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January 1933

## Test 220: McCormick-Deering Farmall "F-12" (Kerosene)

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 220

Dates of test: November 1 to 16, 1933.

Name and model of tractor: McCORMICK-DEERING FARMALL "F-12" (Kerosene)

Manufacturer: International Harvester Company, Chicago, Illinois.

Manufacturer's rating: NOT RATED.

Highest rating permissible under the recommendations of the A.S.A.E. and  
S.A.E. Tractor Rating Codes: Drawbar - 9.44 H.P. Belt - 13.45 H.P.

One carburetor setting (95.7% of maximum) was used thruout this test.

B R A K E H O R S E P O W E R T E S T S

H. P.	Crank shaft speed R.P.M.	Fuel Consumption			Water Consumption per hour gallons			Temp. Deg. F.		Barometer Inches of Mercury
		Gals. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.	Cool- ing	In Fuel	Total	Cool- ing med.	Air	

OPERATING MAXIMUM LOAD TEST. ONE HOUR

14.59	1399	1.457	10.01	0.677	0.000	0.000	0.000	201	73	28.815
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RATED LOAD TEST. ONE HOUR

13.59	1399	1.431	9.50	0.714	0.000	0.000	0.000	195	72	29.078
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\*VARYING LOAD TEST. TWO HOURS

13.59	1400	1.434	9.48	0.715	--	--	--	194	75	--
0.89	1526	0.690	1.29	5.258	--	--	--	200	72	--
7.07	1468	1.004	7.04	0.963	--	--	--	201	73	--
13.72	1370	1.434	9.57	0.708	--	--	--	194	75	--
3.67	1522	0.841	4.36	1.553	--	--	--	199	76	--
10.37	1463	1.111	9.33	0.726	--	--	--	198	78	--
8.41	1458	1.086	7.74	0.876	0.000	0.000	0.000	198	75	29.065

\*20 minute runs. Last line is average for two hours.

D R A W B A R H O R S E P O W E R T E S T S

H. P.	Draw bar pull Pounds	Speed miles per hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used Gal. per hr.	Temp.		Barometer Inches of Mercury
					Gal. per hr.	H. P. per gal.	Lb. per H.P. hr.		Cool- ing med.	Air	

RATED LOAD TEST. TEN HOURS. SECOND GEAR

9.71	1122	3.25	1401	2.69	1.353	7.18	0.945	0.000	199	38	29.050
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MAXIMUM LOAD TEST

11.81	1814	2.44	1400	3.75	-----	Not Recorded	-----	202	45	29.040	
11.01	1278	3.23	1399	3.03	-----	"	"	-----	202	48	29.025
10.63	956	4.17	1401	3.03	-----	"	"	-----	202	46	29.025

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. F S 3098 Type 4 cylinder, Vertical  
Head I Mounting Lengthwise  
Bore and stroke: 3" x 4" Rated R.P.M. 1400  
Port Diam. Valves: Inlet 1 3/16" Exhaust 1 3/16"  
Belt pulley: Diam. 12 3/8" Face 6 1/4" R. P.M. 800  
Magneto: Own Model F 4  
Carburetor: Own Model A 10 Size 1"  
Governor: Own No. None Type Centrifugal  
Air Cleaner: Own Type Oil washed wire filter  
Lubrication: Pressure

CHASSIS: Type 3 wheels, 2 drivers Serial No. F S 3098 Drive Enclosed gear  
Clutch: Rockford Type Single plate - dry disc Operated by foot pedal  
Advertised speeds, miles per hour: Low 2 1/4  
Intermediate 3 High 3 3/4 Reverse 2 1/4  
Drive wheels: Diameter 54" Face 6"  
Lugs: Type Spade No. per wheel 16 Size 4" high by 2 1/2" face  
Extension rims: Width 6" Lugs per rim 16 Size 4" high by 2 1/2" face  
Seat: Pressed Steel  
Total weight as tested (with operator) 3240 pounds.

FUEL AND OIL:

Fuel: Kerosene Weight per gallon 6.78 pounds

Oil: S.A.E. Viscosity No. 30

Total oil to motor 1.592 gallons

Total drained from motor 0.769 gallons

Total time motor was operated 49 hours

The oil was drained  
once - at the end of  
the test.

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REPAIRS AND ADJUSTMENTS

During the belt tests, the spark plug in #3 cylinder was replaced with a new one. On the rated load drawbar test a bolt connecting the drawbar to the drawbar adjusting plate lost out. This was replaced.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

The extension rims and lug equipment used in the drawbar tests are the same as described on page 2 of this report.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 220.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis  
Board of Tractor Test Engineers