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January 1941

## Test 373: John Deere LA

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 373

Dates of test: June 20 to 28, 1941

Name and model of tractor: JOHN DEERE LA

Manufacturer: John Deere Wagon Works, Moline Tractor Division, Moline, Illinois

Manufacturer's rating: NOT RATED

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

Hp.	Crank- shaft Speed R.P.M.	Fuel Consumption			Water Used Gal. per Hr.	Temperature Deg. F.		Barometer Inches of Mercury
		Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cool- ing Medium	Air	

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

14.34	1849	1.369	10.47	0.588	0.807	211	92	29.060
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\* TEST D - ONE HOUR

12.97	1850	1.253	10.35	0.595	0.336	211	92	29.050
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

12.95	1850	1.237	10.47	0.588	- ---	211	92	-- ---
1.27	1908	0.682	1.86	3.307	- ---	203	92	-- ---
6.62	1880	0.916	7.23	0.852	- ---	203	92	-- ---
13.98	1820	1.325	10.55	0.584	- ---	211	93	-- ---
3.39	1939	0.750	4.52	1.363	- ---	204	92	-- ---
9.81	1875	1.076	9.12	0.676	- ---	207	92	-- ---
8.00	1879	0.998	8.02	0.768	0.121	206	92	29.000

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

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## DRAWBAR HORSEPOWER TESTS

Hp.	Draw-bar Pull Lbs.	Speed Miles per Hr.	Crank- shaft Speed R.P.M.	Slip of Drive Wheels %	Fuel Consumption			Water Used Gal. per Hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cool- ing Med.	Air	

Rear wheels, tires and added weight used in Tests F, G and H: Cast iron wheels; 9-24, 4 ply tires and 576 lbs. added weight per wheel.

## TESTS F and G - 100% MAXIMUM LOAD

12.62	1936	2.44	1850	9.42	-----	Not Recorded	-----	211	93	28.905
13.10	1351	3.64	1853	5.64	"	"	"	210	91	28.950
12.30	623	7.40	1849	2.84	"	"	"	210	91	28.950

## \* TEST H - TEN HOURS - Second GEAR

10.62	1091	3.65	1850	4.49	1.255	8.46	0.728	0.189	209	89	28.770
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## TEST J - 100% 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). Second gear.

12.51	1322	3.55	1854	9.73	-----	Not Recorded	-----	210	90	28.850
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## TEST K - 100% MAXIMUM LOAD

Rear wheels, tires and added weight used: Cast iron wheels; 8-24, 4 ply tires and 114 lbs. added weight per rear wheel (\*\* Combination No. 1). Second gear.

12.35	1411	3.28	1852	10.78	-----	Not Recorded	-----	210	84	28.890
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\* Formerly called RATED LOAD; see REMARKS 4, page 5.

\*\* Combination No. 1: Includes wheels, tires and added weight recommended in the manufacturer's published specifications.

Combination No. 2: When the manufacturer does not make a specific recommendation, then the tires used are the smallest size and ply and the wheels are the lightest listed in published specifications or the application for test.

See Page 3 for specifications on wheels, tires and weight.

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## FUEL, OIL and TIME

Fuel Gasoline Octane 73 Weight per gallon 6.16 pounds

Oil: S.A.E. No. 30 To motor 0.734 gal. Drained from motor 0.698 gal.

Total time motor was operated 66 hours.

## TIRES, WHEELS and WEIGHT

		Tests F, G & H	Test J	Test K
Rear Wheel: (each)	Type and Weight	Cast Iron, 135 lbs	Cast Iron, 135 lbs	Cast Iron, 135 lbs
	Liquid Ballast	153 lbs	None	114 lbs
	Added Cast Iron	423 lbs	None	None
Rear Tires:	No., Size & Ply	2, 9-24, 4 ply	2, 9-24, 4 ply	2, 8-24, 4 ply
	Type of Tread	All Traction	All Traction	All Traction
	Make	Goodyear	Goodyear	Goodyear
	Air Pressure	16 lbs	16 lbs	16 lbs
Front Wheel: (each)	Type and Weight	Cast Iron, 38 lbs	Cast Iron, 38 lbs	Cast Iron, 38 lbs
	Liquid Ballast	30 lbs	None	18 lbs
	Added Cast Iron	None	None	None
Front Tires:	No., Size & Ply	2, 5.00-15, 4 ply	2, 5.00-15, 4 ply	2, 4.00-15, 4 ply
	Type of Tread	Triple Rib	Triple Rib	Triple Rib
	Make	Goodyear	Goodyear	Goodyear
	Air Pressure	28 lbs	28 lbs	28 lbs
Height of Drawbar		14 1/2"	15 1/4"	14 1/4"
Static Weight: Rear End		2455 lbs	1305 lbs	1520 lbs
Front End		855 lbs	800 lbs	825 lbs
Total Weight as Tested (With operator)		3490 lbs	2285 lbs	2525 lbs

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## CHASSIS

Type Standard Serial No. LA 1229 Drive Enclosed gear  
 Tread width: Rear 38", 43 1/2", 48 1/2" and 54" Front 40"  
 Advertised speeds, miles per hour: First 2 1/2 Second 3 1/2 Third 9  
 Reverse 2 1/2  
 Belt pulley: Diam. 6 3/4" Face 4 1/2" R.P.M. 1766 Belt speed 3115 f.p.m.  
 Clutch: Make Thelander Type Single dry plate Operated by Foot  
 Seat Pressed steel  
 Brakes: Make Own Type External contracting band  
 Location Final drive pinion shaft  
 Gear reduction (brake drum to rear wheel) 5.000 to 1  
 Operated by Right foot on adjacent foot pedals  
 Locked by Individual ratchets, both pedals  
 Equalization By ball of foot

## MOTOR

Make Own Serial No. None Type 2 cylinder, vertical  
 Head L Mounting Crankshaft lengthwise Lubrication Pressure  
 Bore and stroke 3 1/2" x 4" Rated R.P.M. 1850  
 Port diameter valves: Inlet 1 1/4" Exhaust 1 1/8"  
 Magneto: Make Edison-Splitdorf Serial No. W 3523 Type RM Series 03761  
 Carburetor: Make Marvel-Schebler Model TS-60 Size 7/8"  
 Governor: Make Own Type Variable speed, centrifugal  
 Air Cleaner: Make United Type Oil-washed, crimped wire  
 Cooling medium temperature control: Thermosyphon

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## REPAIRS AND ADJUSTMENTS

During Test K, a small particle of foreign material lodged in the carburetor main jet. This was removed and the test resumed.

The rated load drawbar test was stopped on account of rain. On the following day, when starting the engine to re-run the rated load, moisture was found in the distributor cap.

## REMARKS

1. All results shown on pages 1 and 2 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.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F & B)	13.10	14.34
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	13.94	15.21
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)	10.46	12.93

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 373.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut  
Board of Tractor Test Engineers