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Nebraska Summary: S700 Challenger MT525B

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SUMMARY OF OECD TEST 2433-NEBRASKA SUMMARY 700 CHALLENGER MT 525B DIESEL 24 SPEED

Tractor chassis S/N S103048 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—1084 rpm)					
102.7 (76.6)	2201	6.93 (26.22)	0.480 (0.292)	14.82 (2.92)	
Standard Power Take-off Speed(1000 rpm)					
120.7 (90.0)	2030	7.28 (27.57)	0.430 (0.261)	16.57 (3.26)	
Maximum Power (1 hour)					
122.2 (91.1)	2000	7.32 (27.72)	0.427 (0.260)	16.68 (3.29)	

VARYING POWER AND FUEL CONSUMPTION

102.7 (76.6)	2201	6.93 (26.22)	0.480 (0.292)	14.82 (2.92)	Air temperature
87.6 (65.3)	2209	6.25 (23.67)	0.508 (0.309)	14.01 (2.76)	70°F (21°C)
65.7 (49.0)	2219	5.25 (19.86)	0.568 (0.346)	12.52 (2.47)	Relative humidity
44.4 (33.1)	2231	4.10 (15.51)	0.657 (0.400)	10.83 (2.13)	47%
22.3 (16.6)	2241	2.84 (10.74)	0.908 (0.552)	7.84 (1.54)	Barometer
--	2247	1.92 (7.28)	--	--	30.3" Hg (102.7 kPa)

Maximum Torque - 389.7 lb.-ft. (528.4 Nm) at 1401 rpm
Maximum Torque Rise - 59.0%
Torque rise at 1750 engine rpm - 42%

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—12th(3A) Gear									
73.8 (55.0)	4730 (21.0)	5.85 (9.43)	2200	3.2	0.597 (0.363)	11.93 (2.35)	176 (80)	48 (9)	30.2 (102.1)
75% of Pull at Maximum Power—12th(3A) Gear									
55.9 (41.7)	3545 (15.8)	5.92 (9.52)	2205	2.0	0.676 (0.411)	10.52 (2.07)	176 (80)	48 (9)	30.2 (102.1)
50% of Pull at Maximum Power—12th(3A) Gear									
37.9 (28.3)	2370 (10.5)	6.00 (9.66)	2218	1.2	0.810 (0.493)	8.78 (1.73)	176 (80)	48 (9)	30.2 (102.1)
75% of Pull at Reduced Engine Speed—14th(3B) Gear									
56.2 (41.9)	3555 (15.8)	5.93 (9.55)	1834	2.4	0.584 (0.355)	12.18 (2.40)	174 (79)	46 (8)	30.2 (102.1)
50% of Pull at Reduced Engine Speed—14th(3B) Gear									
38.1 (28.4)	2380 (10.6)	6.00 (9.65)	1847	2.0	0.687 (0.418)	10.36 (2.04)	174 (79)	48 (9)	30.2 (102.1)

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

Dates of tests: September - November, 2007

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** BP Terrac Tractan 9 10W/40

