1-1-1994

Test 1676: White 6125 Diesel 18-Speed

Nebraska Tractor Test Lab
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NEBRASKA OECD TRACTOR TEST 1676—SUMMARY 148
WHITE 6125 DIESEL
18 SPEED

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

Dates of Test: April 19-May 10, 1994

Manufacturer: AGCO Corporation, Norcross, Georgia 30092

FUEL OIL and TIME: Fuel No. 2 Diesel **Cetane No.** 53.9 **Specific gravity converted to 60°/60° F** ***(15°/15°C)*** 0.8400 **Fuel weight** 6.994 lbs/gal *(0.838 kg/l)* **Oil SAE** 15W-40 **API service classification** SG/CE **To motor** 3.851 gal *(14.579 l)* **Drained from motor** 3.512 gal *(13.295 l)* **Transmission and hydraulic lubricant** AGCO Power Fluid 821XL **Front axle lubricant** AGCO Gear Lube SAE 80W-90 **Total time engine was operated** 36.0 hours.

ENGINE: Make Cummins Diesel **Type** six cylinder vertical with turbocharger **Serial No.** 44912148 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** (as specified) 4.016" × 4.72" *(102.0 mm × 120.0 mm)* **Compression ratio** 16.5 to 1 **Displacement** 359 cu in *(5880 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 hydraulic and final drive oil, radiator for transmission oil **Fuel filter** two paper elements **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 50.5-55.8 lb/h *(22.9-25.3 kg/h)* **High idle:** 2325-2425 rpm **Turbo boost** nominal 10.3 psi *(71 kPa)* as measured 14.0 psi *(97 kPa)*

CHASSIS: Type front wheel assist **Serial No.** 620093 **Tread width** rear 65.0" *(1651 mm)* to 124.0" *(3150 mm)* front 62.6" *(1590 mm)* to 88.6" *(2250 mm)* **Wheel base** 107.0" *(2718 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 1.57 *(2.53)* second 1.86 *(2.99)* third 2.17 *(3.49)* fourth 2.49 *(4.00)* fifth 2.94 *(4.73)* sixth 3.44 *(5.54)* seventh 4.05 *(6.52)* eighth 4.79 *(7.70)* ninth 5.60 *(9.01)* tenth 6.50 *(10.47)* eleventh 7.69 *(12.37)* twelfth 8.99 *(14.47)* thirteenth 10.30 *(16.58)* fourteenth 12.18 *(19.60)* fifteenth 14.25 *(22.93)* sixteenth 16.77 *(26.99)* seventeenth 19.82 *(31.90)* eighteenth 23.20 *(37.33)* reverse 1.90 *(3.06)*, 2.25 *(3.62)*, 2.63 *(4.24)*, 3.02 *(4.86)*, 3.57 *(5.74)*, 4.17 *(6.71)*, 4.91 *(7.90)*, 5.80 *(9.34)*, 6.79 *(10.93)* **Clutch** multiple wet disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2024 engine rpm and 1000 rpm at 2000 engine rpm **Unladen tractor mass** 16832 lb *(7337 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—1099 rpm)					
124.94 *(93.17)*	2198	7.79 *(29.49)*	0.436 *(0.265)*	16.04 *(3.16)*	
Maximum Power (2 hours)					
130.95 *(97.65)*	1999	7.79 *(29.50)*	0.416 *(0.253)*	16.80 *(3.31)*	
Standard Power Take-off Speed (1000 rpm)					
130.95 *(97.65)*	1999	7.79 *(29.50)*	0.416 *(0.253)*	16.80 *(3.31)*	
VARYING POWER AND FUEL CONSUMPTION					
124.94 *(93.17)*	2198	7.79 *(29.49)*	0.436 *(0.265)*	16.04 *(3.16)*	Air temperature
108.69 *(81.05)*	2246	6.99 *(26.47)*	0.450 *(0.274)*	15.55 *(3.06)*	75°F *(24°C)*
82.30 *(61.37)*	2274	5.79 *(21.92)*	0.492 *(0.299)*	14.21 *(2.80)*	Relative humidity
55.94 *(41.72)*	2313	4.68 *(17.70)*	0.585 *(0.356)*	11.96 *(2.36)*	56%
28.65 *(21.36)*	2350	3.65 *(13.80)*	0.890 *(0.541)*	7.86 *(1.55)*	Barometer
1.00 *(0.75)*	2386	2.49 *(9.42)*	17.403 *(10.586)*	0.40 *(0.08)*	29.04"Hg *(98.34 kPa)*

Maximum Torque 390 lb.-ft. *(529 Nm)* at 1301 rpm
Maximum Torque Rise 30.6%
Torque rise at 1800 engine rpm 24%

