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January 1939

## Test 332: McCormick-Deering Farmall Model B (Distillate)

Tractor Museum

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Copy of Report of Official Tractor Test No. 332

Dates of test: October 9 to 13, 1939.

Name and model of tractor: McCORMICK-DEERING FARMALL B (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.		Cooling med.	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
16.00	1400	1.361	11.76	0.586	0.033	194	73	29.020
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
15.36	1399	1.300	11.82	0.583	0.112	201	72	29.145
*TEST D - ONE HOUR								
14.31	1401	1.276	11.21	0.614	0.151	198	79	29.150
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
14.48	1403	1.276	11.35	0.607	--	199	79	--
1.70	1498	0.644	2.64	2.612	--	196	76	--
7.35	1457	0.838	8.28	0.833	--	197	78	--
15.12	1336	1.284	11.78	0.585	--	196	79	--
3.75	1473	0.727	5.16	1.336	--	195	78	--
10.69	1413	1.075	9.94	0.693	--	196	78	--
8.85	1430	0.983	9.00	0.765	0.119	196	78	29.135

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.		Cooling med.	Air	
TEST F - 100% MAXIMUM LOAD - Second - GEAR											
14.73	1598	3.46	1400	6.91	----- Not Recorded -----			198	65	28.965	
TEST G - OPERATING MAXIMUM LOAD											
12.02	2463	1.83	1397	21.68	----- Not Recorded -----			197	68	28.930	
13.95	1505	3.48	1399	6.38	----- " " -----			198	60	29.050	
13.97	1119	4.68	1399	4.18	----- " " -----			197	56	29.100	
13.01	493	9.90	1397	2.31	----- " " -----			199	65	28.900	
*TEST H - TEN HOURS - Second - GEAR											
11.55	1242	3.49	1399	6.05	1.203	9.60	0.717	0.037	201	50	29.220

\*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Distillate Octane 37 Weight per gallon 6.89 pounds

Oil: S.A.E. No. 20 To motor 1.381 gal. Drained from motor 1.469 gal.

Total time motor was operated 53 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 2 1/4 Second 3 5/8

Third 4 3/4 Fourth 10 Reverse 2 7/8

Belt pulley: Diam. 8 1/2" Face 6" R.P.M. 1157 Belt Speed 2574 f.p.m.

Clutch: Make Rockford Type Single plate, dry disc Operated by foot

Seat Pressed steel with sponge rubber pad

Total weight as tested (with operator) 3740 pounds

MOTOR

Make Own Serial No. FAB 4560 Type 4 cylinder, vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3" x 4" Rated R.P.M. 1400

Port diameter valves: Inlet 1.187" Exhaust 1.062"

Magneto: Make Own Model H-4

Carburetor: Make Zenith Model 6LAX7 Size 7/8"

Governor: Make Own Type Variable speed, centrifugal

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

Oil Filter: Make Purolator Type Partial flow, with replaceable bakelite impregnated paper element

Cooling medium temperature control: Pines radiator shutters

CHASSIS

Type Tricycle Serial No. FAB 4560 Drive Enclosed gear

Tread width: Rear 66" - 94" Front Single wheel

Rear tires: No. 2 Size 9 x 24" - 4 ply Air pressure 16 pounds

Front tires: No. 1 Size 6 x 12" - 4 ply Air pressure 25 pounds

Added weight: Per rear wheel (Cast Iron 568 pounds  
 (Water 130 pounds)

Front end of frame (each side): Cast Iron 97 pounds

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REPAIRS AND ADJUSTMENTS

At the end of the rated load drawbar test the governor thrust pin, which had been improperly assembled, caught in the governor.

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 95.4% of maximum belt horsepower.

	<u>DRAWBAR</u>	<u>BELT</u>
2. Observed maximum horsepower (tests F and B)	14.73	16.00
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	15.29	16.70
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)	11.47	14.20

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 332.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut  
Board of Tractor Test Engineers