

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 |
|---|--------------------------------|------------------|-----------------------|-----------------------|--------------------------------|
| MAXIMUM POWER AND FUEL CONSUMPTION | | | | | |
| Rated Engine Speed (PTO speed 1052 rpm) | | | | | |
| 204.62 (152.58) | 2200 | 12.48 (47.24) | 0.429 (0.261) | 16.40 (3.23) | |
| Standard Power Take-off Speed (1000 rpm) | | | | | |
| 215.80 (160.92) | 2091 | 12.54 (47.48) | 0.409 (0.248) | 17.20 (3.39) | |
| Maximum Power (2 Hours) | | | | | |
| 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

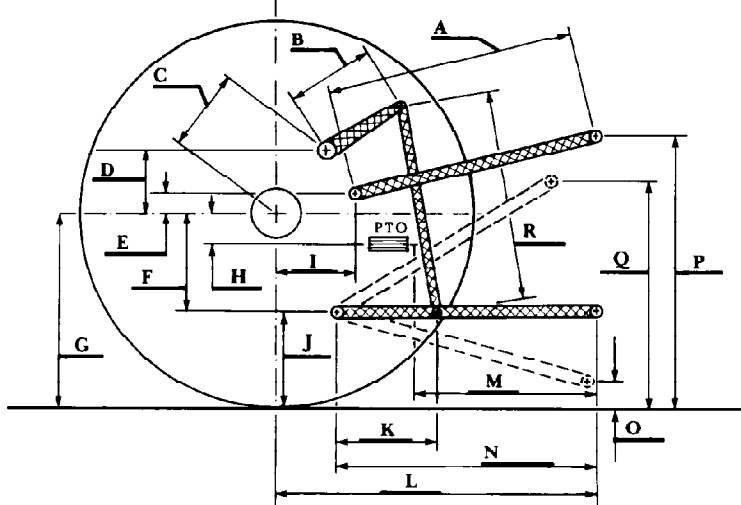
| | |
|-------------------------------------|----------------|
| Observed Maximum Pressure psi.(bar) | 3020(208) |
| Location: | lift cylinder |
| Hydraulic oil temperature: °F(°C) | 149(65) |
| Location: | hydraulic sump |
| Category: | III |
| Quick attach: | none |

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.

Brent T. Sampson
 Test Engineer

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



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