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Test 1611: Case International 7130 and 7230 18-Speed

Nebraska Tractor Test Lab

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NEBRASKA OECD TRACTOR TEST 1611—SUMMARY 051

CASE INTERNATIONAL 7130 DIESEL

ALSO CASE INTERNATIONAL 7230 DIESEL

18 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Fuel Consumption			Mean Atmospheric Conditions
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	

MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed—(PTO speed—1004 rpm)					
172.57 (128.69)	2200	9.75 (36.89)	0.390 (0.237)	17.71 (3.49)	

Maximum Power (Two hours)					
179.10 (133.55)	1850	9.47 (35.86)	0.365 (0.222)	18.91 (3.72)	

VARYING POWER AND FUEL CONSUMPTION

172.57 (128.69)	2200	9.75 (36.89)	0.390 (0.237)	17.71 (3.49)	Air temperature 78°F (26°C)
150.13 (111.95)	2249	8.91 (33.72)	0.410 (0.249)	16.86 (3.32)	
113.67 (84.76)	2275	7.13 (26.97)	0.433 (0.263)	15.95 (3.14)	Relative humidity 34%
77.08 (57.48)	2312	5.52 (20.89)	0.494 (0.301)	13.97 (2.75)	
38.63 (28.81)	2355	4.08 (15.46)	0.730 (0.444)	9.46 (1.86)	Barometer 29.10" Hg (98.55 kPa)
0.78 (0.58)	2381	2.61 (9.87)	23.192 (14.107)	0.30 (0.06)	

Maximum Torque 540.7 lb. ft (733.1 Nm) @ 1600 RPM
Maximum Torque Rise 31.2%

DRAWBAR PERFORMANCE (Front Wheel Drive Engaged)

Power Hp (kW)	Drawbar pull (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 9th Gear									
142.00 (105.89)	9448 (42.03)	5.64 (9.07)	2238	1.87	0.460 (0.280)	15.00 (2.96)	187 (86)	78 (25)	29.12 (98.61)

MAXIMUM POWER IN SELECTED GEARS

5th Gear									
144.31 (107.61)	20926 (93.08)	2.59 (4.16)	1925	7.38	0.462 (0.281)	14.95 (2.95)	187 (86)	76 (24)	29.02 (98.27)
6th Gear									
148.51 (110.75)	19074 (84.84)	2.92 (4.70)	1848	4.95	0.443 (0.270)	15.58 (3.07)	187 (86)	69 (21)	29.18 (98.82)
7th Gear									
153.13 (114.19)	16646 (74.05)	3.45 (5.55)	1851	3.89	0.433 (0.263)	15.95 (3.14)	188 (86)	71 (22)	29.19 (98.85)
8th Gear									
154.15 (114.95)	14470 (64.37)	3.99 (6.43)	1855	3.23	0.428 (0.261)	16.12 (3.18)	188 (87)	73 (23)	29.19 (98.85)
9th Gear									
155.35 (115.84)	12597 (56.03)	4.62 (7.44)	1852	2.48	0.423 (0.257)	16.33 (3.22)	188 (86)	74 (23)	29.20 (98.88)
10th Gear									
155.27 (115.79)	10914 (48.55)	5.34 (8.59)	1855	2.31	0.425 (0.258)	16.26 (3.20)	189 (87)	75 (24)	29.20 (98.88)
11th Gear									
152.35 (113.61)	9329 (41.50)	6.12 (9.86)	1850	1.79	0.431 (0.262)	16.03 (3.16)	190 (88)	76 (24)	29.21 (98.92)
12th Gear									
148.97 (111.09)	7930 (35.27)	7.04 (11.34)	1850	1.71	0.439 (0.267)	15.71 (3.10)	189 (87)	77 (25)	29.21 (98.92)
13th Gear									
148.51 (110.74)	6900 (30.69)	8.07 (12.99)	1848	1.45	0.442 (0.269)	15.62 (3.08)	190 (88)	78 (26)	29.21 (98.92)

Location of Test: Center for Agricultural Equipment, Lincoln Nebraska 68583-0832, U.S.A.

Dates of Test: June - July, 1988

Manufacturer: J.I. Case Company, 700 State Street, Racine, Wisconsin 53404 U.S.A.

