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Nebraska Summary: S647 AGCO RT155A

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SUMMARY OF OECD TEST 2421–NEBRASKA SUMMARY 647
AGCO RT 155A CVT DIESEL
POWERMAXX TRANSMISSION
Tractor chassis S/N R241002 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)					
162.5 *(121.2)*	2200	9.70 *(36.71)*	0.425 *(0.259)*	16.75 *(3.30)*	
Standard Power Take-off Speed(1000 rpm)					
185.7 *(138.5)*	2035	10.20 *(38.62)*	0.391 *(0.238)*	18.21 *(3.59)*	
Maximum Power (1 hour)					
190.0 *(141.7)*	2000	10.29 *(38.97)*	0.386 *(0.235)*	18.46 *(3.64)*	
VARYING POWER AND FUEL CONSUMPTION					
162.5 *(121.2)*	2200	9.70 *(36.71)*	0.425 *(0.259)*	16.75 *(3.30)*	Air temperature
139.6 *(104.1)*	2223	8.56 *(32.41)*	0.436 *(0.265)*	16.31 *(3.21)*	68°F *(20°C)*
105.0 *(78.3)*	2230	6.65 *(25.17)*	0.451 *(0.274)*	15.79 *(3.11)*	Relative humidity
70.4 *(52.5)*	2239	4.95 *(18.74)*	0.500 *(0.304)*	14.22 *(2.80)*	54%
35.4 *(26.4)*	2248	3.27 *(12.38)*	0.658 *(0.401)*	10.81 *(2.13)*	Barometer
-- --	2255	1.87 *(7.06)*	-- --	-- --	29.9" Hg *(101.3 kPa)*

Maximum Torque - 562.9 lb.-ft. *(821.6 Nm)* at 1400 rpm
Maximum Torque Rise - 56.2%
Torque rise at 1750 engine rpm - 39%

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—Rabbit 9									
118.9 *(88.7)*	7550 *(33.6)*	5.91 *(9.51)*	2201	4.5	0.555 *(0.338)*	12.79 *(2.52)*	185 *(85)*	66 *(19)*	29.9 *(101.4)*
75% of Pull at Maximum Power—Rabbit 9									
91.2 *(68.0)*	5685 *(25.3)*	6.02 *(9.69)*	2208	3.5	0.566 *(0.344)*	12.55 *(2.47)*	185 *(85)*	66 *(19)*	29.9 *(101.4)*
50% of Pull at Maximum Power—Rabbit 9									
62.2 *(46.4)*	3780 *(16.8)*	6.17 *(9.93)*	2226	2.8	0.644 *(0.392)*	11.01 *(2.17)*	182 *(83)*	66 *(19)*	29.9 *(101.4)*
75% of Pull at Reduced Engine Speed—Rabbit 10									
91.9 *(68.5)*	5720 *(25.5)*	6.02 *(9.69)*	1747	3.6	0.491 *(0.299)*	14.47 *(2.85)*	182 *(83)*	68 *(20)*	29.9 *(101.4)*
50% of Pull at Reduced Engine Speed—Rabbit 10									
58.5 *(43.6)*	3665 *(16.3)*	5.98 *(9.63)*	1707	4.2	0.545 *(0.332)*	13.03 *(2.57)*	178 *(81)*	68 *(20)*	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 9 10W/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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					Turtle 3				
96.8 *(72.2)*	14300 *(63.6)*	2.54 *(4.09)*	2203	15.0	0.593 *(0.361)*	11.98 *(2.36)*	183 *(84)*	61 *(16)*	29.9 *(101.4)*
					Turtle 4				
102.1 *(76.1)*	13915 *(61.9)*	2.75 *(4.43)*	2207	12.8	0.583 *(0.355)*	12.18 *(2.40)*	181 *(83)*	61 *(16)*	29.9 *(101.4)*
					Turtle 5				
120.7 *(90.0)*	13510 *(60.1)*	3.35 *(5.39)*	2206	12.1	0.551 *(0.335)*	12.89 *(2.54)*	183 *(84)*	63 *(17)*	29.9 *(101.4)*
					Turtle 6				
131.0 *(97.7)*	13600 *(60.5)*	3.61 *(5.81)*	2184	9.5	0.532 *(0.323)*	13.36 *(2.63)*	187 *(86)*	63 *(17)*	29.9 *(101.4)*
					Turtle 7				
142.3 *(106.2)*	13500 *(60.0)*	3.95 *(6.36)*	2050	9.0	0.503 *(0.306)*	14.11 *(2.78)*	185 *(85)*	63 *(17)*	29.9 *(101.4)*
					Turtle 8				
153.7 *(114.6)*	11295 *(50.2)*	5.10 *(8.21)*	2002	7.4	0.476 *(0.289)*	14.92 *(2.94)*	180 *(82)*	63 *(17)*	29.9 *(101.4)*
					Turtle 9				
154.4 *(115.1)*	9630 *(42.8)*	6.01 *(9.67)*	1998	7.1	0.473 *(0.288)*	15.02 *(2.96)*	190 *(88)*	66 *(19)*	29.9 *(101.4)*
					Turtle 10				
152.1 *(113.4)*	8140 *(36.2)*	7.01 *(11.28)*	2002	4.1	0.478 *(0.291)*	14.87 *(2.93)*	180 *(82)*	66 *(19)*	29.9 *(101.4)*
					*Turtle 11				
148.0 *(110.4)*	6985 *(31.1)*	7.95 *(12.79)*	2000	4.7	0.491 *(0.298)*	14.48 *(2.85)*	180 *(82)*	66 *(19)*	29.9 *(101.4)*
					Rabbit 9				
146.6 *(109.3)*	10405 *(46.3)*	5.28 *(8.50)*	2004	6.2	0.498 *(0.303)*	14.26 *(2.81)*	180 *(82)*	66 *(19)*	29.9 *(101.4)*
					Rabbit 10				
149.0 *(111.1)*	8170 *(36.3)*	6.84 *(11.00)*	2002	4.7	0.491 *(0.299)*	14.47 *(2.85)*	185 *(85)*	70 *(21)*	29.9 *(101.4)*
					*Rabbit 11				
150.2 *(112.0)*	7380 *(32.8)*	7.63 *(12.28)*	2004	4.5	0.486 *(0.296)*	14.61 *(2.88)*	190 *(88)*	68 *(20)*	29.9 *(101.4)*
					*Rabbit 12				
148.6 *(110.8)*	6495 *(28.9)*	8.58 *(13.81)*	2003	3.6	0.482 *(0.299)*	14.43 *(2.84)*	192 *(89)*	70 *(21)*	29.9 *(101.4)*

* Front Drive disengaged

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: The data on this summary was obtained from OECD report 2421 conducted on the Massey Ferguson 7495 Diesel.

NOTE 2: The performance figures on this report apply to tractors with chassis S/N R241002 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 l/pm)* 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 II test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2421,** Nebraska Summary 647, June 30, 2009.

