

SUMMARY OF OECD TEST 2420-NEBRASKA SUMMARY 639

AGCO RT 140A CVT DIESEL POWERMAXX TRANSMISSION

Tractor chassis S/N R191039 and higher

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—1081 rpm)					
153.8 (114.7)	2200	9.24 (35.00)	0.428 (0.260)	16.64 (3.28)	
Standard Power Take-off Speed(1000 rpm)					
174.3 (130.0)	2034	9.67 (36.61)	0.395 (0.240)	18.02 (3.55)	
Maximum Power (1 hour)					
179.7 (134.0)	2000	9.73 (36.84)	0.386 (0.235)	18.46 (3.64)	
VARYING POWER AND FUEL CONSUMPTION					
153.8 (114.7)	2200	9.24 (35.00)	0.428 (0.260)	16.64 (3.28)	Air temperature
132.0 (98.4)	2220	8.08 (30.59)	0.436 (0.265)	16.34 (3.22)	68°F (20°C)
99.2 (74.0)	2229	6.41 (24.26)	0.460 (0.280)	15.48 (3.05)	Relative humidity
66.5 (49.6)	2238	4.76 (18.02)	0.510 (0.310)	13.97 (2.75)	53%
33.4 (24.9)	2248	3.21 (12.13)	0.684 (0.416)	10.42 (2.05)	Barometer
--	2255	1.87 (7.09)	--	--	29.9" Hg (101.2 kPa)
Maximum Torque -562.9 lb.-ft. (806.3 Nm) at 1500 rpm					
Maximum Torque Rise -61.9%					
Torque rise at 1750 engine rpm -42%					

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—Turtle 8									
111.4 (83.1)	8195 (36.5)	5.10 (8.21)	2199	3.4	0.538 (0.327)	13.20 (2.60)	185 (85)	70 (21)	29.8 (100.9)
75% of Pull at Maximum Power—Turtle 8									
85.8 (64.0)	6185 (27.5)	5.20 (8.37)	2222	2.1	0.580 (0.353)	12.23 (2.41)	183 (84)	70 (21)	29.8 (100.9)
50% of Pull at Maximum Power—Turtle 8									
57.8 (43.1)	4120 (18.3)	5.26 (8.46)	2220	2.2	0.672 (0.409)	10.56 (2.08)	181 (83)	70 (21)	29.8 (100.9)
75% of Pull at Reduced Engine Speed—Turtle 9									
86.2 (64.3)	6165 (27.4)	5.24 (8.44)	1977	3.1	0.538 (0.327)	13.20 (2.60)	181 (83)	70 (21)	29.8 (100.9)
50% of Pull at Reduced Engine Speed—Turtle 9									
57.8 (43.1)	4140 (18.4)	5.24 (8.42)	1960	3.2	0.600 (0.365)	11.83 (2.33)	181 (83)	66 (19)	29.8 (100.9)

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

Dates of tests: June - September, 2007

Sound tests: June 24, 2008 Nebraska Tractor Test Laboratory, Lincoln Ne.

Manufacturer: AGCO S.A. BP 307, Avenue Blaise Pascal, 60026 Beauvais, France

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.855 **Fuel weight** 7.12 lbs/gal (0.853 kg/l) **Oil** SAE 15W40 **API service classification** CH4 **Transmission and hydraulic lubricant** BP Terrac Tractan 910W/40 **Front axle lubricant** SAE 85W140 API GL-5

