

# SUMMARY OF OECD TEST 2996-NEBRASKA SUMMARY 1093

## CASE IH MAXXUM 115 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)	
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>						
<b>Rated Engine Speed—(PTO speed—1091 rpm)</b>						
106.7 (79.6)	2100	6.18 (23.37)	0.403 (0.245)	17.28 (3.40)	0.35 (1.31)	
<b>Standard Power Take-off Speed (1000 rpm)</b>						
112.4 (83.8)	1924	6.21 (23.51)	0.385 (0.234)	18.09 (3.56)	0.36 (1.35)	
<b>Maximum Power (1 hour)</b>						
116.5 (86.9)	1800	6.22 (23.56)	0.372 (0.226)	18.73 (3.69)	0.39 (1.49)	

#### VARYING POWER AND FUEL CONSUMPTION

106.7 (79.6)	2100	6.18 (23.37)	0.403 (0.245)	17.27 (3.40)	0.35 (1.31)	Air temperature
91.1 (67.9)	2111	5.44 (20.60)	0.416 (0.253)	16.75 (3.30)	0.30 (1.12)	83°F (29°C)
68.9 (51.4)	2134	4.51 (17.09)	0.456 (0.278)	15.27 (3.01)	0.25 (0.94)	Relative humidity
46.8 (34.9)	2157	3.56 (13.46)	0.530 (0.323)	13.14 (2.59)	0.19 (0.72)	52%
23.5 (17.5)	2178	2.63 (9.94)	0.777 (0.473)	8.96 (1.77)	0.12 (0.46)	Barometer
---	2197	1.87 (7.09)	---	---	0.06 (0.21)	29.4" Hg (99.4 kPa)

Maximum torque - 369 lb.-ft. (500 Nm) at 1500 rpm  
 Maximum torque rise - 38.3%  
 Torque rise at 1700 engine rpm - 32%  
 Power increase at 1800 engine rpm - 9%

#### 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)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>Power at Rated Engine Speed—7th (L7) Gear</b>									
72.8 (54.3)	5510 (24.5)	4.96 (7.98)	2100	3.3	0.590 (0.359)	11.82 (2.33)	176 (80)	84 (29)	29.3 (99.3)
<b>75% of Pull at Rated Engine Speed—7th (L7) Gear</b>									
55.7 (41.5)	4135 (18.4)	5.05 (8.12)	2122	2.7	0.627 (0.381)	11.12 (2.19)	180 (82)	86 (30)	29.3 (99.3)
<b>50% of Pull at Rated Engine Speed—7th (L7) Gear</b>									
37.8 (28.2)	2765 (12.3)	5.13 (8.25)	2145	2.1	0.746 (0.454)	9.34 (1.84)	178 (81)	86 (30)	29.3 (99.3)
<b>75% of Pull at Reduced Engine Speed—8th (H1) Gear</b>									
55.8 (41.6)	4115 (18.3)	5.09 (8.19)	1917	2.6	0.644 (0.392)	10.81 (2.13)	180 (82)	86 (30)	29.3 (99.4)
<b>50% of Pull at Reduced Engine Speed—8th (H1) Gear</b>									
37.7 (28.1)	2765 (12.3)	5.11 (8.22)	1917	2.1	0.667 (0.406)	10.46 (2.06)	180 (82)	88 (31)	29.3 (99.4)

**Location of tests:** Istituto per le Macchine Agricole e Movimento Terra 73, Strada delle Cacce 10135 Torino Italy

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

**Manufacturer:** CNH Europe Holding S.A. 24, Boulevard Royal L-2449 Luxembourg

**CONSUMABLE FLUIDS:** Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.837 Fuel weight 6.97 lbs/gal (0.835 kg/l) Diesel Exhaust Fluid (DEF) 32% aqueous urea solution DEF weight 9.08 lbs/gal (1.091 kg/l) Oil SAE 10W30 API service classification CJ-4 Transmission and hydraulic lubricant Akcela Nexplore fluid Front axle lubricant Akcela Nexplore fluid

