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January 1938

Test 312: John Deere H

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 312

Dates of test: October 31 to November 10, 1938.
 Name and model of tractor: JOHN DEERE H
 Manufacturer: John Deere Tractor Company, Waterloo, Iowa.
 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	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

14.84	1399	1.305	11.37	0.608	0.000	201	54	28.935
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

14.22	1400	1.190	11.95	0.578	0.000	201	56	28.920
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*TEST D - ONE HOUR

13.01	1400	1.110	11.72	0.590	0.000	201	57	28.905
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

13.00	1401	1.107	11.74	0.588	--	201	56	--
1.05	1496	0.478	2.20	3.143	--	205	62	--
6.84	1466	0.873	7.84	0.882	--	205	60	--
13.51	1321	1.142	11.83	0.584	--	204	56	--
3.47	1490	0.751	4.62	1.496	--	205	60	--
10.08	1441	0.942	10.70	0.646	--	203	58	--
7.99	1436	0.882	9.06	0.763	0.000	204	58	28.855

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. hr. per gal.	Lb. per H. P. hr.		Cool- ing med.	Air	

TEST F - 100% MAXIMUM LOAD - Second - GEAR

12.48	1386	3.38	1401	6.72	----	Not Recorded	----	200	54	28.780
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TEST G - OPERATING MAXIMUM LOAD

11.67	1839	2.38	1401	10.14	----	Not Recorded	----	196	60	28.675
11.96	1323	3.39	1401	6.35	----	"	"	200	49	28.790
11.90	759	5.88	1398	2.99	----	"	"	195	58	28.730

*TEST H - TEN HOURS * Second - GEAR

9.77	1065	3.44	1400	4.98	0.262	10.16	0.680	0.013	125	51	28.635
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Copy of report of Official Tractor Test No. 312

FUEL, OIL, AND TIME

Fuel Distillate Octane 38 Weight per gallon 6.91 pounds
Oil: S.A.E. No. 30 To motor 0.991 gal. Drained from motor 0.795 gal.
Total time motor was operated 43 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour (rubber tires): First 2.50
Second 3.50 Third 5.75 Reverse 1.75

Belt pulley: Diameter 12 1/4" Face 4 1/2" R.P.M. 700

Clutch: Make Own Type Double disc Operated by hand lever

Seat Pressed steel

Total weight as tested (with operator) 3035 pounds

MOTOR: Make Own Serial No. H - 1000 Type 2 cylinder, horizontal

Head I Mounting Crankshaft crosswise Lubrication Pressure

Bore and stroke: 3 9/16" x 5" Rated R.P.M. 1400

Port diameter valves: Inlet 1 1/2" Exhaust 1 5/16"

Magneto: Make Edison - Spiltdorf Model RM-2

Carburetor: Make Marvel - Schebler Model DLTX-26 Size 1"

Governor: Make Own Type Variable-speed, centrifugal

Air Cleaner: Make United Type Oil-washed, crimped wire

CHASSIS: Type Tricycle Serial No. H - 1000 Drive Enclosed gear

Tread width: Rear 44" - 80" Front: Top 11" Bottom 5 1/2"

Rear tires: No. 2 Size 7.50" x 32" - 4 ply Air pressure 14 pounds

Front tires: No. 2 Size 4.00" x 15" - 4 ply Air pressure 28 pounds

Added weight: Per rear wheel: Cast Iron 284 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 95.8% of maximum belt horsepower.

	RUBBER TIRES	
	DRAWBAR	BELT
2. Observed maximum horsepower (tests F and B)	12.48	14.84
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	12.90	15.26
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).	9.68	12.97

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 312.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers