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January 1940

Test 354: McCormick-Deering Model W-6 (Distillate)

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. 354

Dates of test; September 16 to 23, 1940.
Name and model of tractor; McCORMICK-DEERING W-6 (Distillate)
Manufacturer; International Harvester Company, Chicago, Illinois.
Manufacturer's rating; NOT RATED.

B E L T 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 used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.		Cool- ing med.	Air	

TESTS B AND C - 100% MAXIMUM LOAD - TWO HOURS

34.23	1450	2.805	12.20	0.569	0.000	198	98	28.910
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*TEST D - ONE HOUR

31.23	1450	2.584	12.09	0.574	0.000	200	90	28.925
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

31.23	1449	2.572	12.14	0.572	--	202	90	--
1.33	1557	1.159	1.15	6.045	--	200	88	--
16.32	1506	1.893	8.62	0.805	--	202	88	--
33.95	1436	2.745	12.37	0.561	--	194	90	--
8.34	1543	1.504	5.55	1.252	--	201	88	--
23.94	1481	2.239	10.69	0.649	--	199	88	--
19.19	1495	2.019	9.50	0.730	0.000	199	88	28.935

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. Deg. F.		Barometer Inches of Mercury
					Gal. per hr.	H.P. per gal.	Lb. per H.P. hr.		Cool- ing med.	Air	

TESTS F AND G - 100% MAXIMUM LOAD

24.84	4755	1.96	1458	18.51	-----	Not Recorded	-----	191	91	28.945
30.74	3963	2.91	1451	8.71	-----	"	"	187	94	28.930
31.12	2987	3.91	1450	5.96	-----	"	"	190	92	28.940
31.40	2451	4.80	1450	4.60	-----	"	"	185	91	28.950

*TEST H - TEN HOURS - Second - GEAR

24.77	3149	2.95	1448	7.24	2.389	10.37	0.669	0.000	199	87	29.055
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*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Distillate Octane 39 Weight per gallon 6.94 pounds

Oil: S.A.E. No. 20 To motor 1.975 gal. Drained from motor 1.868 gal.

Total time motor was operated 51 hours

BRIEF SPECIFICATIONS

Advertised speeds miles per hour: First 2-3/8 Second 3-1/8

Third 4 Fourth 4-7/8 Fifth 14-1/2 Reverse 2-7/8

Belt pulley: Diam. 11" Face 7-1/2" R.P.M. 898 Belt Speed 2587 f.p.m.

Clutch: Make Rockford Type Single plate Operated by foot

Seat Pressed steel with sponge rubber pad

Total weight as tested (with operator) 7744 pounds

MOTOR

Make Own Serial No. WBK ME 501 Type 4 cylinder, vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3-7/8" x 5-1/4" Rated R.P.M. 1450

Port diameter valves: Inlet 1.594" Exhaust 1.437"

Magneto: Make Own Model H-4

Carburetor: Make Own Model E-12 Size 1-1/4"

Governor: Make Own Type Variable speed, centrifugal

Air Cleaner: Make Donaldson Type Oil-washed, wire screen filter

Oil Filter: Make Motor Improvements Inc. Type Partial flow with replaceable

bakelite impregnated paper element

Bishop and Babcock thermostat
 and Pines radiator shutters

Cooling medium temperature control:

CHASSIS

Type Standard Serial No. WBK 512 Drive Enclosed gear

Tread width: Rear 53" Front 46-3/4"

Rear tires: No. 2 Size 13.50 x 24 - 6 ply Air pressure 16 pounds

Front tires: No. 2 Size 6.50 x 16 - 4 ply Air pressure 25 pounds

Added weight: Per rear wheel (Cast Iron 970 pounds
 (Water 393 pounds

Per front wheel (Cast Iron 80 pounds
 (Water None pounds

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 100% of maximum belt horsepower,

	<u>DRAWBAR</u>	<u>BELT</u>
2. Observed maximum horsepower (tests F & B)	30.74	34.23
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	32.80	36.69
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	24.60	31.19

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 354.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers