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Nebraska Summary 522: AGCO RT155A Quadrashift Diesel

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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SUMMARY OF OECD TEST 2202-NEBRASKA SUMMARY 522

AGCO RT 155A QUADRASHIFT DIESEL

32 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—1100 rpm)					
156.1 (116.4)	2200	9.56 (36.18)	0.434 (0.264)	16.34 (3.22)	
Standard Power Take-off Speed(1000 rpm)					
165.2 (123.2)	2000	9.18 (34.74)	0.394 (0.240)	18.00 (3.55)	
Maximum Power (2 hours)					
166.0 (123.8)	1986	9.14 (34.58)	0.390 (0.237)	18.17 (3.58)	

VARYING POWER AND FUEL CONSUMPTION

156.1 (116.4)	2200	9.56 (36.18)	0.434 (0.264)	16.34 (3.22)	Air temperature
135.4 (101.0)	2244	8.50 (32.16)	0.445 (0.271)	15.94 (3.14)	70°F(21°C)
102.5 (76.4)	2268	6.88 (26.03)	0.477 (0.290)	14.87 (2.93)	Relative humidity
68.7 (51.2)	2293	5.38 (20.38)	0.556 (0.338)	12.76 (2.51)	58%
34.9 (26.0)	2319	3.85 (14.58)	0.783 (0.476)	9.06 (1.79)	Barometer
--	2338	2.48 (9.40)	--	--	29.9" Hg(101.2 kPa)

Maximum Torque - 525.5 lb.-ft. (712.5 Nm) at 1400 rpm
 Maximum Torque Rise - 41.0%
 Torque rise at 1760 engine 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—20th(2LA) Gear									
135.7 (101.2)	5960 (26.5)	8.54 (13.74)	2204	4.0	0.519 (0.316)	13.65 (2.69)	183 (84)	52 (11)	29.8 (100.9)
75% of Pull at Maximum Power—20th(2LA) Gear									
103.9 (77.5)	4445 (19.8)	8.77 (14.12)	2236	3.3	0.552 (0.336)	12.84 (2.53)	183 (84)	52 (11)	29.8 (100.9)
50% of Pull at Maximum Power—20th(2LA) Gear									
70.4 (52.5)	2960 (13.2)	8.92 (14.35)	2263	2.7	0.670 (0.408)	10.58 (2.09)	181 (83)	52 (11)	29.8 (100.9)
75% of Pull at Reduced Engine Speed—22th(2LB) Gear									
104.2 (77.7)	4455 (19.8)	8.77 (14.12)	1935	3.8	0.490 (0.298)	14.47 (2.85)	181 (83)	50 (10)	29.8 (100.9)
50% of Pull at Reduced Engine Speed—22th(2LB) Gear									
70.9 (52.9)	2985 (13.3)	8.91 (14.33)	1955	3.4	0.555 (0.338)	12.78 (2.52)	180 (82)	50 (10)	29.8 (101.0)

Location of tests: Groupement d'Antony, Parc de Touvoie, BP 44 Antony, France 92163

Dates of tests: March - June, 2004

Sound tests - January 19, 2006

Manufacturer: AGCO S.A. Z.A.-No.2 BP 60307, Avenue Blaise Pascal, 60026 Beauvais, France

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.852 **Fuel weight** 7.09 lbs/gal (0.850 kg/l) **Oil SAE** 10W40 **API service classification** CF4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 10W/40 **Front axle lubricant** Terrac Tractan 9 10W/40

