

# SUMMARY OF OECD TEST 2986-NEBRASKA SUMMARY 1055 NEW HOLLAND T7.290 DIESEL CONTINUOUSLY VARIABLE TRANSMISSION

## 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)	
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>						
<b>Rated Engine Speed—(PTO speed—1133 rpm)</b>						
246.5 (183.8)	2100	12.80 (48.47)	0.362 (0.220)	19.25 (3.79)	0.99 (3.76)	
<b>Standard Power Take-off Speed (1000 rpm)</b>						
268.2 (200.0)	1853	13.60 (51.50)	0.353 (0.215)	19.71 (3.88)	1.01 (3.82)	
<b>Maximum Power (1 hour)</b>						
270.1 (201.4)	1800	13.62 (51.57)	0.352 (0.214)	19.82 (3.91)	1.04 (3.94)	

## VARYING POWER AND FUEL CONSUMPTION

246.5 (183.8)	2100	12.80 (48.50)	0.362 (0.220)	19.25 (3.79)	0.99 (3.76)	Air temperature
210.5 (157.0)	2110	11.18 (42.30)	0.370 (0.225)	18.83 (3.71)	0.88 (3.35)	73°F (23°C)
158.8 (118.4)	2122	8.82 (33.40)	0.388 (0.236)	18.00 (3.55)	0.68 (2.57)	Relative humidity
106.5 (79.4)	2135	6.50 (24.60)	0.426 (0.259)	16.39 (3.23)	0.48 (1.80)	59%
53.5 (39.9)	2146	4.25 (16.10)	0.554 (0.337)	12.59 (2.48)	0.24 (0.89)	Barometer
----	2159	2.03 (7.70)	----	----	0.13 (0.50)	29.9" Hg (101.3 kPa)

Maximum torque - 848 lb-ft (1150 Nm) at 1500 rpm  
 Maximum torque rise - 37.6%  
 Torque rise at 1700 engine rpm - 32%  
 Power increase at 1800 engine rpm - 9.6%

## DRAWBAR PERFORMANCE (Unballasted - Front Drive Engaged) 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)	D.E.F. Consumption lb/hp.hr (kg/kW.h)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>Power at Rated Engine Speed—4.7 mph (7.5 km/h)</b>										
202.4 (150.9)	16205 (72.08)	4.69 (7.54)	2101	3.7	0.437 (0.266)	15.58 (3.07)	0.046 (0.028)	154 (68)	91 (33)	29.3 (99.2)
<b>75% of Pull at Rated Engine Speed—4.7 mph (7.5 km/h)</b>										
153.1 (114.2)	12040 (53.56)	4.77 (7.68)	2116	2.7	0.450 (0.274)	15.13 (2.98)	0.046 (0.028)	144 (62)	91 (33)	29.3 (99.2)
<b>50% of Pull at Rated Engine Speed—4.7 mph (7.5 km/h)</b>										
103.4 (77.1)	7995 (35.57)	4.85 (7.80)	2133	1.9	0.490 (0.298)	13.91 (2.74)	0.044 (0.027)	149 (65)	91 (33)	29.3 (99.2)
<b>75% of Pull at Reduced Engine Speed—6.8 mph (11.0 km/h)</b>										
153.9 (114.8)	12050 (53.61)	4.79 (7.71)	1514	2.6	0.425 (0.259)	16.04 (3.16)	0.041 (0.025)	176 (80)	91 (33)	29.3 (99.2)
<b>50% of Pull at Reduced Engine Speed—6.8 mph (11.0 km/h)</b>										
104.0 (77.5)	8000 (35.58)	4.88 (7.85)	1526	1.7	0.446 (0.271)	15.28 (3.01)	0.043 (0.026)	176 (80)	93 (34)	29.3 (99.2)

**Location of tests:** DLG e.V. Test Centre, Technology and Farm inputs, Max-Eyth-Weg 1, D-64823 Gross-Umstadt, Germany

**Dates of tests:** June to July, 2016.

**Manufacturer:** CNH Industrial Europe Holdings S.A., Boulevard Royal, L-2449 Luxembourg

**CONSUMABLE FLUIDS:** Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.839 Fuel weight 6.98 lbs/gal (0.836 kg/l) Diesel Exhaust Fluid (DEF) 32% aqueous urea solution DEF weight 9.10 lbs/gal (1.093 kg/l) Oil SAE 10W40 API service classification CI-4 Transmission and hydraulic lubricant BP STOU 10W/40 Front axle lubricant SAE 85W90 API GL5

**ENGINE:** Make F.P.T. Industrial Diesel Type six cylinder vertical with turbocharger, air to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment Serial No. \*001375166\* Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 4.094" x 5.197" (104.0 mm x 132.0 mm) Compression ratio 17.0 to 1 Displacement 410 cu in (6728 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 two paper elements Fuel cooler radiator for pump return fuel Exhaust DOC (diesel oxidation catalyst) and SCR (selective catalyst reduction) integrated within a vertical muffler Cooling medium temperature control thermostat and variable speed fan