FUEL AND OIL: Fuel No. 2 Diesel Cetane No. 51.2 Specific gravity converted to 60°/60°F (15°/15°C) 0.8293 Fuel weight 6.905 lbs/gal (0.828 kg/l) Oil SAE 15W-40 Oil Consumption for 10 hours 2.27 lb (1031 gm) Transmission and hydraulic lubricant Case IH Hytran Plus Fluid Front axle lubricant Case IH 135 HEP Gear Lube

ENGINE: Make Consolidated Diesel Corporation-Case Diesel Type six cylinder vertical with turbocharger Serial No. *44239697* Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.488" × 5.315" (114 mm × 135 mm) Compression ratio 17.3 to 1 Displacement 504.5 cu in (8268 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements and aspirator Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil Fuel filter two paper cartridges Muffler underhood Exhaust vertical Cooling medium temperature control two thermostats and variable speed fan.

ENGINE OPERATING PARAMETERS: Fuel rate 66.7-73.7 lb/hr (30.2-33.4 kg/hr) High idle 2315-2395 rpm Turbo boost nominal 9.7-12.9 psi (67-89 kPa) as measured 11.5 psi (79 kPa)

CHASSIS: Type front wheel assist with duals Serial No. *JJA0002390* Tread width rear 64" (1626 mm) to 130" (3302 mm) front 62.1" (1577 mm) to 92.8" (2357) Wheel base 118.3" (3006 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio with full range operator controlled powershift Nominal travel speeds mph (km/h) first 1.81 (2.92) second 2.08 (3.34) third 2.40 (3.86) fourth 2.75 (4.42) fifth 3.15 (5.07) sixth 3.62 (5.82) seventh 4.22 (6.79) eighth 4.84 (7.79) ninth 5.58 (8.98) tenth 6.40 (10.30) eleventh 7.34 (11.81) twelfth 8.42 (13.55) thirteenth 9.63 (15.50) fourteenth 11.05 (17.78) fifteenth 12.74 (20.51) sixteenth 14.62 (23.52) seventeenth 16.76 (26.98) eighteenth 19.23 (30.95) reverse 2.61 (4.20), 2.99 (4.81) Clutch multiple wet disc hydraulically power actuated by foot pedal Brakes multiple wet disc hydraulically power actuated and operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 1004 rpm at 2200 engine rpm Unladen tractor mass 17090 lb (7752 kg).

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

TRACTOR SOUND LEVEL WITH CAB (OECD Test)		dB(A)
Maximum sound level—in 7th gear		73.0
Bystander in 18th gear		84.5

CENTER OF GRAVITY

Horizontal distance forward from centerline of rear wheels	38.4" in (976 mm)
Vertical distance above roadway	42.3" in (1074 mm)
Horizontal distance from center of rear wheel tread 0.2" (5 mm) to the left	

TURNING ON A CONCRETE SURFACE

Turning radius—with brake applied right 175" (4.45 m) left 179" (4.55 m)	
—without brake right 242" (6.15 m) left 236" (5.99 m)	
Turning space radius—with brake applied right 184" (4.67 m) left 188" (4.78 m)	
—without brake right 251" (6.38 m) left 245" (6.22 m)	

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires			
—No., size, ply & psi (kPa)		Four 20.8R38; *, inner 16 (110) outer 12 (85)	Two 20.8R38; *, 16 (110)
Ballast			
—Liquid (total)		1270 lb (576 kg)	None
—Duals (total)		1730 lb (785 kg)	None
Front Tires			
—No., size, ply & psi (kPa)		Two 16.9R26; **, 16 (110)	Two 16.9R26; **, 16 (110)
Ballast			
—Cast iron (total)		1040 lb (472 kg)	None
—Test equip. (total)		550 lb (250 kg)	None
Height of Drawbar		17.5 in (445 mm)	16.5 in (420 mm)
Static Weight			
—Rear		14625 lb (6634 kg)	11625 lb (5273 kg)
—Front		7055 lb (3200 kg)	5465 lb (2479 kg)
—Total		21680 lb (9834 kg)	17090 lb (7752 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

Maximum Force Exerted Through Whole Range:

8636 lbs (38.4 kN)

i) Opening pressure of relief valve:

NA

Sustained pressure at the compensator cutoff:

2650 psi (183 Bar)

ii) Pump delivery rate at minimum pressure and rated engine speed:

28.6 GPM (108.1 l/min)

iii) Pump delivery rate at maximum hydraulic power:

26.0 GPM (98.5 l/min)

Delivery pressure:

2249 psi (155 Bar)

Power:

34.1 Hp (25.5 kW)

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the injection pump was maintained at 155° F (68.5° C). Manufacturers specifications for engine bore, stroke, displacement and compression ratio were not verified. This tractor is equipped with a variable speed cooling fan. Since engine power is influenced by fan speed, all power tests were conducted at approximately the same ambient air temperatures.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1611**, Nebraska Summary 051, January 31, 1989.

