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January 1998

Test 1800: Challenger MT 465 Diesel

Nebraska Tractor Test Lab

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SUMMARY OF OECD TEST 1800-NEBRASKA SUMMARY 279A

CHALLENGER MT 465 DIESEL

12 SPEED

POWER TAKE-OFF PERFORMANCE (540 RPM Shaft)

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—625 rpm)					
82.2 (61.3)	2201	5.43 (20.55)	0.482 (0.293)	15.14 (2.98)	
Maximum Power (2 hours)					
84.1 (62.7)	1999	5.16 (19.55)	0.449 (0.273)	16.27 (3.20)	
Standard Power Take-off Speed (540 rpm)					
83.3 (62.1)	1903	5.00 (18.92)	0.437 (0.266)	16.66 (3.28)	

VARYING POWER AND FUEL CONSUMPTION

82.2 (61.3)	2201	5.43 (20.55)	0.482 (0.293)	15.14 (2.98)	Air temperature
70.7 (52.7)	2225	4.97 (18.82)	0.513 (0.312)	14.22 (2.80)	75°F (24°C)
53.7 (40.0)	2258	4.06 (15.35)	0.550 (0.335)	13.23 (2.61)	Relative humidity
36.1 (26.9)	2278	3.25 (12.30)	0.655 (0.399)	11.10 (2.19)	37%
18.3 (13.6)	2291	2.44 (9.24)	0.972 (0.591)	7.49 (1.48)	Barometer
--	2315	1.65 (6.26)	--	--	29.8" Hg (100.8 kPa)

Maximum Torque -257.2 lb.-ft. (348.7 Nm) at 1305 rpm

Maximum Torque Rise -31.0%

Torque rise at 1800 engine rpm -21%

POWER TAKE-OFF PERFORMANCE (1000 RPM Shaft)

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—1101 rpm)					
84.9 (63.3)	2202	5.40 (20.44)	0.463 (0.282)	15.72 (3.10)	
Standard Power Take-off Speed (1000 rpm)					
86.7 (64.7)	2000	5.14 (19.45)	0.432 (0.263)	16.87 (3.32)	
Maximum Power (2 hours)					
86.7 (64.7)	2000	5.14 (19.45)	0.432 (0.263)	16.87 (3.32)	

VARYING POWER AND FUEL CONSUMPTION

84.9 (63.3)	2202	5.40 (20.44)	0.463 (0.282)	15.72 (3.10)	Air temperature
73.4 (54.7)	2241	4.97 (18.80)	0.493 (0.300)	14.77 (2.91)	75°F (24°C)
56.1 (41.8)	2274	4.10 (15.53)	0.533 (0.325)	13.66 (2.69)	Relative humidity
37.4 (27.9)	2284	3.28 (12.40)	0.638 (0.388)	11.42 (2.25)	34%
18.8 (14.0)	2297	2.46 (9.32)	0.955 (0.581)	7.63 (1.50)	Barometer
--	2314	1.69 (6.38)	--	--	29.8" Hg (100.8 kPa)

Maximum Torque -269.4 lb.-ft. (365.2 Nm) at 1297 rpm

Maximum Torque Rise -33.1%

Torque rise at 1800 engine rpm -24%

Location of Test: Silsoe Research Institute, Wrest Park, Silsoe, Bedford, England MK45 4HS

Dates of Test: June to July, 1998

Manufacturer: AGCO Limited, P.O. Box 62, Banner Lane, Coventry, West Midlands, England CV4 9GF

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.875 **Fuel weight** 7.28 lbs/gal (0.873 kg/l) **Oil** SAE 15W-30 **API service classification** CD **Transmission and hydraulic lubricant** SAE 15W-30 **Front axle lubricant** SAE 15W-30

ENGINE: Make Perkins Diesel **Type** four cylinder vertical with turbocharger **Serial No.** U809240C **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.937" x 5.00" (100.0 mm x 127.0 mm) **Compression ratio** 17.3 to 1 **Displacement** 243 cu in (3990 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

CHASSIS: **Type** front wheel assist **Serial No.** ABED24ABXAE10999 **Tread width** rear 60.4" (1535 mm) to 83.9" (2130 mm) front 63.4" (1610 mm) to 75.4" (1915 mm) **Wheelbase** 92.5" (2350 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.45 (2.33) second 1.89 (3.04) third 2.48 (3.99) fourth 3.25 (5.23) fifth 4.08 (6.57) sixth 5.33 (8.58) seventh 7.00 (11.26) eighth 9.16 (14.74) ninth 11.02 (17.73) tenth 14.39 (23.16) eleventh 18.89 (30.40) twelfth 24.74 (39.81) reverse 1.45 (2.33), 1.90 (3.05), 2.49 (4.00), 3.26 (5.24), 4.09 (6.58), 5.34 (8.59), 7.01 (11.28), 9.18 (14.77), 11.03 (17.75), 14.42 (23.20), 18.92 (30.45), 24.77 (39.87) **Clutch** single dry 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 1902 engine rpm or 1000 rpm at 2000 engine rpm **Unladen tractor mass** 8430 lb (3824 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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)	Temp. °F cool- ing med	Temp. °C Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—5th (1M) Gear								
65.6 (48.9)	6190 (27.5)	3.97 (6.39)	2200	5.3	0.572 (0.348)	12.22 (2.41)	185 (85)	66 (19) 30.0 (101.6)
75% of Pull at Maximum Power—5th (1M) Gear								
50.8 (37.9)	4645 (20.7)	4.10 (6.60)	2247	4.1	0.648 (0.394)	10.77 (2.12)	185 (85)	66 (19) 30.0 (101.6)
50% of Pull at Maximum Power—5th (1M) Gear								
34.7 (25.9)	3105 (13.8)	4.19 (6.75)	2271	2.9	0.765 (0.466)	9.12 (1.80)	186 (86)	68 (20) 30.0 (101.6)
75% of Pull at Reduced Engine Speed—6th (2M) Gear								
50.8 (37.9)	4655 (20.7)	4.09 (6.59)	1718	4.2	0.517 (0.315)	13.50 (2.66)	184 (84)	72 (22) 30.0 (101.6)
50% of Pull at Reduced Engine Speed—6th (2M) Gear								
34.9 (26.0)	3110 (13.8)	4.20 (6.76)	1741	3.0	0.590 (0.359)	11.83 (2.33)	184 (84)	69 (21) 30.0 (101.6)

MAXIMUM POWER IN SELECTED GEARS

1st (1L) Gear								
31.8 (23.7)	9170 (40.8)	1.30 (2.09)	2259	14.8	0.810 (0.493)	8.62 (1.70)	185 (85)	72 (22) 30.0 (101.6)
2nd (2L) Gear								
40.6 (30.3)	8815 (39.2)	1.73 (2.78)	2249	12.9	0.724 (0.441)	9.64 (1.90)	185 (85)	73 (23) 30.0 (101.6)
3rd (3L) Gear								
53.1 (39.6)	8710 (38.8)	2.29 (3.68)	2227	11.4	0.640 (0.389)	10.91 (2.15)	185 (85)	72 (22) 30.0 (101.6)
4th (4L) Gear								
64.9 (48.4)	8230 (36.6)	2.96 (4.76)	2134	8.6	0.563 (0.343)	12.41 (2.45)	185 (85)	72 (22) 30.0 (101.6)
5th (1M) Gear								
67.9 (50.6)	7340 (32.7)	3.47 (5.58)	1946	6.5	0.516 (0.314)	13.55 (2.67)	185 (85)	72 (22) 30.0 (101.6)
6th (2M) Gear								
68.3 (50.9)	5555 (24.7)	4.61 (7.42)	1947	4.9	0.517 (0.315)	13.50 (2.66)	185 (85)	68 (20) 30.0 (101.6)
7th (3M) Gear								
67.2 (50.1)	4100 (18.2)	6.14 (9.88)	1951	3.7	0.524 (0.319)	13.33 (2.63)	185 (85)	68 (20) 30.0 (101.6)
8th (4M) Gear								
63.7 (47.5)	2965 (13.2)	8.05 (12.96)	1938	2.8	0.549 (0.334)	12.73 (2.51)	185 (85)	70 (21) 30.0 (101.6)
9th (1H) Gear								
63.9 (47.7)	2455 (10.9)	9.76 (15.71)	1947	2.5	0.545 (0.332)	12.82 (2.53)	185 (85)	70 (21) 30.0 (101.6)

TIRES 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 18.4R38;**,12(83)
Two 420/70R28;**,15(103)

22.4 in (570 mm)

5100 lb (2314 kg)
3495 lb (1585 kg)
8595 lb (3899 kg)

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance results on this summary were taken from OECD tests conducted under the Code 2 test code procedure.

NOTE: The data on this summary was obtained from OECD report 1800 conducted on the Massey Ferguson 4255 Diesel.

Report reissued: Supplemental sales permit for Massey Ferguson 4253 Diesel, July, 2000.

Report reissued: Supplemental sales permit for Massey Ferguson 4355 Diesel, March, 2003.

Report reissued: Supplemental sales permit for Challenger MT 465 Diesel, July 2003.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1800**, Nebraska Summary 279A , July 2, 2003.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE
(Unballasted - Front Drive Disengaged)
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 (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—7th (3M) Gear									
65.4 (48.8)	3625 (16.1)	6.78 (10.91)	2198	3.4	0.569 (0.346)	12.28 (2.42)	187 (86)	66 (19)	29.7 (100.5)
75% of Pull at Maximum Power—7th (3M) Gear									
50.3 (37.5)	2705 (12.0)	6.97 (11.22)	2246	2.8	0.637 (0.388)	10.96 (2.16)	187 (86)	79 (26)	29.7 (100.5)
50% of Pull at Maximum Power—7th (3M) Gear									
34.9 (26.0)	1840 (8.2)	7.10 (11.42)	2270	2.0	0.723 (0.440)	9.65 (1.90)	187 (86)	79 (26)	29.7 (100.5)
75% of Pull at Reduced Engine Speed—8th (4M) Gear									
51.8 (38.6)	2785 (12.4)	6.97 (11.22)	1716	2.7	0.504 (0.307)	13.86 (2.73)	183 (84)	79 (26)	29.7 (100.5)
50% of Pull at Reduced Engine Speed—8th (4M) Gear									
35.6 (26.5)	1880 (8.4)	7.09 (11.41)	1732	2.1	0.580 (0.353)	12.03 (2.37)	183 (84)	81 (27)	29.7 (100.5)

MAXIMUM POWER IN SELECTED GEARS

2nd (2L) Gear									
28.8 (21.5)	6475 (28.8)	1.67 (2.69)	2263	15.0	0.824 (0.501)	8.48 (1.67)	187 (86)	75 (24)	29.7 (100.5)
3rd (3L) Gear									
38.1 (28.4)	6250 (27.8)	2.29 (3.69)	2251	10.1	0.727 (0.442)	9.61 (1.89)	185 (85)	68 (20)	29.7 (100.5)
4th (4L) Gear									
50.6 (37.7)	6290 (28.0)	3.02 (4.86)	2228	8.7	0.644 (0.392)	10.83 (2.13)	187 (86)	66 (19)	29.7 (100.5)
5th (1M) Gear									
63.0 (47.0)	6400 (28.5)	3.69 (5.94)	2202	9.9	0.593 (0.361)	11.78 (2.32)	187 (86)	66 (19)	29.7 (100.5)
6th (2M) Gear									
68.0 (50.7)	5735 (25.5)	4.45 (7.16)	1942	5.8	0.515 (0.313)	13.55 (2.67)	185 (85)	64 (18)	29.7 (100.5)
7th (3M) Gear									
68.3 (50.9)	4165 (18.5)	6.15 (9.90)	2003	3.7	0.519 (0.316)	13.45 (2.65)	185 (85)	66 (19)	29.7 (100.5)
8th (4M) Gear									
67.3 (50.2)	3090 (13.7)	8.17 (13.14)	2016	3.1	0.523 (0.318)	12.35 (2.63)	185 (85)	77 (25)	29.7 (100.5)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Maximum sound level in 5th (1M) Gear	81.0	81.0
Bystander in 12th (4H) Gear	85.0	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum Force Exerted Through Whole Range: 3665 lbs (16.3 kN)

i) Opening pressure of relief valve: NA

Sustained pressure of the open relief valve: 3105 psi (214 bar)

ii) Pump delivery rate at minimum pressure: 10.0 GPM (38.0 l/min)

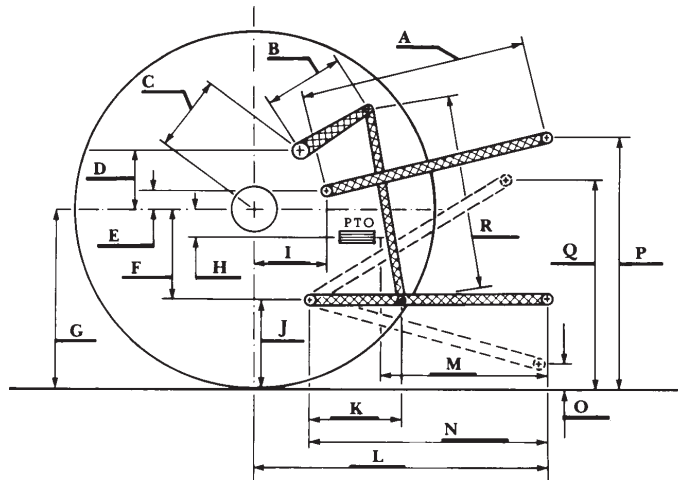
iii) Pump delivery rate at maximum

hydraulic power: 9.5 GPM (36.0 l/min)

Delivery pressure: 2685 psi (185 bar)

Power: 14.9 HP (11.1 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	32.0	815
B	12.2	310
C	12.0	304
D	9.2	233
E	8.1	205
F	8.3	212
G	28.3	720
H	5.4	136
I	7.3	186
J	20.0	508
K	26.6	675
L	38.1	968
M	25.0	635
N	39.4	1000
O	7.8	197
P	44.0	1118
Q	33.3	845
R	30.7	780