.88) twelfth 18.00 (28.96) reverse 3.91 (6.29), 4.57 (7.35), 5.33 (8.57), 6.20 (9.98) **Clutch** multiple wet disc hydraulically actuated by foot pedal **Brakes** caliper disc hydraulically operated by foot pedal **Steering** hydrostatic and articulated **Power take-off** None **Unladen tractor mass** 31670 lb (14365 kg)

**DRAWBAR PERFORMANCE (BALLASTED)  
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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>Maximum Power 5th(M1) Gear</b>									
337.3 (251.5)	24265 (107.93)	5.21 (8.39)	2103	3.8	0.447 (0.272)	15.94 (3.14)	178 (81)	46 (8)	28.56 (96.72)
<b>75% of Pull at Maximum Power 5th(M1) Gear</b>									
270.9 (202.0)	18205 (80.98)	5.58 (8.98)	2224	2.6	0.488 (0.297)	14.62 (2.88)	176 (80)	45 (7)	28.56 (96.72)
<b>50% of Pull at Maximum Power 5th(M1) Gear</b>									
184.5 (137.6)	12135 (53.98)	5.70 (9.18)	2251	1.7	0.574 (0.349)	12.44 (2.45)	176 (80)	45 (7)	28.56 (96.72)
<b>75% of Pull at Reduced Engine Speed 6th(M2) Gear</b>									
270.8 (201.9)	18190 (80.92)	5.58 (8.98)	1902	2.6	0.432 (0.263)	16.50 (3.25)	176 (80)	45 (7)	28.56 (96.72)
<b>50% of Pull at Reduced Engine Speed 6th(M2) Gear</b>									
185.3 (138.2)	12130 (53.97)	5.73 (9.22)	1933	1.7	0.500 (0.304)	14.26 (2.81)	176 (80)	45 (7)	28.56 (96.72)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
1st(L1) Gear									
297.3 (221.7)	43765 (194.67)	2.55 (4.10)	2113	15.0	0.506 (0.308)	14.11 (2.78)	178 (81)	46 (8)	28.56 (96.72)
2nd(L2) Gear									
320.2 (238.8)	42475 (188.93)	2.83 (4.55)	1902	10.6	0.452 (0.275)	15.79 (3.11)	178 (81)	46 (8)	28.56 (96.72)
3rd(L3) Gear									
332.6 (248.0)	36365 (161.75)	3.43 (5.52)	1901	6.9	0.432 (0.263)	16.50 (3.25)	178 (81)	46 (8)	28.58 (96.80)
4th(L4) Gear									
336.5 (250.9)	31090 (138.30)	4.06 (6.53)	1899	5.3	0.427 (0.260)	16.70 (3.29)	178 (81)	46 (8)	28.58 (96.80)
5th(M1) Gear									
341.7 (254.8)	27385 (121.82)	4.68 (7.53)	1900	4.4	0.422 (0.257)	16.90 (3.33)	178 (81)	46 (8)	28.60 (96.84)
6th(M2) Gear									
342.0 (255.0)	23245 (103.39)	5.52 (8.88)	1899	3.6	0.422 (0.257)	16.90 (3.33)	178 (81)	46 (8)	28.60 (96.84)
7th(M3) Gear									
340.2 (253.7)	19665 (87.47)	6.49 (10.44)	1900	2.9	0.422 (0.257)	16.90 (3.33)	178 (81)	46 (8)	28.60 (96.84)
8th(M4) Gear									
335.0 (249.8)	16530 (73.53)	7.60 (12.23)	1903	2.6	0.429 (0.261)	16.65 (3.28)	178 (81)	46 (8)	28.64 (96.98)

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

**NOTE:** This tractor was not equipped with a 3 point hitch when tested. The 3 point hitch performance data shown on this report is from a test series done on the New Holland 9282 Diesel.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturers claim of 50 gal/min (189.3 l/min) remote hydraulic flow. The performance figures on this summary were taken from a test conducted under the OECD Code II test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1791**, Nebraska Summary 284, June 17, 1999.

Leonard L. Bashford  
Director

M. F. Kocher  
R. D. Grisso  
G. J. Hoffman  
Board of Tractor Test Engineers

**TIRES, BALLAST AND WEIGHT**

	With Ballast	Without Ballast
<b>Rear tires</b> - No., size, ply & psi (kPa)	Four 710/70R38;**,10(69)	Four 710/70R38;**,8(55)
<b>Ballast</b> - Liquid(total)	2965 lb (1345 kg)	None
- Cast iron(total)	3995 lb (1813 kg)	None
<b>Front Tires</b> - No., size, ply, & psi (kPa)	Four 710/70R38;**,10(69)	Four 710/70R38;**,8(55)
<b>Ballast</b> - Liquid(total)	2595 lb (1177 kg)	None
- Cast iron(total)	1260 lb (572 kg)	None
<b>Height of Drawbar</b>	21.1 in (535 mm)	21.8 in (553 mm)
<b>Static Weight with operator</b> - Rear	18850 lb (8551 kg)	11890 lb (5393 kg)
- Front	23800 lb (10796 kg)	19945 lb (9047 kg)
- Total	42650 lb (19347 kg)	31835 lb (14440 kg)