Report reissued: Supplemental sales permit for Case International 7230 Diesel, November, 1993.

LOUIS I. LEVITICUS

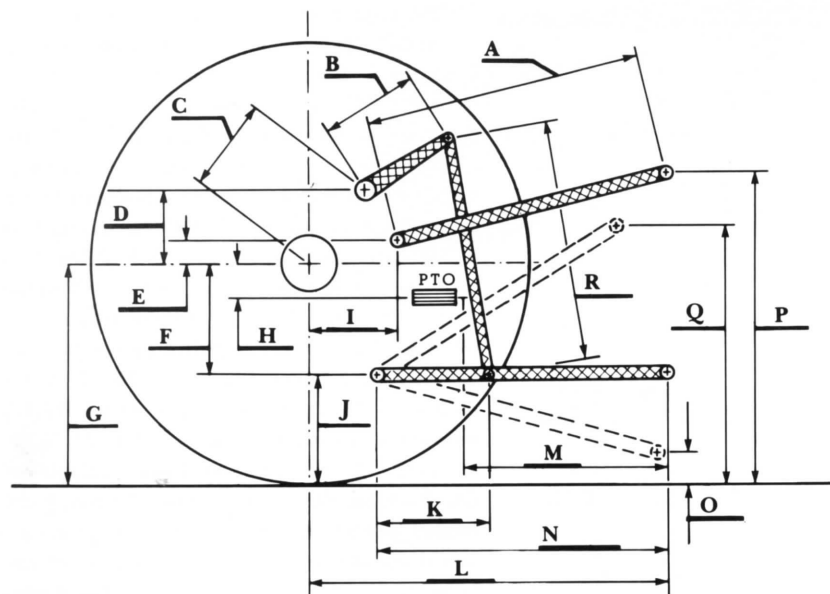
Engineer-in-Charge

L. L. BASHFORD

R. D. GRISSO

K. VON BARGEN

Board of Tractor Test Engineers



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	25.8	654
B	15.0	381
C	21.9	557
D	16.6	422
E	6.7	169
F	13.1	332
G	33.7	855
H	3.5	90
I	24.7	627
J	20.6	523
K	22.8	579
L	51.4	1306
M	20.1	510
N	33.9	861
O	10.1	257
P	42.6	1083
Q	37.1	942
R	31.3	794

DRAWBAR PERFORMANCE
MAXIMUM POWER IN SELECTED GEARS
(Front Wheel Drive Disengaged)

Power Hp (kW)	Drawbar pull (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)
5th Gear									
136.73 (101.96)	18204 (80.98)	2.82 (4.53)	2182	10.97	0.497 (0.302)	13.89 (2.74)	185 (85)	68 (20)	29.18 (98.82)
6th Gear									
142.68 (106.40)	16784 (74.66)	3.19 (5.13)	2056	6.75	0.473 (0.288)	14.60 (2.88)	187 (86)	70 (21)	29.18 (98.82)
7th Gear									
148.31 (110.59)	15351 (68.28)	3.62 (5.83)	1978	5.65	0.450 (0.274)	15.34 (3.02)	187 (86)	72 (22)	29.19 (98.85)
8th Gear									
151.16 (112.72)	14439 (64.23)	3.93 (6.32)	1852	4.77	0.433 (0.264)	15.93 (3.14)	188 (87)	73 (23)	29.19 (98.85)
9th Gear									
152.99 (114.09)	12536 (55.76)	4.58 (7.37)	1850	3.71	0.430 (0.261)	16.07 (3.17)	189 (87)	74 (23)	29.20 (98.88)
10th Gear									
153.51 (114.48)	10882 (48.40)	5.29 (8.51)	1851	2.96	0.429 (0.261)	16.08 (3.17)	190 (88)	75 (24)	29.20 (98.88)
11th Gear									
151.28 (112.81)	9312 (41.42)	6.09 (9.80)	1850	2.54	0.432 (0.263)	16.00 (3.15)	190 (88)	76 (24)	29.20 (98.88)
12th Gear									
148.06 (110.41)	7908 (35.18)	7.02 (11.30)	1851	2.20	0.438 (0.267)	15.76 (3.10)	190 (88)	77 (25)	29.21 (98.92)
13th Gear									
147.92 (110.30)	6893 (30.66)	8.05 (12.95)	1849	1.77	0.442 (0.269)	15.61 (3.07)	190 (88)	78 (26)	29.21 (98.92)

