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January 2005

## Test 1864: Massey Ferguson 471 and 573 Diesel 8-peed

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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# NEBRASKA TRACTOR TEST 1864

## MASSEY FERGUSON 471 DIESEL

## ALSO MASSEY FERGUSON 573 DIESEL

## 8 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—622 rpm)					
64.28 (47.94)	2200	4.27 (16.17)	0.469 (0.285)	15.05 (2.96)	
Maximum Power (1 hour)					
66.23 (49.39)	2100	4.33 (16.40)	0.461 (0.281)	15.29 (3.01)	
Standard Power Take-off Speed - (540 rpm)					
64.17 (47.85)	1909	4.13 (15.65)	0.454 (0.276)	15.52 (3.06)	

### VARYING POWER AND FUEL CONSUMPTION

64.28 (47.94)	2200	4.27 (16.17)	0.469 (0.285)	15.05 (2.96)	Air temperature
55.48 (41.37)	2223	3.83 (14.50)	0.487 (0.296)	14.49 (2.85)	81°F (27°C)
41.71 (31.10)	2247	3.08 (11.65)	0.520 (0.316)	13.55 (2.67)	Relative humidity
28.07 (20.93)	2268	2.43 (9.18)	0.609 (0.371)	11.57 (2.28)	55%
14.19 (10.58)	2292	1.84 (6.98)	0.916 (0.557)	7.70 (1.52)	Barometer
0.93 (0.70)	2310	1.35 (5.10)	10.188 (6.197)	0.69 (0.14)	29.04"Hg (98.34 kPa)

Maximum torque 203 lb.-ft. (275 Nm) at 1053 rpm  
Maximum torque rise - 31.9%  
Torque rise at 1799 rpm - 20%

### TRACTOR SOUND LEVEL WITHOUT CAB

	dB(A)
At no load in 4th(4L) gear	94.1
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 16.9-30; 8; 16 (110)  
Two 9.5L-15; 6; 32 (220)  
18.0 in (455 mm)  
3880 lb (1760 kg)  
2305 lb (1046 kg)  
6185 lb (2806 kg)

**Location of tests:** Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832

**Dates of tests:** October 31- November 3, 2005

**Manufacturer:** AGCO Corporation, 4205 River Green Parkway, Duluth, Georgia 30096

**FUEL, OIL and TIME:** Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.8468 Fuel weight 7.051 lbs/gal (0.845 kg/l) Oil SAE 15W40 API service classification CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL fluid Total time engine was operated 7.5 hours

**ENGINE:** Make Perkins Diesel Type four cylinder vertical Serial No. RE37827\*B505650M\* Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.134" x 5.00" (105.0 mm x 127.0 mm) Compression ratio 19.3 to 1 Displacement 268 cu in (4400 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements Oil filter one full flow cartridge Fuel filter one paper element and water separator Muffler vertical Cooling medium temperature control one thermostat

**ENGINE OPERATING PARAMETERS:** Fuel rate: 28.9 - 31.3 lb/h (13.1 - 14.2 kg/h) High idle: 2300 - 2400 rpm

**CHASSIS:** Type Standard Serial No. 9363BP32086 Tread width rear 61.4" (1560 mm) to 88.1" (2238 mm) front 59.1" (1500 mm) to 83.5" (2120 mm) Wheelbase 90.2" (2350 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.33 (2.14) second 1.95 (3.14) third 3.58 (5.76) fourth 4.39 (7.07) fifth 5.33 (8.58) sixth 7.82 (12.59) seventh 14.33 (23.06) eighth 17.56 (28.26) reverse 1.81 (2.92), 7.25 (11.67) 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 1908 engine rpm Unladen tractor mass 6010 lb (2726 kg)

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

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range: 3391 lbs (15.1 kN)

i) Opening pressure of relief valve: NA

Auxiliary pump

Sustained pressure of the open relief valve: 2575 psi (178 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed: 10.0 GPM (37.9 l/min)

iii) Pump delivery rate at maximum hydraulic power: 8.9 GPM (33.7 l/min)

Delivery pressure: 1804 psi (124 bar)

Power: 9.4 HP (7.0 kW)

### THREE POINT HITCH PERFORMANCE

Observed maximum pressure psi.(bar) 2750 (190)

Location: lift cylinder

Hydraulic oil temperature: °F(°C) 144 (62)

Location: hydraulic valve

Category: II

Quick attach: none

SAE Static Test—System pressure 2385 psi (164 Bar)

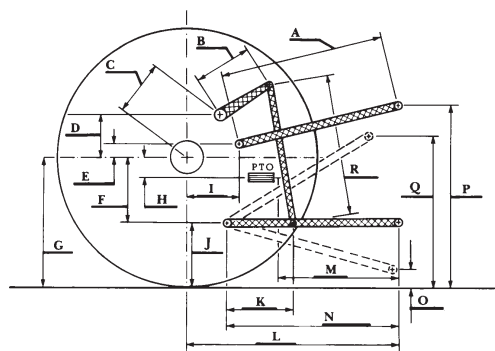
Hitch point distance to ground level in. (mm) 8.0 (203) 15.0 (381) 22.0 (559) 29.0 (737) 36.0 (914)

Lift force on frame lb 4007 4147 4227 4102 3947

" " " " " (kN) (17.8) (18.4) (18.8) (18.2) (17.6)

	SAE test		OECD test	
	inch	mm	inch	mm
A	28.5	724	29.7	754
B	10.5	267	10.5	267
C	12.0	304	12.0	304
D	9.1	232	9.1	232
E	8.0	204	8.0	204
F	8.4	212	8.4	212
G	27.4	695	27.4	695
H	3.7	95	3.7	95
I	6.9	175	6.9	175
J	19.0	483	19.0	483
K	19.1	484	19.1	484
L	36.3	922	36.3	922
M	24.5	622	24.5	622
N	37.7	958	37.7	958
O	8.0	203	8.0	203
P	38.0	965	43.0	1093
Q	35.8	909	35.8	909
R	26.0	660	26.0	660

### HITCH DIMENSIONS AS TESTED - NO LOAD



MASSEY FERGUSON 471 Diesel

Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's remote flow claim of 11.2 GPM (42.4 lpm) with auxiliary pump. The manufacturers claim of 15.5 GPM (58.6 lpm) with auxiliary and lift pumps combined was not verified. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 147°F (64°C).

**Report reissued:** Supplemental sales permit for Massey Ferguson 573 Diesel, October, 2006.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1864, November 3, 2006.

Roger M. Hoy  
Director

M.F. Kocher  
V.I. Adamchuk  
J.A. Smith  
Board of Tractor Test Engineers