**SUMMARY OF OECD TEST 1791 – NEBRASKA SUMMARY 284**  
**NEW HOLLAND 9882 QUADRASYNC DIESEL**  
**12 SPEED**

**PERFORMANCE AT TRANSMISSION OUTPUT SHAFT**

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.k/l)	Mean Atmospheric Conditions
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed</b>					
369.9 (275.8)	2100	21.19 (80.21)	0.409 (0.249)	17.46 (3.44)	
<b>Maximum Power (2 hours)</b>					
377.2 (281.3)	1900	20.29 (76.81)	0.384 (0.233)	18.59 (3.66)	
<b>VARYING POWER AND FUEL CONSUMPTION</b>					
369.9 (275.8)	2100	21.19 (80.21)	0.409 (0.249)	17.46 (3.44)	Air temperature
331.6 (247.3)	2215	20.29 (76.79)	0.436 (0.265)	16.35 (3.22)	72°F (22°C)
253.7 (189.2)	2261	16.86 (63.81)	0.473 (0.288)	15.05 (2.97)	Relative humidity
170.8 (127.4)	2283	13.34 (50.49)	0.558 (0.339)	12.81 (2.52)	49%
86.5 (64.5)	2309	9.80 (37.09)	0.809 (0.492)	8.82 (1.74)	Barometer
16.4 (12.2)	2330	6.23 (23.57)	3.268 (1.711)	2.54 (0.50)	29.12" Hg (98.61 kPa)
Maximum Torque - 1329 lb.-ft. (1802 Nm) at 1233 rpm					
Maximum Torque Rise - 43.7%					
Torque rise at 1700 engine rpm - 24%					

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

CATEGORY: IVN

Quick Attach: None

Maximum Force Exerted Through Whole Range: 15285 lbs (68.0 kN)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2900 psi (200 bar)
- ii) Pump delivery rate at minimum pressure: 48.6 GPM (184.1 l/min)
- iii) Pump delivery rate at maximum
  - hydraulic power: 46.7 GPM (176.8 l/min)
  - Delivery pressure: 2350 psi (162 bar)
  - Power: 64.0 HP (47.7 kW)

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

Observed Maximum Pressure psi (bar) 2800 (193)  
 Location lift cylinder  
 Hydraulic oil Temperature °F (°C) 150 (65)  
 Location hydraulic sump  
 Category IVN  
 Quick Attach None

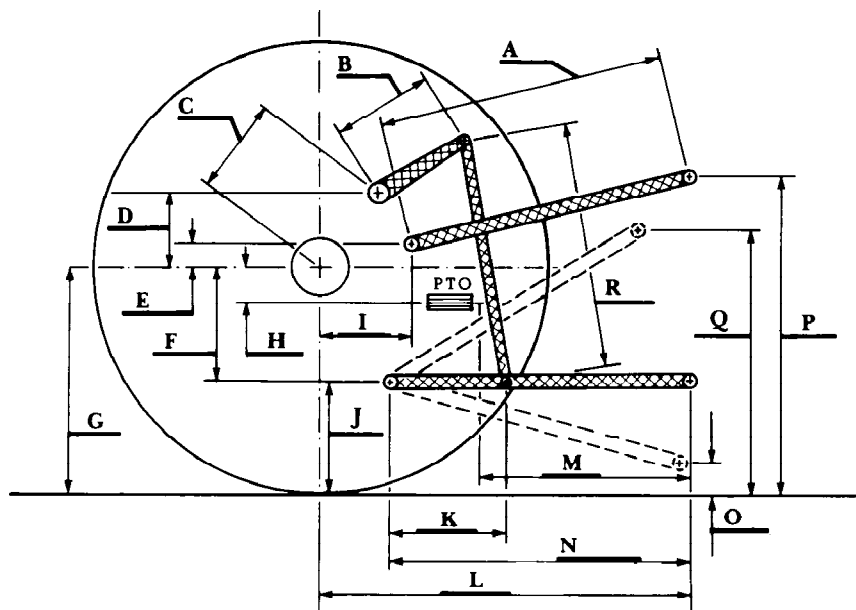
System Pressure - 2600 psi (179 bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	19.4 (492)	27.2 (692)	35.1 (892)	44.1 (1120)
Lift force on frame lb.	25955	22535	20220	17905	13430
" " " " " (kN)	(115.4)	(100.2)	(89.9)	(79.6)	(59.7)

ASAE Test - System Pressure - 2800 psi (193 bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	19.4 (492)	27.2 (692)	35.1 (892)	44.1 (1120)
Lift force on frame lb.	28025	24315	21820	19325	14465
" " " " " (kN)	(124.7)	(108.2)	(97.1)	(86.0)	(64.4)

HITCH DIMENSIONS AS TESTED NO LOAD



	inch	mm
A	27.8	705
B	18.6	472
C	27.0	685
D	19.0	483
E	13.4	341
F	10.4	263
G	33.7	855
H	1.7	43
I	25.3	642
J	23.3	592
K	18.0	457
L	53.4	1356
M	25.3	718
N	43.0	1092
O	9.1	230
P	50.3	1277
Q	41.3	1050
R	33.1	842