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Test 2100: McCormick MTX 155 Diesel

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SUMMARY OF OECD TEST 2100–NEBRASKA SUMMARY 424

McCORMICK MTX 155 DIESEL

16 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—1000 rpm)					
141.2 (105.3)	2201	9.03 (34.38)	0.452 (0.275)	15.55 (3.06)	
Maximum Power (2 hours)					
144.0 (107.4)	2072	8.87 (33.59)	0.432 (0.263)	16.24 (3.20)	
VARYING POWER AND FUEL CONSUMPTION					
141.2 (105.3)	2201	9.03 (34.38)	0.452 (0.275)	15.55 (3.06)	Air temperature
125.3 (93.4)	2301	8.51 (32.19)	0.477 (0.290)	14.73 (2.90)	75°F (24°C)
94.8 (70.7)	2324	7.24 (27.40)	0.536 (0.326)	13.10 (2.58)	Relative humidity
63.7 (47.5)	2340	5.83 (22.05)	0.643 (0.391)	10.93 (2.15)	33%
32.1 (23.9)	2351	4.26 (16.13)	0.932 (0.567)	7.53 (1.48)	Barometer
--	2361	2.59 (9.79)	--	--	29.0" Hg (98.3 kPa)
Maximum Torque - 458.9 lb.-ft. (622.2 Nm) at 1250 rpm					
Maximum Torque Rise - 36.1%					
Torque rise at 1800 engine rpm - 22%					

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 cool- ing med	°C Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—7th(II-3) Gear									
125.4 (93.5)	9520 (42.3)	4.94 (7.95)	2201	2.7	0.499 (0.304)	14.06 (2.77)	194 (90)	68 (20)	29.8 (100.9)
75% of Pull at Maximum Power—7th(II-3) Gear									
99.5 (74.2)	7160 (31.8)	5.21 (8.39)	2308	2.0	0.560 (0.341)	12.54 (2.47)	191 (88)	68 (20)	29.8 (100.9)
50% of Pull at Maximum Power—7th(II-3) Gear									
67.3 (50.2)	4765 (21.2)	5.30 (8.52)	2330	1.5	0.690 (0.420)	10.16 (2.00)	189 (87)	68 (20)	29.8 (100.9)
75% of Pull at Reduced Engine Speed—8th(II-4) Gear									
99.5 (74.2)	7150 (31.8)	5.22 (8.40)	1865	2.1	0.472 (0.287)	14.87 (2.93)	189 (87)	70 (21)	29.8 (101.0)
50% of Pull at Reduced Engine Speed—8th(II-4) Gear									
67.3 (50.2)	4765 (21.2)	5.30 (8.53)	1882	1.4	0.542 (0.330)	12.94 (2.55)	187 (86)	70 (21)	29.8 (101.0)

Location of tests: Silsoe Research Institute, Wrest Park, Silsoe, MK45 4HS, United Kingdom

Dates of tests: June - August, 2002

Manufacturer: McCormick Tractors Intr. Ltd., Doncaster, South Yorkshire, DN2 4PG, England

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.843 **Fuel weight** 7.02 lbs/gal (0.841 kg/l) **Oil SAE 15W40 API service classification** CG-4 **Transmission and hydraulic lubricant** McCormick HTX fluid **Front axle lubricant** API GL5 SAE 85W140

ENGINE: Make Perkins Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** U773065H **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.937" x 5.00" (100.0 mm x 127.0 mm) **Compression ratio** 17.2 to 1 **Displacement** 365 cu in (5985 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.** ZT55AC4JJE3360062 **Tread width** rear 60.2" (1530 mm) to 87.8" (2230 mm) front 60.2" (1530 mm) to 87.8" (2230 mm) **Wheelbase** 112.2" (2850 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.79 (2.88) second 2.16 (3.47) third 2.67 (4.29) fourth 3.31 (5.32) fifth 3.35 (5.39) sixth 4.03 (6.49) seventh 4.98 (8.02) eighth 6.17 (9.93) ninth 6.70 (10.78) tenth 8.07 (12.98) eleventh 9.97 (16.04) twelfth 12.35 (19.87) thirteenth 13.21 (21.26) fourteenth 15.91 (25.60) fifteenth 19.66 (31.64) sixteenth 24.36 (39.20) reverse 2.08 (3.35), 2.50 (4.03), 3.09 (4.98), 3.83 (6.17), 3.88 (6.25), 4.67 (7.52), 5.78 (9.30), 7.16 (11.52), 7.77 (12.50), 9.35 (15.05), 11.56 (18.61), 14.32 (23.05) **Clutch** multiple wet disc electro-hydraulically 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 1877 engine rpm or 1000 rpm at 2200 engine rpm **Unladen tractor mass** 16120 lb (7311 kg)

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. ^o F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
1st(I-1) Gear									
74.6 (55.6)	16660 (74.1)	1.68 (2.70)	2322	13.0	0.662 (0.403)	10.60 (2.09)	190 (88)	72 (22)	29.8 (101.0)
2nd(I-2) Gear									
90.4 (67.4)	16365 (72.8)	2.07 (3.33)	2309	10.3	0.591 (0.360)	11.89 (2.34)	190 (88)	70 (21)	29.8 (101.0)
3rd(I-3) Gear									
111.7 (83.3)	16120 (71.7)	2.60 (4.18)	2283	7.9	0.547 (0.333)	12.83 (2.53)	190 (88)	68 (20)	29.8 (101.0)
4th(I-4) Gear									
124.2 (92.6)	14950 (66.5)	3.11 (5.01)	2160	5.7	0.506 (0.308)	13.86 (2.73)	190 (88)	68 (20)	29.8 (100.8)
5th(II-1) Gear									
124.3 (92.7)	14840 (66.0)	3.14 (5.05)	2154	5.9	0.503 (0.306)	13.96 (2.75)	190 (88)	66 (19)	29.8 (100.8)
6th(II-2) Gear									
127.3 (94.9)	12885 (57.3)	3.70 (5.96)	2066	4.0	0.482 (0.293)	14.57 (2.87)	192 (89)	68 (20)	29.8 (101.0)
7th(II-3) Gear									
127.7 (95.2)	10330 (46.0)	4.64 (7.46)	2070	2.9	0.483 (0.294)	14.52 (2.86)	190 (88)	68 (20)	29.8 (100.9)
8th(II-4) Gear									
126.3 (94.2)	8195 (36.4)	5.78 (9.30)	2071	2.3	0.490 (0.298)	14.37 (2.83)	189 (87)	70 (21)	29.8 (101.0)
9th(III-1) Gear									
127.0 (94.7)	7600 (33.8)	6.27 (10.10)	2068	2.1	0.483 (0.294)	14.52 (2.86)	192 (89)	68 (20)	29.8 (101.0)
10th(III-2) Gear									
124.8 (93.1)	6170 (27.4)	7.59 (12.21)	2070	1.8	0.494 (0.301)	14.20 (2.80)	192 (89)	66 (19)	29.8 (100.8)
11th(III-3) Gear									
120.0 (89.5)	4785 (21.3)	9.40 (15.13)	2067	1.4	0.509 (0.310)	13.79 (2.72)	192 (89)	66 (19)	29.8 (100.8)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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 claims of 28 GPM (106 lpm) remote hydraulic flow nor 3 point lift of 15287 lbs (6934 kg) at 24" behind link ends and 16885 lbs (7659 kg) at the lower link ends. 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. **2100** Nebraska Summary 424, October 26, 2005.

Leonard L. Bashford
 Director

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

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 6th (II-2) gear	71.0	71.0
Bystander	--	--

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 650/65R42; **,13 (86)
 Two 540/65R30; **,13 (86)
 13.6 in (345 mm)
 10200 lb (4627 kg)
 6085 lb (2759 kg)
 16285 lb (7386 kg)

