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Tests 2079 & 2094: Case IH JX 100U Diesel

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SUMMARY OF OECD TESTS 2079 and 2094—NEBRASKA SUMMARY 409

CASE IH JX 100U DIESEL

24 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—613 rpm)					
82.6 (61.6)	2496	4.93 (18.67)	0.418 (0.254)	16.75 (3.30)	
Maximum Power (2 hours)					
83.5 (62.3)	2394	4.87 (18.45)	0.409 (0.249)	17.16 (3.38)	
Standard Power Take-off speed (538 rpm)					
83.1 (62.0)	2191	4.66 (17.63)	0.392 (0.239)	17.87 (3.52)	
VARYING POWER AND FUEL CONSUMPTION					
82.6 (61.6)	2496	4.93 (18.67)	0.418 (0.254)	16.75 (3.30)	Air temperature
74.6 (55.6)	2667	4.77 (18.04)	0.449 (0.273)	15.63 (3.08)	62°F (17°C)
55.5 (41.4)	2688	3.80 (14.39)	0.480 (0.292)	14.61 (2.88)	Relative humidity
38.0 (28.3)	2708	3.06 (11.58)	0.564 (0.343)	12.44 (2.45)	85%
19.6 (14.6)	2736	2.16 (8.17)	0.771 (0.469)	9.09 (1.79)	Barometer
--	2761	1.38 (5.23)	--	--	28.9" Hg (98.0 kPa)
--			--	--	
Maximum Torque -243.8 lb.-ft. (330.6 Nm) at 1507 rpm					
Maximum Torque Rise -40.2%					
Torque rise at 2000 engine rpm -25%					

Location of Test: Istituto Per La Macchine Agricole
E Movimento Terra, Strada delle Cacce, 73-
10135 Torino, Italy

Dates of Test: October 2002 - December 2003

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

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.842
Fuel weight 7.01 lbs/gal (0.840 kg/l) **Oil** SAE 15W40
API service classification CF-4/SG **Oil consumption for 10 hours** 0.02 lb (10 gm)
Transmission and hydraulic lubricant Akcela
Front axle lubricant Akcela
Nexplorer 130 **Front axle lubricant** Akcela
Nexplorer 130

ENGINE: Make Iveco Diesel **Type** four cylinder vertical with turbocharger **Serial No.** 513-869787
Crankshaft lengthwise **Rated Engine speed** 2500
Bore and stroke 4.094" x 4.528" (104 mm x 115 mm)
Compression ratio 16.5 to 1 **Displacement** 238 cu in (3908 ml) **Starting system** 12 volt **Lubrication pressure** **Air cleaner** two paper elements **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** vertical **Cooling medium temperature control** thermostat

CHASSIS: **Type** 2WD and front wheel assist **Serial No.** 001281623 **Tread width** rear 52.4" (1330 mm) to 86.8" (2205 mm) front: 2WD - 55.1" (1400 mm) to 85.4" (2170 mm), FWA - 51.2" (1301 mm) to 83.3" (2116 mm) **Wheel base** 2WD - 92.2" (2342 mm) FWA - 91.1" (2314 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds (30 km/h transmission) mph (km/h)** first 0.98 (1.58) second 1.12 (1.80) third 1.43 (2.30) fourth 1.62 (2.61) fifth 2.06 (3.31) sixth 2.29 (3.69) seventh 2.34 (3.77) eighth 2.61 (4.20) ninth 2.95 (4.74) tenth 3.33 (5.36) eleventh 3.35 (5.40) twelfth 3.79 (6.10) thirteenth 4.80 (7.73) fourteenth 5.40 (8.68) fifteenth 5.47 (8.80) sixteenth 6.15 (9.89) seventeenth 6.88 (11.07) eighteenth 7.83 (12.60) nineteenth 7.84 (12.62) twentieth 8.93 (14.37) twenty-first 11.31 (18.19) twenty-second 12.88 (20.72) twenty-third 16.20 (26.06) twenty-fourth 18.44 (29.67) reverse 1.10 (1.77), 1.60 (2.57), 2.30 (3.70), 2.57 (4.13), 3.30 (5.31), 3.73 (6.00), 5.38 (8.65), 6.04 (9.72), 7.70 (12.39), 8.79 (14.13), 12.66 (20.37), 18.13 (29.18) **Clutch** dual dry disc operated by foot pedal **Brakes** wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2199 engine rpm or 1000 rpm at 2381 engine rpm **Unladen tractor mass** 2WD - 8070 lb (3660 kg), FWA - 8710 lb (3950 kg)

