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## Test 1893: Case IH CX 50/C 50 Diesel

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# SUMMARY OF OECD TEST 1893—NEBRASKA SUMMARY 324

## CASE IH CX 50 DIESEL

### ALSO CASE IH C 50 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
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#### MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed (PTO speed-605 rpm)					
42.5 (31.7)	2248	2.80 (10.58)	0.456 (0.277)	15.20 (2.99)	

Standard Power Take-off Speed (540 rpm)					
40.9 (30.5)	2006	2.57 (9.72)	0.436 (0.265)	15.89 (3.13)	

#### VARYING POWER AND FUEL CONSUMPTION

42.5 (31.7)	2248	2.80 (10.58)	0.456 (0.277)	15.20 (2.99)	Air temperature
37.0 (27.6)	2311	2.50 (9.46)	0.468 (0.285)	14.81 (2.92)	70°F (21°C)
28.2 (21.0)	2348	2.08 (7.86)	0.510 (0.310)	13.57 (2.67)	Relative humidity
18.9 (14.1)	2363	1.69 (6.39)	0.619 (0.376)	11.19 (2.20)	40%
9.5 (7.1)	2389	1.20 (4.55)	0.872 (0.531)	7.94 (1.57)	Barometer
--	2403	0.85 (3.23)	--	--	29.4" Hg (99.7 kPa)

Maximum Torque - 121 lb.-ft. (164 Nm) at 1200 rpm

Maximum Torque Rise - 21.4%

Torque rise at 1800 engine rpm - 12%

#### 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		Temp. °F (°C)		Barom. inch Hg (kPa)
					lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	cool- ing med	Air dry bulb	
<b>Maximum Power 8th (1HiTA) Gear</b>									
35.4 (26.4)	3055 (13.59)	4.35 (6.99)	2248	2.5	0.546 (0.332)	12.86 (2.53)	153 (67)	66 (19)	29.5 (100.0)
<b>75% of Pull at Maximum Power 8th (1HiTA) Gear</b>									
27.4 (20.4)	2290 (10.18)	4.49 (7.22)	2310	1.9	0.596 (0.362)	11.80 (2.32)	140 (60)	68 (20)	29.7 (100.5)
<b>50% of Pull at Maximum Power 8th (1HiTA) Gear</b>									
18.8 (14.0)	1535 (6.82)	4.58 (7.37)	2338	1.2	0.743 (0.452)	9.45 (1.86)	136 (58)	59 (15)	29.7 (100.5)
<b>75% of Pull at Reduced Engine Speed 9th (4LoDD) Gear</b>									
27.6 (20.6)	2285 (10.17)	4.52 (7.28)	1978	1.9	0.567 (0.345)	12.39 (2.44)	138 (59)	59 (15)	29.7 (100.5)
<b>50% of Pull at Reduced Engine Speed 9th (4LoDD) Gear</b>									
18.7 (14.0)	1535 (6.83)	4.57 (7.36)	1985	1.2	0.643 (0.391)	10.92 (2.15)	136 (58)	61 (16)	29.7 (100.5)

**Location of Test:** DLG Testing Station for Agricultural Machinery Max - Eyth - Weg 1, D-64823 Gros-Umstadt, Germany

**Dates of Test:** April - June, 1999

**Manufacturer:** Case United Kingdom Limited, Doncaster, DN2 4PG, England

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.832 **Fuel weight** 6.93 lbs/gal (0.830 kg/l) **Oil SAE 15W-40 API service classification** CF-4 **Transmission and hydraulic lubricant** Case Hy-Tran Plus fluid **Front axle lubricant** SAE 85W-140 gear oil