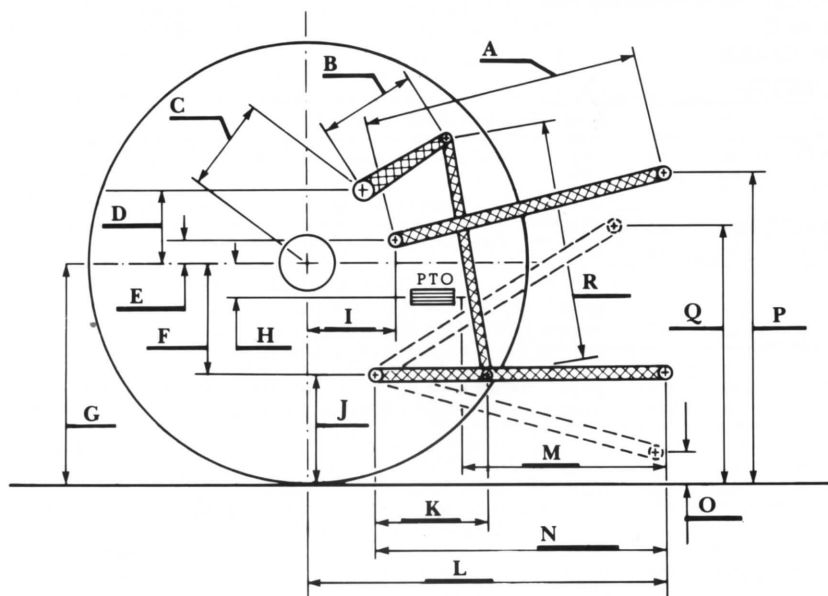
TRACTOR SOUND LEVEL WITH CAB (SAE Test)	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Maximum Available Power—8th Gear	72.5	73.0
75% of Pull at Maximum Power—8th Gear		72.0
50% of Pull at Maximum Power—8th Gear		71.0
50% of Pull at Reduced Engine Speed—10th Gear		70.5
Bystander in 18th gear	83.0	

THREE POINT HITCH PERFORMANCE
(SAE Dynamic Test)

Observed Maximum Pressure psi (kPa)	2700	(18610)
Location	Hydraulic pump	
Hydraulic oil temperature °F (°C)	140	(60)
Location	Transmission sump	
	Maximum Lift Capacity	Lift Capacity for Transport
QUICK ATTACH	Yes	
CATEGORY:	III	*not measured
LOAD lbs (kg)	10875	(4933)
TIME sec	3.90	
HITCH MOVEMENT in (mm)		
Lowest position	15.0	(381)
Top of timed range	** 40.0	(1016)
Highest position	40.1	(1019)
LOAD CG MOVEMENT in (mm)		
Lowest position	15.0	(381)
Top of timed range	41.7	(1059)
Highest position	41.8	(1062)

*Implement load capacity for transport purposes not specified by manufacturer.

**The observed power range 25.0 in (635 mm) is less than the minimum power range for Cat III, 26 in (660 mm) specified by ASAE Standard S217.10.



	inch	mm
A	25.8	654
B	15.0	381
C	21.9	557
D	16.6	422
E	9.8	250
F	13.1	332
G	32.6	827
H	3.5	90
I	24.7	627
J	19.5	495
K	22.8	579
L	51.4	1306
L'	55.4	1407
M	20.1	510
N	33.9	861
O	8.0	203
P	41.5	1054
Q	35.5	902
R	32.0	813

L' to end of Quick Attach

HITCH DIMENSIONS AS TESTED—NO LOAD



Case International 7130 Diesel