2011

Test 2016: New Holland T9.615

Nebraska Tractor Test Lab
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NEBRASKA OECD TRACTOR TEST 2016 - SUMMARY 798
NEW HOLLAND T9.615 DIESEL
16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Diesel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	D.E.F. Consumption Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption Gal/hr *(l/h)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1051 rpm)						
473.41 *(353.02)*	2100	26.29 *(99.54)*	0.391 *(0.238)*	18.00 *(3.55)*	2.12 *(8.03)*	
Standard Power Take-off Speed (1000 rpm)						
514.77 *(383.86)*	1999	27.53 *(104.22)*	0.377 *(0.229)*	18.70 *(3.68)*	2.17 *(8.21)*	
Maximum Power (1 hour)						
530.46 *(395.56)*	1900	27.64 *(104.64)*	0.367 *(0.223)*	19.19 *(3.78)*	2.16 *(8.18)*	
VARYING POWER AND FUEL CONSUMPTION						
473.41 *(353.02)*	2100	26.29 *(99.54)*	0.391 *(0.238)*	18.00 *(3.55)*	2.12 *(8.03)*	Air temperature
411.03 *(306.51)*	2145	23.81 *(90.14)*	0.408 *(0.248)*	17.26 *(3.40)*	2.03 *(7.68)*	73°F *(23°C)*
309.61 *(230.87)*	2155	19.11 *(72.35)*	0.435 *(0.265)*	16.20 *(3.19)*	1.52 *(5.75)*	Relative humidity
207.03 *(154.38)*	2163	14.42 *(54.59)*	0.491 *(0.299)*	14.36 *(2.83)*	1.04 *(3.94)*	11%
104.30 *(77.77)*	2174	9.99 *(37.82)*	0.675 *(0.411)*	10.44 *(2.06)*	0.55 *(2.08)*	Barometer
-- --	2186	5.22 *(19.76)*	-- --	-- --	0.18 *(0.68)*	29.14" Hg *(98.68 kPa)*

Maximum torque - 1695 lb.-ft. *(2298 Nm)* at 1399 rpm
Maximum torque rise - 43.2%
Torque rise at 1699 engine rpm - 34%
Power increase at 1900 engine rpm - 12.0%

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)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—5th Gear									
426.74 *(318.22)*	29418 *(130.86)*	5.44 *(8.75)*	2099	2.8	0.434 *(0.264)*	16.25 *(3.20)*	205 *(96)*	53 *(12)*	28.76 *(97.39)*
75% of Pull at Maximum Power—5th Gear									
330.49 *(246.45)*	22071 *(98.18)*	5.62 *(9.04)*	2150	1.9	0.463 *(0.282)*	15.21 *(3.00)*	208 *(98)*	53 *(12)*	28.71 *(97.22)*
50% of Pull at Maximum Power—5th Gear									
223.21 *(166.45)*	14714 *(65.45)*	5.69 *(9.16)*	2160	1.2	0.519 *(0.316)*	13.57 *(2.67)*	198 *(92)*	53 *(11)*	28.70 *(97.19)*
75% of Pull at Reduced Engine Speed—9th Gear									
330.34 *(246.33)*	22169 *(98.61)*	5.59 *(9.00)*	1472	1.9	0.395 *(0.240)*	17.85 *(3.52)*	201 *(94)*	52 *(11)*	28.70 *(97.19)*
50% of Pull at Reduced Engine Speed—9th Gear									
222.79 *(166.13)*	14697 *(65.38)*	5.69 *(9.15)*	1486	1.2	0.428 *(0.261)*	16.45 *(3.24)*	177 *(80)*	52 *(11)*	28.71 *(97.22)*

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

Dates of tests: November 29-December 1, 2011

Manufacturer: CNH 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)*** 0.8463 **Fuel weight** 7.047 lbs/gal *(0.845 kg/l)* **Diesel Exhaust Fluid (DEF)** 30% aqueous urea solution **DEF weight** 9.071 lbs/gal *(1.087 kg/l)* **Oil SAE** 15W40 **API service classification** CI-4 **Transmission lubricant** New Holland Mastertran transmission fluid **Hydraulic and axle lubricant** New Holland Multi G134 hydraulic fluid **Total time engine was operated:** 15.5 hours

ENGINE: Make F.P.T. Diesel **Type** six cylinder vertical with two turbochargers, air to air intercooler, water to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment **Serial No.** *A-002-001723* **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, seperate radiators for hydraulic and transmission oil **Fuel filter** two paper elements **Fuel cooler** radiator for pump return fuel **Muffler** vertical **Cooling medium temperature control** thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 176.6 - 188.9 lb/h *(80.1 - 85.7 kg/h)* **High idle:** 2150 - 2200 rpm **Turbo boost:** nominal 36.3 - 39.2 psi *(250 - 270 kPa)* as measured 38.0 psi *(262 kPa)*

CHASSIS: Type four wheel drive with duals **Serial No.** *ZBF216101* **Tread width** rear 79.0" *(2006 mm)* to 154.0" *(3912 mm)* front 79.0" *(2006 mm)* to 154.0" *(3912 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 2.71 *(4.36)* second 3.27 *(5.26)* third 3.95 *(6.36)* fourth 4.75 *(7.64)* fifth 5.46 *(8.79)* sixth 6.00 *(9.65)* seventh 6.57 *(10.57)* eighth 7.22 *(11.62)* ninth 7.94 *(12.78)* tenth 8.72 *(14.03)* eleventh 9.56 *(15.38)* twelfth 10.52 *(16.93)* thirteenth 12.06 *(19.41)* fourteenth 14.53 *(23.38)* fifteenth 17.54 *(28.23)* sixteenth 21.14 *(34.02)* reverse 4.18 *(6.73)*, 8.32 *(13.39)* **Clutch** multiple wet disc electrohydraulically operated by foot pedal **Brakes** wet disc hydraulically operated by foot pedal **Steering** hydrostatic and articulated **Power take-off** 1000 rpm at 1999 engine rpm **Unladen tractor mass** 45865 lb *(20804 kg)*

DRAWBAR PERFORMANCE AT 2100 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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					2nd Gear				
383.37 *(285.88)*	46586 *(207.22)*	3.09 *(4.96)*	2137	9.5	0.472 *(0.287)*	14.92 *(2.94)*	207 *(97)*	48 *(9)*	28.83 *(97.63)*
					3rd Gear				
420.32 *(313.43)*	41082 *(182.74)*	3.84 *(6.17)*	2100	5.2	0.442 *(0.269)*	15.95 *(3.14)*	205 *(96)*	52 *(11)*	28.81 *(97.56)*
					4th Gear				
425.75 *(317.48)*	33921 *(150.89)*	4.71 *(7.58)*	2100	3.6	0.435 *(0.264)*	16.21 *(3.19)*	207 *(97)*	53 *(12)*	28.78 *(97.46)*
					5th Gear				
426.74 *(318.22)*	29418 *(130.86)*	5.44 *(8.75)*	2099	2.8	0.434 *(0.264)*	16.25 *(3.20)*	205 *(96)*	53 *(12)*	28.76 *(97.39)*
					6th Gear				
428.19 *(319.30)*	26767 *(119.07)*	6.00 *(9.66)*	2100	2.5	0.431 *(0.262)*	16.36 *(3.22)*	207 *(97)*	54 *(12)*	28.76 *(97.39)*
					7th Gear				
424.69 *(316.69)*	24181 *(107.56)*	6.59 *(10.61)*	2099	2.2	0.433 *(0.263)*	16.27 *(3.21)*	204 *(96)*	52 *(11)*	28.74 *(97.33)*
					8th Gear				
425.35 *(317.18)*	21965 *(97.70)*	7.27 *(11.69)*	2100	1.9	0.434 *(0.264)*	16.23 *(3.20)*	205 *(96)*	53 *(12)*	28.72 *(97.26)*
					9th Gear				
421.54 *(314.34)*	19749 *(87.85)*	8.01 *(12.88)*	2101	1.7	0.441 *(0.268)*	15.98 *(3.15)*	205 *(96)*	53 *(12)*	28.71 *(97.22)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

Note : The advertised engine power levels for this tractor are not in standard SAE (U.S.) horsepower units. The advertised rated engine power of 542 DIN hp is equivalent to 534.59 SAE hp. The advertised maximum engine power of 613 CV hp is equivalent to 604.61 SAE hp.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. Using the procedure described in Board Action No. 31, this tractor did not meet the manfacturer's maximum engine power claim of 613 CV hp equivalent to 604.61 SAE (U.S.) hp. For the maximum power tests, the fuel temperature at the primary fuel filter was maintained at 110°F *(43°C)*. The pull in 2nd gear was limited to avoid excessive power hop. 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. **2016**, Nebraska Summary 798, March 5, 2012.