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—8th Gear									
110.62 *(82.49)*	8875 *(39.48)*	4.67 *(7.52)*	2199	3.16	0.498 *(0.303)*	14.06 *(2.77)*	183 *(84)*	51 *(11)*	28.97 *(98.10)*
75% of Pull at Maximum Power—8th Gear									
86.29 *(64.35)*	6664 *(29.64)*	4.86 *(7.81)*	2263	2.20	0.535 *(0.325)*	13.08 *(2.58)*	173 *(78)*	48 *(9)*	29.03 *(98.31)*
50% of Pull at Maximum Power—8th Gear									
58.68 *(43.76)*	4435 *(19.73)*	4.96 *(7.99)*	2296	1.49	0.625 *(0.380)*	11.19 *(2.20)*	168 *(75)*	48 *(9)*	29.03 *(98.31)*
75% of Pull at Reduced Engine Speed—10th Gear									
86.20 *(64.28)*	6668 *(29.66)*	4.85 *(7.80)*	1662	2.11	0.457 *(0.278)*	15.29 *(3.01)*	175 *(79)*	48 *(9)*	29.03 *(98.31)*
50% of Pull at Reduced Engine Speed—10th Gear									
58.81 *(43.86)*	4444 *(19.77)*	4.96 *(7.99)*	1690	1.58	0.512 *(0.312)*	13.65 *(2.69)*	172 *(78)*	48 *(9)*	29.03 *(98.31)*

DRAWBAR PERFORMANCE
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)*
				4th Gear					
97.16	16719	2.18	2236	14.53	0.557	12.57	171	52	28.97
(72.45)	*(74.37)*	*(3.51)*			*(0.339)*	*(2.48)*	*(77)*	*(11)*	*(98.10)*
				5th Gear					
106.99	15514	2.59	2101	8.78	0.507	13.80	185	52	28.97
(79.78)	*(69.01)*	*(4.16)*			*(0.308)*	*(2.72)*	*(85)*	*(11)*	*(98.10)*
				6th Gear					
114.09	14608	2.93	1998	7.06	0.487	14.37	185	51	28.97
(85.07)	*(64.98)*	*(4.71)*			*(0.296)*	*(2.83)*	*(85)*	*(11)*	*(98.10)*
				7th Gear					
117.50	122506	3.52	1997	5.11	0.470	14.87	185	51	28.97
(87.62)	*(55.63)*	*(5.67)*			*(0.286)*	*(2.93)*	*(85)*	*(11)*	*(98.10)*
				8th Gear					
116.36	10325	4.23	2000	3.68	0.474	14.77	185	51	28.97
(86.77)	*(45.93)*	*(6.80)*			*(0.288)*	*(2.91)*	*(85)*	*(11)*	*(98.10)*
				9th Gear					
115.57	8693	4.99	2001	2.99	0.478	14.62	184	51	28.97
(86.18)	*(38.67)*	*(8.02)*			*(0.291)*	*(2.88)*	*(84)*	*(11)*	*(98.10)*
				10th Gear					
118.06	7610	5.82	2002	2.46	0.466	15.02	185	51	28.97
(88.04)	*(33.85)*	*(9.36)*			*(0.283)*	*(2.96)*	*(85)*	*(11)*	*(98.10)*
				11th Gear					
118.94	6469	6.89	1999	2.11	0.465	15.03	186	51	28.97
(88.69)	*(28.78)*	*(11.10)*			*(0.283)*	*(2.96)*	*(85)*	*(11)*	*(98.10)*
				12th Gear					
116.09	5381	8.09	1998	1.85	0.478	14.62	185	51	28.97
(86.57)	*(23.94)*	*(13.02)*			*(0.291)*	*(2.88)*	*(85)*	*(11)*	*(98.10)*

