January 1931

Test 198: McCormick-Deering Farmall "F-30"

Nebraska Tractor Test Lab
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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Corrected Copy of Report of Official Tractor Test No. 198

Dates of test: October 9 to 23, 1931.
Name and model of tractor: McCORMICK-DEERING FARMALL "F 30"
Manufacturer: International Harvester Co., Chicago, Ill.
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 - 20.27 H.P. Belt - 30.29 H.P.
One carburetor setting (97% of maximum) was used thruout this test.

BRAKE HORSE POWER TESTS

H. P.	Crank shaft speed R.P.M.	Fuel Consumption: Gals. per hour	Fuel Consumption: H. P. hrs. per gal.	Fuel Consumption: Lbs. per H. P. hour	Water Consumption per hour gallons: Cooling	Water Consumption per hour gallons: In fuel	Water Consumption per hour gallons: Total	Temp. Deg. F.: Cooling med.	Temp. Deg. F.: Air	Barometer Inches of Mercury
OPERATING MAXIMUM LOAD TEST. ONE HOUR										
32.80	1150	3.414	9.61	0.704	0.00	0.00	0.00	182	76	28.820
RATED LOAD TEST. ONE HOUR										
30.31	1150	3.327	9.11	0.742	0.00	0.00	0.00	191	75	28.785
***VARYING LOAD TEST. TWO HOURS**										
30.21	1150	3.182	9.49	0.712	--	--	--	184	70	--
0.73	1313	1.558	0.47	14.425	--	--	--	178	71	--
16.44	1244	2.601	6.32	1.069	--	--	--	180	72	--
33.92	1140	3.484	9.74	0.694	--	--	--	178	72	--
8.63	1288	2.104	4.10	1.648	--	--	--	181	74	--
23.11	1197	2.929	7.89	0.857	--	--	--	181	73	--
19.52	1222	2.643	7.39	0.915	0.00	0.00	0.00	180	72	28.975

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

DRAWBAR HORSE POWER TESTS

H. P.	Draw bar pull pounds	Speed Miles per hour	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption: Gal. per hour	Fuel Consumption: H. P. hour per gal.	Fuel Consumption: Lbs. per H.P. hour	Water used Gal. per hour	Temp. Cool-ing med.	Temp. Air	Barometer Inches of Mercury
RATED LOAD TEST. TEN HOURS. Second GEAR											
20.88	2520	3.11	1150	3.44	3.152	6.62	1.024	0.053	175	69	28.580
MAXIMUM LOAD TEST											
24.85	4157	2.24	1152	9.70	-----	Not Recorded		-----	175	58	28.720
23.93	2953	3.04	1151	6.54	-----	"	"	-----	168	67	28.600
23.04	2327	3.71	1151	5.23	-----	"	"	-----	175	68	28.600
22.00	1849	4.46	1145	4.34	-----	"	"	-----	174	68	28.600

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. A A 518 Type 4 cylinder, vertical

Head I Mounting Lengthwise

Bore and stroke: 4 1/4" x 5" Rated R.P.M. 1150

Port Dia. Valves: Inlet 1.697" Exhaust 1.479"

Belt pulley: Diam. 14 5/8" Face 7" R.P.M. 682

Magneto: Own Model E 4 A

Carburetor: Zenith Model K 5 Size 1 1/4"

Governor: Own No. None Type Centrifugal

Air Cleaner: Own Type Oil-washed wire filter

Lubrication: Splash with circulating pump

CHASSIS: Type 4 wheels Serial No. F B 517 Drive Enclosed gear

Clutch: Own Type Single plate-dry Operated by foot

Advertised speeds, miles per hour: First 2 Second 2 3/4

Third 3 1/4 Fourth 3 3/4 Reverse 2 1/2

Drive wheels: Diameter 42" Face 12"

Lugs: Type Spade No. per wheel 24 Size 5" high x 3 1/2" face

Extension rims: Width 6" Lugs: 12 per rim Size 5" high x 3 1/2" face

Seat: Pressed steel

Total weight as tested (with operator) 5990 pounds.

FUEL AND OIL:

Fuel: Kerosene Weight per gallon 6.76 pounds on brake tests
6.78 pounds on rated drawbar tests

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

Total oil to motor 6.949 gallons

Total drained from motor 7.825 gallons

Total time motor was operated 66 hours

The oil was drained to the middle cock and refilled to top cock after approximately each 10 hours of operation. After 55 hours, all the oil was drained. Again at the end of the test all the oil was drained.

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REPAIRS AND ADJUSTMENTS

The pin, which holds the splined end of the steering rod in the splined sleeve, sheared off twice, once during the limber up run and again during the rated load drawbar test. Each time the pin was replaced by another.

REMARKS

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

The drive wheels were equipped with spade lugs and extension rims and lugs as listed 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. 198.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers