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January 1999

## Nebraska Summary 305: Massey Ferguson 6290 Diesel 32-Speed

Nebraska Tractor Test Lab

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# SUMMARY OF OECD TESTS 1874 & 1878-NEBRASKA SUMMARY 305

## MASSEY FERGUSON 6290 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 (PTO speed 1098 rpm)</b>			
120.5 (89.8)	2196	7.45 (28.19)	0.437 (0.266)	16.18 (3.20)	
		<b>Standard Power Take-off Speed(1000 rpm)</b>			
126.2 (94.1)	2000	7.21 (27.30)	0.406 (0.247)	17.51 (3.45)	

#### VARYING POWER AND FUEL CONSUMPTION

120.5 (89.8)	2196	7.45 (28.19)	0.437 (0.266)	16.18 (3.20)	Air temperature
105.7 (78.8)	2258	7.02 (26.58)	0.472 (0.287)	15.05 (2.97)	72°F (22°C)
80.1 (59.7)	2279	5.95 (22.51)	0.528 (0.321)	13.45 (2.65)	Relative humidity
53.9 (40.2)	2293	4.78 (18.11)	0.631 (0.384)	11.27 (2.22)	64%
26.9 (20.0)	2303	3.60 (13.61)	0.950 (0.578)	7.48 (1.47)	Barometer
--	2322	1.99 (7.54)	--	--	29.7" Hg (100.6 kPa)

Maximum Torque - 370.0 lb.-ft. (501.7 Nm) at 1450 rpm  
Maximum Torque Rise - 28.4%  
Torque rise at 1800 engine rpm - 25%

#### 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 13th(4TB) Gear</b>									
113.6 (84.7)	9600 (42.7)	4.44 (7.15)	2202	8	0.484 (0.294)	14.67 (2.89)	187 (86)	61 (16)	30.2 (102.1)
<b>75% of Pull at Maximum Power 13th(4TB) Gear</b>									
91.2 (68.0)	7185 (32.0)	4.76 (7.66)	2274	5	0.518 (0.315)	13.71 (2.70)	192 (89)	57 (14)	29.7 (100.7)
<b>50% of Pull at Maximum Power 13th(4TB) Gear</b>									
63.6 (47.4)	4845 (21.5)	4.92 (7.92)	2293	2	0.593 (0.360)	11.98 (2.36)	190 (88)	57 (14)	29.7 (100.7)
<b>75% of Pull at Reduced Engine Speed 16th(4TC) Gear</b>									
91.7 (68.4)	7195 (32.0)	4.78 (7.69)	1933	5	0.460 (0.280)	15.43 (3.04)	185 (85)	57 (14)	29.7 (100.7)
<b>50% of Pull at Reduced Engine Speed 16th(4TC) Gear</b>									
63.3 (47.2)	4840 (21.5)	4.90 (7.89)	1940	3	0.532 (0.324)	13.35 (2.63)	185 (85)	57 (14)	29.7 (100.7)

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

**Dates of Test:** October - November, 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/40 **Front axle lubricant** API GL5 - SAE 85W140

**ENGINE: Make** Perkins Diesel **Type** six cylinder vertical with turbocharger **Serial No.** U668226C **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.937" x 5.00" (100.0 mm x 127.0 mm) **Compression ratio** 16.0 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** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS: Type** 2WD and FWA **Serial No.** G140015 **Tread width** rear 66.9" (1699 mm) to 86.6" (2199 mm) front 2WD - 54.3" (1380 mm) to 91.7" (2330 mm), FWA - 61.7" (1566 mm) to 80.9" (2054 mm) **Wheelbase** 106.3" (2699 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 1.32 (2.13) second 1.55 (2.50) third 1.83 (2.95) fourth 2.14 (3.45) fifth 2.25 (3.62) sixth 2.63 (4.24) seventh 2.96 (4.77) eighth 3.11 (5.01) ninth 3.47 (5.58) tenth 3.64 (5.86) eleventh 4.01 (6.45) twelfth 4.09 (6.59) thirteenth 4.69 (7.55) fourteenth 4.79 (7.71) fifteenth 4.96 (7.99) sixteenth 5.54 (8.92) seventeenth 5.82 (9.36) eighteenth 6.49 (10.44) nineteenth 6.86 (11.04) twentieth 8.03 (12.92) twenty-first 8.44 (13.58) twenty-second 9.88 (15.90) twenty-third 11.11 (17.88) twenty-fourth 11.66 (18.76) twenty-fifth 13.00 (20.92) twenty-sixth 13.65 (21.96) twenty-seventh 15.03 (24.19) twenty-eighth 15.35 (24.70) twenty-ninth 17.59 (28.31) thirtieth 17.96 (28.91) thirty-first 20.77 (33.42) thirty-second 24.31 (39.12) reverse 1.21 (1.94), 1.41 (2.27), 1.67 (2.68), 1.95 (3.14), 2.05 (3.30), 2.40 (3.86), 2.70 (4.34), 2.83 (4.56), 3.16 (5.08), 3.32 (5.34), 3.65 (5.88), 3.73 (6.00), 4.28 (6.88), 4.36 (7.02), 4.52 (7.28), 5.05 (8.12), 5.29 (8.52), 5.91 (9.51), 6.25 (10.06), 7.31 (11.77), 7.69 (12.37), 9.00 (14.48), 10.12 (16.28),

## 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)
106.1 (79.1)	10925 (48.6)	3.64 (5.86)	2212	13	11th(4TA)Gear 0.507 (0.309)	13.99 (2.76)	189 (87)	61 (16)	30.2 (102.1)
106.6 (79.5)	10845 (48.2)	3.69 (5.93)	2198	13	12th(3TC)Gear 0.511 (0.311)	13.91 (2.74)	190 (88)	61 (16)	30.2 (102.1)
115.9 (86.4)	10105 (45.0)	4.30 (6.92)	2153	9	13th(4TB)Gear 0.476 (0.289)	14.92 (2.94)	190 (88)	61 (16)	30.2 (102.1)
116.1 (86.6)	9890 (44.0)	4.40 (7.08)	2151	9	14th(3TD)Gear 0.477 (0.290)	14.87 (2.93)	190 (88)	61 (16)	30.2 (102.1)
118.1 (88.1)	9575 (42.6)	4.63 (7.45)	2144	7	15th(1LA)Gear 0.460 (0.280)	15.43 (3.04)	187 (86)	61 (16)	30.2 (102.1)
115.7 (86.3)	8410 (37.4)	5.16 (8.31)	2114	6	16th(4TC)Gear 0.474 (0.288)	14.97 (2.95)	187 (86)	61 (16)	30.2 (102.1)
118.7 (88.5)	8465 (37.7)	5.26 (8.46)	2060	6	17th(1LB)Gear 0.450 (0.274)	15.76 (3.11)	189 (87)	61 (16)	30.2 (102.1)
115.9 (86.4)	7215 (32.1)	6.02 (9.68)	2079	5	18th(4TD)Gear 0.463 (0.281)	15.35 (3.02)	190 (88)	61 (16)	30.2 (102.1)
117.5 (87.6)	6865 (30.5)	6.42 (10.33)	2089	5	19th(1LC)Gear 0.467 (0.284)	15.23 (3.00)	190 (88)	61 (16)	30.2 (102.1)
116.5 (86.9)	5875 (26.1)	7.43 (11.96)	2048	5	20th(1LD)Gear 0.460 (0.280)	15.53 (3.04)	189 (87)	61 (16)	30.2 (102.1)
117.6 (87.7)	5775 (25.7)	7.64 (12.29)	2003	5	21st(2LA)Gear 0.450 (0.274)	15.79 (3.11)	190 (88)	61 (16)	30.2 (102.1)
115.5 (86.1)	4945 (22.0)	8.76 (14.10)	1992	5	22nd(2LB)Gear 0.453 (0.275)	15.68 (3.09)	189 (87)	61 (16)	30.2 (102.1)

10.62 (17.09), 11.84 (19.06), 12.43 (20.00), 13.69 (22.03), 13.98 (22.49), 16.03 (25.79), 16.36 (26.33), 18.92 (30.44), 22.14 (35.63) **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** 2WD - 10460 lb (4745 kg), FWA -11395 lb (5170 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 3 point lift claims of 9250 lbs (4196 kg) at 24" behind link ends nor 15653 lbs (7100 kg) at 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 Reports No. **1874 &1878**, Nebraska Summary 305, June 21, 2000.

