

# SUMMARY OF OECD TEST 2755-NEBRASKA SUMMARY 909 CHALLENGER MT595D AUTOPOWER VI DIESEL 24 SPEED

## POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption		D.E.F. Consumption		Mean Atmospheric Conditions
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Gal/hr (l/h)	
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>						
<b>Rated Engine Speed—(PTO speed—1086 rpm)</b>						
205.8 (153.5)	2096	11.81 (44.70)	0.401 (0.244)	17.43 (3.43)	0.46 (1.77)	
<b>Maximum Power (1 hour)</b>						
233.9 (174.4)	1948	12.71 (48.09)	0.379 (0.230)	18.41 (3.63)	0.68 (2.59)	
<b>Standard Power Take-off Speed (1000 rpm)</b>						
231.9 (172.9)	1930	12.50 (47.31)	0.376 (0.229)	18.55 (3.65)	0.65 (2.47)	

## VARYING POWER AND FUEL CONSUMPTION

205.8 (153.5)	2096	11.81 (44.70)	0.401 (0.244)	17.43 (3.43)	0.46 (1.77)	Air temperature
177.3 (132.2)	2123	10.30 (38.99)	0.405 (0.247)	17.21 (3.39)	0.46 (1.74)	73°F (23°C)
133.2 (99.3)	2134	8.01 (30.32)	0.420 (0.255)	16.62 (3.27)	0.34 (1.27)	Relative humidity
89.3 (66.6)	2137	6.10 (23.10)	0.477 (0.290)	14.63 (2.88)	0.25 (0.95)	46%
44.7 (33.3)	2147	4.06 (15.37)	0.633 (0.385)	11.01 (2.17)	0.15 (0.56)	Barometer
--	2155	2.23 (8.43)	--	--	--	30.0" Hg (101.5 kPa)

Maximum torque - 724.6 lb.-ft. (982.4 Nm) at 1397 rpm  
 Maximum torque rise - 40.5%  
 Torque rise at 1700 engine rpm - 29%  
 Power increase at 1948 engine rpm - 13.6%

## 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)
<b>Maximum Power—11th(3A) Gear</b>									
177.8 (132.6)	13515 (60.1)	4.93 (7.94)	2096	5.5	0.442 (0.269)	15.74 (3.10)	183 (85)	39 (4)	30.1 (102.0)
<b>75% of Pull at Maximum Power—11th(3A) Gear</b>									
142.1 (106.0)	10370 (46.1)	5.14 (8.27)	2128	3.4	0.432 (0.263)	16.09 (3.17)	180 (85)	39 (4)	30.1 (102.0)
<b>50% of Pull at Maximum Power—11th(3A) Gear</b>									
96.5 (72.0)	6870 (30.6)	5.27 (8.48)	2140	2.1	0.473 (0.287)	14.72 (2.90)	180 (83)	39 (4)	30.1 (102.0)
<b>75% of Pull at Reduced Engine Speed—13th(3B) Gear</b>									
143.4 (106.9)	10360 (46.1)	5.19 (8.35)	1786	3.3	0.388 (0.236)	17.92 (3.53)	183 (86)	39 (4)	30.1 (102.0)
<b>50% of Pull at Reduced Engine Speed—13th(3B) Gear</b>									
95.3 (71.1)	6740 (30.0)	5.30 (8.53)	1796	2.0	0.422 (0.257)	16.50 (3.25)	181 (84)	39 (4)	30.1 (102.0)

**Location of tests:** IRSTEA, Centre d'Antony, 1 rue Pierre-Gilles de Gennes CS 10030 Antony, 92163, Cedex, France

**Dates of tests:** October - November, 2012

**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)** 0.838 **Fuel weight** 6.98 lbs/gal (0.836 kg/l) **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.10 lbs/gal (1.091 kg/l) **Oil SAE** 15W40 **API service classification** CJ-4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 15W/40 **Front axle lubricant** BP Terrac Tractan 9 15W/40

**ENGINE:** Make Sisu AGCO Power Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler and SCR (selective catalyst reduction) exhaust treatment **Serial No.** X00365 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.252" x 5.276" (108.0 mm x 134.0 mm) **Compression ratio** 17.8 to 1 **Displacement** 449 cu in (7365 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** three paper cartridges **Muffler** vertical **Cooling medium** **temperature control** thermostat and variable speed fan