ENGINE: Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** T06951 **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.** S131034 **Tread width** rear 63.1" (1604 mm) to 70.8" (1798 mm) front 67.0" (1702 mm) to 75.4" (1915 mm) **Wheelbase** 118.4" (3007 mm) **Hydraulic control system** direct engine drive **Transmission** CVT. A combination of mechanical and hydrostatic sections allow an infinite speed adjustment within the ranges noted. The transmission has two mechanical ranges. **Nominal travel speeds mph (km/h)** forward: Low range 0-19 (0-30), high range 0-25 (0-40) reverse: 0-19 (0-30) **Clutch** a foot pedal controls the hydrostatic oil flow **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 2033 engine rpm **Unladen tractor mass** 16600 lb (7530 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/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. ^o F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Turtle 3									
93.6 (69.8)	14185 (63.1)	2.47 (3.98)	2202	15.0	0.590 (0.359)	12.03 (2.37)	187 (86)	68 (20)	29.8 (100.8)
Turtle 4									
101.2 (75.5)	13960 (62.1)	2.72 (4.38)	2197	12.9	0.569 (0.346)	12.49 (2.46)	187 (86)	68 (20)	29.8 (100.8)
Turtle 5									
118.9 (88.7)	13690 (60.9)	3.26 (5.24)	2183	9.8	0.547 (0.333)	12.99 (2.56)	187 (86)	68 (20)	29.8 (100.8)
Turtle 6									
127.9 (95.4)	13570 (60.4)	3.53 (5.69)	2133	10.7	0.526 (0.320)	13.50 (2.66)	183 (84)	70 (21)	29.8 (100.8)
Turtle 7									
136.4 (101.7)	13015 (57.9)	3.93 (6.33)	2044	6.9	0.501 (0.305)	14.16 (2.79)	174 (79)	68 (20)	29.8 (100.8)
Turtle 8									
143.8 (107.2)	10610 (47.2)	5.08 (8.18)	2000	5.8	0.483 (0.294)	14.71 (2.90)	190 (88)	70 (21)	29.8 (100.9)
Turtle 9									
144.2 (107.5)	8825 (39.3)	6.13 (9.86)	2001	5.8	0.481 (0.292)	14.77 (2.91)	192 (89)	66 (19)	29.8 (100.9)
Turtle 10									
142.4 (106.2)	7710 (34.3)	6.93 (11.15)	2000	3.8	0.487 (0.297)	14.57 (2.87)	192 (89)	66 (19)	29.8 (100.9)
*Turtle 11									
140.8 (105.0)	6705 (29.8)	7.87 (12.67)	1999	3.9	0.493 (0.300)	14.41 (2.84)	183 (84)	66 (19)	29.8 (100.9)
Rabbit 9									
138.4 (103.2)	10385 (46.2)	5.00 (8.04)	1999	7.8	0.503 (0.306)	14.11 (2.78)	189 (87)	68 (20)	29.8 (100.9)
Rabbit 10									
141.9 (105.8)	7865 (35.0)	6.77 (10.89)	2002	4.8	0.486 (0.295)	14.62 (2.88)	190 (88)	68 (20)	29.8 (100.9)
*Rabbit 11									
141.3 (105.4)	7105 (31.6)	7.46 (12.00)	2001	4.8	0.488 (0.297)	14.57 (2.87)	192 (89)	68 (20)	29.8 (100.9)
*Rabbit 12									
142.3 (106.1)	6215 (27.6)	8.59 (13.82)	2001	4.2	0.487 (0.296)	14.57 (2.87)	183 (84)	68 (20)	29.8 (100.9)

*Front drive disengaged

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: The data on this summary was obtained from OECD report 2420 conducted on the Massey Ferguson 7490 Diesel.

NOTE 2: The performance figures on this report apply to tractors with chassis S/N R191039 and higher.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The manufacturers' claims of 39 GPM (150 lpm) remote hydraulic flow and 16140 lbs (7320 kg) 3 point lift capacity with a category III/IIIN hitch were not verified. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2420**, Nebraska Summary 639, May 7, 2009.

Roger M. Hoy
Director

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

TIRES, BALLAST AND WEIGHT

Rear tires - No., size, ply & psi(kPa)

Ballast - Duals(total)

- Liquid(none)

Front tires - No., size, ply & psi(kPa)

Ballast - Liquid(total)

- Cast Iron(total)

Height of Drawbar

Static Weight with operator- Rear

- Front

- Total

With Ballast

Four 480/80R46; **,9 (60)

2190 lb (993 kg)

None

Two 420/90R30; **,15 (100)

1700 lb (770 kg)

None

22.4 in (570 mm)

11995 lb (5440 kg)

8925 lb (4050 kg)

20920 lb (9490 kg)

Without Ballast

Two 520/85R42; **,15 (100)

None

None

Two 16.9R30; **,15 (100)

None

22.4 in (570 mm)

10000 lb (4535 kg)

6765 lb (3070 kg)

16765 lb (7605 kg)