ENGINE: Make Perkins Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** U00313P **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 5.000" (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** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** front wheel assist **Serial No.** S060056 **Tread width** rear 55.9" (1420 mm) to 85.4" (2168 mm) front 56.5" (1436 mm) to 86.0" (2184 mm) **Wheelbase** 111.2" (2824 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 1.04 (1.68) second 1.26 (2.02) third 1.47 (2.37) fourth 1.77 (2.85) fifth 2.08 (3.35) sixth 2.50 (4.03) seventh 2.82 (4.54) eighth 3.39 (5.45) ninth 3.98 (6.40) tenth 4.78 (7.70) eleventh 5.63 (9.06) twelfth 5.73 (9.22) thirteenth 6.77 (10.90) fourteenth 6.89 (11.08) fifteenth 8.08 (13.00) sixteenth 9.72 (15.65) seventeenth 11.23 (18.08) eighteenth 11.43 (18.40) nineteenth 13.51 (21.74) twentieth 13.76 (22.14) twenty-first 15.85 (25.51) twenty-second 19.08 (30.70) twenty-third 22.44 (36.11) twenty-fourth 24.86 (40.00) reverse 1.04 (1.68), 1.26 (2.02), 1.47 (2.37), 1.77 (2.85), 2.08 (3.35), 2.50 (4.03), 2.82 (4.54), 3.39 (5.45), 3.98 (6.40), 4.78 (7.70), 5.63 (9.06), 5.73 (9.22), 6.77 (10.90), 6.89 (11.08), 8.08 (13.00), 9.72 (15.65), 11.23 (18.08), 11.43 (18.40), 13.51 (21.74), 13.76 (22.14), 15.85 (25.51), 19.08 (30.70), 22.44 (36.11), 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)
3th(1C) Gear									
38.1 (28.4)	10655 (47.4)	1.34 (2.16)	2221	14.6	0.829 (0.504)	8.59 (1.69)	174 (79)	46 (8)	30.2 (102.1)
4th(1D) Gear									
44.3 (33.0)	10365 (46.1)	1.60 (2.58)	2208	14.2	0.776 (0.472)	9.18 (1.81)	176 (80)	48 (9)	30.2 (102.1)
5th(1E) Gear									
52.8 (39.4)	10340 (46.0)	1.91 (3.08)	2204	12.7	0.737 (0.448)	9.65 (1.90)	172 (78)	48 (9)	30.2 (102.1)
6th(1F) Gear									
63.7 (47.5)	10275 (45.7)	2.32 (3.74)	2202	11.9	0.676 (0.411)	10.52 (2.07)	172 (78)	46 (8)	30.2 (102.1)
7th(2A) Gear									
71.6 (53.4)	10190 (45.3)	2.63 (4.24)	2200	10.8	0.617 (0.375)	11.53 (2.27)	172 (78)	46 (8)	30.2 (102.1)
8th(2B) Gear									
84.5 (63.0)	10025 (44.6)	3.16 (5.09)	2151	9.7	0.565 (0.343)	12.61 (2.48)	174 (79)	46 (8)	30.2 (102.1)
9th(2C) Gear									
92.5 (69.0)	10095 (44.9)	3.44 (5.53)	2001	9.6	0.524 (0.319)	13.59 (2.68)	174 (79)	46 (8)	30.2 (102.1)
10th(2D) Gear									
97.2 (72.5)	8430 (37.5)	4.32 (6.96)	2002	6.1	0.502 (0.305)	14.18 (2.79)	176 (80)	46 (8)	30.2 (102.1)
11th(2E) Gear									
95.3 (71.1)	6880 (30.6)	5.19 (8.35)	2002	3.6	0.501 (0.305)	14.21 (2.80)	178 (81)	48 (9)	30.2 (102.1)
12th(3A) Gear									
106.1 (79.1)	7665 (34.1)	5.19 (8.36)	1999	5.1	0.485 (0.295)	14.67 (2.89)	180 (82)	48 (9)	30.2 (102.1)
13th(2F) Gear									
94.7 (70.6)	5685 (25.3)	6.25 (10.06)	2000	3.6	0.509 (0.310)	13.99 (2.76)	176 (80)	48 (9)	30.2 (102.1)
14th(3B) Gear									
105.0 (78.3)	6225 (27.7)	6.33 (10.19)	2001	4.0	0.489 (0.297)	14.57 (2.87)	181 (83)	48 (9)	30.2 (102.1)
15th(3C) Gear									
104.2 (77.7)	5215 (23.2)	7.49 (12.06)	2000	3.1	0.490 (0.298)	14.52 (2.86)	174 (79)	48 (9)	30.2 (102.1)
*16th(3D) Gear									
101.0 (75.3)	4270 (19.0)	8.87 (14.28)	2000	3.5	0.506 (0.308)	14.06 (2.77)	178 (81)	48 (9)	30.2 (102.1)

*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 1976 engine rpm or 1000 rpm at 2030 engine rpm **Unladen tractor mass** 12160 lb (5515 kg)

NOTE 1: The engine on this tractor is electronically controlled to give 2 power levels. A "boosted" level is available when the PTO is engaged, tractor stationary, and when the tractor is operated in ranges 3 and 4.

NOTE 2: The performance figures on this report apply to tractors with chassis S/N S103048 and higher.

NOTE 3: The data on this summary was obtained from OECD report 2433 conducted on the Massey Ferguson 6465 Diesel.

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 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2433**, Nebraska Summary 700, February 15, 2010.

Roger M. Hoy
 Director

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

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 18.4R42;**,14(96)
 Two 14.9R28;**,14(100)
 19.7 in (500 mm)
 7110 lb (3225 kg)
 5215 lb (2365 kg)
 12325 lb (5590 kg)

TRACTOR SOUND LEVEL WITH HAVIS CAB

dB(A)

At no load in 10th (2D) gear	68.0
Bystander	--

HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range:	7240 lbs (32.2 kN)
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2830 psi (195 bar)
ii) Pump delivery rate at minimum pressure:	30.1 GPM (113.8 l/min)
iii) Pump delivery rate at maximum	
hydraulic power:	26.7 GPM (101.2 l/min)
Delivery pressure:	2290 psi (158 bar)
Power:	35.7 HP (26.6 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	OECD test		SAE test	
	inch	mm	inch	mm
A	26.4	670	26.2	665
B	11.6	295	11.6	295
C	20.7	354	20.7	354
D	13.9	330	13.9	330
E	7.9	200	11.4	290
F	10.2	260	10.2	260
G	32.5	825	32.5	825
H	1.9	48	1.9	48
I	15.3	389	15.3	389
J	22.3	565	22.3	565
K	24.9	633	24.9	633
L	40.7	1033	40.7	1033
M	22.0	558	22.0	558
N	36.7	933	36.7	933
O	8.9	226	9.3	235
P	46.3	1175	41.3	1048
Q	31.4	797	33.1	840
R	30.0	763	29.8	758

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)	2830 (195)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	154 (68)
Location:	hydraulic sump
Category:	II
Quick attach:	None

SAE Static Test—System pressure 2545 psi (176 bar)

Hitch point distance to ground level in. (mm)	9.3 (235)	13.4 (341)	17.7 (450)	23.5 (597)	28.9 (734)	33.1 (840)
Lift force on frame lb	10005	9845	9690	9330	8815	8205
" " " " " " (kN)	(44.5)	(43.8)	(43.1)	(41.5)	(39.2)	(36.5)