**ENGINE:** Make Perkins Diesel **Type** three cylinder vertical **Serial No.** AQU324265D **Crankshaft** lengthwise **Rated engine speed** 2250 **Bore and stroke** 3.74" x 5.00" (95.0 mm x 127.0 mm) **Compression ratio** 17.25 to 1 **Displacement** 165 cu in (2700 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS:** **Type** front wheel assist **Serial No.** JJE 100 1694 **Tread width** rear 55.9" (1420 mm) to 75.7" (1922 mm) front 51.1" (1299 mm) to 74.6" (1894 mm) **Wheel base** 87.2" (2214 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.19 (1.92) second 1.44 (2.32) third 2.10 (3.38) fourth 2.54 (4.08) fifth 3.40 (5.47) sixth 4.10 (6.60) seventh 4.37 (7.04) eighth 4.47 (7.20) ninth 5.28 (8.49) tenth 5.40 (8.69) eleventh 7.89 (12.69) twelfth 9.51 (15.30) thirteenth 12.75 (20.52) fourteenth 15.39 (24.76) fifteenth 16.40 (26.40) sixteenth 19.79 (31.84) reverse 1.32 (2.12), 2.32 (3.73), 3.75 (6.03), 4.82 (7.75), 4.93 (7.93), 8.69 (13.98), 14.05 (22.61), 18.07 (29.08) **Clutch** multiple dry disc hydraulically 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 2007 engine rpm **Unladen tractor mass** 7595 lb (3445 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)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F cool- ing med	°C Air dry bulb	Barom. inch Hg (kPa)
2nd (1LoDD) Gear									
26.5 (19.8)	7990 (35.55)	1.24 (2.00)	2290	15.0	0.671 (0.408)	10.47 (2.06)	151 (66)	63 (17)	29.7 (100.5)
3rd (2LoTA) Gear									
34.1 (25.4)	6515 (28.98)	1.96 (3.15)	2252	6.8	0.570 (0.347)	12.33 (2.43)	151 (66)	64 (18)	29.7 (100.5)
4th (2LoDD) Gear									
34.1 (25.4)	5295 (23.54)	2.41 (3.88)	2251	4.9	0.567 (0.345)	12.39 (2.44)	153 (67)	68 (20)	29.7 (100.5)
5th (3LoTA) Gear									
34.9 (26.0)	3990 (17.75)	3.28 (5.28)	2251	3.4	0.558 (0.339)	12.59 (2.48)	154 (68)	66 (19)	29.7 (100.5)
6th (3LoDD) Gear									
34.3 (25.6)	3265 (14.52)	3.94 (6.35)	2235	2.8	0.565 (0.344)	12.44 (2.45)	153 (67)	68 (20)	29.7 (100.5)
7th (4LoTA) Gear									
34.0 (25.3)	3005 (13.36)	4.24 (6.82)	2240	2.4	0.572 (0.348)	12.28 (2.42)	151 (66)	64 (18)	29.5 (100.0)
8th (1HiTA) Gear									
35.4 (26.4)	3055 (13.59)	4.34 (6.99)	2248	2.5	0.546 (0.332)	12.86 (2.53)	153 (67)	66 (19)	29.5 (100.0)
9th (4LoDD) Gear									
32.5 (24.2)	2365 (10.53)	5.15 (8.28)	2246	1.9	0.595 (0.362)	11.82 (2.33)	153 (67)	66 (19)	29.5 (100.0)
10th (1HiDD) Gear									
33.4 (24.9)	2385 (10.60)	5.25 (8.46)	2247	2.0	0.580 (0.353)	12.12 (2.39)	151 (66)	66 (19)	29.5 (100.0)
11th (2HiTA) Gear									
31.4 (23.4)	1525 (6.78)	7.72 (12.43)	2241	1.2	0.612 (0.373)	11.47 (2.26)	149 (65)	66 (19)	29.7 (100.5)

**Note:** The Case IH C 50 Diesel varies from the Case IH CX 50 Diesel by chassis design and transmission options.

**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 claims of 27% torque rise, Cab sound level of 73.0 dB(A), nor 3 point lift capacity of 3665 lbs., optionally 5097 lbs. 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 Report No. **1893**, Nebraska Summary 324, November 27, 2000.

Brent T. Sampson  
 Test Engineer

L.L. Bashford  
 M.F. Kocher  
 R.D. Grisso, Jr.  
 Board of Tractor Test Engineers

**TRACTOR SOUND LEVEL WITH CAB (2WD model) dB(A)**

At no load in 4th (L4) gear	74.2
Bystander	

**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 16.9R34;\*\*, 12 (80)  
 Two 12.4R24;\*\*, 12 (80)  
 15.0 in (380 mm)  
 4605 lb (2090 kg)  
 3155 lb (1430 kg)  
 7760 lb (3520 kg)

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

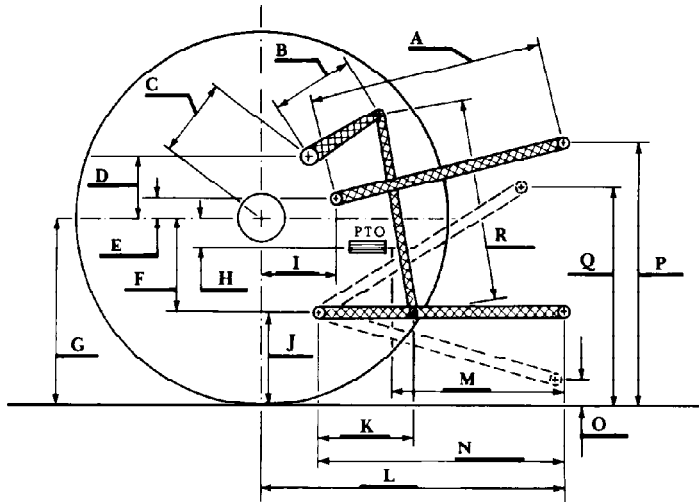
CATEGORY: II

Quick Attach: none

Maximum Force Exerted Through Whole Range: 2675 lbs (11.9 kN)  
 4000 lbs (17.8 kN) (with boost cylinder)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2425 psi (167 bar)
- ii) Pump delivery rate at minimum pressure: 13.8 GPM (52.1 l/min)
- iii) Pump delivery rate at maximum
  - hydraulic power: 12.6 GPM (47.8 l/min)
  - Delivery pressure: 2190 psi (151 bar)
  - Power: 16.1 HP (12.0 kW)

### HITCH DIMENSIONS AS TESTED NO LOAD



	inch	mm
A	28.4	721
B	11.7	298
C	11.6	295
D	11.3	288
E	7.9	200
F	6.7	170
G	29.3	745
H	4.7	120
I	11.8	300
J	22.6	575
K	21.7	550
L	38.4	975
M	21.3	540
N	32.0	814
O	7.9	200
P	46.7	1185
Q	33.1	840
R	29.1	740