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Test 1686: White 6195 Diesel 18-Speed

Nebraska Tractor Test Lab

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NEBRASKA OECD TRACTOR TEST 1686—SUMMARY 170

WHITE 6195 DIESEL 18 SPEED

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

Dates of Test: October 21-27, 1994

Manufacturer: AGCO Corporation, Duluth,
Georgia 30136

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—1056 rpm)					
200.46 (149.48)	2200	12.01 (45.47)	0.417 (0.254)	16.69 (3.29)	
Standard Power Take-off Speed (1000 rpm)					
213.54 (159.24)	2084	12.37 (46.83)	0.404 (0.245)	17.26 (3.40)	
Maximum Power (2 hours)					
218.03 (162.59)	2050	12.49 (47.28)	0.399 (0.243)	17.46 (3.44)	
VARYING POWER AND FUEL CONSUMPTION					
200.46 (149.48)	2200	12.01 (45.47)	0.417 (0.254)	16.69 (3.29)	Air temperature
175.87 (131.15)	2268	10.89 (41.24)	0.432 (0.263)	16.14 (3.18)	79°F (26°C)
133.83 (99.80)	2299	9.17 (34.72)	0.477 (0.290)	14.59 (2.87)	Relative humidity
91.10 (67.93)	2336	7.36 (27.87)	0.563 (0.343)	12.37 (2.44)	51%
45.89 (34.22)	2372	5.51 (20.86)	0.837 (0.509)	8.33 (1.64)	Barometer
1.93 (1.44)	2414	3.83 (14.51)	13.840 (8.418)	0.50 (0.10)	28.66"Hg (97.07 kPa)

Maximum Torque 640 lb.-ft. (868 Nm) at 1601 rpm
Maximum Torque Rise 33.8%
Torque rise at 1800 rpm 28%

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	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—11th Gear									
174.70 (130.28)	8299 (36.92)	7.89 (12.70)	2193	2.39	0.480 (0.292)	14.53 (2.86)	186 (86)	60 (16)	29.12 (98.61)
75% of Pull at Maximum Power—11th Gear									
136.80 (102.02)	6227 (27.70)	8.24 (13.26)	2274	1.84	0.521 (0.317)	13.36 (2.63)	185 (85)	64 (18)	29.03 (98.31)
50% of Pull at Maximum Power—11th Gear									
93.81 (69.95)	4170 (18.55)	8.44 (13.58)	2315	1.18	0.617 (0.375)	11.29 (2.22)	183 (84)	64 (18)	29.03 (98.31)
75% of Pull at Reduced Engine Speed—13th Gear									
136.50 (101.79)	6218 (27.66)	8.23 (13.25)	1695	1.65	0.459 (0.279)	15.19 (2.99)	184 (84)	64 (18)	29.03 (98.31)
50% of Pull at Reduced Engine Speed—13th Gear									
93.83 (69.97)	4170 (18.55)	8.44 (13.58)	1727	1.09	0.513 (0.312)	13.59 (2.68)	183 (84)	64 (18)	29.03 (98.31)

FUEL OIL and TIME: Fuel No. 2 Diesel Cetane No. 50.6 Specific gravity converted to 60°/60° F (15°/15°C) 0.8367 Fuel weight 6.967 lbs/gal (0.835 kg/l) Oil SAE 15W-40 API service classification CDII/SG To motor 4.432 gal (16.779 l) Drained from motor 4.118 gal (15.587 l) Transmission and hydraulic lubricant AGCO Power Fluid 821XL Front axle lubricant AGCO Gear Lube 715 SAE 80W-90 Total time engine was operated 20.5 hours.

ENGINE: Make Consolidated Diesel Corporation Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** 45015028 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** (as specified) 4.488" × 5.315" (114.0 mm × 135.0 mm) **Compression ratio** 16.5 to 1 **Displacement** 505 cu in (8268 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** two full flow cartridges **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** two thermostats.

ENGINE OPERATING PARAMETERS: Fuel rate: 76.3-88.8 lb/h (34.6-40.3 kg/h) **High idle:** 2380-2480 rpm **Turbo boost** nominal 16.7 psi (115 kPa) as measured 16.0 psi (110 kPa)

CHASSIS: Type front wheel assist **Serial No.** 681030PL **Tread width** rear 65.0" (1651 mm) to 124.0" (3150 mm) front 62.6" (1590 mm) to 88.6" (2250 mm) **Wheel base** 115.0" (2921 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 1.67 (2.69) second 1.97 (3.18) third 2.31 (3.71) fourth 2.64 (4.26) fifth 3.13 (5.03) sixth 3.66 (5.88) seventh 4.30 (6.93) eighth 5.09 (8.19) ninth 5.95 (9.58) tenth 6.91 (11.13) eleventh 8.17 (13.14) twelfth 9.56 (15.38) thirteenth 10.95 (17.62) fourteenth 12.94 (20.83) fifteenth 15.14 (24.37) sixteenth 17.82 (28.68) seventeenth 21.07 (33.91) eighteenth 24.66 (39.68) reverse 2.03 (3.26), 2.39 (3.85), 2.80 (4.50), 3.21 (5.16), 3.79 (6.10), 4.43 (7.14), 5.22 (8.40), 6.17 (9.93), 7.22 (11.62) **Clutch** multiple wet disc electro 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** 1000 rpm at 2083 engine rpm **Unladen tractor mass** 18678 lb (8472 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 Consumption lb/hp.hr (kg/kWh)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
6th Gear									
154.65 (115.32)	18427 (81.97)	3.15 (5.06)	2215	13.83	0.536 (0.326)	12.99 (2.56)	184 (84)	54 (12)	29.12 (98.61)
7th Gear									
171.81 (128.12)	17426 (77.51)	3.70 (5.95)	2107	9.55	0.489 (0.297)	14.26 (2.81)	186 (85)	56 (13)	29.12 (98.61)
8th Gear									
184.83 (137.83)	15692 (69.80)	4.42 (7.11)	2052	6.19	0.469 (0.286)	14.84 (2.92)	186 (86)	57 (14)	29.12 (98.61)
9th Gear									
184.58 (137.64)	13131 (58.41)	5.27 (8.48)	2050	4.29	0.463 (0.282)	15.05 (2.96)	186 (86)	58 (14)	29.12 (98.61)
10th Gear									
189.03 (140.96)	11485 (51.09)	6.17 (9.93)	2050	3.48	0.457 (0.278)	15.25 (3.00)	187 (86)	59 (15)	29.12 (98.61)
11th Gear									
190.32 (141.92)	9723 (43.25)	7.34 (11.81)	2049	2.76	0.454 (0.276)	15.34 (3.02)	186 (86)	60 (16)	29.12 (98.61)
12th Gear									
188.02 (140.20)	8158 (36.29)	8.64 (13.91)	2050	2.30	0.456 (0.278)	15.27 (3.01)	187 (86)	61 (16)	29.12 (98.61)

