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January 1999

Nebraska Summary 363: Massey Ferguson 8250 Diesel 32-speed

Nebraska Tractor Test Lab

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SUMMARY OF OECD TEST 1843 – NEBRASKA SUMMARY 363

MASSEY FERGUSON 8250 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					
Rated Engine Speed (PTO speed 1059 rpm)					
161.1 (120.1)	2212	9.53 (36.06)	0.419 (0.255)	16.91 (3.33)	
Standard Power Take-off Speed (1000 rpm)					
163.2 (121.7)	2091	9.29 (35.15)	0.404 (0.246)	17.56 (3.46)	
Maximum Power (2 Hours)					
165.8 (123.6)	1925	8.96 (33.91)	0.385 (0.234)	18.48 (3.64)	

VARYING POWER AND FUEL CONSUMPTION

161.1 (120.1)	2212	9.53 (36.06)	0.419 (0.255)	16.91 (3.33)	Air temperature
137.3 (102.4)	2250	8.52 (32.26)	0.441 (0.268)	16.11 (3.17)	72°F (22°C)
104.3 (77.8)	2280	7.21 (27.28)	0.490 (0.298)	14.49 (2.85)	Relative humidity
69.4 (51.7)	2299	5.64 (21.35)	0.577 (0.351)	12.30 (2.42)	53%
35.0 (26.1)	2322	4.26 (16.12)	0.864 (0.525)	8.22 (1.62)	Barometer
--	2347	2.84 (10.75)	--	--	29.2" Hg (98.9 kPa)

Maximum Torque - 518.6 lb.-ft. (703.1 Nm) at 1227 rpm
Maximum Torque Rise - 37.4%
Torque rise at 1800 engine rpm - 23%

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) med	Temp.°F (°C) cool- ing bulb	Air dry (kPa)	Barom. inch Hg
Maximum Power 12th(3TC) Gear									
144.8 (108.0)	12850 (57.2)	4.23 (6.81)	2045	6	0.448 (0.273)	15.84 (3.12)	181 (83)	64 (18)	29.4 (99.7)
75% of Pull at Maximum Power 12th(3TC) Gear									
111.0 (82.8)	8725 (38.8)	4.77 (7.68)	2260	4	0.523 (0.318)	13.57 (2.67)	169 (76)	62 (17)	29.6 (100.2)
50% of Pull at Maximum Power 12th(3TC) Gear									
75.6 (56.4)	5825 (25.9)	4.87 (7.84)	2285	3	0.623 (0.379)	11.40 (2.25)	171 (77)	62 (17)	29.6 (100.2)
75% of Pull at Reduced Engine Speed 15th(3TD) Gear									
110.2 (82.1)	8645 (38.5)	4.78 (7.69)	1933	4	0.460 (0.280)	15.43 (3.04)	167 (75)	62 (17)	29.6 (100.2)
50% of Pull at Reduced Engine Speed 15th(3TD) Gear									
75.7 (56.5)	5830 (25.9)	4.87 (7.84)	1947	3	0.534 (0.325)	13.30 (2.62)	165 (74)	62 (17)	29.6 (100.2)

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

Dates of Test: March - 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** 10W40 **API service classification** CD/CE
Transmission and hydraulic lubricant BP Terrac Extra 10W/30 **Front axle lubricant** API GL5 - SAE 85W140

ENGINE: Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** G13648 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.251" x 5.276" (108.0 mm x 134.0 mm) **Compression ratio** 16.5 to 1 **Displacement** 449 cu in (7365 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **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.** G 054 011 **Tread width** rear 63.4" (1610 mm) to 74.8" (1900 mm) 64.2" (1630 mm) to 79.9" (2030 mm) **Wheelbase** 121.1" (3075 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 1.54 (2.48) second 1.80 (2.90) third 2.13 (3.43) fourth 2.34 (3.76) fifth 2.49 (4.01) sixth 2.73 (4.40) seventh 3.23 (5.20) eighth 3.34 (5.38) ninth 3.78 (6.08) tenth 3.91 (6.29) eleventh 4.55 (7.32) twelfth 4.62 (7.43) thirteenth 5.08 (8.17) fourteenth 5.31 (8.56) fifteenth 5.40 (8.69) sixteenth 5.94 (9.56) seventeenth 6.28 (10.11) eighteenth 7.01 (11.28) nineteenth 7.35 (11.83) twentieth 7.71 (12.40) twenty-first 8.22 (13.21) twenty-second 9.02 (14.51) twenty-third 10.64 (17.13) twenty-fourth 11.00 (17.71) twenty-fifth 12.45 (20.04) twenty-sixth 12.88 (20.73) twenty-seventh 14.98 (24.10) twenty-eighth 15.20 (24.46) twenty-ninth 17.53 (28.21) thirtieth 17.80 (28.64) thirty-first 20.69 (33.30) thirty-second 24.22 (38.98) reverse 1.42 (2.28), 1.66 (2.67), 1.96 (3.15), 2.15 (3.46), 2.29 (3.69), 2.52 (4.05), 2.98 (4.79), 3.08 (4.95), 3.48 (5.60), 3.60 (5.79), 4.19 (6.74), 4.25 (6.84), 4.67 (7.52), 4.90 (7.88), 4.97 (8.00), 5.47 (8.80), 5.79 (9.31), 6.46 (10.39), 6.77 (10.89), 7.09 (11.41), 3.67 (12.16), 8.30 (13.36), 9.80 (15.77), 10.13 (16.30), 11.46 (18.45), 11.86 (19.08), 13.79 (22.19), 14.00 (22.52), 16.14 (25.97), 16.38 (26.36), 19.05 (30.66), 22.30 (35.88)

