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2008

Test 1934: New Holland T9050 Diesel

Nebraska Tractor Test Lab

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NEBRASKA OECD TRACTOR TEST 1934 - SUMMARY 608

NEW HOLLAND T9050 DIESEL

16 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—1001 rpm)					
443.69 (330.86)	2000	25.12 (95.11)	0.397 (0.241)	17.66 (3.48)	
Maximum Power (1 Hour)					
498.35 (371.62)	1800	26.46 (100.18)	0.372 (0.226)	18.83 (3.71)	
VARYING POWER AND FUEL CONSUMPTION					
443.69 (330.86)	2000	25.12 (95.11)	0.397 (0.241)	17.66 (3.48)	Air temperature
381.33 (284.36)	2022	23.19 (87.79)	0.426 (0.259)	16.44 (3.24)	75°F (24°C)
291.04 (217.03)	2058	18.32 (69.37)	0.441 (0.268)	15.88 (3.13)	Relative humidity
196.78 (146.74)	2088	13.90 (52.63)	0.495 (0.301)	14.15 (2.79)	40%
100.00 (74.57)	2120	9.36 (35.43)	0.656 (0.399)	10.68 (2.10)	Barometer
3.08 (2.30)	2154	5.02 (19.02)	11.436 (6.956)	0.61 (0.12)	29.05" Hg (98.37 kPa)
Maximum torque -1693 lb.-ft. (2295 Nm) at 1401 rpm					
Maximum torque rise -45.3%					
Torque rise at 1601 engine rpm - 35%					
Power increase at 1800 engine rpm - 12.3%					

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)	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—6th Gear									
400.38 (298.56)	27914 (124.17)	5.38 (8.66)	2002	2.7	0.433 (0.263)	16.19 (3.19)	182 (83)	69 (21)	28.83 (97.63)
75% of Pull at Maximum Power—6th Gear									
308.29 (229.89)	20973 (93.29)	5.51 (8.87)	2039	2.1	0.475 (0.289)	14.76 (2.91)	182 (83)	75 (24)	28.79 (97.49)
50% of Pull at Maximum Power—6th Gear									
212.02 (158.10)	14098 (62.71)	5.64 (9.08)	2076	1.5	0.525 (0.320)	13.34 (2.63)	182 (83)	75 (24)	28.79 (97.49)
75% of Pull at Reduced Engine Speed—9th Gear									
308.70 (230.20)	21099 (93.85)	5.49 (8.83)	1534	2.2	0.426 (0.259)	16.45 (3.24)	182 (83)	75 (24)	28.79 (97.49)
50% of Pull at Reduced Engine Speed—9th Gear									
213.14 (158.94)	14110 (62.76)	5.66 (9.12)	1570	1.3	0.449 (0.273)	15.60 (3.07)	181 (83)	75 (24)	28.78 (97.46)

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

Dates of tests: September 8 - 11, 2008

Manufacturer: Case Corporation, 700 State Street Racine, Wi. 53404 USA.

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8416 Fuel weight 7.007 lbs/gal (0.840 kg/l) Oil SAE 15W40 API service classification CI-4 Transmission and hydraulic lubricant NH Ambra Hy-Tran Ultra fluid Front and rear axle lubricant NH Ambra Hy-Tran Ultra fluid Total time engine was operated 17.5 hours

ENGINE: Make Iveco Diesel Type six cylinder vertical with compound turbocharger and air to air aftercooler Serial No. 115236 Crankshaft lengthwise Rated engine speed 2000 Bore and stroke 5.315" x 5.906" (135.0 mm x 150.0 mm) Compression ratio 16.5 to 1 Displacement 786 cu in (12880 ml) Starting system 24 volt Lubrication pressure Air cleaner two paper elements and aspirator Oil filter two full flow cartridges Oil cooler engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil Fuel filter two paper elements Fuel cooler radiator for returned fuel Muffler vertical Cooling medium temperature control one thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 167.5 - 177.7 lb/h (76.0 - 80.5 kg/h) High idle: 2125 - 2165 rpm Turbo boost: nominal 26.8 - 31.2 psi (185 - 215 kPa) as measured 29.0 psi (200 kPa)

CHASSIS: Type four wheel drive with triples Serial No. *Z8F204465* Tread width rear 73.6" (1870 mm) to 187.6" (4766 mm) front 73.6" (1870 mm) to 187.6" (4766 mm) Wheelbase 154.0" (3911 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio with full range operator controlled powershift Nominal travel speeds mph (km/h) first 2.54 (4.08) second 3.05 (4.91) third 3.68 (5.93) fourth 4.44 (7.14) fifth 5.10 (8.20) sixth 5.60 (9.01) seventh 6.14 (9.88) eighth 6.74 (10.85) ninth 7.41 (11.93) tenth 8.15 (13.11) eleventh 8.93 (14.37) twelfth 9.81 (15.79) thirteenth 11.27 (18.13) fourteenth 13.56 (21.83) fifteenth 16.39 (26.38) sixteenth 19.73 (31.75) reverse 3.84 (6.18), 8.48 (13.65) Clutch multiple wet disc electro-hydraulically operated by foot pedal Brakes single wet disc hydraulically actuated by foot pedal Steering hydrostatic and articulated Power take-off 1000 rpm at 1998 engine rpm Unladen tractor mass 43680 lb (19813 kg)