**ENGINE:** Make FPT Diesel Type four cylinder vertical with turbocharger, air to air intercooler and SCR (selective catalyst reduction) exhaust treatment Serial No. 0012376974742280S Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 4.094" x 5.197" (104.0 mm x 132.0 mm) Compression ratio 18.0 to 1 Displacement 274 cu in (4485 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 under hood Exhaust vertical Cooling medium temperature control thermostat and variable speed fan

**CHASSIS:** Type front wheel assist Serial No. ZFEE01344 Tread width rear 56.3" (1430 mm) to 84.0" (2134 mm) front 61.4" (1560 mm) to 88.8" (2256 mm) Wheelbase 106.1" (2694 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial (8) range operator controlled powershift Nominal travel speeds mph (km/h) first 1.44 (2.31) second 1.76 (2.83) third 2.14 (3.45) fourth 2.63 (4.23) fifth 3.37 (5.42) sixth 4.13 (6.65) seventh 5.03 (8.10) eighth 5.60 (9.02) ninth 6.18 (9.94) tenth 6.88 (11.07) eleventh 8.37 (13.47) twelfth 10.27 (16.53) thirteenth 13.17 (21.19) fourteenth 16.14 (25.98) fifteenth 19.68 (31.68) sixteenth 25.27 (40.67) reverse 1.43 (2.28), 1.74 (2.80), 2.12 (3.41), 2.60 (4.18), 3.33 (5.36), 4.08 (6.57), 4.97 (8.00), 5.54 (8.92), 6.20 (9.97), 6.80 (10.94), 8.28 (13.32), 10.16 (16.34), 13.01 (20.94), 15.98 (25.71), 19.44 (31.28), 24.97 (40.19)

**DRAWBAR PERFORMANCE**  
**(Unballasted - Front Drive Engaged)**  
**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. <sup>o</sup> F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
4th(L4) Gear									
63.8 (47.6)	10250 (45.6)	2.34 (3.76)	2110	15.0	0.600 (0.365)	11.62 (2.29)	183 (84)	77 (25)	29.3 (99.1)
5th(L5) Gear									
78.2 (58.3)	10230 (45.4)	2.87 (4.62)	1925	9.7	0.547 (0.333)	12.74 (2.51)	183 (84)	79 (26)	29.3 (99.1)
6th(L6) Gear									
84.2 (62.8)	9305 (41.4)	3.39 (5.46)	1806	6.7	0.516 (0.314)	13.50 (2.66)	181 (83)	79 (26)	29.3 (99.1)
7th(L7) Gear									
80.9 (60.3)	7195 (32.0)	4.22 (6.78)	1800	4.3	0.526 (0.320)	13.25 (2.61)	185 (85)	82 (28)	29.3 (99.2)
8th(H1) Gear									
82.6 (61.6)	6565 (29.2)	4.72 (7.60)	1804	3.9	0.526 (0.320)	13.25 (2.61)	185 (85)	82 (28)	29.3 (99.2)
9th(L8) Gear									
82.9 (61.8)	5980 (26.6)	5.20 (8.36)	1797	3.5	0.522 (0.317)	13.35 (2.63)	181 (83)	82 (28)	29.3 (99.2)
10th(H2) Gear									
82.9 (61.8)	5330 (23.7)	5.83 (9.39)	1803	3.2	0.524 (0.319)	13.30 (2.62)	185 (85)	84 (29)	29.3 (99.2)
11th(H3) Gear									
79.9 (59.6)	4205 (18.7)	7.13 (11.47)	1800	2.7	0.522 (0.317)	13.35 (2.63)	185 (85)	84 (29)	29.3 (99.2)
12th(H4) Gear									
77.8 (58.0)	3325 (14.8)	8.77 (14.12)	1802	2.4	0.510 (0.310)	13.65 (2.69)	183 (84)	84 (29)	29.3 (99.3)

**Clutch** wet disc hydraulically actuated by foot pedal  
**Brakes** wet disc hydraulically actuated by two foot pedals that can be locked together  
**Steering** hydrostatic  
**Power take-off** 540 rpm at 1969 engine rpm or 1000 rpm at 1924 engine rpm  
**Unladen tractor mass** 13780 lb (6250 kg)

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

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor fell 2.4% short of the manufacturer's remote hydraulic flow claim of 21.1 GPM (80 l/min) with FD (fixed disp) pump and 8.7% short of the 29.8 GPM (113 l/min) flow claim with the CCLS hydraulic system. 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. **2996**, Nebraska Summary 1093, June 12, 2017.