**DRAWBAR PERFORMANCE
BALLASTED - 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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
75% of Pull at Maximum Power—Five Hours 11th (4S Hi) Gear									
56.1 (41.8)	5125 (22.8)	4.10 (6.60)	2670	3.5	0.583 (0.354)	12.03 (2.37)	194 (90)	43 (6)	30.1 (102.0)
MAXIMUM POWER IN SELECTED GEARS									
6th (1M Lo) Gear									
59.9 (44.7)	9510 (42.3)	2.36 (3.80)	2660	15.2	0.559 (0.340)	12.54 (2.47)	192 (89)	43 (6)	30.1 (102.1)
7th (3S Hi) Gear									
61.8 (46.1)	9105 (40.5)	2.55 (4.10)	2540	12.2	0.556 (0.338)	12.60 (2.48)	187 (86)	43 (6)	30.1 (102.1)
8th (1M Hi) Gear									
64.8 (48.3)	8500 (37.8)	2.86 (4.60)	2510	8.5	0.535 (0.325)	13.11 (2.58)	187 (86)	43 (6)	30.1 (102.1)
9th (4S Lo) Gear									
66.5 (49.6)	7870 (35.0)	3.17 (5.10)	2495	7.8	0.521 (0.317)	13.45 (2.65)	190 (88)	45 (7)	30.1 (102.1)
10th (2M Lo) Gear									
67.5 (50.3)	7015 (31.2)	3.61 (5.80)	2445	6.5	0.510 (0.310)	13.76 (2.71)	192 (89)	45 (7)	30.1 (102.1)
11th (4S Hi) Gear									
68.0 (50.7)	6835 (30.4)	3.73 (6.00)	2430	6.0	0.506 (0.308)	13.86 (2.73)	194 (90)	45 (7)	30.1 (102.1)
12th (2M Hi) Gear									
67.2 (50.1)	5955 (26.5)	4.23 (6.80)	2440	5.5	0.512 (0.312)	13.68 (2.70)	196 (91)	45 (7)	30.1 (102.1)
13th (3M Lo) Gear									
68.0 (50.7)	4945 (22.0)	5.16 (8.30)	2420	4.8	0.506 (0.308)	13.86 (2.73)	190 (88)	46 (8)	30.1 (102.1)
14th (1F Lo) Gear									
67.6 (50.4)	4340 (19.3)	5.84 (9.40)	2430	4.0	0.510 (0.310)	13.76 (2.71)	198 (92)	46 (8)	30.1 (102.1)
15th (3M Hi) Gear									
66.9 (49.9)	4000 (17.8)	6.28 (10.10)	2440	3.5	0.513 (0.312)	13.65 (2.69)	190 (88)	46 (8)	30.1 (102.1)
16th (1F Hi) Gear									
64.8 (48.3)	3460 (15.4)	7.02 (11.30)	2450	3.0	0.531 (0.323)	13.20 (2.60)	194 (90)	46 (8)	30.1 (102.1)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance results on this summary were taken from OECD tests conducted under the Code I Test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **2079** and **2094**, Nebraska Summary 409, February 17, 2004.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

JX 100U- FWA (40 km/h transmission)

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	-No., size, ply & psi (kPa)	Two 480/70R34; **,13 (90)	Two 480/70R34; **,13 (90)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	440 lb (200 kg)	None
Front Tires	-No., size, ply & psi (kPa)	Two 380/70R24; **,13 (90)	Two 380/70R24; **,13 (90)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	1210 lb (550 kg)	None
Height of Drawbar		19.5 in (495 mm)	19.7 in (500 mm)
Static Weight with Operator	- Rear	5785 lb (2625 kg)	5345 lb (2425 kg)
	- Front	4740 lb (2150 kg)	3525 lb (1600 kg)
	- Total	10525 lb (4775 kg)	8875 lb (4025 kg)

DRAWBAR PERFORMANCE
BALLASTED - 2WD
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)
75% of Pull at Maximum Power—Five Hours 13th (3M Lo) Gear									
57.9 (43.2)	4340 (19.3)	5.00 (8.05)	2701	4.3	0.464 (0.282)	15.13 (2.98)	185 (85)	64 (18)	30.1 (101.9)
MAXIMUM POWER IN SELECTED GEARS									
12th (2M Hi) Gear									
64.5 (48.1)	7105 (31.6)	3.40 (5.47)	2499	12.3	0.539 (0.328)	12.99 (2.56)	192 (89)	68 (20)	30.2 (102.1)
13th (3M Lo) Gear									
69.3 (51.6)	5840 (26.0)	4.45 (7.16)	2503	6.2	0.506 (0.308)	13.86 (2.73)	192 (89)	70 (21)	30.2 (102.1)
14th (1F Lo) Gear									
69.4 (51.7)	5215 (23.2)	5.00 (8.04)	2502	5.4	0.506 (0.308)	13.86 (2.73)	187 (86)	68 (20)	30.2 (102.1)
15th (3M Hi) Gear									
69.4 (51.7)	5060 (22.5)	5.15 (8.28)	2496	5.1	0.510 (0.310)	13.76 (2.71)	192 (89)	68 (20)	30.2 (102.1)
16th (1F Hi) Gear									
69.4 (51.8)	4545 (20.2)	5.72 (9.21)	2501	4.8	0.506 (0.308)	13.86 (2.73)	196 (91)	70 (21)	30.2 (102.1)
17th (4M Lo) Gear									
65.5 (48.9)	4075 (18.1)	6.03 (9.71)	2503	4.0	0.533 (0.324)	13.15 (2.59)	190 (88)	70 (21)	30.2 (102.1)
18th (4M Hi) Gear									
63.4 (47.3)	3505 (15.6)	6.78 (10.91)	2500	3.5	0.548 (0.333)	12.79 (2.52)	190 (88)	68 (20)	30.2 (102.1)

