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Nebraska Summary: S123 Massey Ferguson 3140

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SUMMARY OF OECD TESTS 1253 & 1254—NEBRASKA SUMMARY 123
MASSEY FERGUSON 3140 DIESEL (2WD & FWA)
16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Fuel Consumption 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—1101 rpm)					
115.8 (86.4)	2202	6.39 (24.17)	0.393 (0.239)	18.12 (3.57)	
Standard Power Take-off Speed (1001 rpm)					
111.4 (83.1)	2002	5.87 (22.23)	0.375 (0.228)	18.98 (3.74)	Air temperature
VARYING POWER AND FUEL CONSUMPTION					73°F (23°C)
115.8 (86.4)	2202	6.39 (24.17)	0.393 (0.239)	18.12 (3.57)	
99.2 (74.0)	2220	5.65 (21.39)	0.404 (0.246)	17.56 (3.46)	Relative humidity
74.8 (55.8)	2238	4.68 (17.73)	0.446 (0.271)	15.99 (3.15)	38%
50.4 (37.6)	2252	3.68 (13.94)	0.519 (0.316)	13.70 (2.70)	Barometer
25.1 (18.7)	2264	2.65 (10.03)	0.753 (0.458)	9.47 (1.86)	29.83" Hg (101.0 kPa)
....	2280	1.77 (6.71)	....	....	

Maximum Torque 336.1 lb. ft (455.7 Nm) at 1299 RPM
Maximum Torque Rise 21.7%

DRAWBAR PERFORMANCE
FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull (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)
Maximum Power—9th (1R) Gear									
105.7 (78.8)	6540 (29.1)	6.06 (9.75)	2188	6	0.441 (0.268)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
75% of Pull at Maximum Power—9th (1R) Gear									
81.1 (60.5)	4780 (21.3)	6.36 (10.23)	2234	4	0.483 (0.294)	14.77 (2.91)	180 (82)	45 (7)	29.9 (101.4)
50% of Pull at Maximum Power—9th (1R) Gear									
58.3 (43.5)	3370 (15.0)	6.49 (10.44)	2248	2	0.536 (0.326)	13.35 (2.63)	180 (82)	45 (7)	29.9 (101.4)
75% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
82.3 (61.4)	4855 (21.6)	6.36 (10.24)	1774	4	0.422 (0.257)	16.90 (3.33)	180 (82)	45 (7)	29.9 (101.4)
50% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
60.3 (45.0)	3485 (15.5)	6.49 (10.44)	1776	2	0.450 (0.274)	15.84 (3.12)	180 (82)	45 (7)	29.9 (101.4)
MAXIMUM POWER IN SELECTED GEARS									
6th (3T+S) Gear									
89.5 (66.8)	9230 (41.1)	3.64 (5.85)	2216	15	0.515 (0.313)	13.86 (2.73)	180 (82)	45 (7)	29.9 (101.4)
7th (4T) Gear									
100.0 (74.6)	8610 (38.3)	4.36 (7.01)	2188	11	0.470 (0.286)	15.18 (2.99)	180 (82)	45 (7)	29.9 (101.4)
8th (4T+S) Gear									
102.7 (76.6)	6675 (29.7)	5.77 (9.29)	2190	7	0.455 (0.277)	15.68 (3.09)	180 (82)	45 (7)	29.9 (101.4)
9th (1R) Gear									
105.7 (78.8)	6540 (29.1)	6.06 (9.75)	2188	6	0.441 (0.268)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
10th (1R+S) Gear									
105.1 (78.4)	5055 (22.5)	7.80 (12.55)	2178	4	0.439 (0.267)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
11th (2R) Gear									
105.7 (78.8)	4210 (18.7)	9.42 (15.16)	2176	2	0.442 (0.269)	16.14 (3.18)	180 (82)	45 (7)	29.9 (101.4)

Location of Test: Groupement Antony, BP 121 92164 Antony, France

Dates of Test: November 1989 to January 1990

Manufacturer: MASSEY FERGUSON S.A. Avenue Blaise Pascal B.P. 307 60026 Beauvais, France

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F** *(15°/15°C)* 0.855 **Fuel weight** 7.13 lbs/gal *(0.853 kg/l)* **Oil SAE** 10W30 **Oil consumption for 10 hours** NA **Transmission and hydraulic lubricant** B. P. Agrotrans SAE 80W90 API GL-4 **Front axle lubricant** B. P. Agrotrans SAE80W90 API GL-4

