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Nebraska Summary: S128 Massey Ferguson 393

Nebraska Tractor Test Lab
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SUMMARY OF OECD TEST 1390—NEBRASKA SUMMARY 128
MASSEY FERGUSON 393 DIESEL
8 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—627 rpm)					
84.6 (63.1)	2198	5.28 (19.98)	0.437 (0.266)	16.02 (3.15)	
Standard Power Take-off Speed (540 rpm)					
79.4 (59.2)	1895	4.57 (17.29)	0.403 (0.245)	17.36 (3.42)	Air temperature
VARYING POWER AND FUEL CONSUMPTION					68°F (20°C)
84.6 (63.1)	2198	5.28 (19.98)	0.437 (0.266)	16.02 (3.15)	
72.5 (54.1)	2227	4.57 (17.29)	0.441 (0.268)	15.86 (3.12)	Relative humidity
54.6 (40.7)	2227	3.77 (14.26)	0.483 (0.294)	14.47 (2.85)	38%
36.6 (27.3)	2235	3.03 (11.46)	0.579 (0.352)	12.08 (2.38)	Barometer
18.2 (13.6)	2250	2.30 (8.69)	0.880 (0.535)	7.92 (1.56)	29.8" Hg (100.9 kPa)
....	2283	1.67 (6.31)	....	....	

Maximum Torque 244.4 lb. ft (331.3 Nm) at 1322 RPM
Maximum Torque Rise 20.9%

POWER TAKE-OFF PERFORMANCE (SUPPLEMENTAL TESTS WITH 1000 RPM PTO SHAFT)

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—1159 rpm)					
86.2 (64.3)	2201	5.32 (20.12)	0.431 (0.262)	16.22 (3.20)	
Standard Power Take-off Speed (1001 rpm)					
80.6 (60.1)	1902	4.61 (17.45)	0.399 (0.243)	17.48 (3.45)	Air temperature
VARYING POWER AND FUEL CONSUMPTION					66°F (19°C)
86.2 (64.3)	2201	5.32 (20.12)	0.431 (0.262)	16.22 (3.20)	
74.6 (55.6)	2237	4.72 (17.87)	0.442 (0.269)	15.79 (3.11)	Relative humidity
55.3 (41.2)	2237	3.79 (14.34)	0.480 (0.292)	14.58 (2.87)	33%
37.1 (27.7)	2246	3.07 (11.63)	0.577 (0.351)	12.08 (2.38)	Barometer
18.7 (13.9)	2261	2.36 (8.92)	0.883 (0.537)	7.91 (1.56)	29.8" Hg (100.8 kPa)
....	2287	1.68 (6.36)	....	....	

Maximum Torque 248.0 lb. ft (336.2 Nm) at 1297 RPM
Maximum Torque Rise 20.5%

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

Dates of Test: April to May, 1992

Manufacturer: MASSEY FERGUSON TRACTORS Limited, Banner Lane Coventry, Warwickshire, England CV4 9GF

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** 54.5 **Specific gravity converted to 60°/60°F** *(15°/15°C)* 0.8400 **Fuel weight** 6.99 lbs/gal *(0.838 kg/l)* **Oil SAE** 15W40 **Oil consumption for 10 hours** NA **Transmission lubricant** SAE 15W30 **Front axle lubricant** SAE 15W30

ENGINE: Make Perkins Diesel **Type** four cylinder vertical with turbocharger **Serial No.** LJ31239U511441W **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.878" × 5.0" *(98.5 mm × 127.0 mm)* **Compression ratio** 15.5 to 1 **Displacement** 236 cu in *(3870 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and centrifugal precleaner **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil **Fuel filter** two paper elements and sediment bowl **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

CHASSIS: Type front wheel assist **Serial No.** A08351 **Tread width** rear 60.3" *(1531 mm)* to 83.9" *(2131 mm)* front 58.7" *(1490 mm)* to 76.5" *(1944 mm)* **Wheel base** 92.5" *(2350 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.53 *(2.47)* second 2.26 *(3.63)* third 4.13 *(6.65)* fourth 5.08 *(8.17)* fifth 6.29 *(10.12)* sixth 9.23 *(14.85)* seventh 16.91 *(27.22)* eighth 20.76 *(33.41)* reverse 2.09 *(3.37)*, 8.57 *(13.79)* **Clutch** single dry disc operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1893 engine rpm and 1000 rpm at 1900 engine rpm **Unladen tractor mass** 7280 lb *(3303 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 manufacturers 3 point lift capacity claim of 4250 lb *(1928 kg)*. The performance figures on this summary were taken from a test conducted under the OECD Code II restricted standard test code procedure.

