1-1-1996

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

Nebraska Tractor Test Lab
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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

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)*

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)*	75°F *(24°C)*
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)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Temp.°F (°C) 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)*

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)*
					7thGear				
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)*

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 — **Tested Without Ballast**

Rear Tires—No., size, ply & psi *(kPa)* — Four 18.4R42; **; 12 *(85)*

Front Tires—No., size, ply & psi *(kPa)* — Four 18.4R42; **; 12 *(85)*

Height of Drawbar — 15.5 in *(395 mm)*

Static Weight with Operator—Rear — 13014 lb *(5903 kg)*

—Front — 15874 lb *(7200 kg)*

—Total — 28888 lb *(13103 kg)*

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.

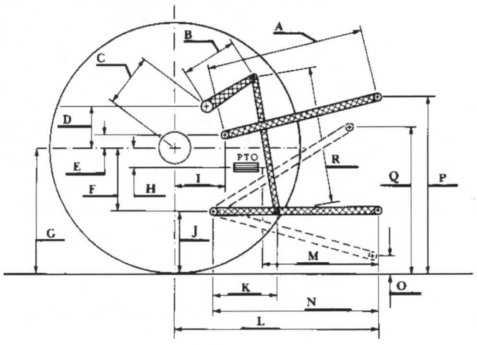
We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1707**, Summary 202, May 23, 1996.

LOUIS I. LEVITICUS
Engineer-in-Charge

L.L. BASHFORD
R.D. GRISSO
M.F. KOCHER
Board of Tractor Test Engineers

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

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