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January 1947

Test 386: McCormick-Deering Farmall Cub

Nebraska Tractor Test Lab

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 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 386

Dates of test: September 29, 1947 to October 9, 1947
 Name and model of tractor: McCormick Deering Farmall Cub
 Manufacturer: INTERNATIONAL HARVESTER COMPANY, Chicago, Illinois
 Manufacturer's rating: None

B E L T H O R S E P O W E R T E S T S

Horse- power	Crank shaft speed rpm	Fuel Consumption			Water used gal per hr	Temperature		Barometer Inches of Mercury
		gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med. °F	Air °F	

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

9.23	1601	0.844	10.94	0.565	0.03	207	82	28.900
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*TEST D - ONE HOUR

8.32	1602	0.810	10.27	0.602	0.02	207	81	28.900
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

8.31	1600	0.796	10.44	0.592	- - -	207	80	- - - -
2.25	1724	0.500	4.50	1.373	- - -	202	80	- - - -
4.38	1684	0.616	7.11	0.870	- - -	202	80	- - - -
8.50	1419	0.830	10.24	0.604	- - -	207	80	- - - -
2.47	1723	0.519	4.76	1.300	- - -	201	78	- - - -
6.38	1638	0.723	8.82	0.701	- - -	203	76	- - - -
5.38	1631	0.664	8.10	0.763	0.02	204	79	28.900

*Formerly called RATED LOAD; see REMARKS 4, page 5.

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

Horse- power	Draw bar pull lb	Speed mph	Crank shaft speed rpm	Slip on drive wheels %	Fuel Consumption			Water used gal per hr	Temperature		Barometer Inches of Mercury
					gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med. °F	Air °F	

Rear wheels, tires and added weight used in Tests F, G, and H; Steel Disc wheels; 8-24, 4-ply tires and 582 lb added weight per wheel.

TESTS F AND G - 100% MAXIMUM - Gears 1, 2, 3

8.33	1596	1.96	1601	10.98	-----Not Recorded-----				206	81	28.950
8.47	1063	2.99	1601	6.76	" "				203	76	28.950
7.79	457	6.39	1604	3.31	" "				205	84	28.950

*TEST H - TEN HOURS - 2nd GEAR

6.75	837	3.02	1602	5.69	0.785	8.60	0.719	0.01	204	77	28.950
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TEST J - OPERATING MAXIMUM LOAD

Same wheels and tires as used in Tests F, G, and H. All added weight removed from tractor (liquid, cast iron, or any other added forms). 2nd gear.

6.90	933	2.77	1600	14.73	-----Not Recorded-----				207	90	28.950
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TEST K - OPERATING MAXIMUM LOAD

Lightest weight wheels and smallest tires suggested by manufacturer. All added weight removed from tractor (liquid, cast iron, or any other added forms). 2nd gear.

5.59	842	2.49	1600	14.57	-----Not Recorded-----				203	86	28.950
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*Formerly called RATED LOAD; see REMARKS 4, page 5.

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 74* Weight per gallon 6.183 lb

Oil: S. A. E. No. 20-20W To motor 0.739 gal. Drained from motor 0.587 gal.

Total time motor was operated 68 hours

TIRES, WHEELS, and WEIGHT

Rear wheel: Type and Weight (each)	Tests F, G, & H		Test J	Test K
	Steel Disc 16.8 lb	Steel Disc 16.8 lb	Steel Disc 16.8 lb	Steel Disc 16.8 lb
Liquid Ballast	147 lb	None	None	None
Added Cast Iron	435 lb	None	None	None
Rear Tires: No. Size & Ply	2 8-24 4-ply	2 8-24 4-ply	2 6-24 2-ply	
Type of Tread	Champion Ground Grip	Champion Ground Grip	Champion Ground Grip	
Make	Firestone	Firestone	Firestone	
Air Pressure	14 lb	12 lb	12 lb	
Front Wheel: Type and Weight (each)	Steel Disc 9 lb	Steel Disc 9 lb	Steel Disc 9 lb	
Liquid Ballast	None	None	None	
Added Cast Iron	None	None	None	
Front Tires: No. Size & Ply	2 4.00-12 2-ply	2 4.00-12 2-ply	2 4.00-12 2-ply	
Type of Tread	Triple Rib	Triple Rib	Triple Rib	
Make	Goodyear	Goodyear	Goodyear	
Air Pressure	20 lb	20 lb	20 lb	
Height of Drawbar	15.5"	16.5"	14.5"	
Static Weight: Rear End	2018 lb	854 lb	794 lb	
Front End	508 lb	510 lb	508 lb	
Total Weight as Tested With Operator	2701 lb	1539 lb	1477 lb	

*Octane rating from Oil Company's Typical Inspection Data

CHASSIS

Equalization The brakes can be locked together

Cooling medium temperature control: Thermo-Siphon

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REPAIRS AND ADJUSTMENTS

None

REMARKS

1. All results shown on pages 1 and 2 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.
2. Observed maximum horsepower (tests F & B)

DRAWBAR	BELT
8.47	9.23
3. Sea level (calculated) maximum horsepower
 (based on 60° F and 29.92" Hg.)

8.89	9.76
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4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)

6.67	8.30
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We, the undersigned, certify that the above is a true and correct report of official tractor test No. 386.

L. F. Larsen
 Engineer-in-Charge

C. W. Smith

F. D. Yung

L. W. Hurlbut
 BOARD OF TRACTOR TEST ENGINEERS