

NEBRASKA OECD TRACTOR TEST 1794 - SUMMARY 354

WHITE 8710 DIESEL

18 SPEED

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 1052 rpm)					
204.33 (152.37)	2200	13.04 (49.35)	0.448 (0.273)	15.67 (3.09)	
Standard Power Take-off Speed (1000 rpm)					
221.42 (165.11)	2092	13.43 (50.85)	0.426 (0.259)	16.48 (3.25)	
Maximum Power (2 Hours)					
225.28 (167.99)	2050	13.47 (50.98)	0.420 (0.256)	16.73 (3.29)	

VARYING POWER AND FUEL CONSUMPTION

204.33 (152.37)	2200	13.04 (49.35)	0.448 (0.273)	15.67 (3.09)	Air temperature
178.05 (132.78)	2255	11.70 (44.28)	0.462 (0.281)	15.22 (3.00)	76°F (24°C)
136.91 (102.09)	2305	9.78 (37.01)	0.502 (0.305)	14.00 (2.76)	Relative humidity
92.15 (68.71)	2342	7.64 (28.93)	0.583 (0.354)	12.06 (2.38)	31%
47.09 (35.11)	2377	5.64 (21.33)	0.841 (0.512)	8.36 (1.65)	Barometer
1.66 (1.24)	2435	3.54 (13.41)	14.980 (9.112)	0.47 (0.09)	29.22" Hg (98.95 kPa)

Maximum Torque - 716 lb.-ft. (970 Nm) at 1300 rpm

Maximum Torque Rise - 46.6%

Torque rise at 1799 engine rpm - 26%

DRAWBAR PERFORMANCE

UNBALLASTED - FRONT DRIVE ENGAGED 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		Barom. inch Hg (kPa)
Maximum Power 11th Gear									
177.14 (132.10)	10171 (45.24)	6.53 (10.51)	2200	2.79	0.516 (0.314)	13.62 (2.68)	188 (87)	69 (21)	28.63 (96.95)
75% of Pull at Maximum Power 11th Gear									
136.78 (102.00)	7574 (33.69)	6.77 (10.90)	2267	2.33	0.557 (0.339)	12.62 (2.49)	188 (87)	85 (29)	28.63 (96.95)
50% of Pull at Maximum Power 11th Gear									
94.27 (70.30)	5061 (22.51)	6.98 (11.24)	2322	1.59	0.646 (0.393)	10.89 (2.14)	185 (85)	86 (30)	28.67 (97.09)
75% of Pull at Reduced Engine Speed 13th Gear									
137.09 (102.23)	7606 (33.83)	6.76 (10.88)	1757	2.33	0.456 (0.277)	15.42 (3.04)	186 (85)	86 (30)	28.66 (97.05)
50% of Pull at Reduced Engine Speed 13th Gear									
93.95 (70.06)	5066 (22.53)	6.96 (11.19)	1795	1.59	0.508 (0.309)	13.83 (2.72)	185 (85)	87 (31)	28.69 (97.16)

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

Dates of Test: May 7- 18, 2001

Manufacturer: AGCO Corporation, 4205 River Green Parkway, Duluth, Georgia, 30096 USA.

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8439 Fuel weight 7.027 lbs/gal (0.842 kg/l) Oil SAE 15W40 API service classification CE/CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL fluid Front axle lubricant AGCO Gear Lube 715 Total time engine was operated 22.0 hours

ENGINE: Make Cummins Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** 45665128 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.488" x 5.315" (114.0 mm x 135.0 mm) **Compression ratio** 17.3 to 1 **Displacement** 505 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 transmission and hydraulic oil **Fuel filter** two paper elements and water separator **Muffler** vertical **Cooling medium temperature control** one thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 86.6 - 95.7 lb/h (39.3 - 43.4 kg/h) **High idle:** 2400 - 2460 rpm **Turbo boost:** nominal 17.7 - 24.0 psi (122 - 165 kPa) as measured 23.3 psi (161 kPa)

CHASSIS: Type front wheel assist **Serial No.** *CG133003* **Tread width** rear 64.1" (1628 mm) to 128.9" (3274 mm) front 60.0" (1524 mm) to 88.0" (2235 mm) **Wheelbase** 121.0" (3073 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 1.39 (2.24) second 1.80 (2.89) third 2.32 (3.74) fourth 2.65 (4.26) fifth 3.00 (4.82) sixth 3.41 (5.49) seventh 3.87 (6.23) eighth 4.41 (7.10) ninth 4.99 (8.03) tenth 5.69 (9.15) eleventh 6.46 (10.39) twelfth 7.36 (11.84) thirteenth 8.32 (13.39) fourteenth 9.48 (15.25) fifteenth 10.76 (17.32) sixteenth 13.86 (22.31) seventeenth 18.56 (29.87) eighteenth 23.10 (37.18) reverse 1.39 (2.24), 2.32 (3.74), 2.65 (4.26), 3.87 (6.23), 4.41 (7.10), 6.46 (10.39) **Clutch** multiple wet disc electro-hydraulically operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2091 engine rpm **Unladen tractor mass** 19630 lb (8904 kg)

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED
MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel lb/lp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
6th Gear									
149.51 (111.49)	17996 (80.05)	3.12 (5.01)	2245	13.97	0.579 (0.352)	12.14 (2.39)	188 (87)	69 (21)	28.63 (96.95)
7th Gear									
167.43 (124.85)	17236 (76.67)	3.64 (5.86)	2203	9.66	0.547 (0.333)	12.85 (2.53)	189 (87)	70 (21)	28.64 (96.99)
8th Gear									
178.64 (133.21)	16801 (74.73)	3.99 (6.42)	2088	8.48	0.519 (0.315)	13.55 (2.67)	187 (86)	72 (22)	28.64 (96.99)
9th Gear									
186.52 (139.09)	15330 (68.19)	4.56 (7.34)	2052	5.81	0.497 (0.302)	14.13 (2.78)	188 (87)	73 (23)	28.64 (96.99)
10th Gear									
189.34 (141.19)	13452 (59.84)	5.28 (8.49)	2051	4.41	0.490 (0.298)	14.34 (2.82)	189 (87)	75 (24)	28.64 (96.99)
11th Gear									
191.06 (142.47)	11845 (52.69)	6.05 (9.73)	2047	3.25	0.486 (0.296)	14.45 (2.85)	188 (86)	69 (21)	28.63 (96.95)
12th Gear									
190.89 (142.35)	10392 (46.23)	6.89 (11.09)	2042	2.97	0.486 (0.296)	14.46 (2.85)	189 (87)	80 (27)	28.64 (96.99)
13th Gear									
189.42 (141.25)	9038 (40.20)	7.86 (12.65)	2051	2.70	0.491 (0.298)	14.32 (2.82)	189 (87)	81 (27)	28.64 (96.99)
14th Gear									
186.55 (139.11)	7907 (35.17)	8.85 (14.24)	2047	2.82	0.496 (0.302)	14.17 (2.79)	189 (87)	82 (28)	28.64 (96.99)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE: The front drive axle on this model automatically disengages at travel speeds above 8.7 mph (14.0 km/h).

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 135°F (57°C). The pull in 4th gear (ballasted tractor) was limited to avoid excessive tractor bouncing. The performance figures on this Summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1794**, Nebraska Summary 354, June 11, 2001.

Brent T. Sampson
 Test Engineer

L. L. Bashford
 M. F. Kocher
 G. J. Hoffman
 Board of Tractor Test Engineers

TIRES, BALLAST AND WEIGHT

Rear tires - No., size, ply & psi (kPa)

Ballast - Duals (total)
 - Cast Iron (total)

Front tires - No., size, ply & psi (kPa)

Ballast - Liquid (total)
 - Cast Iron (total)

Height of Drawbar

Static Weight with operator - Rear

- Front

- Total

With Ballast

Four 20.8R42; **; 16 (110)

2350 lb (1066 kg)

2750 lb (1248 kg)

Two 16.9R30; **; 24 (205)

None

1975 lb (896 kg)

18.0 in (445 mm)

16935 lb (7682 kg)

9945 lb (4511 kg)

26880 lb (12193 kg)

Without Ballast

Two 20.8R42; **; 20 (150)

None

None

Two 16.9R30; **; 24 (165)

None

None

17.0 in (445 mm)

12415 lb (5631 kg)

7390 lb (3352 kg)

19805 lb (8983 kg)

