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January 1998

## Nebraska Summary 300: Massey Ferguson 6245 Diesel 32-Speed

Nebraska Tractor Test Lab

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# SUMMARY OF OECD TEST 1851-NEBRASKA SUMMARY 300

## MASSEY FERGUSON 6245 DIESEL

### 32 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					
		<b>Rated Engine Speed</b>	<b>(PTO speed 1104rpm)</b>		
75.7 (56.5)	2208	4.97 (18.82)	0.468 (0.285)	15.20 (2.99)	
		<b>Maximum Power (2 Hours)</b>			
80.5 (60.0)	2059	4.93 (18.66)	0.435 (0.265)	16.32 (3.22)	
		<b>Standard Power Take-off Speed(1000rpm)</b>			
79.5 (59.3)	2000	4.82 (18.26)	0.431 (0.262)	16.48 (3.25)	

#### VARYING POWER AND FUEL CONSUMPTION

75.7 (56.5)	2208	4.97 (18.82)	0.468 (0.285)	15.20 (2.99)	Air temperature
65.6 (48.9)	2254	4.56 (17.26)	0.494 (0.301)	14.38 (2.83)	72°F (22°C)
49.6 (37.0)	2274	3.90 (14.75)	0.557 (0.339)	12.74 (2.51)	Relative humidity
33.3 (24.8)	2293	3.20 (12.12)	0.684 (0.416)	10.39 (2.05)	55%
16.5 (12.3)	2308	2.45 (9.29)	1.056 (0.642)	6.72 (1.32)	Barometer
--	2327	1.72 (6.52)	--	--	29.4" Hg (99.7 kPa)

Maximum Torque - 230.1 lb.-ft. (312.0 Nm) at 1500 rpm  
Maximum Torque Rise - 27.3%  
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 (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
					<b>Maximum Power 17th(1LB) Gear</b>				
68.0 (50.7)	4670 (20.8)	5.46 (8.79)	2050	5	0.516 (0.314)	13.75 (2.71)	189 (87)	82 (28)	29.7 (100.7)
					<b>75% of Pull at Maximum Power 17th(1LB) Gear</b>				
47.9 (35.7)	2920 (13.0)	6.15 (9.90)	2264	3	0.645 (0.393)	11.01 (2.17)	191 (88)	75 (24)	29.7 (100.7)
					<b>50% of Pull at Maximum Power 17th(1LB) Gear</b>				
33.5 (25.0)	1995 (8.9)	6.29 (10.12)	2286	2	0.792 (0.482)	8.97 (1.77)	187 (86)	75 (24)	29.7 (100.7)
					<b>75% of Pull at Reduced Engine Speed 19th(1LC) Gear</b>				
47.9 (35.7)	2910 (12.9)	6.17 (9.93)	1922	3	0.568 (0.345)	12.50 (2.46)	187 (86)	75 (24)	29.7 (100.7)
					<b>50% of Pull at Reduced Engine Speed 19th(1LC) Gear</b>				
33.7 (25.1)	1995 (8.9)	6.33 (10.19)	1952	2	0.681 (0.414)	10.42 (2.05)	187 (86)	75 (24)	29.7 (100.7)

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

**Dates of Test:** April 1998 -June 1999

**Manufacturer:** AGCO S.A. Z.A.-No.2 BP 60307, Avenue Blaise Pascal, 60026 Beauvais, France

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.853  
**Fuel weight** 7.10 lbs/gal (0.851 kg/l) **Oil SAE** 10W30 **API service classification** CD/CE  
**Transmission and hydraulic lubricant** BP Terrac Extra 10W/30 **Front axle lubricant** API GL5 -SAE 85W140

**ENGINE: Make** Perkins Diesel **Type** four cylinder vertical with turbocharger **Serial No.** U795591B **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 and variable speed fan

