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Test 1708: Case IH 9370 Diesel 12-Speed (Chassis S/N JEE0036501 and Higher)

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NEBRASKA OECD TRACTOR TEST 1708—SUMMARY 203

CASE IH 9370 DIESEL 12 SPEED

CHASSIS SERIAL NUMBERS JEE0036501 AND HIGHER

Location of Test: Tractor Testing Laboratory,
University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of Test: April 18-24, 1996

Manufacturer: CASE CORPORATION, 3401 First Avenue North, Fargo, North Dakota 58102

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—1001 rpm)					
321.69 (239.88)	2100	18.69 (70.75)	0.408 (0.248)	17.21 (3.39)	
Maximum Power (2 hours)					
330.65 (246.56)	1900	17.84 (67.51)	0.379 (0.230)	18.54 (3.65)	

VARYING POWER AND FUEL CONSUMPTION

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
321.69 (239.88)	2100	18.69 (70.75)	0.408 (0.248)	17.21 (3.39)	Air temperature
286.61 (213.73)	2201	17.86 (67.61)	0.438 (0.266)	16.05 (3.16)	77°F (25°C)
219.62 (163.77)	2250	15.25 (57.74)	0.488 (0.297)	14.40 (2.84)	Relative humidity
148.09 (110.43)	2275	12.18 (46.10)	0.577 (0.351)	12.16 (2.40)	33%
75.33 (56.17)	2306	8.84 (33.48)	0.824 (0.501)	8.52 (1.68)	Barometer
1.59 (1.19)	2341	5.85 (22.16)	25.790 (15.687)	0.27 (0.05)	28.56" Hg (96.72 kPa)

Maximum Torque 1172 lb.-ft. (1589 Nm) at 1250 rpm
Maximum Torque Rise 45.9%
Torque rise at 1701 engine rpm 27.1%

DRAWBAR PERFORMANCE 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)
Maximum Power 5th Gear									
286.17 (213.40)	21607 (96.11)	4.97 (7.99)	2100	2.66	0.460 (0.280)	15.26 (3.01)	184 (84)	56 (13)	29.14 (98.68)
75% of Pull at Maximum Power 5th Gear									
231.88 (172.92)	16320 (72.59)	5.33 (8.57)	2232	1.75	0.512 (0.311)	13.71 (2.70)	183 (84)	65 (18)	29.12 (98.61)
50% of Pull at Maximum Power 5th Gear									
158.16 (117.94)	10898 (48.48)	5.44 (8.76)	2269	1.30	0.610 (0.371)	11.50 (2.27)	181 (83)	65 (18)	29.12 (98.61)
75% of Pull at Reduced Engine Speed 7th Gear									
232.49 (173.37)	16311 (72.55)	5.35 (8.60)	1543	1.85	0.401 (0.244)	17.53 (3.45)	181 (83)	65 (18)	29.12 (98.61)
50% of Pull at Reduced Engine Speed 7th Gear									
157.71 (117.61)	10889 (48.44)	5.43 (8.74)	1559	1.30	0.415 (0.252)	16.94 (3.34)	181 (83)	65 (18)	29.12 (98.61)

FUEL OIL and TIME: Fuel No. 2 Diesel Cetane No. 50.6 Specific gravity converted to 60°/60° F (15°/15°C) 0.8432 Fuel weight 7.021 lbs/gal (0.841 kg/l) Oil SAE 15W-40 API service classification CG-4, CF-2, To motor 8.112 gal (30.705 l) Drained from motor 8.184 gal (30.980 l) Transmission and final drive lubricant Case IH Hytran Plus fluid Hydraulic lubricant Case IH Hytran Plus fluid Total time engine was operated 16.5 hours