DRAWBAR PERFORMANCE
BALLASTED - FRONT DRIVE ENGAGED
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)	Temp. °F cool- ing med	Temp. °C Air dry bulb	Barom. inch Hg (kPa)	
4th Gear									
165.15 (123.16)	24468 (108.84)	2.53 (4.07)	2211	8.47	0.549 (0.334)	12.79 (2.52)	187 (86)	74 (23)	28.62 (96.92)
5th Gear									
174.62 (130.21)	23559 (104.80)	2.78 (4.47)	2123	7.41	0.531 (0.323)	13.23 (2.61)	187 (86)	75 (24)	28.62 (96.92)
6th Gear									
183.65 (136.95)	22186 (98.69)	3.10 (5.00)	2049	5.89	0.504 (0.307)	13.94 (2.75)	189 (87)	76 (24)	28.61 (96.88)
7th Gear									
187.87 (140.09)	19686 (87.57)	3.58 (5.76)	2049	4.67	0.494 (0.300)	14.23 (2.80)	189 (87)	77 (25)	28.61 (96.88)
8th Gear									
189.79 (141.52)	17323 (77.06)	4.11 (6.61)	2047	3.79	0.489 (0.298)	14.36 (2.83)	189 (87)	78 (26)	28.61 (96.88)
9th Gear									
188.95 (140.90)	15124 (67.27)	4.69 (7.54)	2053	3.25	0.491 (0.299)	14.31 (2.82)	189 (87)	79 (26)	28.62 (96.92)
10th Gear									
189.75 (141.50)	13301 (59.16)	5.35 (8.61)	2049	2.88	0.488 (0.297)	14.39 (2.83)	189 (87)	80 (27)	28.62 (96.92)
11th Gear									
187.75 (140.00)	11504 (51.17)	6.12 (9.85)	2056	2.52	0.492 (0.299)	14.27 (2.81)	189 (87)	81 (27)	28.62 (96.92)
12th Gear									
187.64 (139.92)	10102 (44.94)	6.97 (11.21)	2048	2.24	0.494 (0.300)	14.23 (2.80)	189 (87)	82 (28)	28.63 (96.95)
13th Gear									
186.71 (139.23)	8856 (39.39)	7.91 (12.72)	2051	1.87	0.496 (0.302)	14.16 (2.79)	189 (87)	83 (28)	28.63 (96.95)
14th Gear									
183.11 (136.54)	7695 (34.23)	8.92 (14.36)	2048	1.98	0.504 (0.307)	13.93 (2.74)	190 (88)	84 (29)	28.63 (96.95)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 8th gear	76.9	76.7
Bystander	--	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

Maximum Force Exerted

Through Whole Range: 19710 lbs (87.7 kN)

High flow option

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2840 psi (196 bar) 2850 psi (196 bar)
- ii) Pump delivery rate at minimum pressure and rated engine speed: 29.1 GPM (110.2 l/min) 39.3 GPM (148.8 l/min)
- iii) Pump delivery rate at maximum hydraulic power: 25.7 GPM (97.3 l/min) 35.9 GPM (135.9 l/min)
- Delivery pressure: 2575 psi (177 bar) 2490 psi (172 bar)
- Power: 38.6 HP (28.8 kW) 52.2 HP (38.9 kW)

THREE POINT HITCH PERFORMANCE

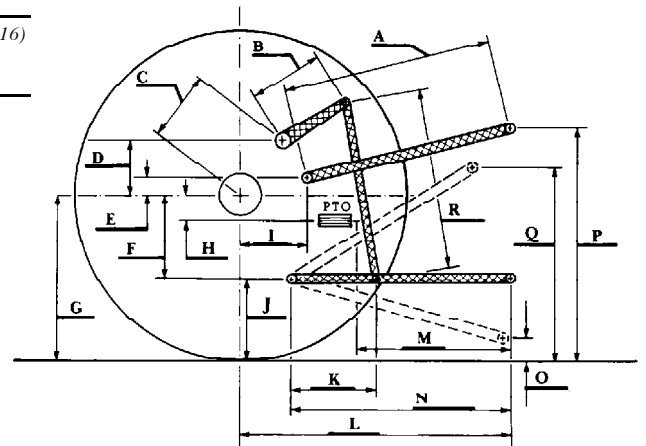
Observed Maximum Pressure psi. (bar) 3020 (208)
 Location: lift cylinder
 Hydraulic oil temperature: °F (°C) 149 (65)
 Location: hydraulic sump
 Category: III
 Quick attach: none

SAE Static Test System pressure 2720 psi (188 Bar)

Hitch point distance to ground level in. (mm)	11.7 (297)	16.0 (406)	24.0 (610)	32.0 (813)	40.0 (1016)
Lift force on frame lb	22635	23229	22302	22860	21726
" " " " " " (kN)	(100.7)	(103.3)	(99.2)	(101.7)	(96.6)

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	28.8	732	29.8	756
B	15.0	380	15.0	380
C	19.4	492	19.4	492
D	17.6	447	17.6	447
E	11.0	280	11.0	280
F	13.0	330	13.0	330
G	36.3	920	34.3	870
H	3.9	100	3.9	100
I	17.6	447	17.6	447
J	23.3	590	21.3	540
K	21.3	540	23.2	590
L	48.2	1225	48.2	1225
M	23.1	588	23.1	588
N	38.4	975	38.4	975
O	11.6	295	9.3	235
P	45.3	1150	48.2	1225
Q	41.5	1054	36.9	937
R	34.0	864	36.0	914

HITCH DIMENSIONS AS TESTED - NO LOAD



White 8710 Diesel

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