January 1920

Test 013: Minneapolis 12-25

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

AGRICULTURAL ENGINEERING DEPARTMENT

UNIVERSITY FARM, LINCOLN

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Report of Official Tractor Test No. _____

Dates of test May 17 to June 3, 1920

Name, model and rating of tractor Minneapolis 12-25

Serial No. Engine 1604 Serial No. Chassis _____

Manufacturer Minneapolis Threshing Machine Co., Hopkins, MN

Tractor equipment used K.W. Model "H" Magneto; Kingston Carburetor

Style and dimensions of wheel lugs Angle 2" high

Brake Horse Power Tests

Horse Power Developed	Crank Shaft Speed R. P. M.	Length of Test Min.	Fuel Consumption			Water Consumption Gallons per Hour			Temperature Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Humidity %	Barometric Pressure Inches Mercury
			Kind of Fuel	Amount Used per Hour Gallons	Horse Power Hours per Gallon	In Radiator	In Fuel Mixture	Total				
RATED LOAD TEST												
25.10	748	120	Kero	3.74	6.71	x	x	2.50	172	85	58	28.5
Belt slippage 1.63%												
VARYING LOAD TEST												
23.63	749.5	10	Kero									
23.73	752.0	10	"									
1.67	943.0	10	"									
6.84	848.0	10	"									
3.66	848.5	10	"									
19.86	825.5	10	"									
15.64	828	60	Kero	2.76	5.66	x	x	1.00	162	86	50	28.5
MAXIMUM LOAD TEST												
26.24	760	60	Kero	4.235	6.20	x	x	2.41	161	82	65	28.7
Belt slippage 1.74%												
HALF LOAD TEST												
14.56	852	60	Kero	1.93	7.535	x	x	0.125	160	81	65	28.65
Belt slippage 1.26%												

*Taken in discharge line from engine.

Remarks Water for radiator and fuel mixture could not be measured separately

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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.	xxx 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 (10 hr. 7 min.)												
12.33	2150	2.15	759	10.31	Kero	3.25	3.80	1.05	182	79	68	28.7
MAXIMUM LOAD TEST (1st 141.1 ft; 2nd 148.9 ft.)												
16.26	2852	2.14	766	10.18	Kero	--- Not recorded ---			160	61	60	28.9
15.72	1881	3.13	740	5.22	Kero	"	"	"	158	64	60	28.9

*Taken in discharge line from engine.

Remarks **Circumference of drive wheels was taken at points of lugs for computing slippage. The tractor was operated in low gear in the ten hour test and in the first maximum test; and high gear in the second maximum test. The track was in better condition than usual when the maximum tests were run. The kerosene used in the drawbar tests on this tractor weighed 6.74 lbs per gallon.

Oil Consumption:

During the complete test consisting of about 32½ hours running the following oil was used:

For the engine, 6 gallons of Veedol Special Heavy, 1½ gallons Mobiloil "A", 4-3/4 gallon Mobiloil "BB"

For the transmission, None added except 1 gallons of Mobiloil "C"

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Miscellaneous Tests: None.

Repairs and Adjustments. Endurance:

The throttle lever and part of the control for water feed to c; carburetor were broken and replaced. Valve tappets were adjusted twice. Fan belt was re-laced once and tightened one other time. One spark plug was cleaned.

At the end of the test the tractor was apparently in good condition. There was no indication of undue wear in any part nor of any weakness which might require early repairs.

The repairs and adjustments as reported above do not, in our opinion, indicate any mechanical defect of more than minor importance.

Brief Specifications Minneapolis 12-25 H.P. Tractor.
Engine: Four cylinder, vertical L-head. Bore 4½", stroke 7" Rated speed 750 r.p.m.
Chassis: Four wheel. Rated speeds: low gear 2.21 mi. per Hr. High gear 2.98 mi. per hr.
Total weight 6600 lbs.

General Remarks:

The tractor of this model first submitted for test failed to come up to the manufacturer's expectations and since the manufacturer thought that the tractor had some defects not common to this model of tractor, a second tractor was accepted for test and results secured as reported above.

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

We, the undersigned, certify that above is a true and correct report of official tractor test No. 13.

Claude K. Shedd
Engineer-in-Charge

Oscar V. Sjogren
E. E. Bradbury
Giles N. Haney
Board of Tractor Test Engineers.