

January 2004

## Tests 2162 & 2163: Case IH JX 1070C Diesel

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# SUMMARY OF OECD TESTS 2162 and 2163—NEBRASKA SUMMARY 451 CASE IH JX 1070C DIESEL 16 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed—565 rpm)</b>					
59.8 (44.6)	2299	3.87 (14.65)	0.452 (0.275)	15.45 (3.04)	
<b>Maximum Power (2 hours)</b>					
60.6 (45.2)	2248	3.88 (14.70)	0.447 (0.272)	15.63 (3.08)	
<b>Standard Power Take-off speed (543 rpm)</b>					
60.2 (44.9)	2211	3.77 (14.27)	0.437 (0.266)	15.99 (3.15)	

## VARYING POWER AND FUEL CONSUMPTION

59.8 (44.6)	2299	3.87 (14.65)	0.452 (0.275)	15.45 (3.04)	Air temperature
52.4 (39.1)	2370	3.55 (13.43)	0.473 (0.288)	14.77 (2.91)	64°F (18°C)
39.7 (29.6)	2393	2.89 (10.95)	0.510 (0.310)	13.70 (2.70)	Relative humidity
27.0 (20.1)	2427	2.26 (8.54)	0.585 (0.356)	11.94 (2.35)	51%
13.5 (10.1)	2461	1.63 (6.18)	0.847 (0.515)	8.26 (1.63)	Barometer
--	2478	1.03 (3.91)	--	--	30.1" Hg (101.8 kPa)

Maximum Torque -156.9 lb.-ft. (257.9 Nm) at 1423 rpm  
Maximum Torque Rise -39.1%  
Torque rise at 1800 engine rpm -23%

**Location of tests:** Alma Mater Studiorum, University  
Di Bologna, Via Gandolfi, 19-40057, Cadriano,  
Bologna, Italy

**Dates of tests:** February-May, 2004

**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)** 0.840  
**Fuel weight** 6.99 lbs/gal (0.838 kg/l) **Oil** SAE 15W40  
**API service classification** CF-4/SG **Oil consumption for 10 hours** 0.03 lb (13 gm)  
**Transmission and hydraulic lubricant** Akcela  
Nexplorer 130 **Front axle lubricant** Akcela  
Nexplorer 130

**ENGINE: Make** Iveco Diesel **Type** three cylinder  
vertical with turbocharger **Serial No.** 864359  
**Crankshaft** lengthwise **Rated engine speed** 2300  
**Bore and stroke** 4.094" x 4.528" (104.0 mm x 115.0  
mm) **Compression ratio** 18.0 to 1 **Displacement**  
179 cu in (2930 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.** HJH297816 **Tread width** rear 48.5" (1232 mm)  
to 76.7" (1949 mm) front: 2WD - 56.7" (1439 mm)  
to 63.3" (1607 mm), FWA - 48.7" (1236 mm) to 76.6"  
(1945 mm) **Wheel base** 2WD - 83.8" (2130 mm) FWA  
- 81.3" (2065 mm) **Hydraulic control system** direct  
engine drive **Transmission** selective gear fixed ratio  
**Nominal travel speeds (30 km/h transmission) mph**  
(km/h) first 0.39 (0.63) second 0.58 (0.93) third 0.85  
(1.37) fourth 1.26 (2.03) fifth 1.63 (2.63) sixth 2.00  
(3.22) seventh 2.43 (3.91) eighth 2.98 (4.79) ninth  
3.57 (5.75) tenth 4.37 (7.04) eleventh 5.30 (8.53)  
twelfth 5.77 (9.28) thirteenth 6.49 (10.44) fourteenth  
8.60 (13.84) fifteenth 12.64 (20.34) sixteenth 18.72  
(30.13) reverse 0.38 (0.61), 0.56 (0.90), 0.83 (1.33),  
1.22 (1.97), 1.58 (2.54), 1.93 (3.11), 2.36 (3.79), 2.88  
(4.64), 3.46 (5.57), 4.24 (6.82), 5.13 (8.26), 5.59  
(8.99), 6.28 (10.11), 8.33 (13.40), 12.24 (19.70),  
18.14 (29.19) **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 2196 engine  
rpm or 1000 rpm at 2260 engine rpm **Unladen**  
**tractor mass** 2WD - 5920 lb (2685 kg), FWA - 6450  
lb (2925 kg)

**DRAWBAR PERFORMANCE(40 km/h trans.)**

**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)
<b>75% of Pull at Maximum Power—Five Hours 10th (3MHi) Gear</b>									
40.0 (29.8)	2720 (12.10)	5.52 (8.88)	2387	4.3	0.539 (0.328)	12.98 (2.56)	194 (90)	66 (19)	30.0 (101.7)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
6th (1M Hi) Gear									
40.0 (29.8)	6665 (29.65)	2.25 (3.62)	2383	15.0	0.530 (0.322)	13.20 (2.60)	194 (90)	70 (21)	29.9 (101.3)
7th (2M Lo) Gear									
46.8 (34.9)	6590 (29.32)	2.66 (4.28)	2304	14.7	0.547 (0.333)	12.79 (2.52)	190 (88)	68 (20)	29.9 (101.3)
8th (2M Hi) Gear									
50.4 (37.6)	5590 (24.87)	3.38 (5.44)	2275	10.3	0.515 (0.313)	13.57 (2.67)	192 (89)	68 (20)	29.9 (101.3)
9th (3M Lo) Gear									
50.8 (37.9)	4520 (20.11)	4.21 (6.78)	2270	6.5	0.514 (0.313)	13.60 (2.68)	192 (89)	66 (19)	29.9 (101.3)
10th (3M Hi) Gear									
51.0 (38.0)	3620 (16.10)	5.28 (8.50)	2280	5.2	0.512 (0.312)	13.65 (2.69)	194 (90)	68 (20)	29.9 (101.3)
11th (4M Lo) Gear									
50.3 (37.5)	2920 (12.98)	6.46 (10.40)	2284	4.6	0.522 (0.318)	13.39 (2.64)	190 (88)	68 (20)	29.9 (101.3)
12th (1 Hi) Gear									
50.9 (38.0)	2720 (12.10)	7.02 (11.30)	2284	4.1	0.518 (0.315)	13.50 (2.66)	192 (89)	70 (21)	29.9 (101.3)
13th (4 M Hi) Gear									
48.9 (36.5)	2295 (10.21)	8.00 (12.87)	2300	3.7	0.536 (0.326)	13.05 (2.57)	190 (88)	68 (20)	29.9 (101.3)
14th (2 Hi) Gear									
47.9 (35.7)	1725 (7.67)	10.42 (16.77)	2243	2.9	0.551 (0.335)	12.69 (2.50)	189 (87)	68 (20)	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. This tractor did not meet the manufacturer's claim of 5258 lbs (2385 kg) 3 point lift capacity. 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. **2162** and **2163**, Nebraska Summary 451, August 29, 2005.

Leonard L. Bashford  
Director

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

**JX 1070C-FWA(40 km/h transmission)**

<b>TIRES, BALLAST AND WEIGHT</b>		<b>With Ballast</b>	<b>Without Ballast</b>
<b>Rear Tires</b>	-No., size, ply & psi (kPa)	Two 16.9R30; **,19 (130)	Two 16.9R30; **,19 (130)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	440 lb (200 kg)	None
<b>Front Tires</b>	-No., size, ply & psi (kPa)	Two 11.2R24; **,17 (120)	Two 11.2R24; **,17 (120)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	640 lb (290 kg)	None
<b>Height of Drawbar</b>		19.7 in (500 mm)	19.7 in (500 mm)
<b>Static Weight with Operator</b>	- Rear	4565 lb (2070 kg)	4300 lb (1950 kg)
	- Front	3130 lb (1420 kg)	2315 lb (1050 kg)
	- Total	7695 lb (3490 kg)	6615 lb (3000 kg)

## DRAWBAR PERFORMANCE(30 km/h trans.)

### BALLASTED - 2WD

#### FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/lp.hr (kg/kW.h)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)	
<b>75% of Pull at Maximum Power—Five Hours 10th (3 MHi) Gear</b>									
38.6 (28.8)	3410 (15.16)	4.25 (6.85)	2380	7.2	0.542 (0.330)	12.89 (2.54)	183 (84)	64 (18)	30.1 (102.0)

#### MAXIMUM POWER IN SELECTED GEARS

9th (3M Lo) Gear									
43.6 (32.5)	5150 (22.91)	3.17 (5.11)	2372	15.1	0.528 (0.321)	13.25 (2.61)	183 (84)	57 (14)	29.9 (101.2)
10th (3M Hi) Gear									
45.7 (34.1)	4535 (20.17)	3.78 (6.09)	2232	12.1	0.540 (0.329)	12.94 (2.55)	185 (85)	59 (15)	29.9 (101.2)
11th (4 M Lo) Gear									
48.5 (36.2)	3760 (16.72)	4.84 (7.79)	2263	8.4	0.539 (0.328)	12.98 (2.56)	187 (86)	57 (14)	29.9 (101.2)
12th (1 Hi) Gear									
49.8 (37.2)	3525 (15.68)	5.30 (8.53)	2263	7.8	0.526 (0.320)	13.30 (2.62)	185 (85)	59 (15)	29.9 (101.2)
13th (4 M Hi) Gear									
49.4 (36.8)	3015 (13.42)	6.14 (9.88)	2284	6.1	0.530 (0.322)	13.20 (2.60)	183 (84)	59 (15)	29.9 (101.2)
14th (2 Hi) Gear									
47.1 (35.1)	2175 (9.67)	8.13 (13.08)	2241	4.1	0.555 (0.337)	12.61 (2.48)	185 (85)	61 (16)	29.9 (101.2)

## JX 1070C-2WD (30km/h transmission)

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
<b>Rear Tires</b>	-No., size, ply & psi (kPa)	Two 16.9R30;**,17(120)	Two 16.9R30;**,17(120)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	440 lb (200 kg)	None
<b>Front Tires</b>	-No., size, ply & psi (kPa)	Two 7.50-16; 8; 44(300)	Two 7.50-16; 8; 44(300)
<b>Ballast</b>	-Liquid (total)	None	None
	-Cast Iron (total)	640 lb (290 kg)	None
<b>Height of Drawbar</b>		26.4 in (670 mm)	26.4 in (670 mm)
<b>Static Weight with Operator</b>	-Rear	4345 lb (1970 kg)	4055 lb (1840 kg)
	-Front	2820 lb (1280 kg)	2030 lb (920 kg)
	-Total	7165 lb (3250 kg)	6085 lb (2760 kg)

TRACTOR SOUND LEVEL WITH CAB	FWA dB(A)	2WD dB(A)
At no load in 9th (3M Lo) gear	79.4	79.1
Bystander in 16th (4 Hi) gear	82.8	81.9

#### CENTER OF GRAVITY - 2WD

Horizontal distance forward from centerline of rear wheels	27.8" (705 mm)
Vertical distance above roadway	31.7" (804 mm)
Horizontal distance from center of rear wheel tread	0.3" (6 mm) to the left

#### CENTER OF GRAVITY - FWA

Horizontal distance forward from centerline of rear wheels	28.5" (723 mm)
Vertical distance above roadway	31.9" (809 mm)
Horizontal distance from center of rear wheel tread	0.2" (5 mm) to the left

#### TURNING ON A CONCRETE SURFACE (2WD)

Turning radius—without brake right 141" (3.58 m) left 139" (3.53 m)
Turning space radius—without brake right 145" (3.68 m) left 143" (3.63 m)

#### TURNING ON A CONCRETE SURFACE (FWA)

Turning radius—without brake right 140" (3.56 m) left 140" (3.56 m)
Turning space radius—without brake right 146" (3.70 m) left 146" (3.70 m)

#### THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range: 3945 lbs (17.5 kN)

i) Opening pressure of relief valve: NA

Sustained pressure with relief valve open: 3010 psi (208 bar) 3000 psi (207 bar) High flow option

ii) Pump delivery rate at minimum pressure: 13.8 GPM (52.3 l/min) 16.9 GPM (63.9 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 9.6 GPM (36.2 l/min) 14.9 GPM (56.4 l/min)

Delivery pressure: 2830 psi (195 bar) 2340 psi (161 bar)

Power: 15.8 HP (11.8 kW) 20.3 HP (15.2 kW)

#### THREE POINT HITCH PERFORMANCE (SAE Static Test)

Observed maximum pressure psi. (bar) 3010 (208)

Location: hydraulic pump

Hydraulic oil temperature: °F (°C) 114 (45)

Location: hydraulic sump

Category: II

Quick attach: none

System pressure 2730 psi (188 Bar)

Hitch point distance to ground level in. (mm) 14.6 (370) 19.3 (490) 24.2 (615) 28.9 (735) 33.9 (860) 38.6 (980)

Lift force on frame lb 4835 5290 5260 4995 4655 4280

" " " " " " (kN) (21.5) (23.5) (23.4) (22.2) (20.7) (19.0)

#### HITCH DIMENSIONS AS TESTED—NO LOAD

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	27.2	690	27.4	695
B	10.0	255	10.0	255
C	12.3	312	12.3	312
D	10.9	276	10.9	276
E	14.2	361	12.1	308
F	7.5	189	7.5	189
G	27.2	690	27.4	695
H	1.2	30	1.2	30
I	13.4	340	13.6	345
J	19.7	501	19.9	506
K	20.6	523	20.6	523
L	40.7	1035	40.7	1035
M	21.7	550	21.7	550
N	34.6	880	34.6	880
O	14.6	370	14.7	373
P	38.7	984	43.9	1116
Q	39.7	1009	39.7	1009
R	22.4	570	22.6	573

