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January 1927

Test 144: Rock Island 18-35

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT

AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 144.

Dates of test: October 12th to October 19th, 1927
 Name, model and rating of tractor: Rock Island 18-35
 Serial No. Engine: 154949 Serial No. Chassis: F270178
 Manufacturer: Rock Island Plow Company, Rock Island, Illinois
 Tractor equipment used: Dixie "46C" Mag., Stromberg "M3" Carburetor
 Style and dimensions of wheel lugs: Spade 24 per wheel. 5" high x 3-1/2" wide x 7" base.

BRAKE HORSE POWER TESTS

H. P.	Crank Shaft	Time of Test	Fuel Consumption	Water Consumption	Temp.	Average Humidity	Height of Barometer
Dev.	Speed	R.P.M.	Kind of fuel	Gals. per hour	Inches	Deg. F.	Inches
	Test	Min.	of Per Hour	H. P. Cool- ing	Total Cool- ing	Air	

RATED LOAD TEST

35.32	1094	60	Dist.	3.916	9.02	0.00	0.96	0.96	186	76	30	29.03
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**VARYING LOAD TEST

34.99	1084	10	Dist.	:	:	:	:	:	:	:	:	:
34.82	1073	10	"	:	:	:	:	:	:	:	:	:
0.81	1100	10	"	:	:	:	:	:	:	:	:	:
9.47	1166	10	"	:	:	:	:	:	:	:	:	:
18.96	1169	10	"	:	:	:	:	:	:	:	:	:
27.48	1133	10	"	:	:	:	:	:	:	:	:	:
21.36	1121	60	"	2.692	7.93	0.00	0.28	0.28	162	75	50	29.00

MAXIMUM LOAD TEST

36.50	1094	120	Dist.	4.738	7.70	0.00	1.155	1.155	177	74	45	29.05
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HALF LOAD TEST

18.76	1160	60	Dist.	2.378	7.89	0.00	0.00	0.00	144	69	42	29.03
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* Taken in discharge line from engine.
 **The last line is the average for the hour.

REMARKS: The distillate used as fuel in these tests weighed 6.88 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

H. P. Dev.	: Draw : Bar	: Speed : Miles	: Crank : Shaft	: Slip : on	: Fuel Consumption : Kind	: Water : Amt.	: Temp. Deg. F. : H. P.	: Used : Used	: Cooling : Air	: Average : Humidity	: Height of : Barometer
	: Pull : Pounds	: Per : Hour	: Speed : R.P.M.	: drive : wheels	: Used : hour	: per : per	: hrs. : per	: per : hour	: Fluid : *	: %	: In Inches
				: %	: Gals.	: Gal.	: Gals.				

RATED LOAD TEST. TEN HOURS

18.77	: 1928	: 3.65	: 1105	: 2.82	: Dist.	: 2.656	: 7.07	: 0.00	: 174	: 72	: 45	: 28.86
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MAXIMUM LOAD TEST

30.42	: 3190	: 3.58	: 1101	: 4.58	: Dist.	: --	: NOT RECORDED	: --	: 162	: 75	: 38	: 28.94
28.12	: 1995	: 5.29	: 1108	: 3.29	: Dist.	: --	: NOT RECORDED	: --	: 162	: 78.5	: 38	: 28.94

*Taken in discharge line from engine.

REMARKS: The rated load and first maximum load tests were made in low gear, the second maximum load test was made in high gear. The distance advanced by the tractor without load on level ground for several complete revolutions of the drive wheels was taken as a basis for calculating the slippage.

OIL CONSUMPTION:

During the complete test consisting of about 37 hours running the following oil was used:
 For the engine, 3-1/2 gallons of Mobiloil "A". 3-1/2 gallons to fill crankcase, none added during test.
 For the transmission, None gallons of Whitmore transmission compound.

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments were necessary during this test. At the end of the test the tractor was in good running order and there were no indications of undue wear nor of any weakness which might require early repair.

BRIEF SPECIFICATIONS

MOTOR: Buda, 4 cylinder, vertical, L-head, mounted crankshaft lengthwise. Bore, 4-1/2", stroke 6". Rated speed: Crankshaft, 1100 R.P.M. Pulley: Diameter 18", width 7-1/2", 660 R.P.M.

Magneto: Dixie "46C"
Carburetor: Stromberg "M3"
Governor: Buda fly-ball type.
Air Cleaner: United dry centrifugal type.

CHASSIS: Four wheels, two drivers, enclosed gear drive, clutch own make twin dry disc. Advertised speeds: Low, 3 miles per hour; High, 4.5 miles per hour; Reverse, 2 miles per hour.

Total weight as tested (with operator) 5740 pounds.

REMARKS

In the advertising literature submitted with application for test of this tractor, we find some claims and statements which cannot be directly compared with the results of this test as reported above. It is our opinion that none of these are excessive or unreasonable.

In order to conform to the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers, the belt horse power rating of this tractor should not exceed 32 HORSE POWER.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 144.

Lew Wallace
Engineer-in-Charge

Oscar W. Sjogren

E. E. Brackett

C. W. Smith
Board of Tractor Test Engineers