Roger M. Hoy  
 Director

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 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th(L7) gear	68.4	69.0
Bystander in 15th(H7) gear	--	81.9

**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 480/80R42; \*\*, 12 (80)  
 Two 380/85R30; \*\*, 12 (80)  
 21.7 in (550 mm)  
 8090 lb (3670 kg)  
 5855 lb (2655 kg)  
 13945 lb (6325 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 6990 lbs (31.1 kN) Lift cylinders 2x80 mm  
8945 lbs (39.8 kN) Lift cylinders 2x90 mm

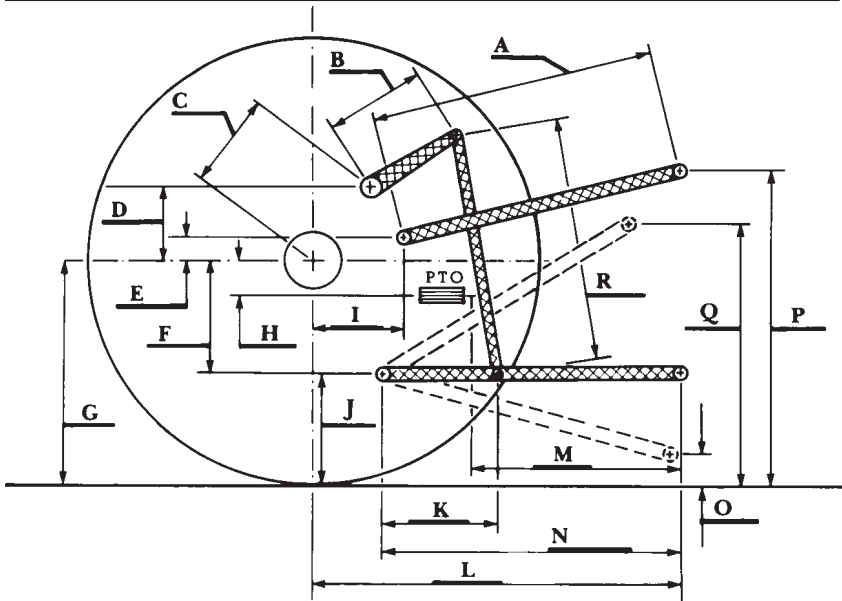
i) Sustained pressure of the open relief valve: 3100 psi (214 bar)  
FD - Fixed disp pump    CCLS Hyd system  
two outlet sets combined

ii) Pump delivery rate at minimum pressure: 20.6 GPM (78.0 l/min)    27.2 GPM (103.2 l/min)

iii) Pump delivery rate at maximum  
hydraulic power: 16.2 GPM (61.2 l/min)    24.2 GPM (91.5 l/min)  
Delivery pressure: 2685 psi (185 bar)    2685 psi (185 bar)  
Power: 25.4 HP (18.9 kW)    37.9 HP (28.2 kW)

ii) Pump delivery rate at minimum pressure: 20.2 GPM (76.5 l/min)    27.0 GPM (102.2 l/min)

iii) Pump delivery rate at maximum  
hydraulic power: 15.5 GPM (58.6 l/min)    24.0 GPM (90.7 l/min)  
Delivery pressure: 2685 psi (185 bar)    2685 psi (185 bar)  
Power: 24.3 Hp (18.1 kW)    37.6 HP (28.0 kW)



**HITCH DIMENSIONS AS TESTED—NO LOAD**

	inch	mm
A	27.0	685
B	12.2	310
C	15.6	395
D	14.6	370
E	7.9	200
F	9.2	235
G	34.4	875
H	3.0	75
I	16.9	430
J	25.2	640
K	19.9	505
L	45.0	1142
M	23.1	587
N	38.3	974
O	7.9	200
P	52.2	1325
Q	34.3	870
R	33.3	845