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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—5th (H1) Gear									
71.5 (53.3)	4540 (20.2)	5.91 (9.51)	2195	7.1	0.519 (0.316)	13.50 (2.66)	185 (85)	57 (14)	29.8 (100.9)
75% of Pull at Maximum Power—5th (H1) Gear									
55.7 (41.5)	3370 (15.0)	6.20 (9.98)	2253	5.0	0.557 (0.339)	12.54 (2.47)	183 (84)	59 (15)	29.8 (100.9)
50% of Pull at Maximum Power—5th (H1) Gear									
38.6 (28.8)	2275 (10.1)	6.36 (10.24)	2266	3.2	0.638 (0.383)	10.96 (2.16)	180 (82)	59 (15)	29.8 (100.9)
75% of Pull at Reduced Engine Speed—6th (H2) Gear									
55.4 (41.3)	3305 (14.7)	6.28 (10.10)	1540	5.0	0.459 (0.279)	15.23 (3.00)	181 (83)	59 (15)	29.8 (100.9)
50% of Pull at Reduced Engine Speed—6th (H2) Gear									
38.8 (28.9)	2270 (10.1)	6.41 (10.32)	1549	3.5	0.492 (0.299)	14.21 (2.80)	174 (79)	59 (15)	29.8 (100.9)
MAXIMUM POWER IN SELECTED GEARS									
2nd (L2) Gear									
41.2 (30.7)	7600 (33.8)	2.03 (3.28)	2257	15.0	0.651 (0.396)	10.76 (2.12)	178 (81)	59 (15)	29.8 (100.9)
3rd (L3) Gear									
67.5 (50.3)	6945 (30.9)	3.64 (5.86)	2208	13.4	0.552 (0.336)	12.64 (2.49)	185 (85)	57 (14)	29.8 (100.9)
4th (L4) Gear									
69.7 (52.0)	5600 (24.9)	4.67 (7.51)	2201	9.3	0.536 (0.326)	13.05 (2.57)	185 (85)	59 (15)	29.8 (100.9)
5th (H1) Gear									
71.5 (53.3)	4540 (20.2)	5.91 (9.51)	2195	7.1	0.519 (0.316)	13.50 (2.66)	185 (85)	57 (14)	29.8 (100.9)
6th (H2) Gear									
70.3 (52.4)	2925 (13.0)	9.01 (14.50)	2209	4.1	0.531 (0.323)	13.15 (2.59)	183 (84)	57 (14)	29.8 (100.9)

DRAWBAR PERFORMANCE
(Front Drive Disengaged)
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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—5th (H1) Gear									
67.9 (50.6)	4475 (19.9)	5.69 (9.15)	2206	11.9	0.549 (0.334)	12.74 (2.51)	185 (85)	63 (17)	29.9 (101.1)
75% of Pull at Maximum Power—5th (H1) Gear									
54.7 (40.8)	3390 (15.1)	6.05 (9.74)	2253	8.5	0.569 (0.346)	12.28 (2.42)	180 (82)	61 (16)	29.9 (101.1)
50% of Pull at Maximum Power—5th (H1) Gear									
37.3 (27.8)	2240 (10.0)	6.24 (10.04)	2260	5.7	0.653 (0.397)	10.71 (2.11)	178 (81)	61 (16)	29.9 (101.1)
75% of Pull at Reduced Engine Speed—6th (H2) Gear									
54.5 (40.7)	3385 (15.1)	6.04 (9.72)	1539	8.5	0.482 (0.293)	14.52 (2.86)	185 (85)	61 (16)	29.9 (101.1)
50% of Pull at Reduced Engine Speed—6th (H2) Gear									
37.1 (27.7)	2235 (9.9)	6.23 (10.03)	1549	5.7	0.496 (0.302)	14.06 (2.77)	174 (79)	61 (16)	29.9 (101.1)
MAXIMUM POWER IN SELECTED GEARS									
4th (L4) Gear									
62.0 (46.2)	5130 (22.8)	4.53 (7.29)	2251	15.0	0.582 (0.354)	12.03 (2.37)	176 (80)	61 (16)	29.9 (101.1)
5th (H1) Gear									
67.9 (50.6)	4475 (19.9)	5.69 (9.15)	2206	11.9	0.549 (0.334)	12.74 (2.51)	185 (85)	63 (17)	29.9 (101.1)
6th (H2) Gear									
69.2 (51.6)	2970 (13.2)	8.74 (14.06)	2193	7.2	0.536 (0.326)	13.05 (2.57)	183 (84)	61 (16)	29.9 (101.1)