ENGINE: Make Cummins Diesel Type six cylinder vertical with turbocharger and intercooler Serial No. 30353624 Crankshaft lengthwise Rated engine speed 2100 Bore and stroke (as specified) 5.5" × 6.0" (139.7 mm × 152.4 mm) Compression ratio 18.5 to 1 Displacement 855 cu in (14013 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 transmission oil, radiator for hydraulic, steering and rear axle oil Fuel filter one paper element Muffler vertical Cooling medium temperature control thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 128.0 - 133.0 lb/h (58.1-60.3 kg/h) High idle: 2260-2400 rpm Turbo boost nominal 21.5-26.5 psi (148-183 kPa) as measured 25.6 psi (176 kPa)

CHASSIS: Type four wheel drive with duals Serial No. *JEE0035346* Tread width rear 76.5" (1943 mm) and 133.5" (3391 mm) front 76.5" (1943 mm) and 133.5" (3391 mm) Wheel base 144.0" (3658 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 2.30 (3.70) second 2.78 (4.47) third 3.42 (5.50) fourth 4.15 (6.68) fifth 5.02 (8.08) sixth 6.19 (9.96) seventh 7.30 (11.75) eighth 8.84 (14.22) ninth 10.88 (17.51) tenth 13.21 (21.26) eleventh 15.99 (25.73) twelfth 19.67 (31.65) reverse 3.00 (4.83), 5.43 (8.74), 9.55 (15.37) Clutch multiple wet disc hydraulically actuated by foot pedal Brakes caliper disc hydraulically operated by foot pedal Steering hydrostatic and articulated Power take-off 1000 rpm at 2098 engine rpm Unladen tractor mass 33786 lb (15325 kg)

**DRAWBAR PERFORMANCE AT 1900 RPM
MAXIMUM POWER IN SELECTED GEARS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption		Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
					lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)			
2nd Gear									
257.74 (192.20)	36814 (163.76)	2.63 (4.23)	2159	9.50	0.482 (0.293)	14.57 (2.87)	181 (83)	49 (9)	29.15 (98.71)
3rd Gear									
281.60 (209.99)	34493 (153.43)	3.06 (4.93)	1981	6.54	0.451 (0.274)	15.58 (3.07)	183 (84)	53 (12)	29.14 (98.68)
4th Gear									
294.18 (219.37)	30187 (134.28)	3.65 (5.88)	1902	4.34	0.427 (0.260)	16.44 (3.24)	183 (84)	54 (12)	29.14 (98.68)
5th Gear									
297.43 (221.80)	24909 (110.80)	4.48 (7.21)	1904	3.20	0.421 (0.256)	16.67 (3.28)	184 (84)	55 (13)	29.14 (98.68)
6th Gear									
297.21 (221.63)	20113 (89.46)	5.54 (8.92)	1900	2.48	0.421 (0.256)	16.66 (3.28)	183 (84)	57 (14)	29.14 (98.68)
7th Gear									
296.13 (220.83)	16914 (75.24)	6.57 (10.57)	1900	2.12	0.423 (0.257)	16.61 (3.27)	184 (84)	58 (14)	29.14 (98.68)
8th Gear									
295.17 (220.11)	13911 (61.88)	7.96 (12.81)	1893	1.57	0.423 (0.257)	16.61 (3.27)	183 (84)	59 (15)	29.14 (98.68)
9th Gear									
290.51 (216.63)	11045 (49.13)	9.86 (15.87)	1901	1.30	0.428 (0.261)	16.39 (3.23)	182 (83)	60 (16)	29.13 (98.65)

REPAIRS AND ADJUSTMENTS: The hydraulic pressure relief valve was replaced.

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 inlet was maintained at 126° F (52° C). The drawbar pull in 2nd gear was limited to avoid excessive tractor bouncing. The performance figures on this summary were taken from a test conducted under the OECD Code II Restricted Standard Test Code procedure.

NOTE: The performance figures on this report apply to tractor serial numbers JEE0036501 and higher.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1708**, Summary 203, August 16, 1996.