**CHASSIS: Type** front wheel assist **Serial No.** F154006 **Tread width** rear 56.0" (1422 mm) to 79.6" (2021 mm) front 56.5" (1436 mm) to 75.6" (1921 mm) **Wheelbase** 97.0" (2464 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 1.36 (2.19) second 1.59 (2.56) third 1.88 (3.03) fourth 2.20 (3.54) fifth 2.31 (3.72) sixth 2.70 (4.35) seventh 3.04 (4.90) eighth 3.17 (5.10) ninth 3.56 (5.73) tenth 3.74 (6.02) eleventh 4.12 (6.63) twelfth 4.21 (6.77) thirteenth 4.82 (7.76) fourteenth 4.92 (7.92) fifteenth 5.10 (8.21) sixteenth 5.69 (9.15) seventeenth 5.97 (9.61) eighteenth 6.66 (10.72) nineteenth 7.05 (11.34) twentieth 8.25 (13.27) twenty-first 8.67 (13.95) twenty-second 10.14 (16.32) twenty-third 11.40 (18.35) twenty-fourth 11.97 (19.27) twenty-fifth 13.35 (21.48) twenty-sixth 14.01 (22.55) twenty-seventh 15.44 (24.84) twenty-eighth 15.76 (25.36) twenty-ninth 18.06 (29.07) thirtieth 18.44 (29.68) thirty-first 21.43 (34.48) thirty-second 24.96 (40.16) reverse 1.28 (2.06), 1.50 (2.41), 1.77 (2.85), 2.07 (3.33), 2.17 (3.50), 2.55 (4.10), 2.86 (4.61), 3.01 (4.84), 3.35 (5.39), 3.52 (5.66), 3.88 (6.24), 3.96 (6.37), 4.54 (7.30), 4.63 (7.45), 4.80 (7.72), 5.36 (8.62), 5.61 (9.03), 6.26 (10.08), 6.62 (10.66), 7.75 (12.48), 8.15 (13.12), 9.54 (15.35), 10.73

## 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)
56.5 (42.1)	7890 (35.1)	2.68 (4.32)	2216	15	7th(3TA)Gear 0.624 (0.379)	11.38 (2.24)	191 (88)	82 (28)	29.7 (100.7)
58.6 (43.7)	7755 (34.5)	2.83 (4.56)	2175	13	8th(2TC)Gear 0.616 (0.375)	11.52 (2.27)	187 (86)	82 (28)	29.7 (100.7)
63.8 (47.6)	7780 (34.6)	3.08 (4.95)	2095	12	9th(3TB)Gear 0.555 (0.337)	12.80 (2.52)	191 (88)	82 (28)	29.7 (100.7)
64.8 (48.3)	7420 (33.0)	3.27 (5.27)	2094	11	10th(2TD)Gear 0.544 (0.331)	13.05 (2.57)	191 (88)	82 (28)	29.7 (100.7)
66.1 (49.3)	6700 (29.8)	3.70 (5.96)	2073	8	11th(4TA)Gear 0.532 (0.323)	13.35 (2.63)	185 (85)	82 (28)	29.7 (100.7)
63.6 (47.4)	6300 (28.0)	3.78 (6.09)	2073	8	12th(3TC)Gear 0.551 (0.335)	12.89 (2.54)	183 (84)	82 (28)	29.7 (100.7)
64.4 (48.0)	5470 (24.3)	4.41 (7.10)	2080	6	13th(4TB)Gear 0.544 (0.331)	13.04 (2.57)	185 (85)	82 (28)	29.7 (100.7)
65.0 (48.5)	5520 (24.6)	4.42 (7.11)	2043	6	14th(3TD)Gear 0.536 (0.326)	13.24 (2.61)	187 (86)	82 (28)	29.7 (100.7)
65.7 (49.0)	5400 (24.0)	4.56 (7.34)	2033	6	15th(1LA)Gear 0.530 (0.323)	13.39 (2.64)	187 (86)	82 (28)	29.7 (100.7)
66.2 (49.4)	4845 (21.6)	5.12 (8.25)	2026	5	16th(4TC)Gear 0.526 (0.320)	13.50 (2.66)	187 (86)	82 (28)	29.7 (100.7)
68.0 (50.7)	4675 (20.8)	5.46 (8.79)	2050	5	17th(1LB)Gear 0.516 (0.314)	13.76 (2.71)	189 (87)	82 (28)	29.7 (100.7)
65.2 (48.6)	4025 (17.9)	6.07 (9.77)	2029	4	18th(4TD)Gear 0.531 (0.323)	13.37 (2.63)	189 (87)	82 (28)	29.7 (100.7)
66.1 (49.3)	3860 (17.2)	6.42 (10.33)	2023	4	19th(1LC)Gear 0.524 (0.318)	13.56 (2.67)	189 (87)	82 (28)	29.7 (100.7)
65.6 (48.9)	3240 (14.4)	7.59 (12.20)	2020	3	20th(1LD)Gear 0.528 (0.321)	13.45 (2.65)	190 (88)	82 (28)	29.7 (100.7)
64.2 (47.9)	3055 (13.6)	7.88 (12.69)	2000	3	21st(2LA)Gear 0.534 (0.325)	13.30 (2.62)	189 (87)	82 (28)	29.7 (100.7)
61.6 (45.9)	2510 (11.2)	9.20 (14.80)	1987	2	22nd(2LB)Gear 0.555 (0.338)	12.79 (2.52)	183 (84)	82 (28)	29.7 (100.7)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 13th(4TB) gear	76.0	77.0
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 16.9R38; \*\*,15(100)  
Two 13.6R28; \*\*,15(100)  
20.5 in (520 mm)  
5720 lb (2595 kg)  
3770 lb (1710 kg)  
9490 lb (4305 kg)

