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SUMMARY OF OECD TESTS 2078 and 2093—NEBRASKA SUMMARY 408
CASE IH JX 90U 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)					
78.0 *(58.2)*	2496	4.77 *(18.06)*	0.429 *(0.261)*	16.34 *(3.22)*	
Maximum Power (2 hours)					
80.9 *(60.3)*	2191	4.61 *(17.46)*	0.400 *(0.243)*	17.51 *(3.45)*	
Standard Power Take-off speed (538 rpm)					
80.9 *(60.3)*	2191	4.61 *(17.46)*	0.400 *(0.243)*	17.51 *(3.45)*	
VARYING POWER AND FUEL CONSUMPTION					
78.0 *(58.2)*	2496	4.77 *(18.06)*	0.429 *(0.261)*	16.34 *(3.22)*	Air temperature
69.1 *(51.5)*	2606	4.44 *(16.81)*	0.451 *(0.274)*	15.54 *(3.06)*	66°F *(19°C)*
52.3 *(39.0)*	2655	3.75 *(14.18)*	0.464 *(0.305)*	13.96 *(2.75)*	Relative humidity
35.3 *(26.3)*	2679	2.87 *(10.87)*	0.502 *(0.348)*	12.28 *(2.42)*	75%
18.0 *(13.4)*	2688	2.46 *(9.30)*	0.956 *(0.582)*	7.32 *(1.44)*	Barometer
-- --	2708	1.59 *(6.01)*	-- --	-- --	29.4" Hg *(99.4 kPa)*

Maximum Torque -213.5 lb.-ft. *(289.5 Nm)* at 1429 rpm
Maximum Torque Rise -30.1%
Torque rise at 2000 engine rpm -24%

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 Nexplorer 130 **Front axle lubricant** Akcela Nexplorer 130

ENGINE: Make Iveco Diesel **Type** four cylinder vertical with turbocharger **Serial No.** 509-864309 **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** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type 2WD and front wheel assist **Serial No.** 001280293 **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)*	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 12th (2M Hi) Gear									
52.3 *(39.0)*	4205 *(18.7)*	4.66 *(7.50)*	2620	3.0	0.598 *(0.364)*	11.67 *(2.30)*	180 *(82)*	50 *(10)*	29.9 *(101.3)*
MAXIMUM POWER IN SELECTED GEARS									
5th (3S Lo) Gear									
52.3 *(39.0)*	9285 *(41.3)*	2.11 *(3.40)*	2630	15.1	0.547 *(0.333)*	12.79 *(2.52)*	189 *(87)*	54 *(12)*	29.9 *(101.3)*
6th (1M Lo) Gear									
59.8 *(44.6)*	9260 *(41.2)*	2.42 *(3.90)*	2516	9.9	0.552 *(0.336)*	12.69 *(2.50)*	190 *(88)*	54 *(12)*	29.9 *(101.3)*
7th (3S Hi) Gear									
61.6 *(45.9)*	8835 *(39.3)*	2.61 *(4.20)*	2497	8.7	0.544 *(0.331)*	12.89 *(2.54)*	187 *(86)*	54 *(12)*	29.9 *(101.3)*
8th (1M Hi) Gear									
62.9 *(46.9)*	8070 *(35.9)*	2.92 *(4.70)*	2490	7.3	0.532 *(0.324)*	13.17 *(2.60)*	183 *(84)*	54 *(12)*	29.9 *(101.3)*
9th (4S Lo) Gear									
64.1 *(47.8)*	7440 *(33.1)*	3.23 *(5.20)*	2484	6.0	0.521 *(0.317)*	13.45 *(2.65)*	187 *(86)*	54 *(12)*	29.9 *(101.3)*
10th (2M Lo) Gear									
65.0 *(48.5)*	6540 *(29.1)*	3.73 *(6.00)*	2482	5.0	0.514 *(0.313)*	13.64 *(2.69)*	181 *(83)*	54 *(12)*	29.9 *(101.3)*
11th (4S Hi) Gear									
65.2 *(48.6)*	6340 *(28.2)*	3.86 *(6.20)*	2475	4.8	0.513 *(0.312)*	13.65 *(2.69)*	180 *(82)*	52 *(11)*	29.9 *(101.3)*
12th (2M Hi) Gear									
65.4 *(48.8)*	5640 *(25.1)*	4.35 *(7.00)*	2458	4.3	0.511 *(0.311)*	13.72 *(2.70)*	187 *(86)*	52 *(11)*	29.9 *(101.3)*
13th (3M Lo) Gear									
65.0 *(48.5)*	4565 *(20.3)*	5.34 *(8.60)*	2447	3.7	0.513 *(0.312)*	13.65 *(2.69)*	183 *(84)*	52 *(11)*	29.9 *(101.3)*
14th (1F Lo) Gear									
65.0 *(48.5)*	4090 *(18.2)*	5.97 *(9.60)*	2438	3.5	0.513 *(0.312)*	13.65 *(2.69)*	189 *(87)*	52 *(11)*	29.9 *(101.3)*
15th (3M Hi) Gear									
64.6 *(48.2)*	3820 *(17.0)*	6.34 *(10.20)*	2432	3.0	0.523 *(0.318)*	13.40 *(2.64)*	187 *(86)*	52 *(11)*	29.9 *(101.3)*
16th (1F Hi) Gear									
63.8 *(47.6)*	3350 *(14.9)*	7.14 *(11.50)*	2427	2.7	0.523 *(0.318)*	13.40 *(2.64)*	185 *(85)*	52 *(11)*	29.9 *(101.3)*

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. **2078** and **2093,** Nebraska Summary 408, February 17, 2004.