DRAWBAR PERFORMANCE (BALLASTED—FRONT DRIVE ENGAGED)
MAXIMUM POWER IN SELECTED GEARS

				3rd Gear					
102.14	19896	1.93	2213	13.25	0.540	12.94	168	43	29.05
(76.17)	*(88.50)*	*(3.10)*			*(0.329)*	*(2.55)*	*(76)*	*(6)*	*(98.37)*
				4th Gear					
111.34	18991	2.20	2093	8.54	0.492	14.21	170	43	29.06
(83.03)	*(84.47)*	*(3.54)*			*(0.299)*	*(2.80)*	*(76)*	*(6)*	*(98.41)*
				5th Gear					
118.05	17480	2.53	1998	6.64	0.473	14.77	172	43	29.07
(88.03)	*(77.75)*	*(4.08)*			*(0.288)*	*(2.91)*	*(78)*	*(6)*	*(98.44)*
				6th Gear					
118.33	14717	3.02	1999	5.16	0.470	14.89	184	43	29.08
(88.25)	*(65.46)*	*(4.85)*			*(0.286)*	*(2.93)*	*(84)*	*(6)*	*(98.48)*
				7th Gear					
121.67	12735	3.58	2000	4.23	0.460	15.20	184	42	29.09
(90.73)	*(56.65)*	*(5.77)*			*(0.280)*	*(2.99)*	*(84)*	*(6)*	*(98.51)*
				8th Gear					
119.65	10492	4.28	2002	3.19	0.462	15.13	194	40	29.27
(89.22)	*(46.67)*	*(6.88)*			*(0.281)*	*(2.98)*	*(90)*	*(4)*	*(99.12)*
				9th Gear					
118.30	8835	5.02	1999	2.84	0.468	14.93	176	41	29.27
(88.22)	*(39.30)*	*(8.08)*			*(0.285)*	*(2.94)*	*(80)*	*(5)*	*(99.12)*
				10th Gear					
119.96	7690	5.85	1998	2.49	0.461	15.17	185	42	29.27
(89.46)	*(34.20)*	*(9.42)*			*(0.280)*	*(2.99)*	*(85)*	*(6)*	*(99.12)*
				11th Gear					
119.12	6428	6.95	2001	2.32	0.462	15.14	184	42	29.27
(88.83)	*(28.59)*	*(11.18)*			*(0.281)*	*(2.98)*	*(84)*	*(6)*	*(99.12)*
				12th Gear					
116.45	5360	8.15	1999	1.78	0.473	14.79	185	41	29.28
(86.84)	*(23.84)*	*(13.11)*			*(0.288)*	*(2.91)*	*(85)*	*(5)*	*(99.15)*

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 return was maintained at 143° F *(62°C)*. This tractor did not meet manufacturers claim of 22 GPM *(84 l/m)* hydraulic flow or 3 point lift capacity of 7212 lbs *(3271 kg)* (optionally—8544 lbs *(3875 kg)*). The performance results on this summary were taken from OECD tests conducted under the Code II Restricted Standard Test Code procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1676**, Summary 148, June 17, 1994.

LOUIS I. LEVITICUS
Engineer-in-Charge

R.D. GRISSO
M.F. KOCHER
K. VON BARGEN
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE (FRONT DRIVE DISENGAGED)

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—7th Gear									
112.08 *(83.58)*	10655 *(47.40)*	3.94 *(6.35)*	2200	3.98	0.489 *(0.297)*	14.31 *(2.82)*	171 *(77)*	41 *(5)*	29.28 *(99.15)*
75% of Pull at Maximum Power—7th Gear									
87.19 *(65.02)*	7988 *(35.53)*	4.09 *(6.59)*	2261	3.03	0.518 *(0.315)*	13.50 *(2.66)*	175 *(79)*	41 *(5)*	29.28 *(99.15)*
50% of Pull at Maximum Power—7th Gear									
59.53 *(44.39)*	5319 *(23.66)*	4.20 *(6.75)*	2298	2.24	0.618 *(0.376)*	11.32 *(2.23)*	178 *(81)*	41 *(5)*	29.28 *(99.15)*
75% of Pull at Reduced Engine Speed—9th Gear									
86.87 *(64.78)*	7998 *(35.57)*	4.07 *(6.56)*	1627	3.03	0.458 *(0.279)*	15.27 *(3.01)*	171 *(77)*	41 *(5)*	29.28 *(99.15)*
50% of Pull at Reduced Engine Speed—9th Gear									
59.53 *(44.39)*	5330 *(23.71)*	4.19 *(6.74)*	1658	2.24	0.513 *(0.312)*	13.64 *(2.69)*	176 *(80)*	41 *(5)*	29.28 *(99.15)*

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)*
4th Gear									
100.87 *(75.22)*	17436 *(77.56)*	2.17 *(3.49)*	2210	14.35	0.546 *(0.332)*	12.80 *(2.52)*	169 *(76)*	43 *(6)*	29.06 *(98.41)*
5th Gear									
114.08 *(85.07)*	17346 *(77.16)*	2.47 *(3.97)*	2000	9.00	0.489 *(0.297)*	14.32 *(2.82)*	184 *(84)*	43 *(6)*	29.07 *(98.44)*
6th Gear									
117.05 *(87.28)*	14717 *(65.46)*	2.98 *(4.80)*	1999	6.23	0.476 *(0.290)*	14.69 *(2.89)*	184 *(84)*	43 *(6)*	29.08 *(98.48)*
7th Gear									
119.34 *(88.99)*	12578 *(55.95)*	3.56 *(5.73)*	2002	4.82	0.464 *(0.282)*	15.06 *(2.97)*	180 *(82)*	42 *(6)*	29.09 *(98.51)*
8th Gear									
117.90 *(87.92)*	10419 *(46.34)*	4.24 *(6.83)*	2000	3.81	0.468 *(0.284)*	14.96 *(2.95)*	185 *(85)*	40 *(4)*	29.27 *(99.12)*
9th Gear									
116.01 *(86.51)*	8690 *(38.66)*	5.01 *(8.06)*	2004	3.37	0.472 *(0.287)*	14.83 *(2.92)*	178 *(81)*	42 *(6)*	29.27 *(99.12)*
10th Gear									
118.13 *(88.09)*	7598 *(33.80)*	5.83 *(9.38)*	2002	2.94	0.464 *(0.282)*	15.08 *(2.97)*	195 *(90)*	42 *(6)*	29.27 *(99.12)*
11th Gear									
117.97 *(87.97)*	6395 *(28.44)*	6.92 *(11.13)*	2002	2.50	0.468 *(0.284)*	14.96 *(2.95)*	188 *(87)*	41 *(5)*	29.27 *(99.12)*
12th Gear									
115.03 *(85.78)*	5321 *(23.67)*	8.11 *(13.05)*	1998	2.24	0.476 *(0.290)*	14.68 *(2.89)*	179 *(81)*	41 *(5)*	29.28 *(99.15)*

