

NEBRASKA OECD TRACTOR TEST 2017 - SUMMARY 962

NEW HOLLAND T9.565 DIESEL

16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption		D.E.F. Consumption		Mean Atmospheric Conditions
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Gal/hr (l/h)	
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1160 rpm)						
449.14 (334.92)	2101	25.28 (95.71)	0.395 (0.240)	17.76 (3.50)	2.09 (7.89)	
Maximum Power (1 hour)						
504.56 (376.25)	1902	26.92 (101.88)	0.375 (0.228)	18.75 (3.69)	2.18 (8.26)	
Standard Power Take-off Speed (1000 rpm)						
496.01 (369.87)	1811	26.10 (98.79)	0.369 (0.225)	19.01 (3.74)	2.06 (7.81)	

VARYING POWER AND FUEL CONSUMPTION

449.14 (334.92)	2101	25.28 (95.71)	0.395 (0.240)	17.76 (3.50)	2.09 (7.89)	Air temperature
389.44 (290.40)	2144	22.83 (86.44)	0.412 (0.250)	17.05 (3.36)	1.69 (6.38)	74°F (24°C)
293.57 (218.92)	2153	18.11 (68.54)	0.433 (0.263)	16.21 (3.19)	1.25 (4.74)	Relative humidity
196.48 (146.52)	2162	13.66 (51.70)	0.488 (0.297)	14.39 (2.83)	0.87 (3.28)	60%
98.73 (73.62)	2175	9.39 (35.53)	0.668 (0.406)	10.52 (2.07)	0.53 (2.02)	Barometer
1.25 (0.93)	2186	5.32 (20.13)	29.813 (18.135)	0.24 (0.05)	0.23 (0.86)	28.69" Hg (97.16 kPa)

Maximum torque - 1633 lb.-ft. (2215 Nm) at 1400 rpm

Maximum torque rise - 45.5%

Torque rise at 1681 engine rpm - 35%

Power increase at 1902 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)	D.E.F. Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Barom. inch Hg (kPa)
Maximum Power—6th Gear								
417.77 (311.53)	27928 (124.23)	5.61 (9.03)	2100	2.2	0.425 (0.259)	16.52 (3.25)	0.043 (0.026)	212 69 28.66 (100) (21) (97.05)
75% of Pull at Maximum Power—6th Gear								
321.81 (239.97)	20934 (93.12)	5.77 (9.28)	2150	1.8	0.447 (0.272)	15.71 (3.10)	0.046 (0.028)	204 74 29.00 (95) (23) (98.21)
50% of Pull at Maximum Power—6th Gear								
216.78 (161.65)	13968 (62.13)	5.82 (9.37)	2159	1.3	0.488 (0.297)	14.39 (2.83)	0.048 (0.029)	210 74 29.00 (99) (23) (98.21)
75% of Pull at Reduced Engine Speed—10th Gear								
321.63 (239.84)	20949 (93.18)	5.76 (9.27)	1475	1.8	0.383 (0.233)	18.33 (3.61)	0.046 (0.028)	212 74 29.00 (100) (23) (98.21)
50% of Pull at Reduced Engine Speed—10th Gear								
217.24 (162.00)	13909 (61.87)	5.86 (9.43)	1493	1.3	0.414 (0.252)	16.95 (3.34)	0.032 (0.019)	197 74 28.99 (92) (23) (98.17)

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

Dates of tests: September 17 - 24, 2014

Manufacturer: CNH Industrial America LLC, 700 State St. Racine, Wi. 53404 USA

CONSUMABLE Fluids, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.8434 **Fuel weight** 7.022 lbs/gal (0.842 kg/l) **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.071 lbs/gal (1.087 kg/l) **Oil SAE 10W40 API service classification CJ-4 Transmission lubricant** New Holland Mastertran **Ultraction fluid Hydraulic and axle lubricant** New Holland Mastertran Ultraction fluid **Total time engine was operated:** 22.0 hours

ENGINE: Make FPT Industrial Diesel **Type** six cylinder vertical with turbocharger, air to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment **Serial No.** 000000874 **Crankshaft** lengthwise **Rated engine speed** 2100 **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** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, separate radiators for hydraulic and transmission oil **Fuel filter** two paper elements **Exhaust** DOC (diesel oxidation catalyst) and SCR (selective catalyst reduction) with a vertical muffler **Cooling medium temperature control** thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 170.2 - 180.6 lb/h (77.2 - 81.9 kg/h) **High idle:** 2175 - 2225 rpm **Turbo boost:** nominal 23.2 - 26.1 psi (160 - 180 kPa) as measured 24.7 psi (170 kPa)