Brent T. Sampson  
Test Engineer

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

TRACTOR SOUND LEVEL WITH CAB	2WD dB(A)	Front Wheel Drive Engaged dB(A)
At no load in 13th (3TB) gear	78.0	78.0
Bystander	--	--

#### Tested Without Ballast

TIRES AND WEIGHT	Front Wheel Assist	2WD
<b>Rear tires</b> - No.,size, ply & psi(kPa)	Two 20.8R38; **,15 (100)	Two 20.8R38; **,15 (100)
<b>Front tires</b> - No.,size, ply & psi(kPa)	Two 16.9R28; **,16 (110)	Two 11.00-16; 8; 36 (250)
<b>Height of Drawbar</b>	25.2 in (640 mm)	33.5 in (850 mm)
<b>Static Weight with operator-</b> Rear	6945 lb (3150 kg)	6845 lb (3105 kg)
- Front	4620 lb (2095 kg)	3780 lb (1715 kg)
- Total	11565 lb (5245 kg)	10625 lb (4820 kg)

# DRAWBAR PERFORMANCE

(Unballasted - 2WD)

## 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)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power 21st(2LA) Gear									
112.4 (83.8)	5105 (22.7)	8.26 (13.30)	2201	5	0.487 (0.297)	14.57 (2.87)	190 (88)	63 (17)	30.3 (102.5)
75% of Pull at Maximum Power 21st(2LA) Gear									
87.8 (65.5)	3800 (16.9)	8.66 (13.93)	2273	3	0.542 (0.330)	13.10 (2.58)	190 (88)	64 (18)	30.2 (102.1)
50% of Pull at Maximum Power 21st(2LA) Gear									
59.9 (44.7)	2540 (11.3)	8.85 (14.24)	2294	2	0.643 (0.391)	11.04 (2.18)	189 (87)	64 (18)	30.2 (102.1)
75% of Pull at Reduced Engine Speed 22nd(2LB) Gear									
87.5 (65.2)	3815 (17.0)	8.60 (13.84)	1927	3	0.471 (0.286)	15.09 (2.97)	187 (86)	64 (18)	30.2 (102.1)
50% of Pull at Reduced Engine Speed 22nd(2LB) Gear									
60.3 (45.0)	2555 (11.4)	8.86 (14.26)	1959	2	0.548 (0.333)	12.96 (2.55)	187 (86)	64 (18)	30.2 (102.1)
MAXIMUM POWER IN SELECTED GEARS									
10th(2TD) Gear									
80.7 (60.2)	9210 (41.0)	3.29 (5.29)	2271	15	0.595 (0.362)	11.93 (2.35)	190 (88)	63 (17)	30.3 (102.5)
11th(4TA) Gear									
89.2 (66.5)	9195 (40.9)	3.64 (5.85)	2254	14	0.560 (0.341)	12.68 (2.50)	190 (88)	63 (17)	30.3 (102.5)
12th(3TC) Gear									
93.1 (69.4)	9195 (40.9)	3.80 (6.11)	2251	12	0.549 (0.334)	12.94 (2.55)	190 (88)	63 (17)	30.3 (102.5)
13th(4TB) Gear									
103.8 (77.4)	9155 (40.7)	4.26 (6.85)	2218	12	0.516 (0.314)	13.76 (2.71)	189 (87)	63 (17)	30.3 (102.5)
14th(3TD) Gear									
106.9 (79.7)	9210 (41.0)	4.35 (7.00)	2200	12	0.507 (0.309)	13.99 (2.76)	189 (87)	63 (17)	30.3 (102.5)
15th(1LA) Gear									
108.4 (80.8)	9015 (40.1)	4.51 (7.25)	2183	11	0.507 (0.309)	13.99 (2.76)	189 (87)	63 (17)	30.3 (102.5)
16th(4TC) Gear									
112.6 (84.0)	8230 (36.6)	5.13 (8.26)	2169	9	0.492 (0.299)	14.43 (2.84)	189 (87)	63 (17)	30.3 (102.5)
17th(1LB) Gear									
114.5 (85.4)	8245 (36.7)	5.21 (8.38)	2110	9	0.479 (0.291)	14.82 (2.92)	190 (88)	63 (17)	30.3 (102.5)
18th(4TD) Gear									
115.8 (86.4)	7445 (33.1)	5.83 (9.39)	2088	9	0.469 (0.286)	15.13 (2.98)	190 (88)	63 (17)	30.3 (102.5)
19th(1LC) Gear									
114.9 (85.7)	6945 (30.9)	6.20 (9.97)	2088	8	0.472 (0.287)	15.04 (2.96)	190 (88)	63 (17)	30.3 (102.5)
20th(1LD) Gear									
117.1 (87.3)	6140 (27.3)	7.15 (11.51)	2032	7	0.455 (0.277)	15.58 (3.07)	190 (88)	63 (17)	30.3 (102.5)
21st(2LA) Gear									
117.3 (87.5)	5775 (25.7)	7.62 (12.27)	2048	6	0.455 (0.277)	15.58 (3.07)	190 (88)	63 (17)	30.3 (102.5)
22nd(2LB) Gear									
116.5 (86.9)	4945 (22.0)	8.84 (14.22)	2010	5	0.451 (0.275)	15.74 (3.10)	190 (88)	63 (17)	30.3 (102.5)

