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Nebraska Summary: S909 Challenger MT595D

Nebraska Tractor Test Lab
University of Nebraska-Lincoln, tractortestlab@unl.edu

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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 Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	D.E.F. Consumption Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption Gal/hr *(l/h)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1086 rpm)						
205.8 *(153.5)*	2096	11.81 *(44.70)*	0.401 *(0.244)*	17.43 *(3.43)*	0.46 *(1.77)*	
Maximum Power (1 hour)						
233.9 *(174.4)*	1948	12.71 *(48.09)*	0.379 *(0.230)*	18.41 *(3.63)*	0.68 *(2.59)*	
Standard Power Take-off Speed (1000 rpm)						
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)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F cool-ing med	Temp.°F *(°C)* Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—11th(3A) Gear									
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)*
75% of Pull at Maximum Power—11th(3A) Gear									
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)*
50% of Pull at Maximum Power—11th(3A) Gear									
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)*
75% of Pull at Reduced Engine Speed—13th(3B) Gear									
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)*
50% of Pull at Reduced Engine Speed—13th(3B) Gear									
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)*	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)*

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

TIRES, BALLAST AND WEIGHT — **Tested without ballast**

Rear Tires - No., size, ply & psi*(kPa)*	Two 650/65R42;**;14*(100)*
Front Tires - No., size, ply & psi*(kPa)*	Two 540/65R30;**;16*(110)*
Height of Drawbar	22.4 in (*570 mm*)
Static Weight with operator - Rear	10515 lb *(4770 kg)*
- Front	8795 lb (*3990 kg*)
- Total	19310 lb (*8760 kg*)

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.

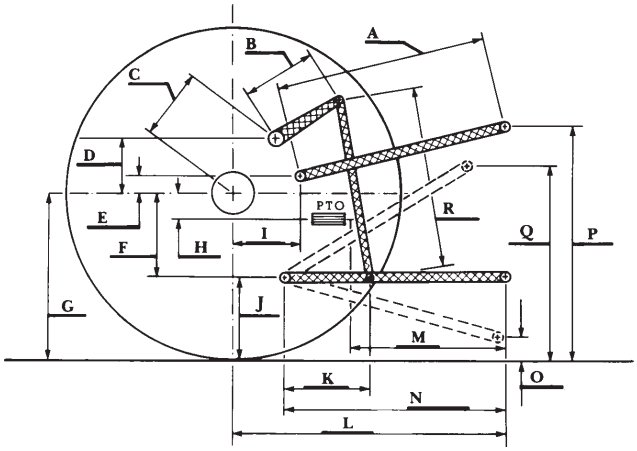
Roger M. Hoy
Director

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

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*