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January 1938

Test 313: John Deere L

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 313

Dates of test: November 14 to 16, 1938.

Name and model of tractor: JOHN DEERE L

Manufacturer: John Deere Wagon Works, Moline Tractor Division of Deere and Company,
 Moline, 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								
10.42	1549	1.061	9.82	0.625	0.000	196	62	28.670
*TEST D - ONE HOUR								
9.28	1550	0.946	9.81	0.626	0.000	193	61	28.615
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
9.27	1548	0.938	9.88	0.621	--	193	60	--
1.28	1635	0.528	2.42	2.531	--	162	59	--
4.92	1622	0.689	7.14	0.860	--	179	59	--
10.01	1471	1.016	9.85	0.623	--	193	59	--
2.47	1644	0.596	4.14	1.482	--	176	59	--
7.18	1586	0.826	8.69	0.706	--	185	59	--
5.86	1584	0.765	7.66	0.802	0.000	181	59	28.610

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											
8.40	1235	2.55	1545	16.05	----- Not Recorded -----			191	50	28.610	
9.06	908	3.74	1551	7.65	----- " " -----			190	46	28.625	
9.06	571	5.95	1548	4.07	----- " " -----			193	58	28.570	
*TEST H - TEN HOURS - Second - GEAR											
7.06	688	3.85	1549	4.98	0.872	8.10	0.758	0.006	190	58	28.530

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

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 70 Weight per gallon 6.14 pounds
Oil: S.A.E. No. 10 To motor 0.490 gal. Drained from motor 0.292 gal.
Total time motor was operated 39 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour (rubber tires): First 2.50
Second 3.75 Third 6.00 Reverse 3.75
Belt pulley: Diameter 6 3/4" Face 4 1/2" R.P.M. 1480
Clutch: Make Long CB-C Type Single plate, dry Operated by foot pedal
Seat Pressed steel
Total weight as tested (with operator) 2180 pounds

MOTOR: Make John Deere - Hercules Serial No. 422811 Type 2 cylinder, vertical
Head L Mounting Crankshaft lengthwise Lubrication Pressure
Bore and stroke 3 1/4" x 4" Rated R.P.M. 1550
Port diameter valves: Inlet 1 1/4" Exhaust 1 1/8"
Magneto: Make Edison - Splitdorf Model R M Series 03509
Carburetor: Make Marvel - Schebler Model TS - 13 Size 7/8"
Governor: Make Handy Type Variable speed, centrifugal
Air Cleaner: Make United Type Oil-washed, crimped wire

CHASSIS: Type Standard Serial No. 625030 Drive Enclosed gear
Tread width: Rear 36 1/4", 42", 48 5/8", 54 3/8" Front 39"
Rear tires: No. 2 Size 6.00" x 22" - 4 ply Air pressure 16 pounds
Front tires: No. 2 Size 4.00" x 15" - 2 ply Air pressure 14 pounds
Added weight: Per rear wheel (Cast Iron 149 pounds
(Calcium chloride solution 58 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. The carburetor used was of the fixed jet type and one size jet (selected by the manufacturer) was used throughout all tests. Tests B and F were used in determining the horsepower to be developed in tests D and H, respectively.

	RUBBER TIRES	
	Drawbar	Belt
2. Observed maximum horsepower (tests F & B)	9.06	10.42
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	9.34	10.90
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.)	7.01	9.27

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 313.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers