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January 1920

Test 051: Lauson 15-30

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY FARM, LINCOLN

Report of Official Tractor Test No. 51

Dates of test August 13 to September 6, 1920.

Name, model and rating of tractor Lauson 15-30

Serial No. Engine 45B110 Serial No. Chassis 2232

Manufacturer John Lauson Mfg. Co., New Holstein, Wisconsin.

Tractor equipment used Dixie Model 46 Mag.; Kingston Model L Carb.

Style and dimensions of wheel lugs Pyramid $3\frac{1}{4}$ " high x 2" wide.

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 %	Barometric 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												
30.14	960	120	Kero.	3.68	8.19	1.50	0.31	1.81	212	109	57	28.8
			Belt slippage 1.83%.									
VARYING LOAD TEST												
50.05	956	10	Kero.									
33.63	958	"	"									
1.01	1008	"	"									
8.09	1006	"	"									
15.66	990	"	"									
23.42	984	"	"									
18.40	984	60	Kero.	2.88	6.39	0.25	0.25	0.50	187	106	58	28.8
MAXIMUM LOAD TEST												
32.46	980	60	Kero.	4.49	7.23	0.75	0.00	0.75	212	94	92	28.85
			Belt slippage 1.35%.									
HALF LOAD TEST												
15.66	990	60	Kero.	2.38	6.59	0.125	0.125	0.25	188	104	58	28.8
			Belt slippage 1.07%.									

*Taken in discharge line from engine.

Remarks The kerosene used in this test weighed 6.73 pounds per gallon.

Report of Official Tractor Test No. 51

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
					Ind of Fuel Used	Amount Used per Hour Gallons	Horse Power Hours per Gallon					
RATED LOAD TEST. TEN HOURS												
17.68	2512	2.64	963	6.76	Kero.	3.62	4.89	0.21	196	76	63	28.0
MAXIMUM LOAD TEST(1st 146.8 ft. --2nd134.8ft.)												
25.67	3115	3.09	1111	7.32	Kero.	Not	Recorded		180	75	63	28.0
26.51	5191	1.91	1062	14.90	"	"	"	"	190	75	63	28.0

*Taken in discharge line from engine.

Remarks The rated drawbar and first maximum test were made in high gear. The second maximum pull was
in low gear. For computing slippage the circumference was taken at the points of the lugs.

Oil Consumption:

During the complete test consisting of about 31 hours running the following oil was used:

For the engine, Mobiloil 4-1/2 gallons of Mobiloil BB

For the transmission, None gallons of -- --

Report of Official Tractor Test No. 51.

Repairs and Adjustments. Endurance:

Just after the limbering up run all valves were ground and valve tappets were adjusted.

After running about 14 hours the valve timing was checked up and changed slightly.

After about 20 hours of running the fuel heating system was changed so that the governor would automatically control the hot and cold air. This is to be made standard equipment.

At the end of this test the tractor was running in good condition, and there were no indications of undue wear in any part nor that any part would require early repair.

It is our opinion that the above repairs and adjustments necessary during this test do not indicate any serious mechanical defect.

Brief Specifications:

Motor: Beaver, valve-in-head, vertical, 4 cylinder. Bore $4\frac{3}{4}$ ". Stroke 6". Rated speed 950 r.p.m. Rated H.P. belt 30, Drawbar 15.

Chassis: 4 wheel, internal expanding shoe clutch, Rated speeds low $1\frac{1}{4}$, high $2\frac{1}{2}$ miles per hour.

Total weight: 6,500#.

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 these tests as reported above. It is our opinion that none of these are excessive or unreasonable except the following:

Folder: "Whether running idle or on the full load, the Lauson burns all the kerosene."

"The Lauson burns every particle of kerosene. --- -This close regulation makes every drop of fuel count and there is positively no waste."

We, the undersigned, certify that above is a true and correct report of official tractor test No. 51.

Fred R. Mohavee
Engineer-in-Charge

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