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Test 1707: Case IH 9350 Diesel 12-Speed (Chassis S/N JEE0036501 and Higher)

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NEBRASKA OECD TRACTOR TEST 1707—SUMMARY 202

CASE IH 9350 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 16-23, 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—1000 rpm)					
276.98 (206.55)	2100	16.06 (60.80)	0.407 (0.248)	17.25 (3.40)	
Maximum Power (2 hours)					
284.25 (211.96)	1800	15.01 (56.82)	0.371 (0.225)	18.94 (3.73)	

VARYING POWER AND FUEL CONSUMPTION

276.98 (206.55)	2100	16.06 (60.80)	0.407 (0.248)	17.25 (3.40)	Air temperature
246.90 (184.11)	2203	15.25 (57.74)	0.434 (0.264)	16.19 (3.19)	
190.19 (141.83)	2261	13.03 (49.35)	0.481 (0.293)	14.59 (2.87)	Relative humidity
129.14 (96.30)	2295	10.81 (40.92)	0.588 (0.357)	11.95 (2.35)	30%
65.46 (48.81)	2327	8.16 (30.89)	0.875 (0.532)	8.02 (1.58)	Barometer
1.62 (1.21)	2375	4.87 (18.44)	21.157 (12.869)	0.33 (0.07)	28.49" Hg (96.48 kPa)

Maximum Torque 1017 lb.-ft. (1378 Nm) at 1300 rpm
Maximum Torque Rise 46.8%
Torque rise at 1700 engine rpm 26%

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									
246.21 (183.60)	19423 (86.40)	4.75 (7.65)	2106	3.29	0.450 (0.273)	15.62 (3.08)	184 (84)	67 (19)	28.56 (96.72)
75% of Pull at Maximum Power 5th Gear									
199.00 (148.40)	14555 (64.74)	5.13 (8.25)	2253	2.53	0.507 (0.309)	13.84 (2.73)	184 (84)	73 (23)	28.57 (96.75)
50% of Pull at Maximum Power 5th Gear									
136.79 (102.00)	9695 (43.12)	5.29 (8.52)	2305	1.67	0.600 (0.365)	11.70 (2.31)	179 (82)	74 (23)	28.58 (96.78)
75% of Pull at Reduced Engine Speed 7th Gear									
198.37 (147.92)	14521 (64.59)	5.12 (8.24)	1548	2.44	0.420 (0.255)	16.72 (3.29)	184 (84)	74 (23)	28.58 (96.78)
50% of Pull at Reduced Engine Speed 7th Gear									
135.35 (102.42)	9707 (43.18)	5.31 (8.54)	1588	1.49	0.475 (0.289)	14.77 (2.91)	181 (83)	74 (23)	28.58 (96.78)

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 8.445 gal
(31.967 l) Drained from motor 7.827 gal (29.630 l)
Transmission and final drive lubricant Case
IH Hytran-Plus fluid Hydraulic lubricant Case IH
Hytran Plus fluid Total time engine was operated
23.0 hours.

ENGINE: Make Cummins **Diesel Type** six
cylinder vertical with turbocharger and intercooler
Serial No. 34791625 **Crankshaft** lengthwise **Rated**
engine speed 2100 Bore and stroke (as specified)
4.921"×5.787" (125.0 mm×147.0 mm) Compression
ratio 16.1 to 1 Displacement 660 cu in (10820 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, separate radiators for
hydraulic and transmission oil **Fuel filter** one paper
element **Muffler** vertical **Cooling medium**
temperature control thermostat

ENGINE OPERATING PARAMETERS: fuel
rate: 110.0 - 114.0 lb/h (49.9 - 51.7 kg/h) **high idle:**
2340 - 2460 rpm **Turbo boost** nominal 24.5 - 29.4
psi (169 - 203 kPa) as measured 26.1 psi (180 kPa)

