

SUMMARY OF OECD TEST 2413 - NEBRASKA SUMMARY 605 CHALLENGER MT555B AUTOPOWER VI DIESEL 24 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—1098 rpm)					
154.4 (115.1)	2196	10.02 (37.92)	0.462 (0.281)	15.41 (3.04)	
Standard Power Take-off Speed(1000 rpm)					
168.0 (125.3)	2000	9.93 (37.39)	0.421 (0.256)	16.92 (3.33)	
Maximum Power (1 hour)					
171.4 (127.8)	1900	9.86 (37.31)	0.410 (0.249)	17.38 (3.42)	

VARYING POWER AND FUEL CONSUMPTION

154.4 (115.1)	2196	10.02 (37.92)	0.462 (0.281)	15.41 (3.04)	Air temperature
131.6 (98.1)	2202	9.06 (34.30)	0.490 (0.298)	14.52 (2.86)	72°F (21°C)
99.0 (73.8)	2210	7.39 (27.97)	0.531 (0.323)	13.40 (2.64)	Relative humidity
66.4 (49.5)	2220	5.46 (20.67)	0.585 (0.356)	12.17 (2.40)	31%
33.5 (25.0)	2232	3.47 (13.15)	0.738 (0.449)	9.65 (1.90)	Barometer
--	2243	1.99 (7.53)	--	--	30.3" Hg (102.5 kPa)

Maximum Torque - 531.7 lb.-ft. (720.9 Nm) at 1450 rpm
Maximum Torque Rise - 44.0%
Torque rise at 1750 engine rpm - 38%

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	Barom. inch Hg (kPa)
Maximum Power—11th(3A) Gear								
119.6 (89.2)	8070 (35.9)	5.56 (8.94)	2197	3.7	0.527 (0.321)	13.50 (2.66)	181 (83)	48 (9)
75% of Pull at Maximum Power—11th(3A) Gear								
90.5 (67.5)	6025 (26.8)	5.63 (9.06)	2203	2.3	0.590 (0.359)	12.07 (2.38)	176 (80)	48 (9)
50% of Pull at Maximum Power—11th(3A) Gear								
61.7 (46.0)	4055 (18.0)	5.70 (9.18)	2215	1.5	0.652 (0.396)	10.92 (2.15)	176 (80)	48 (9)
75% of Pull at Reduced Engine Speed—13th(3B) Gear								
90.3 (67.3)	6015 (26.8)	5.63 (9.06)	1833	1.8	0.510 (0.310)	13.96 (2.75)	176 (80)	48 (9)
50% of Pull at Reduced Engine Speed—13th(3B) Gear								
61.4 (45.8)	4040 (18.0)	5.70 (9.18)	1835	1.1	0.568 (0.345)	12.54 (2.47)	174 (79)	48 (9)

Location of tests: Groupement d'Antony, Parc de Touvoie, BP 44 Antony, Cedex, France 92163
Dates of tests: February - March, 2008

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 BP Terrac Tractan 9 fluid **Front axle lubricant** API GL5 - SAE 85W140

ENGINE: Make Perkins Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler
Serial No. 28851766602430 **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 **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** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** Front wheel assist **Serial No.** S117 010 **Tread width** rear 61.7" (1567 mm) to 70.8" (1798 mm) front 68.8" (1747 mm) to 75.4" (1915 mm) **Wheelbase** 120.1" (2996 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (6) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.07 (1.72) second 1.29 (2.07) third 1.51 (2.43) fourth 1.82 (2.93) fifth 2.14 (3.44) sixth 2.57 (4.14) seventh 2.90 (4.66) eighth 3.49 (5.61) ninth 4.09 (6.58) tenth 4.92 (7.92) eleventh 5.55 (8.93) twelfth 5.79 (9.31) thirteenth 6.67 (10.73) fourteenth 6.97 (11.21) fifteenth 7.83 (12.60) sixteenth 9.42 (15.16) seventeenth 11.08 (17.83) eighteenth 12.60 (20.27) nineteenth 13.34 (21.46) twentieth 15.14 (24.37) twenty-first 17.78 (28.61) twenty-second 21.39 (34.42) twenty-third 25.15 (40.48) twenty-fourth 24.86 (40.00) (engine speed 1800 rpm) reverse 1.07 (1.72), 1.29 (2.07), 1.51 (2.43), 1.82 (2.93), 2.14 (3.44), 2.57 (4.14), 2.90 (4.66), 3.49 (5.61), 4.09 (6.58), 4.92 (7.92), 5.55 (8.93), 5.79 (9.31), 6.67 (10.73), 6.97 (11.21), 7.83 (12.60), 9.42 (15.16), 11.08 (17.83), 12.60 (20.27), 13.34 (21.46), 15.14 (24.37), 17.78 (28.61), 21.39 (34.42), 25.15 (40.48), 24.86 (40.00)

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)
4th(1D) Gear									
64.5 (48.1)	14905 (66.3)	1.62 (2.61)	2204	14.6	0.704 (0.428)	10.12 (1.99)	172 (78)	46 (8)	29.9 (101.3)
5th(1E) Gear									
75.4 (56.2)	14815 (65.9)	1.91 (3.07)	2202	14.0	0.687 (0.418)	10.36 (2.04)	171 (77)	46 (8)	29.9 (101.3)
6th(1F) Gear									
91.7 (68.4)	14535 (64.7)	2.37 (3.81)	2193	11.1	0.629 (0.382)	11.32 (2.23)	176 (80)	46 (8)	29.9 (101.3)
7th(2A) Gear									
102.9 (76.7)	14275 (63.5)	2.70 (4.35)	2194	9.6	0.575 (0.350)	12.35 (2.44)	174 (79)	46 (8)	29.9 (101.3)
8th(2B) Gear									
123.9 (92.4)	14320 (63.7)	3.24 (5.22)	2180	10.2	0.541 (0.329)	13.15 (2.59)	176 (80)	46 (8)	29.9 (101.3)
9th(2C) Gear									
133.8 (99.8)	14120 (62.8)	3.55 (5.71)	2031	9.2	0.497 (0.302)	14.31 (2.82)	176 (80)	46 (8)	29.9 (101.3)
10th(2D) Gear									
141.0 (105.1)	12365 (55.0)	4.28 (6.88)	1963	6.6	0.472 (0.287)	15.08 (2.97)	174 (79)	48 (9)	29.9 (101.3)
11th(3A) Gear									
153.9 (114.8)	12365 (55.0)	4.67 (7.51)	1896	5.3	0.461 (0.281)	15.43 (3.04)	181 (83)	48 (9)	29.9 (101.3)
12th(2E) Gear									
138.5 (103.3)	10430 (46.4)	4.98 (8.02)	1908	3.8	0.466 (0.284)	15.28 (3.01)	183 (84)	48 (9)	29.9 (101.3)
13th(3B) Gear									
156.1 (116.4)	10205 (45.4)	5.74 (9.23)	1904	4.2	0.452 (0.275)	15.74 (3.10)	183 (84)	50 (10)	29.9 (101.3)
14th(2F) Gear									
138.9 (103.6)	8610 (38.3)	6.05 (9.74)	1908	2.7	0.466 (0.283)	15.28 (3.01)	181 (83)	46 (8)	29.9 (101.3)
15th(3C) Gear									
157.0 (117.1)	8720 (38.8)	6.75 (10.86)	1900	3.8	0.450 (0.274)	15.83 (3.12)	183 (84)	48 (9)	29.9 (101.3)
*16th(3D) Gear									
155.7 (116.1)	7230 (32.2)	8.08 (13.00)	1908	3.2	0.457 (0.278)	15.58 (3.07)	183 (84)	48 (9)	29.9 (101.3)
*17th(3E) Gear									
150.9 (112.5)	5920 (26.3)	9.56 (15.38)	1903	2.9	0.471 (0.286)	15.13 (2.98)	181 (83)	48 (9)	29.9 (101.3)

* Front Drive disengaged

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 2000 engine rpm or 1000 rpm at 2000 engine rpm
Unladen tractor mass -16835 lb (7635 kg)

NOTE: The engine on this tractor is electronically controlled to give 2 power levels. A "boosted" level is available when the PTO is engaged, under load, and when the tractor is operated in ranges 3 and 4.

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. **2413**, Nebraska Summary 605, August 21, 2008.

