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January 1923

Test 095: McCormick Deering 10-20

Nebraska Tractor Test Lab

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(Mount Receipts)

UNIVERSITY OF NEBRASKA AGRICULTURAL EXPERIMENTAL DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 95

Dates of test: September 25th to October 3rd, 1923.
Name, model and rating of tractor: McCormick-Deering 10-20
Serial No. Engine: KC 1356 Serial No. Chassis: KC 1356
Manufacturer: International Harvester Company, Chicago, Illinois.
Tractor equipment used: Dixie 46-C-Aero No. 883311 Magneto, Ensign "JH" Carburetor
Style and dimensions of wheel lugs: Spade 4" high - 3-3/4" wide.

BRAKE HORSE POWER TESTS

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

RATED LOAD TEST

20.09	:1008	: 120	: Kero	:1.978	:10.15	:0.476	: 10.91	:0.567	: 208	: 82	: 76	: 28.55
Belt Slippage 0.99%												

VARYING LOAD TEST ***

20.09	:1006	: 10	: Kero	:	:	:	:	:	:	:	:	:
20.10	:1000	: 10	: "	:	:	:	:	:	:	:	:	:
0.79	:1095	: 10	: "	:	:	:	:	:	:	:	:	:
5.27	:1053	: 10	: "	Average Belt Slippage		0.60%	:	:	:	:	:	:
10.34	:1032	: 10	: "	:	:	:	:	:	:	:	:	:
15.23	:1018	: 10	: "	:	:	:	:	:	:	:	:	:
12.22	:1034	: 60	: Kero	:1.535	: 7.81	:0.490	: 0.066	:0.556	: 207	: 81	: 76	: 28.55

MAXIMUM LOAD TEST

21.84	:1000	: 60	: Kero	:2.274	: 9.61	:0.354	: 0.115	:0.969	: 209	: 71	: 86	: 28.65
Belt Slippage 0.96%												

HALF LOAD TEST

10.70	:1068	: 60	: Kero	:1.465	: 7.30	:0.254	: 0.110	:0.365	: 208	: 71	: 86	: 28.66
Belt Slippage 0.54%												

* Taken in discharge line from engine.
*** The last line is an average for the hour.

REMARKS: The kerosens used as fuel in this test weighed 6.80 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

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

									Barometer
									in Inches

RATED LOAD, TEN HOURS

11.50	1294	3.33	939	-11.70	6.13	Kero	1.980	5.81	0.121	209	72	52	28.88
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MAXIMUM LOAD TEST

14.20	1628	3.27	926	-10.52	7.13	Kero	-- Not Recorded --			210	80	89	28.65
15.54	2640	2.21	989	-1.34	14.84	"	"	"	"	210	80	89	28.65

* Taken in discharge line from engine.

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

REMARKS: The rated load and first maximum tests were run in second gear. The second maximum test was run in low gear.

OIL CONSUMPTION:

During the complete test consisting of about 30 hours running the following oil was used:
 For the engine, 3-1/2 gallons of Mobiloil "A", 2 gallons to fill crank case and 1-1/2 gallons were added.
 For the transmission, none.

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REPAIRS AND ADJUSTMENTS

There were no adjustments or repairs necessary during the test of this tractor.

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

McCormick-Deering 1C-20

Motor: Own, four cylinder, vertical, valve-in-head. Bore - 4-1/4", stroke - 5". Rated speed 1000 r.p.m. at maximum load, 1100 r.p.m. no load, speed on intermediate loads as controlled by governor. Rating: belt, 20 H.P. - drawbar, 10 H.P.

Chassis: Four wheel, disc clutch. Rated speeds: low - 2.17 miles per hour, second - 3.21 miles per hour, high - 4.25 miles per hour.

Total weight - 4010 pounds.

REMARKS

In the advertising literature submitted with the applications 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 are excessive or unreasonable.

We, the undersigned certify that above is a true and correct report of official tractor test No. 95.

E. E. Brackett
Engineer in Charge

Oscar W. Sjogren

C. W. Smith

Fred R. McHavoc

Board of Tractor Test Engineers