CHASSIS: Type four wheel drive with triples **Serial No.** *ZCF218180* **Tread width** rear 73.6" (1870 mm) to 187.6" (4766 mm) front 73.6" (1870 mm) to 187.6" (4766 mm) **Wheelbase** 148.0" (3759 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 2.65 (4.26) second 3.19 (5.13) third 3.85 (6.20) fourth 4.63 (7.46) fifth 5.33 (8.57) sixth 5.85 (9.42) seventh 6.41 (10.32) eighth 7.05 (11.35) ninth 7.75 (12.47) tenth 8.51 (13.70) eleventh 9.33 (15.02) twelfth 10.25 (16.50) thirteenth 11.78 (18.95) fourteenth 14.18 (22.82) fifteenth 17.13 (27.56) sixteenth 20.63 (33.20) reverse 4.01 (6.45), 8.07 (12.99) **Clutch** multiple wet disc electrohydraulically operated by foot pedal **Brakes** wet disc hydraulically operated by foot pedal **Steering** hydrostatic and articulated

DRAWBAR PERFORMANCE AT 2100 ENGINE RPM
DRAWBAR 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)	Hp.hr/gal (kW.h/l)	D.E.F Consumption lb/hp.hr (kg/kW.h)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
					2nd Gear					
338.42 (252.36)	46053 (204.85)	2.76 (4.44)	2143	14.3	0.487 (0.296)	14.42 (2.84)	0.049 (0.030)	194 (90)	53 (12)	29.03 (98.31)
					3rd Gear					
402.62 (300.23)	43070 (191.58)	3.51 (5.64)	2100	7.2	0.440 (0.268)	15.96 (3.14)	0.048 (0.029)	204 (96)	58 (15)	29.04 (98.34)
					4th Gear					
414.45 (309.05)	35298 (157.01)	4.40 (7.08)	2099	3.0	0.428 (0.260)	16.40 (3.23)	0.043 (0.026)	207 (97)	73 (23)	28.66 (97.05)
					5th Gear					
416.77 (310.78)	30722 (136.66)	5.09 (8.18)	2099	2.6	0.425 (0.259)	16.52 (3.25)	0.043 (0.026)	213 (101)	72 (22)	28.66 (97.05)
					6th Gear					
417.77 (311.53)	27928 (124.23)	5.61 (9.03)	2100	2.2	0.425 (0.259)	16.52 (3.25)	0.043 (0.026)	212 (100)	69 (21)	28.66 (97.05)
					7th Gear					
414.10 (308.79)	25184 (112.02)	6.17 (9.93)	2101	2.0	0.429 (0.261)	16.37 (3.23)	0.043 (0.026)	213 (101)	70 (21)	28.66 (97.05)
					8th Gear					
415.96 (310.18)	22990 (102.26)	6.79 (10.92)	2100	1.8	0.427 (0.260)	16.44 (3.24)	0.043 (0.026)	211 (99)	75 (24)	28.64 (96.99)
					9th Gear					
412.80 (307.82)	20729 (92.21)	7.47 (12.02)	2099	1.6	0.429 (0.261)	16.36 (3.22)	0.042 (0.026)	212 (100)	78 (26)	28.63 (96.95)

Power take-off MY 2014 - 1000 rpm at 1998 engine rpm, MY 2015 - 1000 rpm at 1811 engine rpm **Unladen tractor mass** 47155 lb (21389 kg)

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 fuel filter was maintained at 110°F (43°C). The performance figures on this Summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2097**, Nebraska Summary 962, December 19, 2014.

Roger M. Hoy
Director

M.F. Kocher
J.D. Luck
P.J. Jasa
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At no load in 4th gear	73.6
Bystander in 16th gear	88.2

TIRES AND WEIGHT

Rear Tires -No., size, ply & psi (kPa)	Tested Without Ballast
Front Tires -No., size, ply & psi (kPa)	Six 520/85R42;***,9(60)
Height of Drawbar	Six 520/85R42;***,10(70)
Static Weight with operator - Rear	20.5 in (520 mm)
- Front	22155 lb(10049 kg)
- Total	25175 lb(11419 kg)
	47330 lb(21468 kg)