Roger M. Hoy
 Director

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TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires - No., size, ply & psi(kPa)	Four 480/80R46;**,12(80)	Two 480/80R46;**,15(100)
Ballast - Duals (total)	1795 lb (815 kg)	None
- Cast Iron (total)	1145 lb (520 kg)	None
Front Tires - No., size, ply & psi(kPa)	Two 16.9R30;**,15(100)	Two 16.9R30;**,15(100)
Ballast - Liquid (total)	None	None
- Cast Iron (total)	1325 lb (600 kg)	None
Height of Drawbar	25.2 in (640 mm)	24.4 in (620 mm)
Static Weight with operator - Rear	12060 lb (5470 kg)	9810 lb (4450 kg)
- Front	9205 lb (4175 kg)	7190 lb (3260 kg)
- Total	21265 lb (9645 kg)	17000 lb (7710 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)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)	
6th(1F) Gear									
110.5 (82.4)	18725 (83.3)	2.21 (3.56)	2151	13.9	0.604 (0.367)	11.79 (2.32)	179 (82)	46 (8)	29.9 (101.1)
7th(2A) Gear									
124.4 (92.8)	17535 (78.0)	2.66 (4.28)	2136	8.1	0.532 (0.324)	13.38 (2.64)	179 (82)	46 (8)	29.9 (101.1)
8th(2B) Gear									
135.4 (101.0)	16885 (75.1)	3.01 (4.85)	1992	7.3	0.491 (0.299)	14.49 (2.86)	181 (83)	46 (8)	29.9 (101.1)
9th(2C) Gear									
138.5 (103.3)	14645 (65.2)	3.55 (5.71)	1960	5.1	0.480 (0.292)	14.82 (2.92)	179 (82)	46 (8)	29.9 (101.1)
10th(2D) Gear									
140.4 (104.7)	12275 (54.6)	4.29 (6.91)	1947	4.0	0.467 (0.284)	15.23 (3.00)	179 (82)	46 (8)	29.9 (101.1)
11th(3A) Gear									
153.1 (114.2)	12125 (53.9)	4.74 (7.62)	1901	3.7	0.462 (0.281)	15.39 (3.03)	185 (85)	46 (8)	29.9 (101.1)
12th(2E) Gear									
136.6 (101.9)	10295 (45.8)	4.98 (8.01)	1906	3.7	0.475 (0.289)	14.97 (2.95)	181 (83)	46 (8)	29.9 (101.1)
13th (3B) Gear									
153.5 (114.5)	10070 (44.8)	5.72 (9.20)	1901	3.3	0.461 (0.281)	15.43 (3.04)	185 (85)	46 (8)	29.9 (101.1)
14th (2F) Gear									
136.2 (101.6)	8490 (37.8)	6.02 (9.69)	1908	2.8	0.478 (0.291)	14.87 (2.93)	183 (84)	46 (8)	29.9 (101.1)
15th(3C) Gear									
153.1 (114.2)	8500 (37.8)	6.75 (10.87)	1907	3.0	0.462 (0.281)	15.39 (3.03)	185 (85)	46 (8)	29.9 (101.1)
*16th(3D) Gear									
152.5 (113.7)	7105 (31.6)	8.05 (12.96)	1902	3.1	0.466 (0.283)	15.28 (3.01)	185 (85)	46 (8)	29.9 (101.1)

*Front Drive disengaged

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 10th (2D) gear	67.0	68.0
Bystander	--	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range:	14565 lbs (64.8 kN)	
	<u>one coupler set</u>	<u>two outlet sets combined</u>
i) Sustained pressure of the open relief valve:	2845 psi (196 bar)	2845 psi (196 bar)
ii) Pump delivery rate at minimum pressure:	27.5 GPM (104.0 l/min)	30.7 GPM (116.4 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	25.8 GPM (97.7 l/min)	28.5 GPM (107.9 l/min)
Delivery pressure:	1915 psi (132 bar)	2205 psi (152 bar)
Power:	28.8 hp (21.5 kW)	36.6 Hp (27.3 kW)

THREE POINT HITCH PERFORMANCE

Observed maximum pressure psi. (bar)	2845 (196)
Location:	lift cylinders
Hydraulic oil temperature: °F (°C)	151 (66)
Location:	hydraulic sump
Category:	II
Quick attach:	No

SAE Static Test—System pressure 2555 psi (176 Bar)

Hitch point distance to ground level in. (mm)	12.8 (326)	18.6 (473)	23.9 (607)	36.9 (938)	42.4 (1076)
Lift force on frame lb	17400	17375	17470	17625	17155
" " " " " " (kN)	(77.4)	(77.3)	(77.7)	(78.4)	(76.3)

HITCH DIMENSIONS AS TESTED - NO LOAD

	OECD test		SAE test	
	inch	mm	inch	mm
A	29.9	760	30.5	775
B	15.7	400	15.7	400
C	20.7	525	20.7	525
D	19.1	485	19.1	485
E	8.3	210	11.6	295
F	12.2	310	12.2	310
G	36.4	925	36.4	925
H	2.0	50	2.0	50
I	17.7	450	16.9	430
J	24.2	615	24.2	615
K	21.8	554	21.8	554
L	47.2	1200	47.2	1200
M	22.0	560	22.0	560
N	37.1	942	37.1	942
O	9.2	238	12.8	326
P	48.2	1225	43.2	1098
Q	41.9	1065	42.4	1076
R	36.3	923	34.4	873