JX 100U-2WD (30 km/h transmission)

TIRES, BALLAST AND WEIGHT	With Ballast	Without Ballast
Rear Tires	-No., size, ply & psi (kPa) Two 480/70R34;**,13 (90)	Two 480/70R34;**,13 (90)
Ballast	-Liquid (total) None	None
	-Cast Iron (total) 440 lb (200 kg)	None
Front Tires	-No., size, ply & psi (kPa) Two 7.50-20;8;54 (370)	Two 7.50-20; 8;54 (370)
Ballast	-Liquid (total) None	None
	-Cast Iron (total) 1210 lb (550 kg)	None
Height of Drawbar	27.4 in (695 mm)	27.8 in (705 mm)
Static Weight with Operator	-Rear 5575 lb (2530 kg)	5135 lb (2330 kg)
	-Front 4310 lb (1955 kg)	3100 lb (1405 kg)
	-Total 9885 lb (4485 kg)	8235 lb (3735 kg)

TRACTOR SOUND LEVEL WITH CAB	FWA dB(A)	2WD dB(A)
At no load in 13th (3M Lo) gear	79.6	79.6
Bystander in 24th (4F Hi) gear	84.9	85.7

CENTER OF GRAVITY - 2WD

Horizontal distance forward from centerline of rear wheels	34.5" (876 mm)
Vertical distance above roadway	34.6" (880 mm)
Horizontal distance from center of rear wheel tread	0" (0 mm) to the left/right

CENTER OF GRAVITY - FWA

Horizontal distance forward from centerline of rear wheels	36.3" (923 mm)
Vertical distance above roadway	33.8" (858 mm)
Horizontal distance from center of rear wheel tread	0" (0 mm) to the left/right

TURNING ON A CONCRETE SURFACE (2WD)

Turning radius—without brake right 152" (3.85 m) left 150" (3.80 m)
Turning space radius—without brake right 154" (3.90 m) left 150" (3.80 m)

TURNING ON A CONCRETE SURFACE (FWA)

Turning radius—without brake right 224" (5.70 m) left 220" (5.60 m)
Turning space radius—without brake right 228" (5.80 m) left 224" (5.70 m)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range:	6825 lbs (30.4 kN)
i) Opening pressure of relief valve:	NA
Sustained pressure with relief valve open:	2875 psi (198 bar)
ii) Pump delivery rate at minimum pressure:	16.3 GPM (61.8 l/min)
iii) Pump delivery rate at maximum	
hydraulic power:	13.9 GPM (52.8 l/min)
Delivery pressure:	2435 psi (168 bar)
Power:	19.7 HP (14.7 kW)

THREE POINT HITCH PERFORMANCE (SAE Static Test)

Observed Maximum Pressure psi.(bar)	2875 (198)
Location:	hydraulic pump
Hydraulic oil temperature: °F (°C)	144 (62)
Location:	hydraulic sump
Category:	II
Quick attach:	none

System pressure 2585 psi (178 Bar)

Hitch point distance to ground level in.(mm)	8.0 (203)	13.6 (345)	19.2 (488)	24.8 (630)	30.4 (773)	36.0 (915)
Lift force on frame lb	12340	11600	10455	9260	8275	7900
" " " " " " (kN)	(54.9)	(51.6)	(46.5)	(41.2)	(36.8)	(35.1)

SAE TEST

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	27.0	685	26.8	680
B	10.0	255	10.0	255
C	13.0	329	13.0	329
D	11.8	300	11.8	300
E	13.2	335	10.0	255
F	8.1	205	8.1	205
G	29.3	745	29.3	745
H	0.6	15	0.6	15
I	15.7	400	15.7	400
J	21.2	540	21.2	540
K	21.2	540	18.3	465
L	43.3	1100	43.3	1100
M	21.7	550	21.7	550
N	38.0	965	38.0	965
O	8.0	203	7.9	200
P	40.2	1021	45.3	1150
Q	34.3	870	35.0	870
R	25.8	655	23.8	605

HITCH DIMENSIONS AS TESTED—NO LOAD