Roger M. Hoy
Director

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

TIRES, BALLAST AND WEIGHT	With Ballast	Without Ballast
Rear tires - No.,size, ply & psi*(kPa)*	Four 480/80R46; **;9 *(60)*	Two 520/85R42;**;15*(100)*
Ballast - Duals(total)	2190 lb *(993 kg)*	None
- Liquid(none)	None	None
Front tires - No.,size, ply & psi*(kPa)*	Two 420/90R30;**;15 *(100)*	Two 16.9R30;**;15*(100)*
Ballast - Liquid(total)	1700 lb *(770 kg)*	None
- Cast Iron(total)	None	None
Height of Drawbar	22.4 in *(570 mm)*	22.4 in *(570 mm)*
Static Weight with operator- Rear	11995 lb *(5440 kg)*	10000 lb *(4535 kg)*
- Front	8925 lb *(4050 kg)*	6765 lb *(3070 kg)*
- Total	20920 lb *(9490 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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F cool-ing med	*(°C)* Air dry bulb	Barom. inch Hg *(kPa)*
					Turtle 2				
103.4 *(77.1)*	19930 *(88.6)*	1.95 *(3.13)*	2201	15.0	0.593 *(0.361)*	11.98 *(2.36)*	181 *(83)*	64 *(18)*	29.7 *(100.6)*
					Turtle 3				
129.4 *(96.5)*	18985 *(84.4)*	2.56 *(4.11)*	2091	11.4	0.524 *(0.319)*	13.55 *(2.67)*	189 *(87)*	64 *(18)*	29.7 *(100.6)*
					Turtle 4				
142.0 *(105.9)*	17040 *(75.8)*	3.13 *(5.03)*	1999	9.6	0.486 *(0.296)*	14.61 *(2.88)*	187 *(86)*	63 *(17)*	29.7 *(100.6)*
					Turtle 5				
147.0 *(109.6)*	17020 *(75.7)*	3.24 *(5.21)*	2002	7.7	0.487 *(0.296)*	14.57 *(2.87)*	180 *(82)*	63 *(17)*	29.7 *(100.6)*
					Turtle 6				
151.0 *(112.6)*	14395 *(64.0)*	3.93 *(6.33)*	1998	6.6	0.482 *(0.293)*	14.72 *(2.90)*	187 *(87)*	64 *(18)*	29.7 *(100.6)*
					Turtle 7				
149.4 *(111.4)*	12970 *(57.7)*	4.32 *(6.95)*	2001	5.8	0.487 *(0.296)*	14.58 *(2.87)*	187 *(87)*	64 *(18)*	29.7 *(100.6)*
					Turtle 8				
150.5 *(112.2)*	10880 *(48.4)*	5.19 *(8.35)*	1998	4.5	0.484 *(0.294)*	14.67 *(2.89)*	190 *(88)*	64 *(18)*	29.7 *(100.6)*
					Turtle 9				
148.5 *(110.7)*	9665 *(43.0)*	5.76 *(9.27)*	2005	4.3	0.487 *(0.296)*	14.58 *(2.87)*	192 *(89)*	66 *(19)*	29.7 *(100.7)*
					Turtle 10				
147.4 *(109.9)*	8295 *(36.9)*	6.66 *(10.72)*	1998	3.4	0.494 *(0.300)*	14.38 *(2.83)*	192 *(89)*	66 *(19)*	29.7 *(100.7)*
					Turtle 11				
145.9 *(108.8)*	7015 *(31.2)*	7.80 *(12.55)*	1993	3.2	0.496 *(0.302)*	14.31 *(2.82)*	192 *(89)*	68 *(20)*	29.7 *(100.7)*
					Rabbit 9				
144.0 *(107.4)*	9530 *(42.4)*	5.67 *(9.13)*	2004	4.1	0.507 *(0.308)*	14.01 *(2.76)*	192 *(89)*	68 *(20)*	29.7 *(100.7)*
					Rabbit 10				
147.1 *(109.7)*	8095 *(36.0)*	6.81 *(10.97)*	1995	3.7	0.493 *(0.300)*	14.42 *(2.84)*	194 *(90)*	68 *(20)*	29.7 *(100.7)*
					Rabbit 11				
146.8 *(109.5)*	6800 *(30.2)*	8.10 *(13.03)*	1997	3.2	0.496 *(0.302)*	14.31 *(2.82)*	187 *(87)*	66 *(19)*	29.8 *(100.8)*
					*Rabbit 12				
144.0 *(107.4)*	6005 *(26.7)*	8.99 *(14.47)*	1995	3.8	0.505 *(0.307)*	14.06 *(2.77)*	194 *(90)*	66 *(19)*	29.8 *(100.8)*

* Front drive disengaged

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Front Wheel Drive Disengaged dB(A)
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 inch	SAE TEST *mm*	OECD TEST inch	OECD TEST *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*