ENGINE: Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** N13304 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.252" x 4.724" (108.0 mm x 120.0 mm) **Compression ratio** 18.5 to 1 **Displacement** 402 cu in (6596 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** M302015 **Tread width** rear 61.7" (1567 mm) to 95.2" (2417 mm) front 66.5" (1690 mm) to 85.5" (2172 mm) **Wheelbase** 118.5" (3011 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.47 (2.36) second 1.72 (2.76) third 2.03 (3.26) fourth 2.22 (3.57) fifth 2.37 (3.82) sixth 2.60 (4.18) seventh 3.06 (4.93) eighth 3.17 (5.10) ninth 3.59 (5.78) tenth 3.71 (5.97) eleventh 4.38 (7.05) twelfth 4.59 (7.39) thirteenth 5.13 (8.25) fourteenth 5.38 (8.65) fifteenth 5.65 (9.09) sixteenth 6.34 (10.21) seventeenth 6.61 (10.64) eighteenth 7.43 (11.95) nineteenth 7.80 (12.56) twentieth 8.54 (13.75) twenty-first 9.14 (14.71) twenty-second 10.00 (16.09) twenty-third 11.81 (19.00) twenty-fourth 12.20 (19.64) twenty-fifth 13.82 (22.24) twenty-sixth 14.29 (22.99) twenty-seventh 16.86 (27.14) twenty-eighth 17.68 (28.45) twenty-ninth 19.74 (31.76) thirtieth 20.69 (33.30) thirty-first 24.42 (39.30) thirty-second 24.86 (40.00) reverse 1.47 (2.36), 1.72 (2.76), 2.03 (3.26), 2.22 (3.57), 2.37 (3.82), 2.60 (4.18), 3.06 (4.93), 3.17 (5.10), 3.59 (5.78), 3.71 (5.97), 4.38 (7.05), 4.59 (7.39), 5.13 (8.25), 5.38 (8.65), 5.65 (9.09), 6.34 (10.21), 6.61 (10.64), 7.43 (11.95), 7.80 (12.56),

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/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
6th(2TB)Gear									
98.6 (73.5)	15240 (67.8)	2.43 (3.91)	2241	11.7	0.557 (0.339)	12.74 (2.51)	181 (83)	50 (10)	29.8 (101.0)
7th(2TC)Gear									
117.1 (87.3)	15085 (67.1)	2.91 (4.68)	2223	9.6	0.527 (0.321)	13.45 (2.65)	181 (83)	50 (10)	29.8 (101.0)
8th(3TA)Gear									
119.8 (89.3)	14930 (66.4)	3.01 (4.84)	2222	9.6	0.525 (0.320)	13.50 (2.66)	181 (83)	50 (10)	29.8 (101.0)
9th(2TD)Gear									
133.3 (99.4)	14835 (66.0)	3.37 (5.42)	2172	8.5	0.512 (0.312)	13.85 (2.73)	181 (83)	50 (10)	29.8 (101.0)
10th(3TB)Gear									
135.6 (101.1)	14610 (65.0)	3.48 (5.60)	2155	8.0	0.503 (0.306)	14.11 (2.78)	181 (83)	50 (10)	29.8 (101.0)
11th(3TC)Gear									
142.8 (106.5)	13600 (60.5)	3.94 (6.34)	2047	6.8	0.469 (0.285)	15.13 (2.98)	181 (83)	50 (10)	29.8 (101.0)
12th(4TA)Gear									
142.1 (106.0)	13115 (58.3)	4.06 (6.54)	2000	7.2	0.466 (0.283)	15.23 (3.00)	181 (83)	49 (9)	29.8 (101.0)
13th(3TD)Gear									
143.6 (107.1)	11735 (52.2)	4.59 (7.39)	2004	5.4	0.459 (0.279)	15.43 (3.04)	183 (84)	45 (7)	29.8 (101.0)
14th(4TB)Gear									
141.7 (105.7)	10995 (48.9)	4.83 (7.78)	2009	6.4	0.467 (0.284)	15.18 (2.99)	183 (84)	50 (10)	29.8 (101.0)
15th(1LA)Gear									
144.4 (107.7)	10680 (47.5)	5.07 (8.16)	1998	5.0	0.460 (0.280)	15.43 (3.04)	183 (84)	50 (10)	29.8 (101.0)
16th(4TC) Gear									
140.8 (105.0)	9240 (41.1)	5.71 (9.19)	1998	4.5	0.470 (0.286)	15.13 (2.98)	183 (84)	52 (11)	29.8 (101.0)
17th(1LB)Gear									
143.2 (106.8)	9060 (40.3)	5.93 (9.54)	1985	4.3	0.461 (0.280)	15.39 (3.03)	183 (84)	52 (11)	29.8 (101.0)
18th(4TD)Gear									
140.4 (104.7)	7860 (35.0)	6.70 (10.78)	1987	4.6	0.470 (0.286)	15.08 (2.97)	183 (84)	52 (11)	29.8 (100.9)
19th(1LC)Gear									
142.4 (106.2)	7640 (34.0)	6.99 (11.25)	1985	4.6	0.464 (0.282)	15.28 (3.01)	183 (84)	52 (11)	29.8 (100.9)
20th(2LA)Gear									
148.0 (110.4)	7185 (32.0)	7.73 (12.44)	1986	4.7	0.457 (0.278)	15.53 (3.06)	183 (84)	52 (11)	29.8 (100.9)
21st(1LD)Gear									
143.0 (106.6)	6575 (29.2)	8.15 (13.12)	1989	4.9	0.461 (0.280)	15.39 (3.03)	183 (84)	52 (11)	29.8 (100.9)
22nd(2LB)Gear									
145.8 (108.7)	6120 (27.2)	8.93 (14.37)	1908	4.8	0.463 (0.281)	15.33 (3.02)	185 (85)	50 (10)	29.8 (100.9)

