

Tractor Test and Power Museum, The Lester F. Larsen

UNL Larsen Tractor Museum Archives

University of Nebraska - Lincoln

Year 1939

Test 335: John Deere A

Tractor Test Museum
University of Nebraska

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 335

Dates of test: November 13 to 16, 1939.

Name and model of tractor: JOHN DEERE A

Manufacturer: John Deere Tractor Company, Waterloo, Iowa.

Manufacturer's rating: NOT RATED.

BELT HORSEPOWER TESTS

H.P.	Crank shaft speed R.P.M.	Gal. per hr.	Fuel Consumption		Water used gal. per hr.	Temp. Deg. F		Barometer inches of Mercury
			H. P. hr. per gal.	Lb. per H. P. hr.		Cooling med.	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
29.59	975	2.809	10.53	0.655	0.019	209	79	29.100
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
28.93	975	2.561	11.30	0.611	0.049	207	70	29.100
*TEST D - ONE HOUR								
26.36	975	2.397	11.00	0.627	0.079	207	69	29.085
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
26.36	975	2.400	10.98	0.625	- - - -	207	70	- - - -
2.08	1046	0.996	2.09	3.303	- - - -	207	70	- - - -
13.95	1016	1.622	8.60	0.802	- - - -	202	71	- - - -
27.94	936	2.504	11.16	0.618	- - - -	207	71	- - - -
7.08	1033	1.270	5.57	1.237	- - - -	203	69	- - - -
20.44	998	1.957	10.44	0.660	- - - -	200	72	- - - -
16.31	1000	1.791	9.11	0.758	0.026	204	70	29.090

DRAWBAR HORSEPOWER TESTS

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 - THIRD - GEAR											
26.20	2339	4.20	975	4.96	-----Not Recorded-----			209	58	29.150	
TEST G - OPERATING MAXIMUM LOAD											
24.64	4110	2.25	976	13.03	-----Not Recorded-----			207	70	29.155	
25.53	3053	3.14	974	7.41	-----Not Recorded-----			206	68	29.150	
25.47	2269	4.21	976	4.82	-----Not Recorded-----			208	55	29.140	
25.13	1682	5.60	974	3.33	-----Not Recorded-----			204	48	29.160	
*TEST H - TEN HOURS - THIRD - GEAR											
20.48	1815	4.23	975	4.21	2.140	9.57	0.721	0.041	204	59	29.165

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

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FUEL, OIL, AND TIME

Fuel Distillate Octane 37 Weight per gallon 6.90 pounds
 Oil: S.A.E. No. 30 To motor 3.305 gal. Drained from motor 1.844 gal.

Total time motor was operated 50 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 2 1/3 Second 3
 Third 4 Fourth 5 1/4 Reverse 3 3/4

Belt Pulley: Diam. 12 3/4" Face 7 3/8" R.P.M. 975 Belt Speed 3270 f.p.m.

Clutch: Make Own Type Dry disc Operated by hand

Seat Pressed steel

Total weight as tested (with operator) 6410 pounds

MOTOR

Make Own Serial No. 488005 Type 2 cylinder, horizontal

Head I Mounting Crankshaft crosswise Lubrication Pressure

Bore and stroke 5 1/2" x 6 3/4" Rated R.P.M. 975

Port diameter valves: Inlet 1 15/16" Exhaust 1 49/64"

Magneto: Make Wico Model C-1042

Carburetor: Make Schebler Model DLTX-24 Size 1 1/2"

Governor: Make Own Type Variable speed, centrifugal

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

Oil Filter: Make Purolator Type Partial flow, with replaceable im-
 pregnated paper element

Cooling medium temperature control: Pines radiator shutters

CHASSIS

Type Tricycle Serial No. 488005 Drive Enclosed gear

Tread width: Rear 56" - 84" Front: Top 14" Bottom 7 3/4"

Rear tires: No. 2 Size 11 x 38" - 6 ply Air Pressure 16 pounds

Front tires: No. 2 Size 5.50" x 16" - 4 ply Air Pressure 28 pounds

Added weight: (Cast Iron 418 pounds
 Per rear wheel(Calcium Chloride solution 385 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 96.9% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F and B)	26.20	29.59
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	26.83	30.98
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)	20.12	26.33

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 335.

 Carlton L. Zink
 Engineer-in-charge

 E. E. Brackett

 C. W. Smith

 L. W. Hurlbut

BOARD OF TRACTOR TEST ENGINEERS