

# SUMMARY OF OECD TEST 1779 – NEBRASKA SUMMARY 276

## MASSEY FERGUSON 4225 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed 624 rpm)</b>					
54.8 (40.9)	2200	3.81 (14.44)	0.507 (0.309)	14.37 (2.83)	
<b>Maximum Power (2 hours)</b>					
55.4 (41.3)	2100	3.74 (14.15)	0.492 (0.299)	14.82 (2.92)	
<b>Standard Power Take-off Speed (540 rpm)</b>					
53.4 (39.8)	1903	3.44 (13.03)	0.470 (0.286)	15.50 (3.05)	

#### VARYING POWER AND FUEL CONSUMPTION

54.8 (40.9)	2200	3.81 (14.44)	0.507 (0.309)	14.37 (2.83)	Air temperature
48.0 (35.8)	2267	3.55 (13.43)	0.539 (0.328)	13.53 (2.66)	68°F (20°C)
36.6 (27.3)	2301	3.14 (11.88)	0.625 (0.380)	11.67 (2.30)	Relative humidity
24.5 (18.3)	2323	2.39 (9.03)	0.708 (0.431)	10.29 (2.03)	36%
12.3 (9.2)	2340	1.74 (6.59)	1.032 (0.628)	7.08 (1.39)	Barometer
--	2347	1.25 (4.74)	--	--	29.9" Hg (101.6 kPa)

Maximum Torque -169.4 lb.-ft. (229.7 Nm) at 1300 rpm

Maximum Torque Rise -29.4%

Torque rise at 1800 engine rpm -18%

#### 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed 1100 rpm)</b>					
56.1 (41.8)	2200	3.81 (14.42)	0.495 (0.301)	14.72 (2.90)	
<b>Maximum Power (2 hours)</b>					
56.9 (42.4)	2104	3.73 (14.13)	0.478 (0.291)	15.23 (3.00)	
<b>Standard Power Take-off Speed (1000 rpm)</b>					
55.9 (41.7)	2001	3.57 (13.53)	0.466 (0.284)	15.64 (3.08)	

#### VARYING POWER AND FUEL CONSUMPTION

56.1 (41.8)	2200	3.81 (14.42)	0.495 (0.301)	14.72 (2.90)	Air temperature
49.1 (36.6)	2267	3.54 (13.41)	0.526 (0.320)	13.86 (2.73)	70°F (21°C)
37.3 (27.8)	2302	3.11 (11.77)	0.607 (0.369)	12.00 (2.37)	Relative humidity
25.1 (18.7)	2321	2.41 (9.14)	0.702 (0.427)	10.38 (2.04)	32%
12.7 (9.5)	2335	1.74 (6.58)	0.995 (0.606)	7.33 (1.44)	Barometer
--	2349	1.27 (4.80)	--	--	30.0" Hg (101.6 kPa)

