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Test 1714: Case IH 9380 Diesel 12-Speed (Chassis S/N JEE0036501 and Higher)

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NEBRASKA OECD TRACTOR TEST 1714—SUMMARY 209
CASE IH 9380 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: May 30- June 4, 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** 7.972 gal *(30.177 l)* **Drained from motor** 7.536 gal *(28.529 l)* **Transmission and final drive lubricant** Case IH Hytran Plus fluid **Hydraulic lubricant** Case IH Hytran Plus fluid **Total time engine was operated** 13.5 hours.

ENGINE: Make Cummins Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** 30353425 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** (as specified) 5.5" × 6.0" *(139.7 mm × 152.4 mm)* **Compression ratio** 16.5 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: 142.0 - 148.0 lb/h *(64.4 - 67.1 kg/h)* **high idle:** 2260 - 2400 rpm **Turbo boost** nominal 21.6 - 26.5 psi *(149 - 183 kPa)* as measured 24.7 psi *(170 kPa)*

CHASSIS: Type four wheel drive with duals **Serial No.** *JEE0035300* **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** 31580 lb *(14325 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)					
360.76 *(269.02)*	2100	20.83 *(78.87)*	0.405 *(0.247)*	17.32 *(3.41)*	
Maximum Power (2 hours)					
364.34 *(271.69)*	2000	20.37 *(77.10)*	0.393 *(0.239)*	17.89 *(3.52)*	
VARYING POWER AND FUEL CONSUMPTION					
360.76 *(269.02)*	2100	20.83 *(78.87)*	0.405 *(0.247)*	17.32 *(3.41)*	Air temperature
322.79 *(240.70)*	2212	19.95 *(75.54)*	0.434 *(0.264)*	16.18 *(3.19)*	75°F *(24°C)*
246.23 *(183.61)*	2249	16.62 *(62.92)*	0.474 *(0.288)*	14.81 *(2.92)*	Relative humidity
165.69 *(123.55)*	2271	12.90 *(48.85)*	0.547 *(0.333)*	12.84 *(2.53)*	69%
83.99 *(62.63)*	2301	9.14 *(34.61)*	0.764 *(0.465)*	9.19 *(1.81)*	Barometer
1.59 *(1.19)*	2340	5.98 *(22.64)*	26.402 *(16.060)*	0.27 *(0.05)*	28.84" Hg *(97.66 kPa)*

Maximum Torque 1352 lb.-ft. *(1833 Nm)* at 1299 rpm
Maximum Torque Rise 50.0%
Torque rise at 1700 engine rpm 22%

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 7th Gear									
321.75 *(239.93)*	16608 *(73.87)*	7.27 *(11.69)*	2098	2.05	0.452 *(0.275)*	15.54 *(3.06)*	186 *(86)*	66 *(19)*	29.01 *(98.24)*
75% of Pull at Maximum Power 7th Gear									
257.23 *(191.81)*	12458 *(55.42)*	7.74 *(12.46)*	2223	1.50	0.505 *(0.307)*	13.89 *(2.74)*	184 *(84)*	68 *(20)*	29.02 *(98.27)*
50% of Pull at Maximum Power 7th Gear									
174.88 *(130.41)*	8290 *(36.88)*	7.91 *(12.73)*	2260	1.04	0.590 *(0.359)*	11.90 *(2.34)*	181 *(83)*	68 *(20)*	29.02 *(98.27)*
75% of Pull at Reduced Engine Speed 8th Gear									
257.38 *(191.93)*	12444 *(55.35)*	7.76 *(12.48)*	1840	1.59	0.436 *(0.265)*	16.10 *(3.17)*	182 *(83)*	68 *(20)*	29.02 *(98.27)*
50% of Pull at Reduced Engine Speed 8th Gear									
175.28 *(130.71)*	8292 *(36.88)*	7.93 *(12.76)*	1871	0.95	0.504 *(0.306)*	13.93 *(2.75)*	181 *(83)*	68 *(20)*	29.02 *(98.27)*

DRAWBAR PERFORMANCE AT 2000 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)*
					3rd Gear				
292.55 *(218.16)*	33422 *(148.67)*	3.28 *(5.28)*	2161	8.25	0.504 *(0.307)*	13.93 *(2.74)*	182 *(83)*	62 *(17)*	29.04 *(98.34)*
					4th Gear				
310.69 *(231.68)*	30597 *(136.10)*	3.81 *(6.13)*	2000	5.46	0.463 *(0.282)*	15.15 *(2.98)*	183 *(84)*	64 *(18)*	29.05 *(98.37)*
					5th Gear				
319.69 *(238.39)*	25569 *(113.74)*	4.69 *(7.55)*	2003	3.92	0.445 *(0.271)*	15.77 *(3.11)*	186 *(86)*	64 *(18)*	29.04 *(98.34)*
					6th Gear				
320.26 *(238.82)*	20606 *(91.66)*	5.83 *(9.38)*	2000	2.86	0.442 *(0.269)*	15.88 *(3.13)*	187 *(86)*	65 *(18)*	29.03 *(98.31)*
					7thGear				
321.71 *(239.90)*	17370 *(77.26)*	6.95 *(11.18)*	2008	2.05	0.441 *(0.268)*	15.92 *(3.14)*	186 *(86)*	66 *(19)*	29.02 *(98.27)*
					8th Gear				
321.33 *(239.61)*	14312 *(63.66)*	8.42 *(13.55)*	2002	1.59	0.443 *(0.269)*	15.86 *(3.12)*	186 *(86)*	66 *(19)*	29.03 *(98.31)*

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At 75% load in 5th Gear	76.0
Bystander	—

TIRES AND WEIGHT **Tested Without Ballast**

Rear Tires—No., size, ply & psi *(kPa)* Four 20.8R42; **; 12 *(85)*

Front Tires—No., size, ply & psi *(kPa)* Four 20.8R42; **; 12 *(85)*

Height of Drawbar 17.0 in *(430 mm)*

Static Weight with Operator—Rear 12886 lb *(5836 kg)*

—Front 18880 lb *(8564 kg)*

—Total 31746 lb *(14400 kg)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: No Three Point Hitch Available

Quick Attach: NA

Maximum Force Exerted Through Whole Range:	NA	
i) Opening pressure of relief valve:	NA	
Sustained pressure with pump installed:	2930 psi	*(202 bar)*
ii) Pump delivery rate at minimum pressure:	27.5 GPM	*(104.1 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	23.5 GPM	*(89.0 l/min)*
Delivery pressure:	2720 psi	*(188 bar)*
Power:	37.3 HP	*(27.8 kW)*

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 123° F *(50° C)*. The drawbar pull in 3rd 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. **1714**, Summary 209, June 7, 1996.

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CASE IH 9380 Diesel

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