CHASSIS: Type four wheel drive with duals **Serial**
No. *JEE0035867* Tread width rear 60.0" (1524
mm) and 130.0" (3302 mm) front 60.0" (1524 mm) and
130.0" (3302 mm) **Wheel base 132.5" (3366 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 2.24 (3.60) second 2.71
(4.36) third 3.34 (5.37) fourth 4.05 (6.52) fifth 4.91
(7.90) sixth 6.04 (9.72) seventh 7.13 (11.47) eighth
8.63 (13.89) ninth 10.62 (17.09) tenth 12.89 (20.74)
eleventh 15.60 (25.11) twelfth 19.20 (30.90) reverse
2.93 (4.72), 5.30 (8.53), 9.32 (15.00) **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 28720 lb (13028 kg)

DRAWBAR PERFORMANCE AT 1800 RPM

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)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
2nd Gear									
205.58 (153.30)	29577 (131.56)	2.61 (4.19)	2214	8.82	0.548 (0.333)	12.83 (2.53)	180 (82)	46 (8)	29.05 (98.37)
3rd Gear									
238.55 (177.87)	29281 (130.25)	3.05 (4.92)	2076	7.38	0.466 (0.283)	15.09 (2.97)	180 (82)	44 (7)	29.04 (98.34)
4th Gear									
247.99 (184.93)	26353 (117.22)	3.53 (5.68)	1948	6.05	0.433 (0.264)	16.20 (3.19)	181 (83)	56 (13)	29.09 (98.51)
5th Gear									
248.87 (185.58)	23104 (102.77)	4.04 (6.50)	1809	4.36	0.423 (0.258)	16.59 (3.27)	186 (86)	67 (19)	28.56 (96.72)
6th Gear									
251.20 (187.32)	18755 (83.43)	5.02 (8.08)	1801	2.95	0.417 (0.254)	16.84 (3.32)	186 (85)	66 (19)	28.54 (96.65)
7th Gear									
255.53 (190.55)	16041 (71.35)	5.97 (9.61)	1808	2.61	0.409 (0.249)	17.18 (3.39)	185 (85)	67 (19)	28.56 (96.72)
8th Gear									
257.71 (192.18)	13286 (59.10)	7.27 (11.71)	1807	1.93	0.408 (0.248)	17.19 (3.39)	187 (86)	68 (20)	28.56 (96.72)
9th Gear									
255.47 (190.51)	10728 (47.72)	8.93 (14.37)	1793	1.41	0.415 (0.253)	16.91 (3.33)	186 (85)	69 (21)	28.56 (96.72)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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 121° F (49° C). The 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 chassis serial numbers JEE0036501 and higher.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1707**, Summary 202, May 23, 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	78.5
Transport sound level in 12th Gear	77.5
Bystander in 12th Gear	91.5

TIRES, BALLAST AND WEIGHT

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

Tested Without Ballast

Four 18.4R42; **, 12 (85)
Four 18.4R42; **, 12 (85)

Height of Drawbar

15.5 in (395 mm)

Static Weight with Operator—Rear
—Front
—Total

13014 lb (5903 kg)
15874 lb (7200 kg)
28888 lb (13103 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: Yes

Maximum Force Exerted Through Whole Range:

14148 lbs (62.9 kN)

i) Opening pressure of relief valve:

NA

Sustained pressure with pump installed:

2910 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:

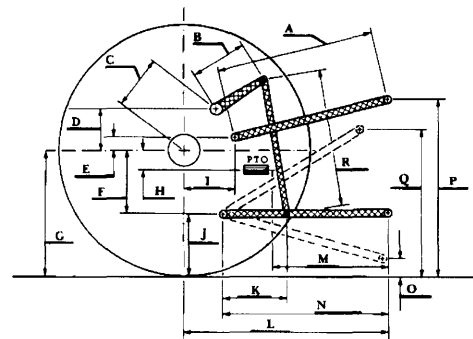
22.9 GPM (86.7 l/min)

Delivery pressure:

2710 psi (187 bar)

Power:

36.2 HP (27.0 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	29.4	747
B	21.0	533
C	25.6	651
D	25.1	637
E	11.4	289
F	9.9	251
G	34.3	870
H	2.2	56
I	22.8	579
J	24.4	619
K	23.0	584
L	52.2	1326
*L'	57.2	1453
M	25.0	636
N	42.0	1067
O	9.0	229
P	48.2	1225
Q	40.3	1024
R	36.2	919

*L' to end of Quick Coupler



CASE IH 9350 Diesel

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska—Lincoln
Darrell Nelson, Dean and Director