

# NEBRASKA TRACTOR TEST 1794A

## AGCO ALLIS 9775 DIESEL

### 18 SPEED

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

**Dates of Test:** September 20-26, 2000

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

#### 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed 1052 rpm)</b>					
204.62 (152.58)	2200	12.48 (47.24)	0.429 (0.261)	16.40 (3.23)	
<b>Standard Power Take-off Speed (1000 rpm)</b>					
215.80 (160.92)	2091	12.54 (47.48)	0.409 (0.248)	17.20 (3.39)	
<b>Maximum Power (2 Hours)</b>					
220.67 (164.55)	2000	12.42 (47.01)	0.396 (0.241)	17.77 (3.50)	

#### VARYING POWER AND FUEL CONSUMPTION

204.62 (152.58)	2200	12.48 (47.24)	0.429 (0.261)	16.40 (3.23)	Air temperature
176.92 (131.93)	2235	11.18 (42.34)	0.444 (0.270)	15.82 (3.12)	75°F (24°C)
135.91 (101.35)	2288	9.43 (35.71)	0.488 (0.297)	14.41 (2.84)	Relative humidity
93.79 (69.94)	2369	7.73 (29.25)	0.579 (0.352)	12.14 (2.39)	34%
46.95 (35.01)	2375	5.63 (21.33)	0.843 (0.513)	8.33 (1.64)	Barometer
2.70 (2.01)	2375	3.84 (14.54)	9.995 (6.080)	0.70 (0.14)	28.83 Hg (97.63 kPa)

Maximum Torque - 692 lb.-ft. (939 Nm) at 1300 rpm  
 Maximum Torque Rise - 41.6%  
 Torque rise at 1800 engine rpm - 24%

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.8441 **Fuel weight** 7.028 lbs/gal (0.842 kg/l) **Oil SAE 15W40 API service classification** CE/CF-4 **Transmission and hydraulic lubricant** AGCO Power fluid 821XL **Front axle lubricant** AGCO Gear Lube 715 **Total time engine was operated** 9.0 hours

**ENGINE: Make** Navistar **Diesel Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** WN4211N1131579 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.591" x 5.35" (116.6 mm x 135.9 mm) **Compression ratio** 16.5 to 1 **Displacement** 531 cu in (8700 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 transmission oil **Fuel filter** two paper elements **Muffler** vertical **Cooling medium temperature control** thermostat and variable speed fan

**ENGINE OPERATING PARAMETERS: Fuel rate:** 83.4 - 92.0 lb/h (37.8 - 41.7 kg/h) **High idle:** 2304 - 2404 rpm **Turbo boost:** nominal 17.5 - 22.5 psi (121 - 155 kPa) as measured 19.9 psi (137 kPa)

**CHASSIS: Type** front wheel assist **Serial No.** \*CH106002\* **Tread width** rear 61.5" (1562 mm) to 126.0" (3200 mm) front 60.0" (1524 mm) to 88.0" (2235 mm) **Wheelbase** 112.5" (2858 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 1.44 (2.32) second 1.86 (3.00) third 2.40 (3.87) fourth 2.75 (4.42) fifth 3.09 (4.98) sixth 3.53 (5.68) seventh 4.01 (6.45) eighth 4.57 (7.35) ninth 5.17 (8.32) tenth 5.89 (9.48) eleventh 6.69 (10.77) twelfth 7.62 (12.27) thirteenth 8.62 (13.87) fourteenth 9.82 (15.80) fifteenth 11.15 (17.95) sixteenth 14.37 (23.12) seventeenth 18.59 (29.91) eighteenth 23.94 (38.53) reverse 1.44 (2.32), 2.40 (3.87), 2.75 (4.42), 4.01 (6.45), 4.57 (7.35), 6.69 (10.77) **Clutch** multiple wet disc electro-hydraulically operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2091 engine rpm **Unladen tractor mass** 19845 lb (9001 kg)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 8th gear	76.4	74.5
Bystander		--

#### TIRES AND WEIGHT

**Rear tires** - No., size, ply & psi (kPa)  
**Front tires** - No., size, ply & psi (kPa)  
**Height of Drawbar**  
**Static Weight with operator** - Rear  
 - Front  
 - Total

#### Tested Without Ballast

Two 18.4R46; \*\*\*, 22 (150)  
 Two 14.9R34; \*\*\*, 24 (165)  
 18.0 in (455 mm)  
 12170 lb (5520 kg)  
 7850 lb (3561 kg)  
 20020 lb (9081 kg)

### THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

Maximum Force Exerted

Through Whole Range: 19710 lbs (87.7 kN)

		<u>High flow option</u>
i) Opening pressure of relief valve:	NA	NA
Sustained pressure of the open relief valve:	2850 psi (196 bar)	2850 psi (196 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:	29.9 GPM (113.2 l/min)	39.3 GPM (148.8 l/min)
iii) Pump delivery rate at maximum hydraulic power:	26.0 GPM (98.4 l/min)	35.9 GPM (135.9 l/min)
Delivery pressure:	2640 psi (182 bar)	2490 psi (172 bar)
Power:	40.0 HP (29.9 kW)	52.2 Hp (38.9 kW)

### THREE POINT HITCH PERFORMANCE

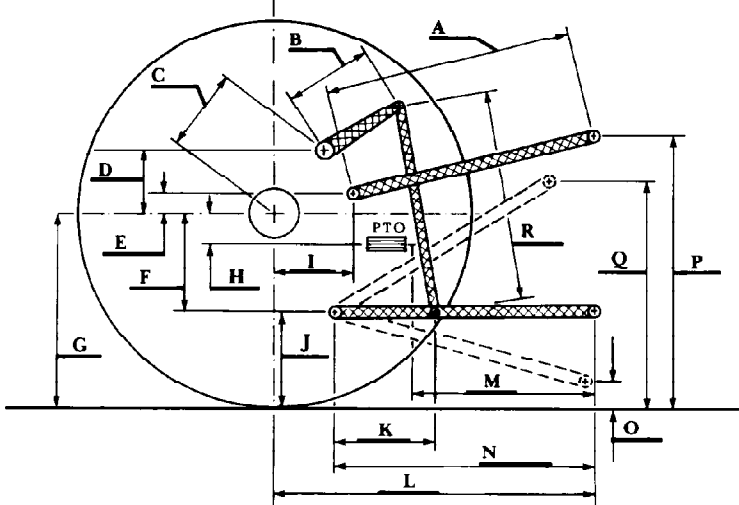
Observed Maximum Pressure psi.(bar)	3020(208)
Location:	lift cylinder
Hydraulic oil temperature: °F(°C)	149(65)
Location:	hydraulic sump
Category:	III
Quick attach:	none

**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



Agricultural Research Division  
 Institute of Agriculture and Natural Resources  
 University of Nebraska Lincoln  
 Darrell Nelson, Dean and Director

**NOTE:** See Nebraska Tractor Test 1794, on the White 8710 Diesel, for drawbar performance for this model.

**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 114°F(46°C).

We, the undersigned, certify that this is a true and correct report of Official Tractor Test No. **1794A**, June 11, 2001.

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 Test Engineer

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AGCO Allis 9775 Diesel