TRACTOR SOUND LEVEL WITH CAB	**Front Wheel Drive Disengaged dB(A)**	**Engaged dB(A)**
At 75% load in 9th gear	77.0	77.0
Bystander	—	—

TIRES, BALLAST AND WEIGHT

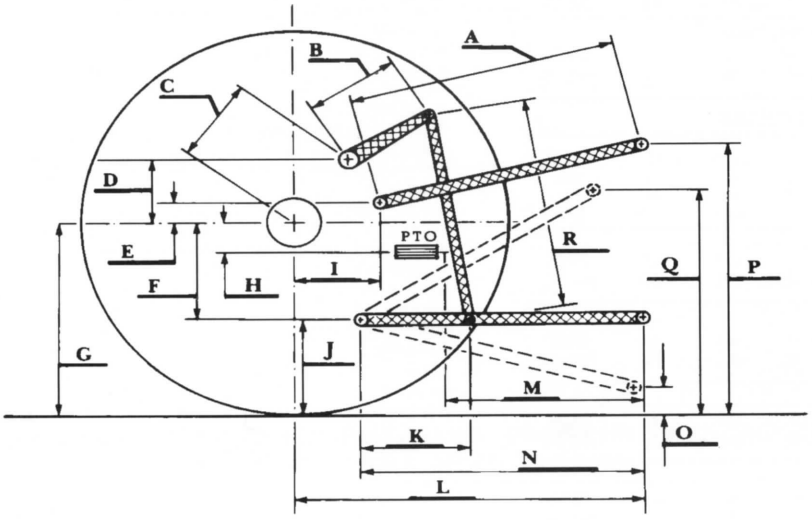
	With Ballast	**Without Ballast**
Rear Tires—No., size, ply & psi *(kPa)*	Four 18.4R42; **; 20 *(140)*	Two 18.4R42; **, 20 *(140)*
Ballast—Duals (total)	1700 lb *(771 kg)*	None
—Test Equip. (total)	88 lb *(40 kg)*	None
Front Tires—No., size, ply & psi *(kPa)*	Two 16.9R28; **; 22 *(150)*	Two 16.9R28; **; 22 *(150)*
Ballast—Liquid (total)	None	None
—Test Equip. (total)	36 lb *(16 kg)*	None
Height of Drawbar	22.0 in *(560 mm)*	20.5 in *(520 mm)*
Static Weight with Operator—Rear	12984 lb *(5889 kg)*	11196 lb *(5078 kg)*
—Front	5840 lb *(2649 kg)*	5804 lb *(2633 kg)*
—Total	18824 lb *(8538 kg)*	17000 lb *(7711 kg)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III
Quick Attach: No

Maximum Force Exerted Through Whole Range:	5913 lbs	*(26.3 kN)*
	6962 lbs	*(31.0 kN)* with lift assist cylinder
i) Opening pressure of relief valve:	NA	
Sustained pressure with pump stalled:	2270 psi	*(156 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	20.6 GPM	*(78.0 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	19.8 GPM	*(75.0 l/min)*
Delivery pressure:	1960 psi	*(135 bar)*
Power:	22.6 HP	*(16.9 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	*mm*
A	25.3	*641*
B	16.0	*406*
C	19.8	*502*
D	18.2	*461*
E	9.1	*230*
F	10.2	*259*
G	35.0	*889*
H	1.9	*48*
I	20.1	*508*
J	24.8	*630*
K	21.4	*543*
L	45.3	*1150*
M	22.4	*568*
N	34.8	*884*
O	9.0	*229*
P	51.8	*1316*
Q	38.3	*972*
R	38.7	*983*

WHITE 6125 DIESEL

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