Leonard L. Bashford
Director

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

JX 90U-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		19.7 in *(495 mm)*	19.7 in *(500 mm)*
Static Weight with Operator	- Rear	5765 lb *(2615 kg)*	5325 lb *(2415 kg)*
	- Front	4760 lb *(2160 kg)*	3550 lb *(1610 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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F cool-ing med	(°C) Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power—Five Hours 13th (3M Lo) Gear									
52.4	4000	4.91	2650	4.1	0.505	13.91	183	66	29.7
(39.1)	*(17.8)*	*(7.90)*			*(0.307)*	*(2.74)*	*(84)*	*(19)*	*(100.7)*
MAXIMUM POWER IN SELECTED GEARS									
9th (4S Lo) Gear									
51.8	7330	2.65	2613	15.2	0.609	11.50	198	64	29.9
(38.6)	*(32.6)*	*(4.26)*			*(0.371)*	*(2.27)*	*(92)*	*(18)*	*(101.1)*
10th (2M Lo) Gear									
59.4	7285	3.06	2497	14.8	0.573	12.23	189	66	29.9
(44.3)	*(32.4)*	*(4.92)*			*(0.349)*	*(2.41)*	*(87)*	*(19)*	*(101.1)*
11th (4S Hi) Gear									
62.5	7305	3.21	2502	12.0	0.542	12.93	194	64	29.9
(46.6)	*(32.5)*	*(5.16)*			*(0.330)*	*(2.55)*	*(90)*	*(18)*	*(101.1)*
12th (2M Hi) Gear									
62.0	6560	3.55	2498	6.9	0.550	12.74	190	66	29.9
(46.2)	*(29.2)*	*(5.71)*			*(0.335)*	*(2.51)*	*(88)*	*(19)*	*(101.1)*
13th (3M Lo)Gear									
65.4	5370	4.57	2501	4.7	0.518	13.52	187	64	29.9
(48.7)	*(23.9)*	*(7.35)*			*(0.315)*	*(2.66)*	*(86)*	*(18)*	*(101.1)*
14th (1F Lo) Gear									
64.8	4750	5.12	2500	4.5	0.527	13.30	196	64	29.9
(48.4)	*(21.1)*	*(8.24)*			*(0.321)*	*(2.62)*	*(91)*	*(18)*	*(101.1)*
15th (3M Hi) Gear									
60.9	4315	5.29	2503	4.4	0.548	12.79	183	66	29.9
(45.4)	*(19.2)*	*(8.51)*			*(0.333)*	*(2.52)*	*(84)*	*(19)*	*(101.1)*
16th (1F Hi) Gear									
63.7	4045	5.91	2505	4.1	0.538	13.05	187	66	29.9
(47.5)	*(18.0)*	*(9.51)*			*(0.327)*	*(2.57)*	*(86)*	*(19)*	*(101.1)*
17th(4M Lo) Gear									
63.4	3575	6.65	2496	3.5	0.533	13.15	189	64	29.9
(47.3)	*(15.9)*	*(10.71)*			*(0.324)*	*(2.59)*	*(87)*	*(18)*	*(101.1)*

JX90U-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		27.2 in *(690 mm)*	27.6 in *(700 mm)*
Static Weight with Operator	- Rear	5600 lb *(2540 kg)*	5160 lb *(2340 kg)*
	- Front	4285 lb *(1945 kg)*	3075 lb *(1395 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	79.4	79.4
Bystander in 24th (4F Hi) gear	84.7	85.6

CENTER OF GRAVITY - 2WD

Horizontal distance forward from centerline of rear wheels	34.8" *(883 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	37.3" *(947 mm)*
Vertical distance above roadway	33.7" *(855 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)

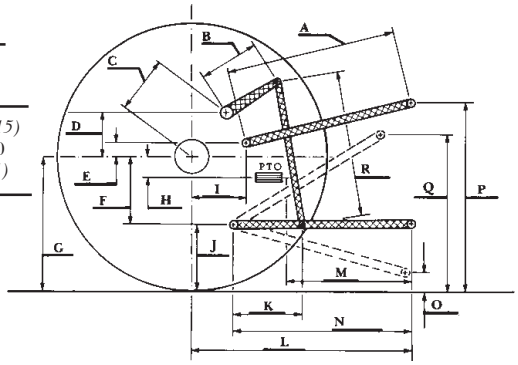
Observed maximum pressure psi. *(bar)*	2875 *(198)*
Location:	hydraulic pump
Hydraulic oil temperature: °F *(°C)*	144 *(62)*
Location:	hydraulic sump
Category:	II
Quick attach:	none

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 inch	SAE TEST *mm*	OECD TEST inch	OECD TEST *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



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