DRAWBAR PERFORMANCE AT 1900 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)	Hp.hr/gal (kW.h/l)	D.E.F Consumption lb/hp.hr (kg/kW.h)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
					2nd Gear					
338.62 (252.51)	46095 (205.04)	2.75 (4.43)	2143	14.5	0.490 (0.298)	14.33 (2.82)	0.050 (0.030)	192 (89)	52 (11)	29.03 (98.31)
					3rd Gear					
405.35 (302.27)	45061 (200.44)	3.38 (5.43)	2075	9.6	0.444 (0.270)	15.80 (3.11)	0.051 (0.031)	208 (98)	61 (16)	29.04 (98.34)
					4th Gear					
445.89 (332.50)	42803 (190.40)	3.91 (6.29)	1937	6.8	0.420 (0.255)	16.73 (3.29)	0.047 (0.028)	215 (102)	63 (17)	29.04 (98.34)
					5th Gear					
459.03 (342.29)	37848 (168.35)	4.55 (7.32)	1900	3.7	0.412 (0.250)	17.06 (3.36)	0.041 (0.025)	213 (101)	74 (23)	28.65 (97.02)
					6th Gear					
464.54 (346.41)	34603 (153.92)	5.03 (8.10)	1900	3.0	0.407 (0.247)	17.27 (3.40)	0.042 (0.025)	217 (103)	69 (21)	28.66 (97.05)
					7th Gear					
462.53 (344.91)	31293 (139.20)	5.55 (8.92)	1899	2.6	0.409 (0.249)	17.15 (3.38)	0.042 (0.025)	216 (102)	70 (21)	28.66 (97.05)
					8th Gear					
462.80 (345.11)	28415 (126.39)	6.11 (9.83)	1900	2.3	0.407 (0.248)	17.25 (3.40)	0.041 (0.025)	216 (102)	77 (25)	28.64 (96.99)
					9th Gear					
462.63 (344.98)	25780 (114.68)	6.73 (10.83)	1900	2.0	0.408 (0.248)	17.21 (3.39)	0.041 (0.025)	218 (103)	78 (25)	28.64 (96.99)
					10th Gear					
462.32 (344.75)	23402 (104.10)	7.41 (11.93)	1899	1.8	0.410 (0.249)	17.13 (3.38)	0.041 (0.025)	217 (103)	82 (28)	28.64 (96.99)

HYDRAULIC PERFORMANCE

CATEGORY: IVN

Quick Attach: yes

OECD Static test

Maximum force exerted through whole range:	21903 lbs (97.4 kN)	
	Three outlet sets combined	
	<u>Standard pump</u>	<u>High flow pump</u>
i) Sustained pressure of the open relief valve:	2877 psi (198 bar)	3039 psi (210 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	43.8 GPM (165.8 l/min)	59.4 GPM (224.9 l/min)
iii) Pump delivery rate at maximum hydraulic power:	43.3 GPM (163.7 l/min)	56.0 GPM (211.9 l/min)
Delivery pressure:	2526 psi (174 bar)	2645 psi (182 bar)
Power:	63.7 HP (47.5 kW)	86.4 Hp (64.4 kW)
	Single outlet set	
ii) Pump delivery rate at minimum pressure and rated engine speed:	42.8 GPM (162.2 l/min)	47.6 GPM (180.1 l/min)
iii) Pump delivery rate at maximum hydraulic power:	42.7 GPM (161.6 l/min)	43.0 GPM (162.6 l/min)
Delivery pressure:	2024 psi (139 bar)	2116 psi (146 bar)
Power:	50.4 HP (37.6 kW)	53.0 Hp (39.6 kW)

MegaFlow system

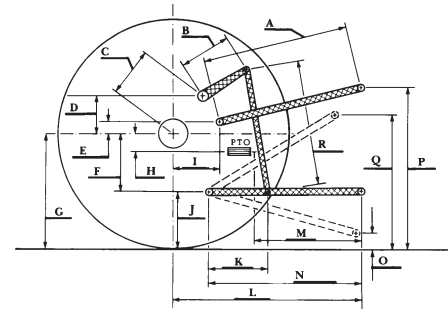
	Two outlet sets combined	
	<u>Standard pump</u>	<u>MegaFlow pump</u>
i) Sustained pressure at compensator cutoff:	2877 psi (198 bar)	2855 psi (197 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	43.8 GPM (165.8 l/min)	57.3 GPM (217.0 l/min)
Combined flow:	101.1 GPM (382.8 l/min)	
iii) Pump delivery rate at maximum hydraulic power:	43.3 GPM (163.7 l/min)	56.4 GPM (213.6 l/min)
Delivery pressure:	2526 psi (174 bar)	2479 psi (171 bar)
Power:	63.7 HP (47.5 kW)	81.6 Hp (60.9 kW)

	Two outlet sets combined	
	<u>High flow pump</u>	<u>MegaFlow pump</u>
i) Sustained pressure at compensator cutoff:	2993 psi (206 bar)	2855 psi (197 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	61.0 GPM (230.9 l/min)	57.3 GPM (217.0 l/min)
Combined flow:	118.3 GPM (447.9 l/min)	
iii) Pump delivery rate at maximum hydraulic power:	56.7 GPM (214.7 l/min)	56.4 GPM (213.6 l/min)
Delivery pressure:	2517 psi (174 bar)	2479 psi (171 bar)
Power:	83.3 HP (62.1 kW)	81.6 Hp (60.9 kW)

HITCH DIMENSIONS AS TESTED - NO LOAD

	inch	mm
A	39.0	990
B	30.7	780
C	27.9	709
D	26.5	673
E	13.5	342
F	16.3	415
G	38.2	970
H	2.6	66
I	21.2	538
J	21.9	555
K	30.5	775
L	58.5	1487
*L'	65.8	1671
M	53.6	1361
N	43.0	1093
O	9.1	230
P	52.6	1335
Q	46.5	1181
R	39.4	1000

*L' to Quick Attach ends



NEW HOLLAND T9.565 Diesel

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