ENGINE: Make Perkins Diesel **Type** six cylinder vertical with turbocharger**Serial No.** YB 31228 U 505951 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.937" × 5.00" *(100 mm × 127 mm)* **Compression ratio** 16.0 to 1 **Displacement** 365 cu in *(5985 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** two full flow cartridges **Oil cooler** engine coolant heat exchanger for crankcase oil **Fuel filter** two paper elements **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type 2WD and FWA **Serial No.** N 104 005 **Tread width** rear 62.5" *(1588 mm)* to 85.8" *(2180 mm)* front 2WD - 60.7" *(1543 mm)* to 91.9" *(2333 mm)* FWA - 66.4" *(1686 mm)* to 85.5" *(2171 mm)* **Wheel base** 106.2" *(2697 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.58 *(2.55)* second 2.00 *(3.22)* third 2.39 *(3.85)* fourth 3.02 *(4.87)* fifth 3.31 *(5.33)* sixth 4.18 *(6.73)* seventh 4.79 *(7.71)* eighth 6.06 *(9.75)* ninth 6.35 *(10.22)* tenth 8.03 *(12.92)* eleventh 9.59 *(15.44)* twelfth 12.12 *(19.51)*, thirteenth 13.27 *(21.36)* fourteenth 16.78 *(27.00)* fifteenth 20.56 *(33.09)* sixteenth 24.29 *(39.09)* reverse 1.57 *(2.53)*, 1.99 *(3.20)*, 2.38 *(3.83)*, 3.01 *(4.84)*, 3.29 *(5.30)*, 4.16 *(6.69)*, 4.76 *(7.67)*, 6.02 *(9.69)*, 6.31 *(10.16)*, 7.98 *(12.84)*, 9.54 *(15.35)*, 12.05 *(19.40)*, 13.20 *(21.24)*, 16.68 *(26.84)*, 19.11 *(30.75)*, 24.15 *(38.86)* **Clutch** dry single disc operated by foot pedal **Brakes** single wet disc hydraulically actuated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1980 engine rpm and 1000 rpm at 2000 engine rpm **Unladen tractor mass** 2WD - 10430 lb *(4730 kg)*, FWA - 11495 lb *(5215 kg)*

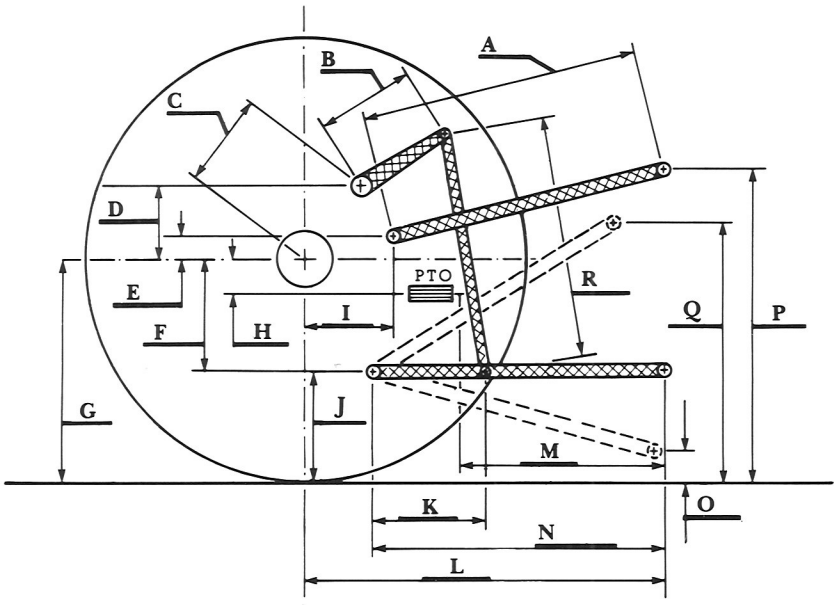
TRACTOR SOUND LEVEL WITH CAB	2WD dB(A)	FWA dB(A)
Gear closest to 4.7 mph *(7.5 km/h)* 7th (4T) gear	74.0	75.0
Maximum sound level in 12th (2R + S) gear	76.0	76.0
Transport speed—no load 16th (4R) gear	72.0	72.0
Bystander in 16th (4R) gear	85.0	86.0

TIRES AND WEIGHT		Tested Without Ballast Front Wheel Assist	2WD
Rear Tires	—No., size, ply & psi *(kPa)*	Two 20.8-38; 8; 14 *(100)*	Two 20.8-38; 8; 14 *(100)*
Front Tires	—No., size, ply & psi *(kPa)*	Two 14.9-28; 8; 16 *(110)*	Two 11.00-16; 8; 36 *(250)*
Height of Drawbar		22.8 in *(578 mm)*	32.3 in *(820 mm)*
Static Weight with Operator	—Rear	7035 lb *(3190 kg)*	6935 lb *(3145 kg)*
	—Front	4630 lb *(2100 kg)*	3660 lb *(1660 kg)*
	—Total	11665 lb *(5290 kg)*	10595 lb *(4805 kg)*

THREE POINT HITCH PERFORMANCE (OECD STATIC TEST)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	9800 lbs	*(43.6 kN)*
i) Opening pressure of relief valve:	NA	
Sustained pressure of the open relief valve:	2790 psi	*(192 bar)*
ii) Pump delivery rate at minimum pressure:	13.3 GPM	*(50.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	12.6 GPM	*(47.8 l/min)*
Delivery pressure:	2610 psi	*(180 bar)*
Power:	19.2 Hp	*(14.3 kW)*



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	28.3	*720*
B	11.6	*295*
C	13.9	*354*
D	13.0	*330*
E	7.9	*200*
F	11.0	*280*
G	33.6	*855*
H	1.7	*43*
I	15.0	*382*
J	22.6	*575*
K	25.6	*650*
L	43.3	*1101*
M	25.6	*651*
N	37.0	*940*
O	8.1	*205*
P	42.7	*1085*
Q	30.2	*768*
R	32.6	*827*

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 restricted standard test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report Nos. **1253 & 1254,** Nebraska Summary 123, January 29, 1993.

LOUIS I. LEVITICUS
Engineer-in-Charge

L. L. BASHFORD
R. D. GRISSO
K. VON BARGEN
Board of Tractor Test Engineers

The following performance figures apply to the tractor equipped with a Front Drive Axle.

DRAWBAR PERFORMANCE
FUEL CONSUMPTION CHARACTERISTICS
(Front Drive Engaged)

Power Hp *(kW)*	Drawbar pull *(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)*
Maximum Power—9th (1R) Gear									
100.9 *(75.2)*	6105 *(27.2)*	6.20 *(9.97)*	2170	3	0.449 *(0.273)*	15.89 *(3.13)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*
75% of Pull at Maximum Power—9th (1R) Gear									
80.1 *(59.7)*	4655 *(20.7)*	6.45 *(10.38)*	2226	2	0.490 *(0.298)*	14.57 *(2.87)*	180 *(82)*	61 *(16)*	30.3 *(102.5)*
50% of Pull at Maximum Power—9th (1R) Gear									
52.7 *(39.3)*	2990 *(13.3)*	6.61 *(10.63)*	2246	1	0.584 *(0.355)*	12.23 *(2.41)*	180 *(82)*	61 *(16)*	30.3 *(102.5)*
75% of Pull at Reduced Engine Speed									
Available gear ratios did not permit running of this test									
50% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
54.5 *(40.6)*	3085 *(13.7)*	6.62 *(10.66)*	1782	1	0.473 *(0.288)*	15.08 *(2.97)*	180 *(82)*	61 *(16)*	30.3 *(102.5)*
MAXIMUM POWER IN SELECTED GEARS									
5th (3T) Gear									
83.0 *(61.9)*	10745 *(47.8)*	2.90 *(4.66)*	2216	15	0.529 *(0.322)*	13.45 *(2.65)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*
6th (3T+S) Gear									
96.3 *(71.8)*	9240 *(41.1)*	3.91 *(6.29)*	2196	9	0.480 *(0.292)*	14.87 *(2.93)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*
7th (4T) Gear									
98.3 *(73.3)*	8005 *(35.6)*	4.60 *(7.41)*	2198	6	0.467 *(0.284)*	15.23 *(3.00)*	180 *(82)*	61 *(16)*	30.3 *(102.5)*
8th (4T+S) Gear									
99.2 *(74.0)*	6270 *(27.9)*	5.93 *(9.55)*	2190	4	0.462 *(0.281)*	15.48 *(3.05)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*
9th (1R) Gear									
100.9 *(75.2)*	6105 *(27.2)*	6.20 *(9.97)*	2170	3	0.449 *(0.273)*	15.89 *(3.13)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*
10th (1R+S) Gear									
100.3 *(74.8)*	4720 *(21.0)*	7.97 *(12.83)*	2180	2	0.452 *(0.275)*	15.79 *(3.11)*	180 *(82)*	61 *(16)*	30.3 *(102.5)*
11th (2R) Gear									
100.4 *(74.9)*	3935 *(17.5)*	9.57 *(15.40)*	2172	2	0.449 *(0.273)*	15.89 *(3.13)*	181 *(83)*	61 *(16)*	30.3 *(102.5)*

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