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January 1923

Test 093: Russell Model C 15-30

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. 93.

Dates of test: May 16th to May 23rd, 1923

Name, model and rating of tractor: Russell Model C, 15 - 30

Serial No. Engine: Climax K 4092 Serial No. Chassis X2175

Manufacturer: The Russell & Company, Massillon, Ohio.

Tractor Equipment used: Splitdorf Areo Model 448 Magneto Kingston L Carburetor.

Style and dimensions of wheel lugs: Spade - 3-1/4" high, 3" wide - 42 on each drive wheel.

BRAKE HORSE POWER TESTS

H.P. Dev.	Crank Shaft Speed R.P.M	Time of Test Min.	Fuel Consumption			Water Consump. Gals Per hour			Cool- ing Fluid	Air	Average Humidity %	Height of Barometer Inches
			Kind of Fuel	Gals. @ Hour	H.P. Hrs @ Gal.	Cool In ing Fuel	Total					

RATED LOAD TEST

30.10	951	120	Kero	3.956	7.61	0.00	0.838	0.838	183	73	83	28.67
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Belt Slippage 1.57%

Varying Load Test ***

29.77	940	10	Kero									
29.09	889	10	"									
1.40	1012	10	"									
8.02	1007	10	"	Average Belt Slippage 1.18%								
15.86	998	10	"									
23.12	972	10	"									
18.38	970	60	Kero	2.850	6.45	0.00	0.326	0.326	175	77	69	28.67

MAXIMUM LOAD TEST

33.57	935	60	Kero	6.07	5.53	0.00	2.046	2.046	187	83	55	28.64
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Belt Slippage 1.75%

Half Load Test

15.75	990	60	Kero	2.286	6.89	0.00	0.00	0.00	175	80	55	28.64
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Belt slippage 1.02%

*Taken from Discharge line from engine.

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

REMARKS: The kerosene used as fuel in this test weighed 6.78 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

H.P. Dev.	Draw Bar Pull Lbs.	Speed Miles Per Hour	Speed Crank Shaft R.P.M	Slip on Drive Wheels %	Fuel Consumption			Water Used Per Hour Gals	Temp. Deg. F.		Ave Humid- ity %	Height of Barometer in Inches
					Kind Used	Amt Per Hour Gal.	H.P. Hrs. Per Gal.		Cool- ing Fluid	Air		

RATED LOAD TEST, TEN HOURS

16.74	2499	2.51	961	7.21 -3.55	Kero	2.861	5.85	0.382	180	67	69	28.66
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MAXIMUM LOAD TEST

24.05	3870	2.33	924	11.09 0.79	Kero	-Not Recorded--			166	56	74	28.65
19.63	2390	3.08	775	4.97 -6.04	"	"	"	"	196	58	74	28.65

*Taken in discharge line from engine.

***The first figure denotes slippage at the points of the lugs, the second figure denotes slippage at the rim of the wheel.

REMARKS: The rated load test and the first maximum test were made in low gear. The second maximum test was made in high gear.

OIL CONSUMPTION:

During the complete test consisting of about 36 hours running the following oil was used: For the engine, 4 gallons of Mobiloil "BB" - 2 gallons to fill crank case and 2 gallons were added during test. For the transmission, none. For the gears, 1 gallon of Stanolind.

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REPAIRS AND ADJUSTMENTS

May 17: Before any data were taken the governor butterfly valve was found to be circular and was replaced by one of elliptical shape, upon the statement of the representative of the Company that regular equipment of the governor of this tractor is with elliptical butterfly valve.

May 21: During the rated load drawbar test the fan belt was tightened once.

May 22: During the maximum drawbar test the clutch was adjusted once.

There were no other repairs or adjustments necessary. At the end of the test the tractor was in good running order and there were no indications of undue wear nor of any weakness which might require early repair.

BRIEF SPECIFICATIONS Russell Model C, 15 - 30

Motor: Climax K, four cylinder, vertical, L head. Bore - 5" stroke - 6-1/2". Rated speed 950 r.p.m. Climax governor with elliptical butterfly valve.

Chassis: Four wheel, shoe clutch. Two speeds forward, low - 2.4 miles per hour, high - 3.7 miles per hour.

Total weight - 6035 pounds.

REMARKS

In the advertising literature submitted with the application for test of this tractor, we find 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. 93.

E. E. Brackett
Engineer in Charge

Oscar W. Sjogren

C. W. Smith

Fred R. Nohavec
Board of Tractor Test Engineers