**CHASSIS:** **Type** front wheel assist **Serial No.** B 193 047 **Tread width** rear 52.8" (1340 mm) to 87.8" (2230 mm) front 52.8" (1340 mm) to 87.8" (2230 mm) **Wheelbase** 117.8" (2993 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 1.01 (1.62) second 1.21 (1.95) third 1.42 (2.29) fourth 1.72 (2.76) fifth 2.01 (3.24) sixth 2.42 (3.90) seventh 2.73 (4.39) eighth 3.27 (5.27) ninth 3.85 (6.19) tenth 4.63 (7.45) eleventh 5.22 (8.40) twelfth 5.44 (8.76) thirteenth 6.28 (10.10) fourteenth 6.55 (10.54) fifteenth 7.37 (11.86) sixteenth 8.87 (14.27) seventeenth 10.43 (16.78) eighteenth 12.54 (20.18) nineteenth 14.49 (23.32) twentieth 17.42 (28.04) twenty-first 20.45 (32.91) twenty-second 24.61 (39.60) twenty-third 24.86 (40.00) twenty-fourth 24.86 (40.00) electronically limited reverse 1.01 (1.62), 1.21 (1.95), 1.42 (2.29), 1.72 (2.76), 2.01 (3.24), 2.42 (3.90), 2.73 (4.39), 3.27 (5.27), 3.85 (6.19), 4.63 (7.45), 5.22 (8.40), 5.44 (8.76), 6.28 (10.10), 6.55 (10.54), 7.37 (11.86), 8.87 (14.27) 10.43 (16.78), 12.54 (20.18), 14.49 (23.32), 17.42 (28.04), 20.45 (32.91), 24.61 (39.60), 24.86 (40.00), 24.86 (40.00) electronically limited

**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									
72.1 (53.8)	17760 (79.0)	1.52 (2.45)	2125	13.0	0.542 (0.329)	12.84 (2.53)	180 (82)	39 (4)	30.1 (102.0)
5th(1E) Gear									
85.4 (63.7)	17290 (76.9)	1.85 (2.98)	2123	10.2	0.484 (0.294)	14.37 (2.83)	181 (83)	39 (4)	30.1 (102.0)
6th(1F) Gear									
99.1 (73.9)	16860 (75.0)	2.20 (3.55)	2133	10.0	0.478 (0.291)	14.57 (2.87)	178 (81)	37 (3)	30.1 (102.0)
7th(2A) Gear									
114.0 (85.0)	16860 (75.0)	2.54 (4.08)	2129	9.0	0.459 (0.279)	15.18 (2.99)	174 (79)	37 (3)	30.1 (102.0)
8th(2B) Gear									
134.1 (100.0)	16320 (72.6)	3.08 (4.96)	2124	8.6	0.448 (0.273)	15.53 (3.06)	178 (81)	37 (3)	30.1 (102.0)
9th(2C) Gear									
159.7 (119.1)	16725 (74.4)	3.58 (5.76)	2119	9.1	0.433 (0.263)	16.09 (3.17)	183 (84)	39 (4)	30.1 (102.0)
10th(2D) Gear									
178.1 (132.8)	16190 (72.0)	4.13 (6.64)	2018	6.6	0.404 (0.246)	17.21 (3.39)	185 (85)	39 (4)	30.1 (102.0)
11th(3A) Gear									
197.4 (147.2)	16410 (73.0)	4.51 (7.26)	1957	6.8	0.409 (0.248)	17.03 (3.35)	198 (92)	37 (3)	30.1 (102.0)
12th(2E) Gear									
197.9 (147.6)	15835 (70.4)	4.69 (7.55)	1952	6.4	0.408 (0.248)	17.03 (3.35)	190 (88)	39 (4)	30.1 (102.0)
13th(3B) Gear									
208.1 (155.2)	14050 (62.5)	5.56 (8.94)	1950	5.6	0.388 (0.236)	17.92 (3.53)	192 (89)	39 (4)	30.1 (102.0)
14th(2F) Gear									
202.4 (150.9)	13115 (58.4)	5.79 (9.31)	1954	5.4	0.408 (0.248)	17.06 (3.36)	192 (89)	39 (4)	30.1 (102.0)
15th(3C) Gear									
206.8 (154.2)	11715 (52.1)	6.62 (10.65)	1956	4.3	0.392 (0.238)	17.77 (3.50)	192 (89)	39 (4)	30.1 (102.0)
16th(3D) Gear									
204.8 (152.7)	9550 (42.5)	8.04 (12.94)	1964	3.6	0.396 (0.241)	17.56 (3.46)	187 (86)	39 (4)	30.1 (102.0)
17th(3E) Gear									
192.3 (143.4)	7660 (34.1)	9.41 (15.14)	1948	2.9	0.425 (0.258)	16.40 (3.23)	198 (92)	39 (4)	30.1 (102.0)

