January 1925

Test 116: Oil Pull Model R 25-45

Nebraska Tractor Test Lab
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UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY FARM, LINCOLN

Report of Official Tractor Test No. 116

Dates of test July 7 to 14, 1925

Name, model and rating of tractor Oil Pull Model R 25-45

Serial No. Engine R - 50 Serial No. Chassis R - 20

Manufacturer Advance-Rumely Thresher Company Incorporated, La Porte, Indiana

Tractor equipment used American Bosch DU4/2 magneto. Secor-Higgins Fuel Valve ED 22

Style and dimensions of wheel lugs Cast Spade 4-1/2" high. Convex face 3" wide

Brake Horse Power Tests

Horse Power Developed	Crank Shaft Speed R. P. M.	Length of Test Min.	Fuel Consumption: Kind of Fuel	Fuel Consumption: Amount Used per Hour Gallons	Fuel Consumption: Horse Power Hours per Gallon	Water Consumption Gallons per Hour: In Radiator	Water Consumption Gallons per Hour: In Fuel Mixture	Water Consumption Gallons per Hour: Total	Temperature *Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Humidity %	Barometric Pressure Inches Mercury
RATED LOAD TEST												
45.55	546	120	Kero	4.270	10.67		5.62	5.62	217	95	51	28.66
			Belt Slippage 1.64%									
** VARYING LOAD TEST												
45.51	545.0	10	Kero									
45.74	543.5	10	"									
1.06	567.5	10	"	Average Belt Slippage 1.05%								
11.85	563.0	10	"									
23.32	555.5	10	"									
34.65	552.0	10	"									
27.34	554.0	60	Kero	2.674	10.22		2.60	2.60	218	85	50	28.74
MAXIMUM LOAD TEST												
50.57	541	60	Kero	5.371	9.42		6.22	6.22	211	94	50	28.68
			Belt Slippage 1.82%									
HALF LOAD TEST												
23.36	556	60	Kero	2.187	10.68		1.42	1.42	242	90	50	28.72
			Belt Slippage 0.92%									

*Taken in discharge line from engine.

** The last line is an average for the hour

Remarks

The kerosene used as fuel in this test weighed 6.74 pounds per gallon.

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Drawbar Horse Power Tests

Horse Power Developed	Draw Bar Pull Pounds	Speed Miles per Hour	Crank Shaft Speed R. P. M.	Slippage of Drive Wheels % **	Fuel Consumption: Kind of Fuel Used	Fuel Consumption: Amount Used per Hour Gallons	Fuel Consumption: Horse Power Hours per Gallon	Water Used per Hour Gallons	*Temperature of Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Average Humidity %	Barometric Pressure Inches Mercury
RATED LOAD TEST. TEN HOURS												
27.42	3824	2.69	543	-5.68 8.47	Kero	4.121	6.65	4.809	195	88	44	28.67
MAXIMUM LOAD TEST												
32.64	6321	1.935	546	5.16 18.02	Kero	- - NOT RECORDED - -			200	98	38	28.77
35.54	4922	2.71	539.5	-6.63 7.82	"	"	"		191	96.5	46	28.72
34.13	3696	3.46	539	-10.05 4.86	"	"	"		202	92	46	28.70

*Taken in discharge line from engine.

** The first figure denotes slippage at the rim of the wheel. The second figure denotes slippage at the points of the lugs.

Remarks

The rated load test and the second maximum load test were run in second gear. The first maximum test was run in low gear.

The third maximum test was run in high gear.

Oil Consumption:

During the complete test consisting of about 41-1/2 hours running the following oil was used:

For the engine, 13-1/4 gallons of Mobiloil "B", 2-1/2 gal. to fill crank case. 10-3/4 gal. added to lubricator.

For the transmission, None ~~gallons of~~ Other lubrication, 2 pounds cup grease

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REPAIRS AND ADJUSTMENTS

General remarks.

After the limber-up run and before any of the data for this report were taken, a gasket was inserted under left bearing plate to provide more end clearance for crank shaft.

No other repairs nor 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: Own, 2 cylinder, horizontal, valve-in-head. Removable head. Mounted with crankshaft crosswise. Oil cooled. Bore, 7-13/16"; stroke 9-1/2". Rated speed 540 r.p.m.

Governor: Own - fly-ball type
Air Cleaner: Donaldson (dry centrifugal)
Lubricator: Manzel.

Chassis: Four wheels, 2 drivers; enclosed gears; disc clutch. Advertised speeds: low gear, 2 miles per hour; second gear, 2-1/2 miles per hour; high gear, 3 miles per hour.

Total weight as tested (with operator) 11,900 pounds.

REMARKS

In the advertising literature submitted with the specifications and application for the 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.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 116.

E. E. Brackett
Engineer-in-Charge

Oscar W. Sjogren

F. N. Laub

C. W. Smith
Board of Tractor Test Engineers.