DRAWBAR PERFORMANCE at 1800 engine rpm **MAXIMUM POWER IN SELECTED GEARS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption 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)
372.37 (277.68)	43815 (194.90)	3.19 (5.13)	1990	12.6	3rd Gear 0.469 (0.285)	14.95 (2.95)	183 (84)	62 (17)	28.85 (97.70)
424.25 (316.36)	42412 (188.66)	3.75 (6.04)	1856	7.6	4th Gear 0.425 (0.259)	16.48 (3.25)	183 (84)	63 (17)	28.84 (97.66)
441.74 (329.41)	38806 (172.62)	4.27 (6.87)	1798	5.5	5th Gear 0.416 (0.253)	16.85 (3.32)	183 (84)	67 (19)	28.84 (97.66)
441.42 (329.16)	34972 (155.56)	4.73 (7.62)	1800	4.8	6th Gear 0.416 (0.253)	16.86 (3.32)	182 (83)	70 (21)	28.83 (97.63)
441.51 (329.23)	31836 (141.61)	5.20 (8.37)	1794	4.3	7th Gear 0.415 (0.252)	16.89 (3.33)	182 (83)	73 (23)	28.82 (97.60)
442.09 (329.67)	28634 (127.37)	5.79 (9.32)	1804	3.5	8th Gear 0.414 (0.252)	16.94 (3.34)	182 (83)	74 (23)	28.81 (97.56)
437.00 (325.87)	25671 (114.19)	6.38 (10.27)	1794	2.7	9th Gear 0.419 (0.255)	16.73 (3.30)	182 (83)	75 (24)	28.81 (97.56)
439.83 (327.98)	23401 (104.09)	7.05 (11.34)	1800	2.5	10th Gear 0.415 (0.253)	16.87 (3.32)	182 (83)	75 (24)	28.80 (97.53)
435.29 (324.59)	20939 (93.14)	7.80 (12.55)	1806	1.9	11th Gear 0.420 (0.255)	16.69 (3.29)	181 (83)	75 (24)	28.80 (97.53)
441.33 (329.10)	19257 (85.66)	8.59 (13.83)	1798	1.2	12th Gear 0.413 (0.251)	16.95 (3.34)	181 (83)	75 (24)	28.79 (97.49)

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. For the maximum power tests, the fuel temperature at the primary filter was maintained at 110°F (43°C). 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 and correct report of official Tractor Test No. **1934**, Nebraska Summary 608, November 24, 2008.

Roger M. Hoy
Director

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

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At no load in 4th gear	74.3
Bystander in 16th gear	87.5

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

Six 520/85R42; **; 14 (95)
Six 520/85R42; **; 15 (105)
20.5 in (520 mm)
18710 lb (8486 kg)
25145 lb (11406 kg)
43855 lb (19892 kg)

HYDRAULIC PERFORMANCE

CATEGORY: IVN

Quick Attach: yes

OECD Static test

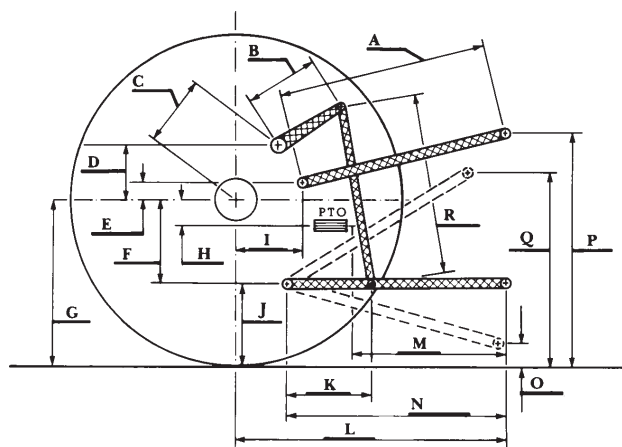
Maximum force exerted through whole range:	19620 lbs (87.3 kN)	
	<u>Standard pump</u>	<u>High flow pump</u>
i) Sustained pressure of the open relief valve:	2880 psi (199 bar)	3037 psi (209 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	40.6 GPM (153.7 l/min)	58.8 GPM (222.4 l/min)
iii) Pump delivery rate at maximum hydraulic power:	37.7 GPM (142.7 l/min)	56.3 GPM (213.2 l/min)
Delivery pressure:	2805 psi (193 bar)	2767 psi (191 bar)
Power:	61.7 HP (46.0 kW)	90.9 Hp (67.8 kW)

MegaFlow system

	<u>Main pump</u>	<u>MegaFlow pump</u>
i) Sustained pressure at compensator cutoff:	3026 psi (208 bar)	3041 psi (210 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	56.6 GPM (214.2 l/min)	37.7 GPM (142.6 l/min)
Combined flow:	94.3 GPM (356.8 l/min)	
iii) Pump delivery rate at maximum hydraulic power:	55.4 GPM (209.5 l/min)	35.9 GPM (135.9 l/min)
Delivery pressure:	2430 psi (167 bar)	2861 psi (197 bar)
Power:	78.5 HP (58.5 kW)	59.9 Hp (44.7 kW)

HITCH DIMENSIONS AS TESTED - NO LOAD

	inch	mm
A	32.6	827
B	29.9	760
C	23.2	590
D	22.0	558
E	13.5	342
F	13.4	340
G	38.2	970
H	6.4	162
I	22.8	578
J	24.8	630
K	29.0	736
L	56.3	1431
*L'	63.6	1615
M	34.3	871
N	46.5	1181
O	7.9	200
P	48.6	1234
Q	42.2	1072
R	39.8	1010



New Holland T9050 Diesel

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University of Nebraska-Lincoln