**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/kWh)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
4th Gear									
156.05 (116.37)	24399 (108.53)	2.40 (3.86)	2238	10.38	0.524 (0.319)	13.29 (2.62)	184 (84)	50 (10)	29.12 (98.61)
5th Gear									
171.19 (127.66)	23044 (102.50)	2.79 (4.48)	2140	7.83	0.491 (0.298)	14.20 (2.80)	184 (84)	51 (11)	29.14 (98.68)
6th Gear									
184.10 (137.28)	21804 (96.99)	3.17 (5.10)	2049	6.33	0.471 (0.287)	14.78 (2.91)	184 (84)	51 (11)	29.14 (98.68)
7th Gear									
189.28 (141.15)	18655 (82.98)	3.80 (6.12)	2050	4.51	0.456 (0.278)	15.27 (3.01)	184 (84)	52 (11)	29.15 (98.71)
8th Gear									
189.25 (141.13)	15654 (69.63)	4.53 (7.30)	2045	3.62	0.455 (0.277)	15.30 (3.01)	186 (85)	53 (12)	29.15 (98.71)
9th Gear									
187.94 (140.15)	13165 (58.56)	5.35 (8.62)	2049	2.81	0.457 (0.278)	15.24 (3.00)	185 (85)	52 (11)	29.15 (98.71)
10th Gear									
1189.02 (140.95)	11336 (50.42)	6.25 (10.06)	2052	2.44	0.456 (0.277)	15.28 (3.01)	186 (85)	52 (11)	29.15 (98.71)
11th Gear									
1189.71 (141.46)	9600 (42.70)	7.41 (11.93)	2050	2.07	0.454 (0.276)	15.35 (3.02)	185 (85)	52 (11)	29.15 (98.71)
12th Gear									
1184.48 (137.56)	7972 (35.46)	8.68 (13.97)	2044	1.79	0.462 (0.281)	15.08 (2.97)	186 (86)	52 (11)	29.15 (98.71)

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 162° F (72°C). This tractor did not meet manufacturers claim of 22 GPM (82 l/m) hydraulic flow or 3 point lift capacity of 9900 lbs (4490 kg). The pull in 4th gear (ballasted, front drive engaged) was limited to avoid excessive tractor bouncing. 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. **1686**, Summary 170, December 15, 1994.

LOUIS I. LEVITICUS
Engineer-in-Charge

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

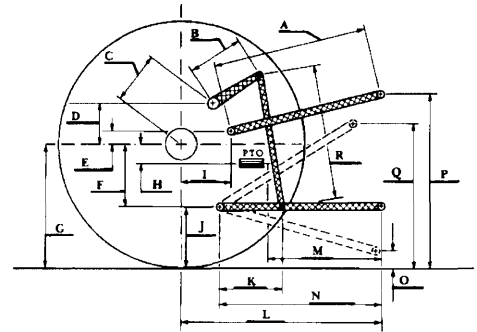
TRACTOR SOUND LEVEL WITH CAB

dB(A)

At 75% load in 8th gear	75.5
Bystander	—

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires —No., size, ply & psi (kPa)	Four 18.4R46; ***; 18 (125)	Two 18.4R46; ***; 20 (140)
Ballast —Duals (total)	2436 lb (1185 kg)	None
—Cast Iron (total)	1466 lb (665 kg)	None
Front Tires —No., size, ply & psi (kPa)	Two 16.9R30; **; 24 (165)	Two 16.9R30; **; 24 (165)
Ballast —Liquid (total)	None	None
—Cast Iron (total)	1434 lb (650 kg)	None
Height of Drawbar	17.0 in (430 mm)	16.0 in (405 mm)
Static Weight with Operator —Rear	15478 lb (7021 kg)	12052 lb (5467 kg)
—Front	8700 lb (3946 kg)	6790 lb (3080 kg)
—Total	24178 lb (10967 kg)	18842 lb (8847 kg)



THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

Maximum Force Exerted Through Whole Range:	8172 lbs (36.4 kN)
i) Opening pressure of relief valve:	NA
—Sustained pressure with pump stalled:	2550 psi (176 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	18.9 GPM (71.5 l/min)
iii) Pump delivery rate at maximum hydraulic power:	16.9 GPM (64.0 l/min)
—Delivery pressure:	2200 psi (152 bar)
—Power:	21.7 HP (16.2 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 6195 DIESEL

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