(17.26),11.26(18.12),12.56(20.21),13.18(21.21),  
14.52 (23.36),14.82 (23.85),16.99 (27.34),17.34  
(27.91), 20.33 (32.72), 23.48 (37.78) **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 2000 engine rpm  
**Unladen tractor mass** 9325 lb (4230 kg)

**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 23.8 GPM  
(90 l/min) hydraulic flow with closed center  
system, lift at link ends of 12897 lbs (5850 kg)  
nor lift at 24" of 7000 lbs (3182 kg) with 2 5/8"  
(66.7 mm) cylinders. The performance figures on  
this summary were taken from a test conducted  
under the OECD Code II test procedure.

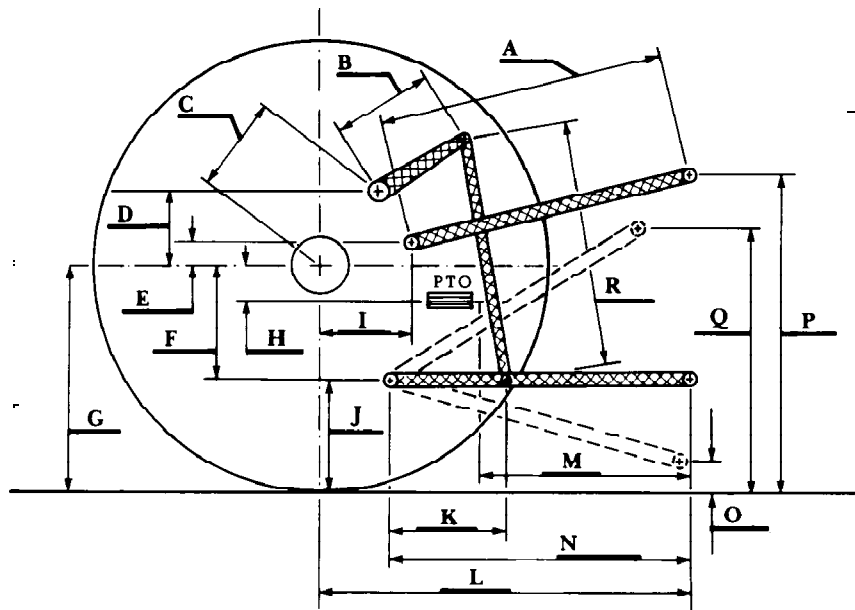
We, the undersigned, certify that this is a true  
summary of data from OECD Report No. **1851**,  
Nebraska Summary 300, June 21, 2000.

Brent T. Sampson  
Test Engineer

L.L. Bashford  
M.F. Kocher  
R.D. Grisso Jr.  
Board of Tractor Test Engineers

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

CATEGORY: II	lift cylinder diameter	
Quick Attach: None	66.7 mm	75 mm
Maximum Force Exerted		
Through Whole Range:	6655 lbs (29.6 kN)	8475 lbs (37.7 kN) (at the frame)
	8160 lbs (36.3 kN)	10385 lbs (46.2 kN) (at the hitch points)
	open center system	closed center system
i) Opening pressure of relief valve:	NA	NA
Sustained pressure of the open relief valve:	2845 psi (196 bar)	2845 psi (196 bar)
ii) Pump delivery rate at minimum pressure:	15.6 GPM (59.0 l/min)	22.4 GPM (84.7 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	14.1 GPM (53.4 l/min)	21.8 GPM (82.7 l/min)
Delivery pressure:	2640 psi (182 bar)	2440 psi (168 bar)
Power:	21.7 HP (16.2 kW)	31.0 HP (23.2 kW)



HITCH DIMENSIONS AS TESTED NO LOAD

	inch	mm
A	26.4	670
B	11.6	295
C	13.9	354
D	13.0	330
E	7.9	200
F	11.0	280
G	31.3	795
H	1.7	43
I	15.3	389
J	20.3	515
K	21.4	543
L	43.5	1104
M	24.8	629
N	37.1	943
O	7.3	186
P	44.3	1125
Q	33.7	855
R	28.1	715