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1390,** Nebraska Summary 128, March 17, 1993.

LOUIS I. LEVITICUS
Engineer-in-Charge

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

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Disengaged dB(A)
Gear closest to 4.7 mph *(7.5 km/h)* 4th (L4) gear	83.0	82.0
Maximum sound level 4th (L4) gear	83.0	82.0
Transport speed 8th (H4) gear	82.0	83.0
Bystander	.....	.....

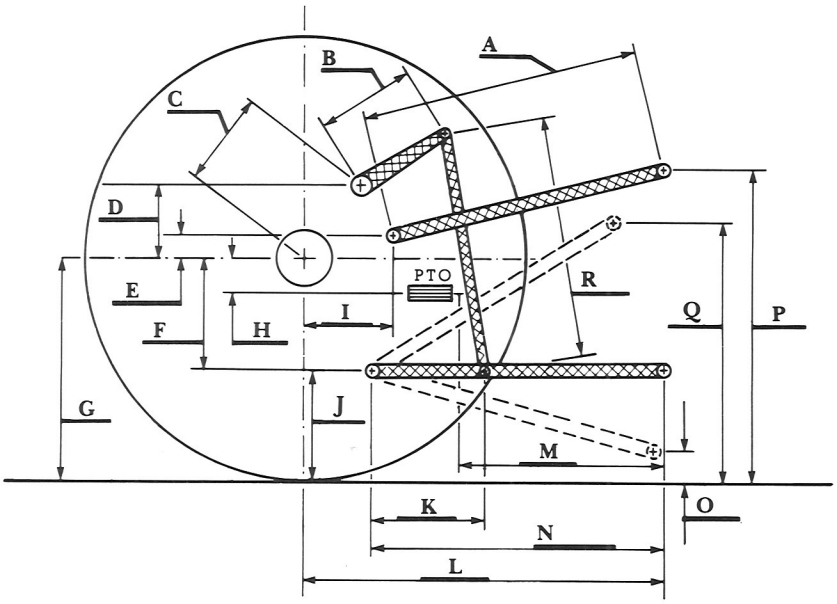
TIRES AND WEIGHT

		Tested Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 18.4-30; 6; 12 *(83)*
Front Tires	—No., size, ply & psi *(kPa)*	Two 12.4-24; 8; 12 *(83)*
Height of Drawbar		13.4 in *(340 mm)*
Static Weight with Operator—Rear		4205 lb *(1907 kg)*
	—Front	3245 lb *(1471 kg)*
	—Total	7450 lb *(3378 kg)*

THREE POINT HITCH PERFORMANCE (OECD STATIC TEST)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	4160 lbs	*(18.5 kN)*
i) Opening pressure of relief valve:	NA	
Sustained pressure of the open relief valve:	3510 psi	*(242 bar)*
ii) Pump delivery rate at minimum pressure:	7.9 GPM	*(29.9 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	7.2 GPM	*(27.4 l/min)*
Delivery pressure:	3050 psi	*(210 bar)*
Power:	12.9 Hp	*(9.59 kW)*



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	30.0	*762*
B	10.5	*267*
C	12.0	*304*
D	9.2	*233*
E	8.1	*205*
F	8.3	*212*
G	28.3	*720*
H	5.2	*132*
I	7.3	*186*
J	20.0	*508*
K	19.8	*504*
L	36.7	*933*
M	25.0	*635*
N	38.0	*965*
O	7.9	*201*
P	44.0	*1118*
Q	33.5	*851*
R	26.4	*670*

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln
Darrell Nelson, Dean and Director