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Nebraska Summary: S607 Challenger MT575B

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University of Nebraska-Lincoln, tractortestlab@unl.edu

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SUMMARY OF OECD TEST 2415-NEBRASKA SUMMARY 607

CHALLENGER MT575B TECHSTAR DIESEL

CONTINUOUSLY VARIABLE TRANSMISSION

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)					
170.7 (127.3)	2201	10.11 (38.28)	0.422 (0.257)	16.88 (3.32)	
Standard Power Take-off Speed(1000 rpm)					
192.6 (143.6)	2035	10.77 (40.77)	0.399 (0.243)	17.84 (3.51)	
Maximum Power (1 hour)					
193.8 (144.6)	1900	10.71 (40.53)	0.394 (0.239)	18.08 (3.56)	

VARYING POWER AND FUEL CONSUMPTION

170.7 (127.3)	2201	10.11 (38.28)	0.422 (0.257)	16.88 (3.32)	Air temperature
145.4 (108.4)	2205	9.10 (34.45)	0.446 (0.271)	15.97 (3.15)	73°F (23°C)
109.6 (81.7)	2216	7.71 (29.17)	0.501 (0.305)	14.21 (2.80)	Relative humidity
73.5 (54.8)	2230	5.66 (21.43)	0.549 (0.333)	12.99 (2.56)	54%
37.0 (27.6)	2243	3.53 (13.36)	0.680 (0.413)	10.48 (2.06)	Barometer
--	2250	1.97 (7.46)	--	--	30.5" Hg (103.3 kPa)

Maximum torque - 642.7 lb.-ft. (871.4 Nm) at 1300 rpm
Maximum torque rise - 57.8%
Torque rise at 1800 engine rpm - 41%

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 12									
109.7 (81.8)	5495 (24.4)	7.49 (12.05)	2199	5	0.560 (0.341)	12.66 (2.50)	176 (80)	41 (5)	30.1 (101.9)
75% of Pull at Maximum Power—Rabbit 12									
83.3 (62.1)	4110 (18.3)	7.60 (12.23)	2202	3	0.632 (0.385)	11.22 (2.21)	174 (79)	41 (5)	30.1 (101.9)
50% of Pull at Maximum Power—Rabbit 12									
56.9 (42.4)	2765 (12.3)	7.72 (12.42)	2219	2	0.709 (0.431)	10.00 (1.97)	176 (80)	41 (5)	30.1 (101.9)
75% of Pull at Reduced Engine Speed—Rabbit 14									
83.4 (62.2)	4120 (18.3)	7.59 (12.21)	1929	3	0.561 (0.341)	12.64 (2.49)	174 (79)	41 (5)	30.1 (101.9)
50% of Pull at Reduced Engine Speed—Rabbit 14									
57.4 (42.8)	2780 (12.4)	7.74 (12.45)	1934	2	0.631 (0.384)	11.24 (2.22)	172 (78)	41 (5)	30.1 (101.9)

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

Dates of tests: October - November, 2007

Manufacturer: AGCOS.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 SAE10W/40 **Front axle lubricant** Gear oil SAE 85W/90

ENGINE: Make Caterpillar Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** 66602963 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 5.00" (105.0 mm x 127.0 mm) **Compression ratio** 16.2 to 1 **Displacement** 402 cu in (6600 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 final drive oil, radiator for transmission oil **Fuel filter** one paper element **Muffler** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** front wheel assist **Serial No.** S123 140 **Tread width** rear 60.0" (1524 mm) to 110.0" (2794 mm) front 67.0" (1702 mm) to 74.8" (1900 mm) **Wheelbase** 118.4" (3007 mm) **Hydraulic control system** direct engine drive **Transmission** AGCO CVT. A combination of mechanical and hydrostatic sections are electronically controlled to give the travel speeds shown. 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 2062 engine rpm or 1000 rpm at 2033 engine rpm **Unladen tractor mass** 17595 lb (7980 kg)

DRAWBAR PERFORMANCE									
(Unballasted - Front Drive Engaged)									
MAXIMUM POWER AT SELECTED SPEEDS									
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)
104.2 (77.7)	15400 (68.5)	2.54 (4.08)	2200	15.3	Turtle 3 0.607 (0.369)	11.69 (2.30)	174 (79)	37 (3)	30.1 (101.9)
118.7 (88.5)	15150 (67.4)	2.94 (4.73)	2188	11.4	Turtle 4 0.557 (0.339)	12.74 (2.51)	169 (76)	37 (3)	30.1 (101.9)
150.1 (111.9)	14795 (65.8)	3.80 (6.12)	2182	10.4	Turtle 5 0.506 (0.308)	14.01 (2.76)	181 (83)	37 (3)	30.1 (101.9)
159.6 (119.0)	14455 (64.3)	4.14 (6.66)	2005	10.6	Turtle 6 0.483 (0.294)	14.67 (2.89)	181 (83)	37 (3)	30.1 (101.9)
163.9 (122.2)	13535 (60.2)	4.54 (7.31)	1927	7.9	Turtle 8 0.471 (0.287)	15.05 (2.97)	178 (81)	39 (4)	30.1 (101.9)
164.5 (122.7)	12770 (56.8)	4.83 (7.77)	1910	8.3	Turtle 9 0.470 (0.286)	15.11 (2.98)	201 (94)	39 (4)	30.1 (101.9)
164.3 (122.5)	11490 (51.1)	5.36 (8.63)	1906	7.7	Turtle 10 0.470 (0.286)	15.08 (2.97)	181 (83)	39 (4)	30.1 (101.9)
164.7 (122.8)	10160 (45.2)	6.08 (9.79)	1905	6.1	Turtle 12 0.465 (0.283)	15.27 (3.01)	187 (86)	39 (4)	30.1 (101.9)
162.9 (121.5)	8125 (36.1)	7.52 (12.10)	1900	5.7	Turtle 14 0.472 (0.287)	15.02 (2.96)	187 (86)	39 (4)	30.1 (101.9)
162.5 (121.2)	9605 (42.7)	6.34 (10.21)	1905	7.6	Rabbit 12 0.472 (0.287)	15.02 (2.96)	183 (84)	39 (4)	30.1 (101.9)
164.4 (122.6)	8245 (36.7)	7.48 (12.03)	1903	6.9	Rabbit 14 0.470 (0.286)	15.11 (2.98)	187 (86)	39 (4)	30.1 (101.9)
163.2 (121.7)	7460 (33.2)	8.20 (13.20)	1897	6.1	Rabbit 16 0.469 (0.285)	15.14 (2.98)	185 (85)	39 (4)	30.1 (101.9)

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 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. **2415**, Nebraska Summary 607, September 2, 2008.

Roger M. Hoy
Director

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

DRAWBAR PERFORMANCE
(Ballasted - Front Drive Engaged)
MAXIMUM POWER AT SELECTED SPEEDS

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)
99.9 (74.5)	19770 (88.0)	1.90 (3.05)	2186	14.5	Turtle 2 0.629 (0.383)	11.27 (2.22)	178 (81)	43 (6)	29.9 (101.3)
137.6 (102.6)	19535 (86.9)	2.64 (4.25)	2174	14.0	Turtle 3 0.557 (0.339)	12.74 (2.51)	183 (84)	43 (6)	29.9 (101.3)
146.3 (109.1)	18645 (82.9)	2.94 (4.74)	2127	11.9	Turtle 4 0.523 (0.318)	13.55 (2.67)	181 (83)	43 (6)	29.9 (101.3)
159.4 (118.9)	16445 (73.16)	3.64 (5.86)	1977	8.2	Turtle 5 0.485 (0.295)	14.61 (2.88)	183 (84)	41 (5)	29.9 (101.3)
160.0 (119.3)	15420 (68.6)	3.89 (6.26)	1912	7.2	Turtle 6 0.480 (0.292)	14.77 (2.91)	183 (84)	41 (5)	29.9 (101.3)
161.5 (120.4)	13580 (60.4)	4.46 (7.17)	1902	8.2	Turtle 8 0.478 (0.291)	14.82 (2.92)	183 (84)	45 (7)	29.9 (101.3)
162.0 (120.8)	12340 (54.9)	4.92 (7.92)	1910	6.2	Turtle 9 0.473 (0.288)	14.97 (2.95)	183 (84)	41 (5)	29.9 (101.3)
160.3 (119.5)	10890 (48.4)	5.52 (8.88)	1901	6.6	Turtle 10 0.478 (0.291)	14.82 (2.92)	189 (87)	41 (5)	29.9 (101.3)
161.2 (120.2)	9610 (42.8)	6.29 (10.12)	1908	5.5	Turtle 12 0.478 (0.291)	14.82 (2.92)	187 (86)	45 (7)	29.9 (101.3)
157.2 (117.3)	7605 (33.8)	7.75 (12.48)	1905	5.9	Turtle 14 0.483 (0.294)	14.66 (2.89)	190 (88)	43 (6)	29.9 (101.3)
157.3 (117.3)	9510 (42.3)	6.20 (9.97)	1901	7.9	Rabbit 12 0.487 (0.296)	14.57 (2.87)	185 (85)	43 (6)	29.9 (101.3)
160.4 (119.6)	8260 (36.7)	7.28 (11.72)	1900	5.9	Rabbit 14 0.477 (0.290)	14.87 (2.93)	189 (87)	43 (6)	29.9 (101.3)
159.0 (118.6)	6990 (31.1)	8.53 (13.72)	1906	4.1	Rabbit 16 0.482 (0.293)	14.72 (2.90)	189 (87)	45 (7)	29.9 (101.3)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

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: 2930 psi (202 bar)

one coupler set two outlet sets combined

ii) Pump delivery rate at minimum pressure: 26.5 GPM (100.3 l/min) 31.0 GPM (117.4 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 23.7 GPM (89.8 l/min) 28.5 GPM (107.8 l/min)

Delivery pressure: 2175 psi (150 bar) 2335 psi (161 bar)

Power: 30.1 HP (22.5 kW) 38.8 HP (28.9 kW)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi.(bar)

2930(202)

Location:

lift cylinders

Hydraulic oil temperature: °F(°C)

158(70)

Location:

hydraulic sump

Category:

II

Quick attach:

No

SAE Static Test—System pressure 2640 psi (182 Bar)

Hitch point distance to ground level in. (mm) 11.9(302) 17.7(450) 23.6(600) 33.5(850) 38.7(984)

Lift force on frame lb 17400 16750 16950 17040 15870

" " " " " " (kN) (77.4) (74.5) (75.4) (75.8) (70.6)

HITCH DIMENSIONS AS TESTED - NO LOAD

	SAE test		OECD test	
	inch	mm	inch	mm
A	29.5	750	28.9	735
B	14.0	355	14.0	355
C	14.4	365	14.4	365
D	7.9	200	7.9	200
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	26.9	684	26.9	684
N	40.6	1030	40.6	1030
O	11.9	302	7.8	198
P	44.6	1133	52.5	1334
Q	38.7	984	38.5	977
R	28.5	725	30.5	775