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

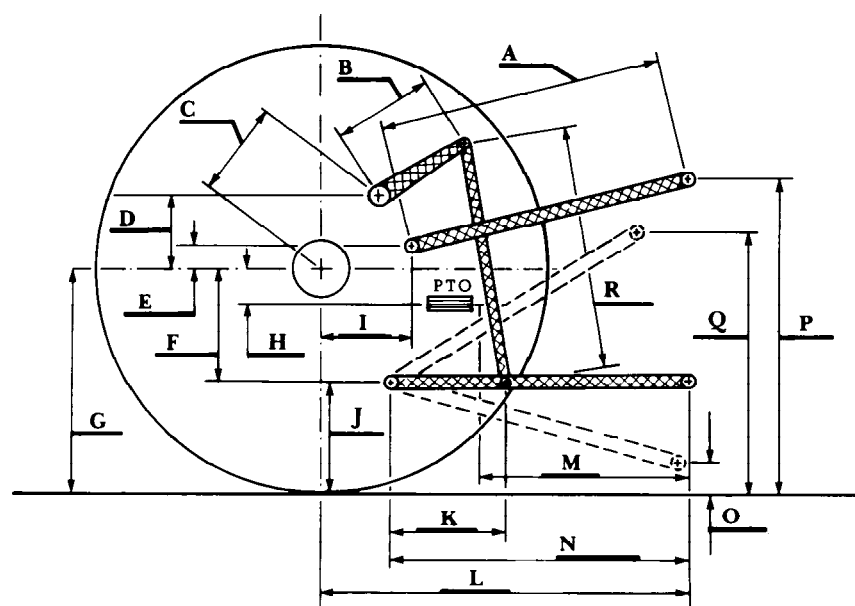
Maximum Force Exerted

Through Whole Range:

8140 lbs (36.2 kN) (at the frame)

10905 lbs (48.5 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)	25.3 GPM (95.7 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	14.1 GPM (53.4 l/min)	25.0 GPM (94.5 l/min)
Delivery pressure:	2640 psi (182 bar)	2305 psi (159 bar)
Power:	21.7 HP (16.2 kW)	33.6 HP (25.0 kW)



HITCH DIMENSIONS AS TESTED NO LOAD

	inch	mm
A	28.9	735
B	11.6	295
C	13.9	354
D	13.0	330
E	6.3	160
F	11.0	280
G	33.6	855
H	1.7	43
I	15.3	389
J	22.6	575
K	21.4	543
L	43.5	1104
M	25.7	654
N	37.1	943
O	8.6	218
P	46.7	1185
Q	36.8	935
R	29.8	757