Maximum Torque -174.7 lb.-ft. (236.9 Nm) at 1303 rpm

Maximum Torque Rise -30.6%

Torque rise at 1800 engine rpm -16%

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

**Dates of Test:** March-June, 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 **Serial No.** U839020C **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** 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.** CBAD24BCXAE15999 **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 1.41 (2.27) second 1.85 (2.97) third 2.42 (3.89) fourth 3.17 (5.10) fifth 3.98 (6.40) sixth 5.20 (8.37) seventh 6.82 (10.98) eighth 8.94 (14.38) ninth 10.74 (17.29) tenth 14.04 (22.59) eleventh 18.42 (29.65) twelfth 24.13 (38.83) reverse 1.60 (2.57), 2.08 (3.35), 2.73 (4.40), 3.59 (5.77), 4.50 (7.24), 5.88 (9.46), 7.71 (12.41), 10.10 (16.26), 12.15 (19.55), 15.87 (25.54), 20.83 (33.52), 27.27 (43.90) **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** 7630 lb (3460 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)	Hp.ltr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>Maximum Power 5th (1M) Gear</b>									
42.5 (31.7)	4090 (18.2)	3.90 (6.27)	2206	4.6	0.600 (0.365)	11.67 (2.30)	189 (87)	73 (23)	29.7 (100.5)
<b>75% of Pull at Maximum Power 5th (1M) Gear</b>									
33.3 (24.8)	3065 (13.6)	4.07 (6.55)	2279	3.5	0.680 (0.414)	10.30 (2.03)	189 (87)	73 (23)	29.7 (100.5)
<b>50% of Pull at Maximum Power 5th (1M) Gear</b>									
22.8 (17.0)	2050 (9.1)	4.17 (6.71)	2310	2.4	0.847 (0.515)	8.27 (1.63)	189 (87)	73 (23)	29.6 (100.4)
<b>75% of Pull at Reduced Engine Speed 6th (2M) Gear</b>									
33.3 (24.8)	3065 (13.6)	4.07 (6.55)	1744	3.5	0.545 (0.332)	12.84 (2.53)	187 (86)	75 (24)	29.6 (100.4)
<b>50% of Pull at Reduced Engine Speed 6th (2M) Gear</b>									
22.7 (16.9)	2040 (9.1)	4.17 (6.71)	1766	2.4	0.624 (0.380)	11.22 (2.21)	185 (85)	73 (23)	29.6 (100.4)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
1st (1L) Gear									
26.3 (19.6)	7680 (34.2)	1.28 (2.07)	2295	15.0	0.816 (0.496)	8.58 (1.69)	189 (87)	77 (25)	29.6 (100.4)
2nd (2L) Gear									
33.9 (25.3)	7600 (33.8)	1.67 (2.69)	2259	13.5	0.707 (0.430)	9.90 (1.95)	189 (87)	75 (24)	29.6 (100.4)
3rd (3L) Gear									
41.4 (30.9)	6945 (30.9)	2.24 (3.61)	2200	9.5	0.620 (0.377)	11.28 (2.22)	189 (87)	75 (24)	29.6 (100.4)
4th (4L) Gear									
42.5 (31.7)	5305 (23.6)	3.00 (4.83)	2169	6.1	0.600 (0.365)	11.67 (2.30)	189 (87)	75 (24)	29.7 (100.5)
5th (1M) Gear									
43.3 (32.3)	4380 (19.5)	3.71 (5.97)	2106	4.9	0.579 (0.352)	12.08 (2.38)	189 (87)	73 (23)	29.7 (100.5)
6th (2M) Gear									
43.2 (32.2)	3315 (14.7)	4.88 (7.86)	2099	3.7	0.582 (0.354)	12.03 (2.37)	189 (87)	73 (23)	29.7 (100.5)
7th (3M) Gear									
42.5 (31.7)	2455 (10.9)	6.49 (10.44)	2103	2.8	0.589 (0.359)	11.88 (2.34)	189 (87)	73 (23)	29.7 (100.5)
8th (4M) Gear									
40.9 (30.5)	1790 (8.0)	8.57 (13.79)	2106	2.1	0.610 (0.371)	11.47 (2.26)	189 (87)	72 (22)	29.7 (100.5)

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturers 3 point lift capacity claim of 5732 lbs (2600 kg), optionally 6614 lbs (3000 kg) at lower link ends. The performance results on this summary were taken from OCED tests conducted under the Code II test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. 1779, Nebraska Summary 276, May 12, 1999.

LEONARD L. BASHFORD  
Director

M.F. KOCHER  
R.D. GRISSO  
G.J. HOFFMAN  
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Maximum sound level in 5th(1M) gear	84.0	84.0
Bystander in 12th(4H) gear	83.0	--

**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)	Hp.hr/gal (kW.h/l)	Temp. °F cool- ing med	(°C) Air dry bulb	Barom. inch Hg (kPa)
<b>Maximum Power 6th (2M) Gear</b>									
42.5 (31.7)	3175 (14.1)	5.02 (8.08)	2199	4.9	0.605 (0.368)	11.57 (2.28)	189 (87)	70 (21)	29.6 (100.3)
<b>75% of Pull at Maximum Power 6th (2M) Gear</b>									
33.4 (24.9)	2385 (10.6)	5.25 (8.45)	2278	4.0	0.690 (0.419)	10.15 (2.00)	189 (87)	70 (21)	29.6 (100.3)
<b>50% of Pull at Maximum Power 6th (2M) Gear</b>									
23.0 (17.2)	1605 (7.1)	5.37 (8.65)	2313	3.4	0.865 (0.526)	8.10 (1.60)	189 (87)	68 (20)	29.6 (100.3)
<b>75% of Pull at Reduced Engine Speed 7th (3M) Gear</b>									
33.4 (24.9)	2390 (10.6)	5.24 (8.43)	1733	4.0	0.549 (0.334)	12.74 (2.51)	187 (86)	66 (19)	29.6 (100.3)
<b>50% of Pull at Reduced Engine Speed 7th (3M) Gear</b>									
22.9 (17.1)	1595 (7.1)	5.38 (8.65)	1765	3.4	0.641 (0.390)	10.91 (2.15)	187 (86)	66 (19)	29.6 (100.3)

**MAXIMUM POWER IN SELECTED GEARS**

<b>1st (1L) Gear</b>									
20.9 (15.6)	6090 (27.1)	1.29 (2.07)	2313	15.0	0.945 (0.575)	7.41 (1.46)	189 (87)	68 (20)	29.6 (100.3)
<b>2nd (2L) Gear</b>									
27.4 (20.4)	5960 (26.5)	1.72 (2.77)	2299	12.1	0.783 (0.476)	8.94 (1.76)	189 (87)	68 (20)	29.6 (100.3)
<b>3rd (3L) Gear</b>									
34.1 (25.4)	5720 (25.5)	2.24 (3.60)	2269	11.8	0.692 (0.421)	10.12 (1.99)	189 (87)	66 (19)	29.6 (100.3)
<b>4th (4L) Gear</b>									
42.4 (31.6)	5420 (24.1)	2.93 (4.71)	2199	9.0	0.618 (0.376)	11.33 (2.23)	189 (87)	66 (19)	29.6 (100.4)
<b>5th (1M) Gear</b>									
43.0 (32.1)	4450 (19.8)	3.62 (5.82)	2109	6.6	0.589 (0.358)	11.89 (2.34)	189 (87)	70 (21)	29.6 (100.3)
<b>6th (2M) Gear</b>									
43.2 (32.2)	3375 (15.0)	4.80 (7.72)	2104	5.0	0.584 (0.355)	11.99 (2.36)	189 (87)	70 (21)	29.6 (100.3)
<b>7th (3M) Gear</b>									
42.6 (31.8)	2515 (11.2)	6.35 (10.22)	2104	4.1	0.599 (0.364)	11.68 (2.30)	189 (87)	68 (20)	29.6 (100.3)
<b>8th (4M) Gear</b>									
40.7 (30.4)	1820 (8.1)	8.39 (13.51)	2110	3.7	0.621 (0.378)	11.27 (2.22)	187 (86)	66 (19)	29.6 (100.4)
<b>9th (1H) Gear</b>									
41.8 (31.2)	1560 (6.9)	10.05 (16.17)	2095	3.3	0.610 (0.371)	11.47 (2.26)	189 (87)	66 (19)	29.6 (100.3)

**TIRES AND WEIGHT**

**Rear Tires** No., size, ply & psi (kPa)  
**Front Tires** No., size, ply & psi (kPa)

**Tested Without Ballast**

Two 18.4R30;\*\*,12(83)  
 Two 360/70R24;\*\*,15(103)

**Height of Drawbar**

**Static Weight with operator**

Rear 19.3 in (490 mm)  
 Front 4730 lb (2145 kg)  
 Total 3065 lb (1390 kg)  
 7795 lb (3535 kg)

### THREE POINT HITCH PERFORMANCE (OECD Static Test)

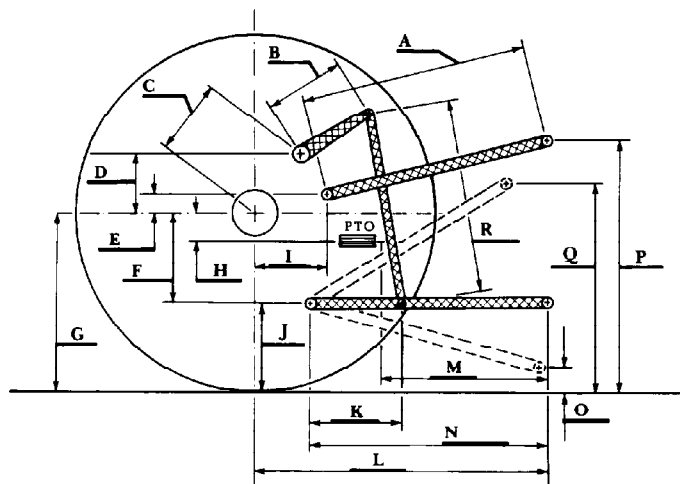
CATEGORY: II

QuickAttach: None

Maximum Force Exerted Through Whole Range: 3665 lbs (16.3 kN)(at the frame)  
 4340 lbs (19.3 kN)(at the hitch points)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 3045 psi (210 bar)
- ii) Pump delivery rate at minimum pressure: 10.2 GPM (38.6 l/min)
- iii) Pump delivery rate at maximum
  - hydraulic power: 9.6 GPM (36.3 l/min)
  - Delivery pressure: 2755 psi (190 bar)
  - Power: 15.4 HP (11.5 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