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)
5th(1TD) Gear									
99.8 (74.4)	16235 (72.2)	2.31 (3.71)	2270	14	0.559 (0.340)	12.69 (2.50)	178 (81)	64 (18)	29.4 (99.7)
6th(2TB) Gear									
111.6 (83.2)	16050 (71.4)	2.61 (4.20)	2265	12	0.528 (0.321)	13.45 (2.65)	172 (78)	64 (18)	29.4 (99.7)
7th(2TC) Gear									
130.1 (97.0)	15960 (71.0)	3.06 (4.92)	2227	11	0.506 (0.308)	14.04 (2.77)	174 (79)	64 (18)	29.4 (99.7)
8th(3TA) Gear									
134.6 (100.4)	15735 (70.0)	3.21 (5.17)	2221	9	0.485 (0.295)	14.66 (2.89)	176 (80)	64 (18)	29.4 (99.7)
9th(2TD) Gear									
141.5 (105.5)	14525 (64.6)	3.65 (5.88)	2191	8	0.464 (0.282)	15.33 (3.02)	176 (80)	64 (18)	29.4 (99.7)
10th(3TB) Gear									
142.8 (106.5)	14165 (63.0)	3.78 (6.08)	2177	7	0.455 (0.277)	15.61 (3.08)	169 (76)	64 (18)	29.4 (99.7)
11th(4TA) Gear									
144.8 (108.0)	13165 (58.6)	4.13 (6.64)	2033	7	0.453 (0.275)	15.68 (3.09)	180 (82)	64 (18)	29.4 (99.7)
12th(3TC) Gear									
144.8 (108.0)	12860 (57.2)	4.23 (6.81)	2045	6	0.448 (0.273)	15.84 (3.12)	181 (83)	64 (18)	29.4 (99.7)
13th(1LA) Gear									
144.4 (107.7)	11935 (53.1)	4.54 (7.30)	1985	6	0.437 (0.266)	16.24 (3.20)	171 (77)	64 (18)	29.4 (99.7)
14th(4TB) Gear									
145.1 (108.2)	11350 (50.5)	4.79 (7.71)	1991	5	0.439 (0.267)	16.19 (3.19)	174 (79)	64 (18)	29.4 (99.7)
15th(3TD) Gear									
143.9 (107.3)	11310 (50.3)	4.77 (7.68)	1953	5	0.422 (0.257)	16.80 (3.31)	172 (78)	64 (18)	29.4 (99.7)
16th(1LB) Gear									
147.4 (109.9)	10340 (46.0)	5.34 (8.59)	1977	4	0.432 (0.263)	16.45 (3.24)	176 (80)	64 (18)	29.4 (99.7)
17th(4TC) Gear									
142.4 (106.2)	9530 (42.4)	5.60 (9.02)	1957	5	0.448 (0.272)	15.86 (3.12)	178 (81)	64 (18)	29.4 (99.7)
18th(1LC) Gear									
145.4 (108.4)	8585 (38.2)	6.36 (10.23)	1981	5	0.434 (0.264)	16.39 (3.23)	178 (81)	64 (18)	29.4 (99.7)
19th(4TD) Gear									
142.8 (106.5)	8015 (35.7)	6.68 (10.75)	1977	4	0.447 (0.272)	15.89 (3.13)	178 (81)	64 (18)	29.4 (99.7)
20th(2LA) Gear									
145.2 (108.3)	7780 (34.6)	7.00 (11.27)	1974	4	0.441 (0.268)	16.09 (3.17)	180 (82)	64 (18)	29.4 (99.7)
21st(1LD) Gear									
143.8 (107.2)	7285 (32.4)	7.40 (11.91)	1956	4	0.443 (0.269)	16.04 (3.16)	178 (81)	64 (18)	29.4 (99.7)
22nd(2LB) Gear									
141.3 (105.4)	6575 (29.2)	8.06 (12.97)	1935	4	0.447 (0.272)	15.89 (3.13)	178 (81)	64 (18)	29.4 (99.7)

