January 1928

Test 153: John Deere "General Purpose" 10-20

Nebraska Tractor Test Lab
University of Nebraska-Lincoln, tractortestlab@unl.edu

UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN
Copy of Report of Official Tractor Test No. 153

Dates of test: October 22 to 29, 1928
Name, model and rating of tractor: John Deere "General Purpose" 10-20
Manufacturer: John Deere Tractor Co., Waterloo, Iowa.

BRAKE HORSE POWER TESTS

H. P.	Crank shaft speed R.P.M.	Fuel Consumption: Gals. per hour	Fuel Consumption: H. P. hrs. @ Gal.	Fuel Consumption: Lbs. @ H.P. hour	Water Consumption per hour gallons: Cooling	Water Consumption per hour gallons: In fuel	Water Consumption per hour gallons: Total	Temp. Deg. F.: Cooling medium	Temp. Deg. F.: Air	Barometer Inches of mercury
OPERATING MAXIMUM LOAD TEST. ONE HOUR (97% of maximum load)										
24.97	948	2.721	9.18	0.741	1.54	- -	1.54	199	62	29.03
RATED LOAD TEST. ONE HOUR										
20.20	948	2.362	8.55	0.795	0.93	- -	0.93	197	62	29.03
VARYING LOAD TEST. TWO HOURS										
20.21	950.5	2.585	7.82	0.870	- -	- -	- -	195	56.5	------
1.25	1021.5	1.253	1.00	6.816	- -	- -	- -	173	60	------
10.52	984.5	1.429	7.36	0.924	- -	- -	- -	196.5	62.5	------
22.01	940.5	2.629	8.37	0.812	- -	- -	- -	198.5	63.5	------
5.26	979.5	1.341	3.92	1.734	- -	- -	- -	185.5	64	------
15.61	974.5	1.738	8.98	0.757	- -	- -	- -	199.5	65	------
12.70	975	1.829	6.94	0.980	0.48	- -	0.48	191	62	28.95

*20 minute runs. Last line is average for two hours.

DRAWBAR HORSE POWER TESTS

H. P.	Draw bar pull pounds	Speed: miles per hour	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption: Gal. per hour	Fuel Consumption: H.P. hr. per gal.	Fuel Consumption: Lbs. per H.P. hour	Water used Gal. per hour	Temp. Cooling medium	Temp. Air	Barometer Inches of mercury
RATED LOAD TEST. TEN HOURS. Intermediate GEAR.											
10.20	1078	3.55	937	1.01	2.061	4.95	1.374	0.16	185	42	29.33
MAXIMUM LOAD TEST											
16.85	1837.5	3.44	943	5.46	--- Not Recorded ---				185	52	28.96
17.24	2489	2.60	959	7.30	"	"			196	52	28.86
13.93	1060	4.93	945	2.03	"	"			193.5	60	28.86

UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN
Copy of Report of Official Tractor Test No. 153

BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 200112 Type 2 Cylinder horizontal

Head "L" Mounting Crosswise

Bore and stroke: 5¾ x 6 in. Rated R.P.M. 950

Port Dia. Valves: Inlet 2¼" Exhaust 2¼"

Belt pulley Diam. 13 in. Face 6½ in. R.P.M. 950

Magneto: Fairbanks-Morse Model "John Deere"

Carburetor: Ensign Model BJ Size 1¼"

Governor: Own No. ---------- Type Fly-Ball

Air Cleaner Donaldson-Simplex Type Aux. Twister and Oil Fiber

Lubrication Pressure

CHASSIS: Type 4 wheels Serial No. 200112 Drive Enclosed gear and chain

Clutch Own Type Disc Operated by hand

Advertised speeds, miles per hour: Low 2-1/3

Intermediate 3-1/8 High 4-1/3 Reverse 2

Drive wheels: Diameter 42¾" Face 10"

Lugs: Type Spade No. per wheel 24 Size 4½"H x 3 1/8" x 3 3/8"

Extension rims: Width -------- Seat Pressed steel

Total weight as tested (with operator) 4265 pounds.

FUEL AND OIL

Fuel: Kerosene Weight per gallon 6.80 lbs.

Oil: Mobiloil A To fill crankcase 1½ gallons

Additional amount used during test 4¾ gallons

Total number of hours of test 42

UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 153

REPAIRS AND ADJUSTMENTS

Before the operating maximum belt load test, oil was found to be leaking from around the flywheel end of the crankshaft. This was repaired by readjusting the gasket and tightening gasket cover plate.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

The results of this test indicate that the rating of this tractor does not exceed the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 153.

Lew Wallace
Engineer-in-charge

O. W. Sjogren

E. E. Brackett

C. W. Smith
Board of Tractor Test Engineers