**CHASSIS:** Type front wheel assist Serial No. \*ZFME50794\* Tread width rear 72.4" (1840 mm) to 114.5" (2908 mm) front 73.1" (1858 mm) to 88.9" (2258 mm) Wheelbase 117.9" (2995 mm) Hydraulic control system direct engine drive Transmission infinitely variable with four ranges and automatic shifting between ranges Nominal travel speeds mph (km/h) forward - 0 - 32.0 mph (0 - 52 km/h), reverse - 0 - 16.8 mph (0 - 27 km/h) Clutch multiple wet disc electrohydraulically operated by foot pedal Brakes wet disc hydraulically operated by two foot pedals that can be locked together Steering hydrostatic Power take-off 1000 rpm at 1853 engine rpm Unladen tractor mass 25355 lb (11500 kg)

## DRAWBAR PERFORMANCE AT 1800 ENGINE RPM

### (Unballasted - Front Drive Engaged) MAXIMUM POWER AT SELECTED SPEEDS

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. <sup>o</sup> F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
3.7 mph (6.0 km/h)										
191.6 (142.9)	24550 (109.20)	2.93 (4.71)	1829	14.9	0.492 (0.299)	14.06 (2.77)	0.049 (0.030)	189 (87)	86 (30)	29.3 (99.2)
4.7 mph (7.5 km/h)										
217.0 (161.8)	20640 (91.81)	3.94 (6.35)	1800	5.3	0.436 (0.265)	15.84 (3.12)	0.044 (0.027)	187 (86)	84 (29)	29.3 (99.2)
5.6 mph (9.0 km/h)										
219.4 (163.6)	17290 (76.91)	4.76 (7.66)	1801	3.8	0.431 (0.262)	16.01 (3.15)	0.043 (0.026)	189 (87)	84 (29)	29.4 (99.7)
6.8 mph (11.0 km/h)										
220.5 (164.4)	14140 (62.89)	5.85 (9.41)	1801	3.1	0.429 (0.261)	16.09 (3.17)	0.044 (0.027)	187 (86)	84 (29)	29.5 (99.8)
8.1 mph (13.0 km/h)										
226.2 (168.7)	12305 (54.74)	6.89 (11.09)	1801	2.6	0.419 (0.255)	16.50 (3.25)	0.043 (0.026)	189 (87)	82 (28)	29.5 (99.8)
9.3 mph (15.0 km/h)										
230.9 (172.2)	10530 (46.84)	8.22 (13.23)	1801	2.3	0.410 (0.249)	16.85 (3.32)	0.039 (0.024)	190 (88)	84 (29)	29.5 (99.8)
10.6 mph (17.0 km/h)										
230.1 (171.6)	9470 (42.13)	9.11 (14.67)	1808	2.0	0.411 (0.250)	16.80 (3.31)	0.039 (0.024)	185 (85)	84 (29)	29.5 (99.8)
11.8 mph (19.0 km/h)										
213.5 (159.2)	7685 (34.19)	10.42 (16.77)	1809	1.7	0.446 (0.271)	15.48 (3.05)	0.046 (0.028)	172 (78)	81 (27)	29.4 (99.7)

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

**NOTE:** The performance results on this report were obtained from tests carried out on the Case IH Optum 270 Diesel.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's remote hydraulic flow claims of 43.6 GPM (165 l/min) (multiple outlets) nor 37.0 GPM (140 l/min) (single outlet). This tractor did not meet the manufacturer's 3 point lift claim of 19180 lbs (8700 kg). The manufacturer's claim of 58 GPM (220 l/min) with high flow pump was not tested for verification. 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 summary of data from OECD Report No. **2986**, Nebraska Summary 1055, December 12, 2016.

Roger M. Hoy  
Director

M.F. Kocher  
P.J. Jasa  
S.K. Pitla  
Board of Tractor Test Engineers

### TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At no load at 4.7 mph (7.5 km/h)	65.9
Bystander	---

### 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**  
Two 710/75R42;\*\*\*;12(80)  
Two 600/60R34;\*\*\*;12(80)  
22.0 in (560 mm)  
14660 lb (6650 kg)  
10860 lb (4925 kg)  
25520 lb (11575 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: No

OECD Static test

Maximum force exerted through whole range: 15800 lbs (70.3 kN)

i) Sustained pressure at compensator cutoff: 2875 psi (198 bar)

**three outlet sets combined**

ii) Pump delivery rate at minimum pressure: 43.5 GPM (164.8 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 39.4 GPM (149.1 l/min)

Delivery pressure: 2175 psi (150 bar)

Power: 49.9 HP (37.2 kW)

**single outlet set**

ii) Pump delivery rate at minimum pressure: 36.7 GPM (138.8 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 28.8 GPM (108.8 l/min)

Delivery pressure: 2655 psi (183 bar)

Power: 44.6 HP (33.3 kW)

**HITCH DIMENSIONS AS TESTED—NO LOAD**

	inch	mm
A	30.3	770
B	17.9	454
C	18.4	468
D	17.3	440
E	9.4	240
F	10.6	270
G	40.3	1025
H	1.7	42
I	21.5	545
J	29.7	755
K	23.3	591
L	52.4	1332
M	25.8	655
N	39.3	997
O	9.1	230
P	56.7	1440
Q	43.2	1098
R	38.2	970