LOUIS I. LEVITICUS
Engineer-in-Charge

L.L. BASHFORD
R.D. GRISSO
M.F. KOCHER

Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
Maximum sound level in 5th Gear	79.0
Transport sound level in 12th Gear	77.5
Bystander in 12th Gear	94.0

TIRES, BALLAST AND WEIGHT

Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)

Tested Without Ballast

Four 20.8R42; **, 12 (85)
Four 20.8R42; **, 12 (85)

Height of Drawbar

16.5 in (420 mm)

Static Weight with Operator—Rear
—Front
—Total

15542 lb (7050 kg)
18410 lb (8350 kg)
33952 lb (15400 kg)

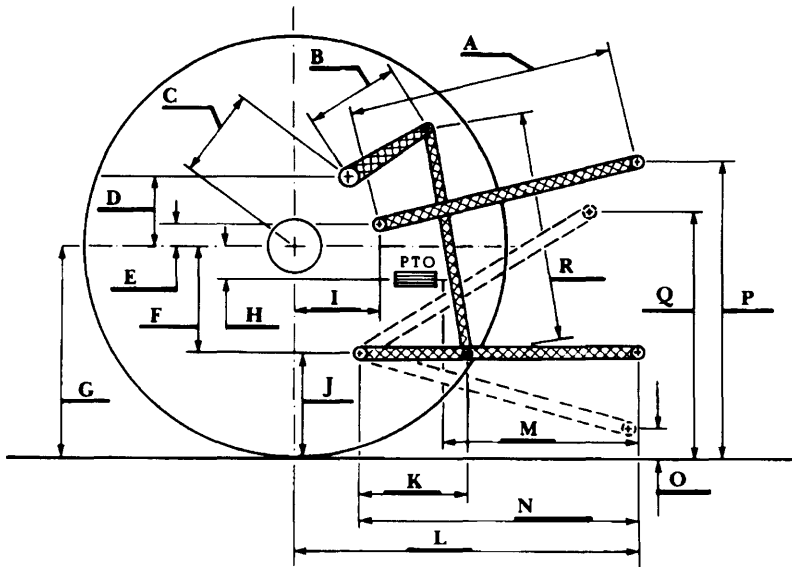
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: IVN

Quick Attach: Yes

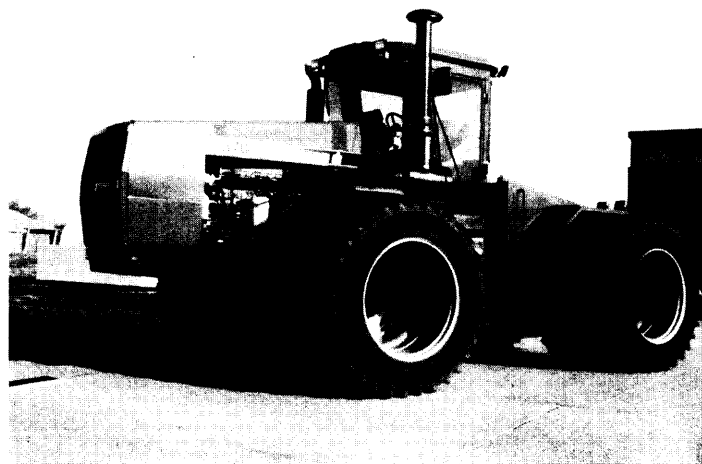
Maximum Force Exerted Through Whole Range:	18144 lbs	(80.7 kN)
i) Opening pressure of relief valve:	NA	
Sustained pressure with pump installed:	2920 psi	(201 bar)
ii) Pump delivery rate at minimum pressure:	27.2 GPM	(103.0 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	22.8 GPM	(86.3 l/min)
Delivery pressure:	2740 psi	(189 bar)
Power:	36.4 HP	(27.2 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	33.0	838
B	21.0	533
C	27.7	704
D	23.3	592
E	10.6	270
F	14.0	355
G	35.6	905
H	3.3	85
I	18.4	467
J	21.6	550
K	25.5	647
L	51.5	1308
*L'	58.7	1492
M	26.1	664
N	39.3	997
O	9.0	229
P	48.9	1241
Q	40.4	1026
R	36.9	937

*L' to Quick Attach ends



CASE IH 9370 DIESEL

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