8.54 (13.75), 9.14 (14.71), 10.00 (16.09), 11.81 (19.00), 12.20 (19.64), 13.82 (22.24), 14.29 (22.99), 16.86 (27.14), 17.68 (28.45), 19.74 (31.76), 20.69 (33.30), 24.43 (39.30), 24.86 (40.00) **Clutch** multiple wet disc operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1998 engine rpm or 1000 rpm at 2000 engine rpm **Unladen tractor mass** 15465 lb (7015 kg)

NOTE: The data on this summary was obtained from OECD report 2202 conducted on the Massey Ferguson 6495 Diesel.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The category IHN hitch configuration was not tested for verification. 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 summary of data from OECD Report No. **2202**, Nebraska Summary 522, May 22, 2006.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

TIRES, BALLAST AND WEIGHT	FWA	FWA
	With Ballast	Without Ballast
Rear tires - No., size, ply & psi (kPa)	Four 620/70R42; **,15(100)	Two 620/70R42; **,15(100)
Ballast - Duals(total)	1610 lb (730 kg)	None
- Liquid(none)	None	None
Front tires - No., size, ply & psi (kPa)	Two 540/65R30; **,16(110)	Two 540/65R30; **,16(110)
Ballast - Liquid(total)	None	None
- Cast Iron(total)	None	None
Height of Drawbar	22.0 in (560 mm)	22.5 in (570 mm)
Static Weight with operator -Rear	11255 lb (5105 kg)	9600 lb (4355 kg)
- Front	6030 lb (2735 kg)	6075 lb (2755 kg)
- Total	17285 lb (7840 kg)	15675 lb (7110 kg)

DRAWBAR PERFORMANCE
(Ballasted - 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—20th(2LA) Gear									
132.0 (98.4)	6080 (27.0)	8.14 (13.09)	2208	3.0	0.525 (0.320)	13.50 (2.66)	185 (85)	75 (24)	29.9 (101.1)
75% of Pull at Maximum Power—20th(2LA) Gear									
101.4 (75.6)	4570 (20.3)	8.32 (13.39)	2239	2.3	0.577 (0.351)	12.28 (2.42)	183 (84)	75 (24)	29.9 (101.1)
50% of Pull at Maximum Power—20th(2LA) Gear									
68.9 (51.4)	3040 (13.5)	8.50 (13.68)	2265	1.3	0.675 (0.411)	10.51 (2.07)	181 (83)	75 (24)	29.9 (101.1)
75% of Pull at Reduced Engine Speed—22nd(2LB) Gear									
100.8 (75.2)	4555 (20.3)	8.30 (13.36)	1938	4.1	0.489 (0.298)	14.50 (2.86)	181 (83)	75 (24)	29.9 (101.1)
50% of Pull at Reduced Engine Speed—22nd(2LB) Gear									
69.2 (51.6)	3065 (13.6)	8.47 (13.63)	1952	2.9	0.570 (0.347)	12.44 (2.45)	181 (83)	77 (25)	29.9 (101.1)
MAXIMUM POWER IN SELECTED GEARS									
6th(2TB) Gear									
94.5 (70.5)	16150 (71.8)	2.19 (3.53)	2232	14.8	0.607 (0.369)	11.67 (2.30)	181 (83)	66 (19)	29.9 (101.2)
7th(2TC) Gear									
110.8 (82.6)	16030 (71.3)	2.59 (4.17)	2221	14.5	0.585 (0.356)	12.13 (2.39)	183 (84)	68 (20)	29.9 (101.2)
8th(3TA) Gear									
116.5 (86.9)	15940 (70.9)	2.74 (4.41)	2216	12.3	0.566 (0.344)	12.54 (2.47)	181 (83)	68 (20)	29.9 (101.2)
9th(2TD) Gear									
126.3 (94.2)	15505 (69.0)	3.06 (4.92)	2160	11.4	0.543 (0.330)	13.06 (2.57)	179 (82)	68 (20)	29.9 (101.2)
10th(3TB) Gear									
127.8 (95.3)	15280 (68.0)	3.14 (5.05)	2132	10.8	0.533 (0.324)	13.30 (2.62)	181 (83)	70 (21)	29.9 (101.2)
11th(3TC) Gear									
134.6 (100.4)	14320 (63.7)	3.52 (5.67)	1988	9.0	0.489 (0.298)	14.50 (2.86)	183 (84)	70 (21)	29.9 (101.2)
12th(4TA) Gear									
136.7 (101.9)	13835 (61.5)	3.70 (5.96)	1981	8.4	0.483 (0.294)	14.67 (2.89)	181 (83)	72 (22)	29.9 (101.2)
13th(3TD) Gear									
137.3 (102.4)	12140 (54.0)	4.24 (6.82)	1988	6.5	0.477 (0.290)	14.87 (2.93)	183 (84)	72 (22)	29.9 (101.2)
14th(4TB) Gear									
137.1 (102.2)	11580 (51.5)	4.44 (7.15)	1981	6.0	0.482 (0.293)	14.72 (2.90)	183 (84)	72 (22)	29.9 (101.2)
15th(1LA) Gear									
139.1 (103.7)	11085 (49.3)	4.71 (7.58)	1986	5.5	0.475 (0.289)	14.92 (2.94)	183 (84)	72 (22)	29.9 (101.2)
16th(4TC) Gear									
136.4 (101.7)	9600 (42.7)	5.33 (8.58)	1986	4.9	0.482 (0.293)	14.72 (2.90)	183 (84)	73 (23)	29.9 (101.1)
17th(1LB) Gear									
139.3 (103.9)	9345 (41.6)	5.59 (9.00)	1986	4.5	0.473 (0.288)	14.97 (2.95)	183 (84)	73 (23)	29.9 (101.1)
18th(4TD) Gear									
136.5 (101.8)	8095 (36.0)	6.32 (10.17)	1989	3.7	0.480 (0.293)	14.72 (2.90)	185 (85)	73 (23)	29.9 (101.1)
19th(1LC) Gear									
137.6 (102.6)	7790 (34.6)	6.62 (10.66)	1984	3.9	0.476 (0.290)	14.90 (2.94)	185 (85)	73 (23)	29.9 (101.1)
20th(2LA) Gear									
142.1 (106.0)	7330 (32.6)	7.27 (11.70)	1983	3.6	0.477 (0.290)	14.87 (2.93)	185 (85)	75 (24)	29.9 (101.1)
21st(1LD) Gear									
136.8 (102.0)	6745 (30.0)	7.61 (12.25)	1983	3.2	0.483 (0.294)	14.67 (2.89)	185 (85)	75 (24)	29.9 (101.1)
22nd(2LB) Gear									
140.7 (104.9)	6315 (28.1)	8.36 (13.45)	1984	5.6	0.485 (0.295)	14.62 (2.88)	185 (85)	75 (24)	29.9 (101.1)

TRACTOR SOUND LEVEL WITH CAB

dB(A)

At no load in 12th (4TA) gear	70.6
Bystander in 32nd (4LD) gear	84.9

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range: 15240 lbs (67.8 kN)

i) Opening pressure of relief valve: NA

Sustained pressure of the open relief valve: 2845 psi (196 bar)

ii) Pump delivery rate at minimum pressure: 32.1 GPM (121.7 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 29.6 GPM (112.0 l/min)

Delivery pressure: 2175 psi (150 bar)

Power: 37.5 HP (28.0 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	31.5	800
B	15.7	400
C	21.0	534
D	19.5	495
E	8.3	210
F	12.2	310
G	35.6	905
H	2.0	50
I	17.7	450
J	23.4	595
K	25.0	635
L	47.2	1198
M	23.5	598
N	37.0	940
O	10.2	258
P	47.4	1205
Q	40.2	1022
R	36.3	923

