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Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F. Larsen

January 1922

Test 084: Rogers

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN.

Copy of Report of Official Tractor Test No. 84

Dates of test: April 1 to May 10, 1922.

Name, -model and rating of tractor: Rogers

Serial No. Engine: 106 Serial No. Chassis 207

Manufacturer: Rogers Tractor & Trailer Co., Albion, Pa.

Tractor equipment used: Berling FL41(172464) Mag.-Zenith 2" L8 Carburetor.

Style and dimensions of wheel lugs: Angle 3"x3"x7/16"

BRAKE HORSE POWER TESTS

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RATED LOAD TEST

61.30: 815 :120 :Gas.:9.687: 6.33 : X : X : X : 192 : 64 : 87 :28.05
Belt Slippage 1.82%

**VARYING LOAD TEST

62.52:	824.5:	10	:	Gasol:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
61.24:	796.5:	10	:	"	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1.69:	895.0:	10	:	"	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
16.81:	833.5:	10	:	"	:	Belt Slippage 1.50%	:	:	:	:	:	:	:	:	:	:	:	:	:	:
31.30:	821.5:	10	:	"	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
48.90:	813.0:	10	:	"	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
37.90:	831.0:	60	:	"	:	7,754: 4.89	:	X	:	X	:	X	:	173	:	60	:	96	:	27.91

MAXIMUM LOAD TEST

63.04: 822.0: 60 :Gasol: 9.709: 6.49 : X : X : X : 189 : 49 : 66 : 28.36
Belt Slippage 1.92%

HALF LOAD TEST

31.48: 827.0: 60 :Gaso.:6.629: 4.75 : X : X : X : 161: 64 : 96 : 27.91
Belt Slippage 1.48%

*Taken in discharge line from engine.

Remarks: The gasoline used as fuel in the belt tests weighed 6.06 pounds per gallon.

**The last line is an average for the hour.

Copy of Report of Official Tractor Test No. 84

Drawbar Horse Power Tests

H. P. Dev.	Draw	Speed	Crank	Slip	Fuel Consumption			Temp. Deg. F		Height		
	Bar	Miles	Shaft	on	Amt.	H.P.	Used	*	Average	of	Barometer	
	Pull	Per	Speed	Drive	Kind	Per	Hrs.	Per	Cooling	Air	Humidity	
	Lbs.	Hour	R.P.M.	Wheels	Used	Hour	Per	Hour	Fluid			
				%**		Gals.	Gal.	Gals.				

Rated Load Test, Ten Hours.

35.47	3979	3.34	828	4.42	Gasol.	8.318	4.264	0.65	199	79	48	28.55
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Maximum Load Test

38.995	4215	3.47	846	4.26	Gasol.	*	---	Not Recorded	185	67	25	29.28
34.85	10000	1.31	803	14.79	"	---	---	Not Recorded---	200	82	25	29.28

*Taken in discharge line from engine.

Remarks: The rated load and first maximum tests were made in high gear. The second maximum was made in low gear.

**Two figures are given denoting slippage in each test; the first shows slippage at the rim of the wheel, and the second shows slippage at the points of the lugs.

The gasoline used as fuel in the draw bar tests weighed 5.99 pounds per gallon.

Oil Consumption: During the complete test consisting of about 78 hours running the following oil was used:
For the engine, 23 1/2 gallons of Mobiloil B (9 gals. to fill crankcase and 14 1/2 gals. added).
For the transmission, 1 1/2 gallons of 600 W. For steering gear reservoir 4 gals. heavy Polarine

1650-W

COPY OF
REPORT OF OFFICIAL TRACTOR TEST NO. 84

Repairs & Adjustments:

The following adjustments were made before any official data were taken: shortened fan belt, 4 new spark plugs, adjusted one valve tappet, put on larger vacuum tank, put on new governor spring, removed belt clutch throwout arm and tightened spring, pulley clutch throwout not used during test.

The following adjustments were made after test began: magneto points dressed 4 times, magneto points replaced, put in 4 new plugs, repaired broken fan bracket, lacing on fan belt broke three times, welded water manifold, enlarged suction line on oil pump.

At the end of the test the compression was slightly lower on all cylinders. Right steering cylinder was leaking oil, otherwise the tractor seemed to be in good working condition.

Brief Specifications.

Motor: Buffalo, 4-cylinder, vertical, L-head, bore $6\frac{3}{4}$ ", stroke 9", rated speed 800 R.P.M.

Chassis: 4 wheel drive, own, disc clutch, 2 speeds forward, 2 speeds reverse; low, 1.6 miles per hour; high, 3.6 miles per hour. Hydraulic steering gear.

Total weight: 19,500 pounds.

General Remarks.

In the advertising literature submitted with the applications for test of this tractor we find some claims and statements which cannot be directly compared with the results of this test as reported above. It is our opinion that none of these are excessive or unreasonable.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 84.

E. E. Brackett
Engineer-in-Charge

Oscar W. Sjogren

C. W. Smith

Fred R. Nohaves
Board of Tractor Test Engineers.