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/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Turtle 1									
79.1 (59.0)	19490 (86.7)	1.52 (2.45)	2214	15.2	0.636 (0.387)	11.17 (2.20)	180 (82)	68 (20)	29.9 (101.1)
Turtle 2									
104.3 (77.8)	19410 (86.3)	2.02 (3.24)	2199	14.8	0.610 (0.371)	11.63 (2.29)	187 (86)	70 (21)	29.9 (101.1)
Turtle 3									
129.5 (96.6)	19020 (84.6)	2.55 (4.11)	2055	11.6	0.535 (0.325)	13.27 (2.61)	185 (85)	70 (21)	29.9 (101.1)
Turtle 4									
133.3 (99.4)	18590 (82.7)	2.69 (4.33)	2045	9.5	0.518 (0.315)	13.71 (2.70)	189 (87)	72 (22)	29.9 (101.1)
Turtle 5									
140.7 (104.9)	15895 (70.7)	3.32 (5.34)	2006	7.8	0.496 (0.302)	14.31 (2.82)	189 (87)	72 (22)	29.9 (101.1)
Turtle 6									
142.3 (106.1)	14215 (63.2)	3.75 (6.04)	2003	6.9	0.490 (0.298)	14.48 (2.85)	189 (87)	73 (23)	29.9 (101.1)
Turtle 7									
144.1 (107.5)	12500 (55.6)	4.32 (6.96)	1999	5.7	0.484 (0.294)	14.67 (2.89)	190 (88)	73 (23)	29.9 (101.1)
Turtle 8									
143.0 (106.6)	10590 (47.1)	5.06 (8.15)	2002	4.6	0.491 (0.298)	14.48 (2.85)	190 (88)	73 (23)	29.9 (101.1)
Turtle 9									
141.1 (105.2)	9040 (40.2)	5.85 (9.42)	2003	4.3	0.492 (0.299)	14.43 (2.84)	190 (88)	73 (23)	29.8 (101.0)
Turtle 10									
140.7 (104.9)	7890 (35.1)	6.69 (10.76)	1999	3.5	0.496 (0.301)	14.33 (2.82)	190 (88)	73 (23)	29.8 (101.0)
Turtle 11									
136.5 (101.8)	6540 (29.1)	7.83 (12.60)	2003	3.2	0.510 (0.310)	13.92 (2.74)	190 (89)	73 (23)	29.8 (101.0)
Rabbit 9									
138.4 (103.2)	9125 (40.6)	5.69 (9.15)	2001	4.3	0.501 (0.305)	14.16 (2.79)	190 (89)	73 (23)	29.8 (101.0)
Rabbit 10									
139.7 (104.2)	7455 (33.2)	7.03 (11.31)	2000	3.9	0.494 (0.301)	14.37 (2.83)	189 (87)	73 (23)	29.8 (101.0)
Rabbit 11									
137.2 (102.3)	6340 (28.2)	8.12 (13.06)	1999	3.2	0.507 (0.308)	14.01 (2.76)	194 (90)	75 (24)	29.8 (101.0)
Rabbit 12									
136.2 (101.6)	5580 (24.8)	9.15 (14.73)	2003	2.4	0.520 (0.316)	13.65 (2.69)	190 (88)	75 (24)	29.8 (101.0)

Front Wheel Drive
Engaged Disengaged
dB(A) dB(A)

TRACTOR SOUND LEVEL WITH CAB

At no load at 5.2 mph (8.4 km/h) (engine 1200 rpm)	62.0	60.4
At no load at 5.2 mph (8.4 km/h) (engine 2250 rpm)	66.5	66.2
Bystander in Rabbit range		82.3

HYDRAULIC PERFORMANCE

CATEGORY: II
Quick Attach: None
OECD Static test

Maximum force exerted through whole range:	13915 lbs (61.9 kN)
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2900 psi (200 bar)
ii) Pump delivery rate at minimum pressure:	30.5 GPM (115.6 l/min)
iii) Pump delivery rate at maximum	
hydraulic power:	29.3 GPM (111.0 l/min)
Delivery pressure:	2265 psi (156 bar)
Power:	38.7 HP (28.9 kW)

THREE POINT HITCH PERFORMANCE - SAE Test

Observed Maximum Pressure psi. (bar)	2900 (200)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	158 (70)
Location:	hydraulic sump
Category:	II
Quick attach:	None

System pressure 2610 psi (180 bar)

Hitch point distance to ground level in. (mm)	12.0 (306)	17.7 (450)	23.6 (600)	27.6 (700)	33.5 (850)	38.3 (974)
Lift force on frame lb	16545	16590	16930	17175	17065	16140
" " " " " " (kN)	(73.6)	(73.8)	(75.3)	(76.4)	(75.9)	(71.8)

HITCH DIMENSIONS AS TESTED - NO LOAD

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	29.7	754	30.7	780
B	14.0	355	14.0	355
C	14.4	365	14.4	365
D	12.0	305	12.0	305
E	12.6	321	10.9	276
F	10.9	276	10.9	276
G	36.4	925	36.4	925
H	2.4	60	2.4	60
I	15.0	380	15.6	397
J	25.5	649	25.5	649
K	26.2	665	26.2	665
L	47.6	1210	47.6	1210
M	27.0	685	27.0	685
N	40.6	1030	40.6	1030
O	12.0	306	7.8	199
P	44.6	1132	49.6	1259
Q	38.3	974	39.6	1006
R	28.7	729	30.7	780