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 20.8R38; **,15 (100)

Two 16.9R28; **,15 (100)

22.0 in (560 mm)

12035 lb (5460 kg)

6195 lb (2810 kg)

18230 lb (8270 kg)

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

1993 engine rpm or 1000 rpm at 2091 engine

rpm **Unladen tractor mass** 18065 lb (8195 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. 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 Reports No. **1843** Nebraska Summary 363, June 5, 2002.

Brent T. Sampson
Test Engineer

L.L. Bashford
M.F. Kocher
V.I. Adamchuk
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 13th (3TB) gear	77.0	76.0
Bystander	--	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: None

Maximum Force Exerted

Through Whole Range: 16101 lbs (71.6 kN)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2850 psi (196 bar)
- ii) Pump delivery rate at minimum pressure and rated engine speed: 29.9 GPM (113.2 l/min)
- iii) Pump delivery rate at maximum hydraulic power: 26.0 GPM (98.4 l/min)
- Delivery pressure: 2640 psi (182 bar)
- Power: 40.0 HP (29.9 kW)

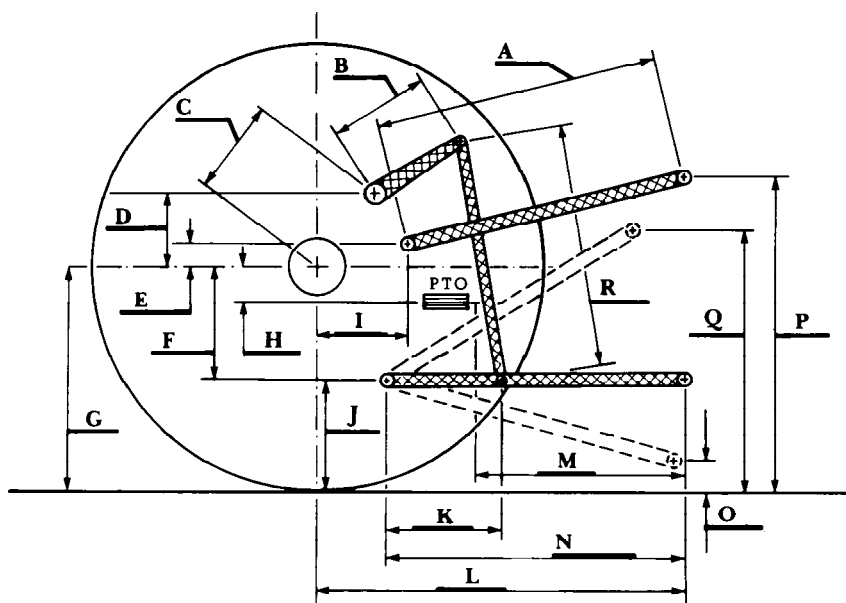
THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar) 3015 (208)
 Location: lift cylinder
 Hydraulic temperature F (°C) 153 (67)
 Location: hydraulic sump
 Category: III
 Quick attach: none

SAE Static Test System pressure 2715 psi (187 Bar)

Hitch point distance to ground level in. (mm)	9.7 (246)	16.0 (406)	24.0 (610)	32.0 (813)	40.0 (1016)
Lift force on frame lb	18963	18432	18441	18054	16965
" " " " " (kN)	(84.4)	(82.0)	(82.0)	(80.3)	(75.5)

HITCH DIMENSIONS AS TESTED NO LOAD



	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	28.8	732	29.8	756
B	15.0	380	15.0	380
C	19.4	492	19.4	492
D	17.6	447	17.6	447
E	11.0	280	11.0	280
F	13.0	330	13.0	330
G	34.3	870	34.3	870
H	3.9	100	3.9	100
I	17.6	447	17.6	447
J	21.3	540	21.3	540
K	21.3	540	23.2	590
L	48.2	1225	48.2	1225
M	23.1	588	23.1	588
N	38.4	975	38.4	975
O	9.6	245	9.3	235
P	43.3	1100	48.2	1225
Q	39.5	1004	37.4	949
R	34.0	864	35.1	892