**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 1890 engine rpm or 1000 rpm at 1930 engine rpm  
**Unladen tractor mass** 19145 lb (8685 kg)

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**NOTE:** The data on this summary was obtained from OECD report 2755 conducted on the Massey Ferguson 7626 Dyna 6 Diesel.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's three point hitch lift claim of 14000 lbs (6350 kg) nor remote hydraulic flow claim of 29 gpm (110 lpm) nor cab noise level claim of 69 dB(A). The manufacturer's remote hydraulic flow claim of 39 GPM (150 lpm) for optional pump was 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. **2755**, Nebraska Summary 909, January 24, 2014.

Roger M. Hoy  
 Director

M.F. Kocher  
 J.D. Luck  
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 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front wheel drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 10th (2D) gear	70.0	70.0
Bystander		--

**TIRES, BALLAST AND WEIGHT**

**Rear Tires** - No., size, ply & psi(kPa)  
**Front Tires** - No., size, ply & psi(kPa)  
**Height of Drawbar**  
**Static Weight with operator** - Rear  
 - Front  
 - Total

**Tested without ballast**

Two 650/65R42;\*\*,14(100)  
 Two 540/65R30;\*\*,16(110)  
 22.4 in (570 mm)  
 10515 lb (4770 kg)  
 8795 lb (3990 kg)  
 19310 lb (8760 kg)

## HYDRAULIC PERFORMANCE

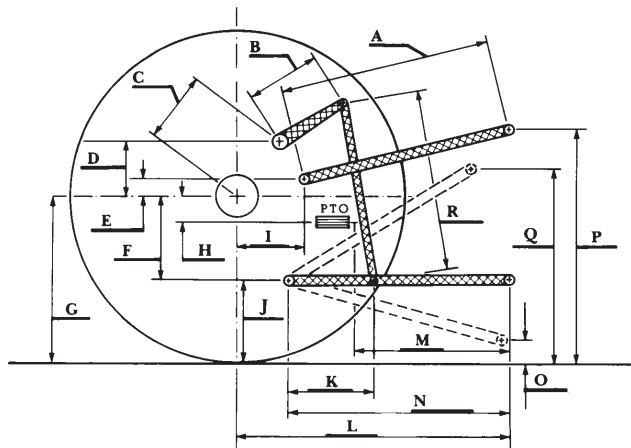
CATEGORY: III

Quick Attach: None

OECD Static test

- Maximum force exerted through whole range: 13670 lbs (60.8 kN)
- i) Sustained pressure of the open relief valve: 2770 psi (191 bar)  
two outlet sets combined
- ii) Pump delivery rate at minimum pressure: 28.7 GPM (108.7 l/min)
- iii) Pump delivery rate at maximum  
 hydraulic power: 25.9 GPM (98.2 l/min)  
 Delivery pressure: 2235 psi (154 bar)  
 Power: 33.8 HP (25.2 kW)  
single outlet set
- ii) Pump delivery rate at minimum pressure: 28.7 GPM (108.6 l/min)
- iii) Pump delivery rate at maximum  
 hydraulic power: 26.0 GPM (98.3 l/min)  
 Delivery pressure: 1915 psi (132 bar)  
 Power: 29.0 HP (21.7 kW)

**HITCH DIMENSIONS AS TESTED—NO LOAD**



	inch	mm
A	30.3	770
B	15.7	400
C	20.7	525
D	19.1	485
E	8.3	210
F	12.2	310
G	36.4	925
H	2.0	50
I	17.7	450
J	24.2	615
K	21.8	554
L	47.2	1200
M	22.0	560
N	37.1	942
O	11.1	283
P	51.2	1300
Q	41.6	1057
R	36.3	923