Roger M. Hoy
Director

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

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in 4th gear	72.4
Bystander in 16th gear	85.7

TIRES AND WEIGHT — **Tested Without Ballast**

Rear Tires - No., size, ply & psi*(kPa)*	Four 710/70R42;***;8*(55)*
Front Tires - No., size, ply & psi*(kPa)*	Four 710/70R42;***;12*(85)*
Height of Drawbar	22.5 in *(570 mm)*
Static Weight with operator - Rear	19340 lb *(8772 kg)*
- Front	26700 lb*(12111 kg)*
- Total	46040 lb*(20883 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)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
				2nd Gear					
384.71 *(286.88)*	46820 *(208.26)*	3.08 *(4.96)*	2136	9.5	0.472 *(0.287)*	14.94 *(2.94)*	208 *(98)*	48 *(9)*	28.83 *(97.63)*
				3rd Gear					
435.07 *(324.43)*	44761 *(199.11)*	3.65 *(5.87)*	2035	7.0	0.439 *(0.267)*	16.05 *(3.16)*	205 *(96)*	53 *(12)*	28.79 *(97.49)*
				4th Gear					
464.83 *(346.62)*	41736 *(185.65)*	4.18 *(6.73)*	1900	5.4	0.415 *(0.253)*	16.96 *(3.34)*	206 *(97)*	52 *(11)*	28.77 *(97.43)*
				5th Gear					
471.51 *(351.60)*	36255 *(161.27)*	4.88 *(7.85)*	1900	3.9	0.410 *(0.249)*	17.19 *(3.39)*	206 *(96)*	54 *(12)*	28.76 *(97.39)*
				6th Gear					
473.53 *(353.11)*	33010 *(146.83)*	5.38 *(8.66)*	1900	3.3	0.408 *(0.248)*	17.27 *(3.40)*	206 *(97)*	53 *(11)*	28.74 *(97.33)*
				7th Gear					
472.48 *(352.33)*	29916 *(133.07)*	5.92 *(9.53)*	1900	2.8	0.407 *(0.247)*	17.32 *(3.41)*	205 *(96)*	53 *(11)*	28.73 *(97.29)*
				8th Gear					
473.39 *(353.00)*	27210 *(121.04)*	6.53 *(10.50)*	1901	2.5	0.409 *(0.249)*	17.22 *(3.39)*	205 *(96)*	53 *(12)*	28.72 *(97.26)*
				9th Gear					
473.17 *(352.84)*	24599 *(109.42)*	7.21 *(11.60)*	1900	2.2	0.410 *(0.250)*	17.18 *(3.38)*	207 *(97)*	54 *(12)*	28.71 *(97.22)*
				10th Gear					
472.00 *(351.97)*	22099 *(98.30)*	8.01 *(12.89)*	1919	1.9	0.412 *(0.251)*	17.10 *(3.37)*	205 *(96)*	54 *(12)*	28.71 *(97.22)*

HYDRAULIC PERFORMANCE

CATEGORY: IVN
Quick Attach: yes
OECD Static test
Maximum force exerted through whole range: 19620 lbs *(87.3 kN)*

Three outlet sets combined

	Standard pump	High flow pump
i) Sustained pressure of the open relief valve:	2877 psi *(198 bar)*	3048 psi *(210 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	43.8 GPM *(165.8 l/min)*	61.5 GPM *(232.7 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	43.3 GPM *(163.7 l/min)*	58.4 GPM *(220.9 l/min)*
Delivery pressure:	2526 psi *(174 bar)*	2671 psi *(184 bar)*
Power:	63.7 HP *(47.5 kW)*	90.9 Hp *(67.8 kW)*

Single outlet set

ii) Pump delivery rate at minimum pressure and rated engine speed:	42.8 GPM *(162.2 l/min)*	48.7 GPM *(184.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	42.7 GPM *(161.6 l/min)*	45.9 GPM *(173.6 l/min)*
Delivery pressure:	2024 psi *(139 bar)*	2259 psi *(156 bar)*
Power:	50.4 HP *(37.6 kW)*	60.4 Hp *(45.1 kW)*

MegaFlow system

Two outlet sets combined

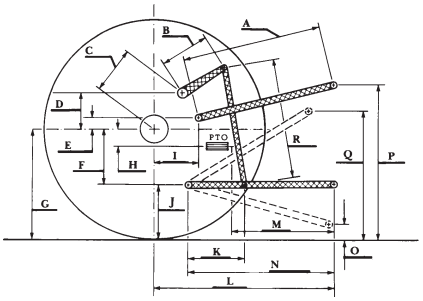
	Standard pump	MegaFlow pump
i) Sustained pressure at compensator cutoff:	2877 psi *(198 bar)*	2855 psi *(197 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	43.8 GPM *(165.8 l/min)*	57.3 GPM *(217.0 l/min)*
Combined flow:	101.1 GPM *(382.8 l/min)*	
iii) Pump delivery rate at 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

	High flow pump	MegaFlow pump
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	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 T9.615 Diesel

Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln