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## Tests 2146 & 2147: Case IH JX 65 Diesel Series II

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# SUMMARY OF OECD TESTS 2146 & 2147—NEBRASKA SUMMARY 460

## CASE IH JX 65 DIESEL

### 12 SPEED

### Chassis Serial numbers HFJ013287 and higher

#### 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-614 rpm)</b>					
59.3 (44.2)	2500	3.76 (14.23)	0.437 (0.266)	15.79 (3.11)	
<b>Maximum Power (2 hours)</b>					
60.5 (45.1)	2300	3.71 (14.06)	0.424 (0.258)	16.29 (3.21)	
<b>Standard Power Take-off Speed (540 rpm)</b>					
59.8 (44.6)	2200	3.64 (13.77)	0.419 (0.255)	16.45 (3.24)	

#### VARYING POWER AND FUEL CONSUMPTION

59.3 (44.2)	2500	3.76 (14.23)	0.437 (0.266)	15.79 (3.11)	Air temperature
52.0 (38.8)	2584	3.49 (13.20)	0.462 (0.281)	14.92 (2.94)	73°F (23°C)
39.6 (29.5)	2620	2.81 (10.62)	0.490 (0.298)	14.10 (2.78)	Relative humidity
26.6 (19.9)	2643	2.12 (8.03)	0.550 (0.335)	12.54 (2.47)	41%
13.5 (10.1)	2687	1.55 (5.87)	0.791 (0.481)	8.73 (1.72)	Barometer
--	2714	1.05 (3.97)	--	--	27.0" Hg (91.5 kPa)

Maximum Torque - 172.5 lb.-ft. (233.8 Nm) at 1300 rpm  
 Maximum Torque Rise - 38.4%  
 Torque rise at 2000 engine rpm - 23%

#### 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>Maximum Power—8th (III-1) Gear</b>									
46.4 (34.6)	3095 (13.77)	5.62 (9.05)	2502	5.0	0.562 (0.342)	12.44 (2.45)	167 (75)	63 (17)	27.3 (92.3)
<b>75% of Pull at Maximum Power—8th (III-1) Gear</b>									
36.9 (27.5)	2325 (10.33)	5.95 (9.57)	2601	3.3	0.649 (0.395)	10.76 (2.12)	167 (75)	63 (17)	27.3 (92.3)
<b>50% of Pull at Maximum Power—8th (III-1) Gear</b>									
25.3 (18.9)	1550 (6.89)	6.12 (9.85)	2633	1.7	0.774 (0.471)	9.02 (1.78)	167 (75)	63 (17)	27.3 (92.3)
<b>75% of Pull at Reduced Engine Speed—9th (II-4) Gear</b>									
36.6 (27.3)	2315 (10.30)	5.92 (9.53)	2028	3.2	0.547 (0.333)	12.78 (2.52)	167 (75)	63 (17)	27.3 (92.3)
<b>50% of Pull at Reduced Engine Speed—9th (II-4) Gear</b>									
25.7 (19.1)	1570 (6.99)	6.13 (9.86)	2072	1.9	0.609 (0.371)	11.46 (2.26)	167 (75)	63 (17)	27.3 (92.3)

**Locations of tests:** DAEMTC (The Directorate of Agricultural Equipment and Machinery Testing Centre) Ankara, Turkey and CNH America LLC Burr Ridge, IL, USA

**Dates of Test:** August 2003 - March, 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)** 0.829 **Fuel weight** 6.90 lbs/gal (0.827 kg/l) **Oil SAE 20W-50 API service classification** DM12 **Transmission and hydraulic lubricant** BP Terrac Tractan 8 fluid **Front axle lubricant** BP Terrac Tractan 8 fluid

**ENGINE:** Make Iveco Diesel **Type** three cylinder vertical with turbocharger **Serial No.** \*639-911196\* **Crankshaft** lengthwise **Rated engine speed** 2500 **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 (2931 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** paper element **Oil filter** two cartridges **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

**CHASSIS:** **Type** 2WD & front wheel assist **Serial No.** 2WD-D2C2AC, FWA-D2S7AA **Tread width** rear 56.1" (1424 mm) to 75.7" (1924 mm) front 2WD-56.0" (1422 mm) to 71.7" (1822 mm) FWA-56.9" (1445 mm) to 73.8" (1875 mm) **Wheel base** 2WD-85.6" (2175 mm), FWA-83.4" (2119 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.06 (1.71) second 1.63 (2.63) third 2.22 (3.58) fourth 2.48 (3.99) fifth 3.19 (5.13) sixth 3.82 (6.15) seventh 5.19 (8.36) eighth 5.84 (9.40) ninth 7.44 (11.98) tenth 9.00 (14.48) eleventh 12.24 (19.69) twelfth 17.53 (28.21) reverse 1.06 (1.71), 1.64 (2.64), 2.23 (3.59), 2.49 (4.00), 3.20 (5.15), 3.83 (6.17), 5.21 (8.39), 5.86 (9.43), 7.47 (12.02), 9.02 (14.52), 12.28 (19.76), 17.58 (28.29) **Clutch** dual dry disc operated by foot pedal **Brakes** wet disc operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2200 engine rpm and 1000 rpm at 2381 engine rpm **Unladen tractor mass** 2WD- 6010 lb (2726 kg), FWA - 6130 lb (2780 kg)

**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)	Temp. °F (°C)	Barom. inch Hg (kPa)		
5th (I-4) Gear									
36.2 (27.0)	4625 (20.58)	2.94 (4.73)	2598	12.4	0.625 (0.380)	11.02 (2.20)	167 (75)	63 (17)	27.3 (92.3)
6th (II-2) Gear									
41.7 (31.1)	4310 (19.17)	3.63 (5.84)	2572	8.8	0.583 (0.355)	11.82 (2.36)	167 (75)	63 (17)	27.3 (92.3)
7th (II-3) Gear									
47.2 (35.2)	3940 (17.53)	4.49 (7.23)	2314	7.8	0.555 (0.338)	12.42 (2.48)	167 (75)	63 (17)	27.3 (92.3)
8th (III-1) Gear									
48.9 (36.5)	3610 (16.05)	5.08 (8.18)	2300	6.6	0.538 (0.327)	12.82 (2.56)	167 (75)	63 (17)	27.3 (92.3)
9th (II-4) Gear									
44.6 (33.2)	2480 (11.04)	6.74 (10.84)	2299	2.8	0.562 (0.342)	12.27 (2.45)	167 (75)	63 (17)	27.3 (92.3)

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

**NOTE 1:** The PTO and drawbar results shown on this report are from tests conducted on the New Holland TD 70D.

**NOTE 2:** The performance data on this summary applies to tractor chassis serial numbers HFJ013287 and higher.

**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 13.6 GPM (51.7 lpm) hydraulic flow. The performance results on this summary were taken from OECD tests conducted under the Code II Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **2146** & **2147**, Nebraska Summary 460, April 1, 2005.

Leonard L. Bashford  
 Director

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

TRACTOR SOUND LEVEL WITHOUT CAB	Front wheel drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th(II-3) Gear	86.0	86.1
Bystander		-

**Tested Without Ballast**

**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

**Front Wheel Assist**

Two 14.9-30; 6; 20(140)  
 Two 9.5-24; 6; 30(210)  
 14.2 in (360 mm)  
 3925 lb (1780 kg)  
 2370 lb (1075 kg)  
 6295 lb (2855 kg)

**2WD**

Two 14.9-30; 6; 20 (140)  
 Two 7.50-16; 6; 40 (280)  
 14.2 in (360 mm)  
 4100 lb (1860 kg)  
 2075 lb (941 kg)  
 6175 lb (2801 kg)

## DRAWBAR PERFORMANCE

(Unballasted - 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 cool- ing med	Air dry bulb (°C)	Barom. inch Hg (kPa)
<b>Maximum Power—8th (III-1) Gear</b>									
44.4 (33.1)	2700 (12.00)	6.17 (9.93)	2509	8.0	0.571 (0.347)	12.23 (2.41)	162 (72)	59 (15)	27.0 (91.5)
<b>75% of Pull at Maximum Power—8th (III-1) Gear</b>									
34.6 (25.8)	2025 (9.00)	6.41 (10.31)	2555	6.0	0.681 (0.414)	10.25 (2.02)	162 (72)	59 (15)	27.0 (91.5)
<b>50% of Pull at Maximum Power—8th (III-1) Gear</b>									
24.2 (18.1)	1350 (6.00)	6.73 (10.84)	2636	4.1	0.793 (0.482)	8.81 (1.73)	162 (72)	59 (15)	27.0 (91.5)
<b>75% of Pull at Reduced Engine Speed—9th (II-4) Gear</b>									
34.6 (25.8)	2025 (9.00)	6.41 (10.31)	2006	6.0	0.571 (0.347)	12.23 (2.41)	162 (72)	59 (15)	27.0 (91.5)
<b>50% of Pull at Reduced Engine Speed—9th (II-4) Gear</b>									
24.6 (18.3)	1370 (6.09)	6.74 (10.84)	2069	4.2	0.658 (0.400)	10.61 (2.09)	162 (72)	59 (15)	27.0 (91.5)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
5th (I-4) Gear									
33.0 (24.6)	3925 (17.45)	3.15 (5.08)	2551	14.9	0.710 (0.432)	9.84 (1.94)	156 (69)	50 (10)	27.3 (92.5)
6th (II-2) Gear									
39.0 (29.1)	3870 (17.22)	3.78 (6.08)	2507	13.6	0.646 (0.393)	10.81 (2.13)	156 (69)	50 (10)	27.3 (92.5)
7th (II-3) Gear									
46.5 (34.7)	3520 (15.66)	4.95 (7.97)	2345	11.0	0.546 (0.332)	12.79 (2.52)	156 (69)	50 (10)	27.3 (92.5)
8th (III-1) Gear									
48.7 (36.3)	3330 (14.81)	5.49 (8.83)	2297	10.0	0.528 (0.321)	13.22 (2.60)	156 (69)	50 (10)	27.3 (92.5)
9th (II-4) Gear									
46.2 (34.5)	2380 (10.59)	7.28 (11.72)	2311	7.0	0.551 (0.335)	12.69 (2.50)	156 (69)	50 (10)	27.3 (92.5)

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

CATEGORY: II

Quick Attach: none

Maximum Force Exerted Through Whole Range: 3865 lbs (17.2kN)

i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2975 psi (205 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	11.0 GPM (41.8 l/min)
iii) Pump delivery rate at maximum hydraulic power:	9.1 GPM (34.4 l/min)
Delivery pressure:	2685 psi (185 bar)
Power:	14.2 HP (10.6 kW)

### THREE POINT HITCH PERFORMANCE (SAE test)

Observed Maximum Pressure psi. (bar)	2780 (192)
Location:	hydraulic manifold
Hydraulic oil temperature: °F (°C)	149 (65)
Location:	hydraulic sump
Category:	II
Quick attach:	none

#### SAE Static Test—System pressure 2470 psi (170 Bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	15.0 (380)	22.0 (558)	29.0 (737)	36.0 (914)
Lift force on frame lb	5769	6055	5793	6060	5147
" " " " " " (kN)	(25.7)	(26.9)	(25.8)	(27.0)	(22.9)

### HITCH DIMENSIONS AS TESTED—NO LOAD

	OECD test		SAE test	
	inch	mm	inch	mm
A	30.9	772	30.1	765
B	10.0	255	10.0	255
C	11.6	295	11.6	295
D	11.6	295	11.6	295
E	7.5	190	9.4	240
F	8.2	208	8.2	208
G	26.2	665	24.6	625
H	0.2	5	0.2	5
I	7.7	195	7.1	180
J	18.0	457	16.4	417
K	17.1	435	20.1	510
L	39.2	995	39.2	995
M	26.2	665	26.2	665
N	36.2	920	36.2	920
O	8.2	208	8.0	203
P	42.0	1067	35.4	899
Q	36.3	921	32.0	813
R	22.4	570	24.4	619

