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January 1920

## Test 029: La Crosse Model G 12-24

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA  
AGRICULTURAL ENGINEERING DEPARTMENT  
UNIVERSITY FARM, LINCOLN

Report of Official Tractor Test No. 29

Dates of test August 2, to August 5, 1920.

Name, model and rating of tractor La Crosse Model G 12-24

Serial No. Engine 18024 Serial No. Chassis 18024

Manufacturer La Crosse Tractor Co., La Crosse, Wis.

Tractor equipment used Atwater-Kent K-3 Mag & Dry Bat. Stromberg Mod. MB3 Carb.

Style and dimensions of wheel lugs Flat spades 3 1/2" x 3 1/2"

**Brake Horse Power Tests**

Horse Power Developed	Crank Shaft Speed R. P. M.	Length of Test Min.	Fuel Consumption			Water Consumption Gallons per Hour			Temperature *Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Humidity %	Barometrie Pressure Inches Mercury
			Kind of Fuel	Amount Used per Hour Gallons	Horse Power Hours per Gallon	In Radiator	In Fuel Mixture	Total				
RATED LOAD TEST												
24.23	899	120	Kero	3.69	6.56	x	x	0.19	201	84	65	28.9
	Belt Slipage			0.82%								
VARYING LOAD TEST												
24.28	902	10	Kero									
24.31	896.5	10	"									
3.04	1225	10	"									
7.30	1063.5	10	"									
12.87	952	10	"									
19.35	951.5	10	"									
16.22	998	60	Kero	2.97	5.47	x	x	0.00	181	86	55	28.9
MAXIMUM LOAD TEST												
24.94	902	60	Kero	4.36	5.72	x	x	0.25	192	90	50	28.9
	Belt Slipage			1.04%								
HALF LOAD TEST												
13.11	970	60	Kero	2.23	5.89	x	x	0.00	180	88	50	28.9
	Belt Slipage			0.52%								

\*Taken in discharge line from engine.

Remarks Kerosene used for fuel in the rated & varying brake tests on this tractor weighed 6.75 lbs per gallon; kerosene used in all other test weighed 6.74 lbs per gallon.

x Water to radiator and fuel mixture could not be measured separately

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### Drawbar Horse Power Tests

Horse Power Developed	Draw Bar Pull Pounds	Speed Miles per Hour	Crank Shaft Speed R. P. M.	** Slippage of Drive Wheels %	Fuel Consumption			Water Used per Hour Gallons	*Temperature of Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Average Humidity %	Barometric Pressure Inches Mercury
					Kind of Fuel Used	Amount Used per Hour Gallons	Horse Power Hours per Gallon					
RATED LOAD TEST. TEN HOURS												
13.63	1859	2.75	821	7.9	Kero	2.86	4.76	0.30	198	87	62	28.85
MAXIMUM LOAD TEST (155.6 ft.)												
17.83	2155	3.10	856	5.1	Kero	-----Not Recorded-----			170	90	46	28.8

\*Taken in discharge line from engine.

Remarks \*\* For computing slippage, circumference of drive wheels was taken at points of lugs.

#### Oil Consumption:

During the complete test consisting of about 18 hours running the following oil was used:

For the engine, 3 gallons of Mobiloil "3"

For the transmission, none added. gallons of

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Miscellaneous Tests:

The line drive attachment was installed on La Crosse tractor. The tractor was operated with line drive control, the operator walking behind the tractor and also with operator seated on a water wagon pulled by the tractor.

The operator had reasonably good and convenient control of tractor with the four lines: Two for guiding, one for starting and one for stopping.

It is our opinion that a careful operator can safely use the line drive control on this tractor.

Repairs and Adjustments. Endurance:

Two new spark plugs and new governor spring put on.

New fan belt put on.

Ignition timing changed and ground valves.

Changed carburetor to Stromberg and put on specifications as regular equipment.

At the end of the test the tractor was working good and there was no indications of undue wear in any part nor of any weakness which might require early repairs.

It is our opinion that the repairs and adjustments necessary during this test do not indicate any mechanical defect of more than minor importance.

Brief Specifications La Crosse Model G 12-24 H.P. tractor.

Engine: 2 cylinder, horizontal, valve-in-head. Bore 6" stroke 7". Rated speed 900 r.p.m.

Chassis: Four wheel. Rated speed 2½ mi. per hour.

Total weight. 4670 lbs.

General Remarks:

In the advertising literature submitted with the application for test of this tractor we find some statements and claims which cannot be directly compared with the results of this test as reported above.

It is our opinion that none of these statements or claims are unreasonable or excessive except the following:

"Perfect fuel combustion".

"La Crosse tractors hold the low fuel consumption record".

"Line drive unequalled either by other tractors or horses."

"Horizontal twin-cylinder motor has been thoroly proved to be the most efficient design for burning kerosene."

"More economical in operation and up keep than any other tractor"

We do not approve the above statements and comparisons because they cannot be directly compared with results of this test, and proof is lacking.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 29.

Fred R. Mohave  
Engineer-in-Charge

Oscar W. Jorgensen  
E. E. Brackett  
C. W. Smith  
Board of Tractor Test Engineers.