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January 1925

Test 117: McCormick-Deering "Farmall"

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT

AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 117

Dates of test: September 14th to 19th, 1925
 Name, model and rating of tractor: McCormick-Deering "Farmall"
 Serial No. Engine QC693 Serial No. Chassis QC693
 Manufacturer: International Harvester Company of America, Chicago, Illinois
 Tractor equipment used: Dixie Aero magneto, Ensign carburetor 3DA600F
 Style and dimensions of wheel lugs: Angles 3-1/2" x 2-1/2" x 5/16" x 22"

BRAKE HORSE POWER TESTS

H. P.	Crank	Time	Fuel Consumption	Water Consumption	Temp.							
Dev.	Shaft	of	Kind: Gals	H.P.: Cool	In	°						
	Speed	Test	of	per	Hrs. @	ing	Fuel	Total	Cool	Air		
	R.P.M.	Min	Fuel	Hour	Gal				ing		Average	Humidity %
											Height of	Barometer
											in Inches	

RATED LOAD TEST

18.03	: 1196	: 120	: Kero	: 1.87	: 9.64	: 1.885	: 0.00	: 1.885	: 210	: 91	: 76	: 28.62
Belt Slippage 1.60%												

** VARYING LOAD TEST

18.11	: 1200	: 10	: Kero	:	:	:	:	:	:	:	:	:
18.22	: 1197	: 10	: "	:	:	:	:	:	:	:	:	:
1.01	: 1288	: 10	: "	:	Average Belt Slippage 1.17%			:	:	:	:	:
4.81	: 1268	: 10	: "	:	:	:	:	:	:	:	:	:
9.42	: 1245	: 10	: "	:	:	:	:	:	:	:	:	:
13.97	: 1232	: 10	: "	:	:	:	:	:	:	:	:	:
11.11	: 1238	: 60	: Kero	: 1.51	: 7.36	: 0.98	: 0.00	: 0.98	: 201	: 87.5	: 56	: 28.58

MAXIMUM LOAD TEST

20.05	: 1201	: 60	: Kero	: 2.136	: 9.39	: 1.10	: 0.00	: 1.10	: 210	: 77	: 76	: 28.67
Belt Slippage 1.59%												

HALF LOAD TEST

9.46	: 1250	: 60	: Kero	: 1.398	: 6.77	: 0.74	: 0.00	: 0.74	: 209	: 97	: 61	: 28.56
Belt Slippage 1.12%												

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

REMARKS: The kerosene used in this test weighed 6.74 pounds per gallon

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DRAWBAR HORSE POWER TESTS

H. P. Dev.	Draw : Bar	Speed : Miles Per Hour	Crank : Shaft R.P.M.	Slip : on Drive Wheels % **	Fuel Consumption : Kind : Amt. : Per Hour	Water : Used : Per Hour	Temp. deg. F. : Cooling : Fluid : *	Average : Humidity : %	Height of : Barometer : In Inches
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RATED LOAD TEST. TEN HOURS

9.35	1113.5	3.15	1207	-5.71 10.17	Kero	1.788	5.23	1.165	210	91.5	43.5	28.55
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MAXIMUM LOAD TEST

13.27	1625.	3.06	1193	-3.71 11.86	Kero	- - NOT RECORDED - -			210	97	44	28.65
12.70	2727.5	1.745	1202	10.37 23.64	Kero	" " "			210	94	44	28.64
10.41	867.5	4.505	1205	-10.56 6.06	Kero	" " "			200	97	44	28.64

* 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 lug.

REMARKS: The rated and first maximum load tests were run in 2nd gear. The second maximum load test was run in low gear. The third maximum load test was run in high gear.

OIL CONSUMPTION: During the complete test consisting of about 39 hours running the following oil was used:
For the engine, 4-3/4 gallons of Mobiloil "BB", 1-3/4 gallons to fill crank case and 3 gallons were added.

For the transmission, none.

Other lubrication, 1/2 lb. of A.D. cup grease.

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REPAIRS AND ADJUSTMENTS

There were no repairs nor adjustments necessary during this test. 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

"Farmall"

Motor: Own, 4 cylinder, vertical, valve-in-head. Removable cylinder sleeves. Mounted with crankshaft lengthwise. Bore, 3-3/4"; stroke 5".
Rated speed 1200 r.p.m.

Air Cleaner: Pomona Model 118 (oil and fiber type)
Governor: Own (centrifugal or fly-ball type)

Chassis: Four wheels, 2 drivers; enclosed gears; multiple dry disc clutch. Advertised speeds: low gear, 2 miles per hour; second gear, 3 miles per hour; high gear 4 miles per hour.

Total weight as tested (with operator) 4,100 pounds.

REMARKS

In the advertising literature submitted with the specifications and application for the 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. 117

E. E. Brackett
Engineer-in-Charge

Low Wallace

Oscar W. Sjogren

C. W. Smith

Board of Tractor Test Engineers