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January 1920

## Test 045: Cletrac Model W 12-20

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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**UNIVERSITY OF NEBRASKA**  
**AGRICULTURAL ENGINEERING DEPARTMENT**  
**UNIVERSITY FARM, LINCOLN**

Report of Official Tractor Test No. 45

Dates of test July 29 to August 9, 1920.

Name, model and rating of tractor Cletrac Model W 12-20

Serial No. Engine 48468 Serial No. Chassis 19585

Manufacturer Cleveland Tractor Co., Cleveland, Ohio.

Tractor equipment used Teagle Model 66-S Mag. Kingston Model L Carb.

Style and dimensions of wheel lugs Crawler track. No lugs.

**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												
20.14	1276	120	Kero	2.42	8.33	0.00	0.50	0.50	194	97	67	28.9
	Belt Slippage		1.97%									
VARYING LOAD TEST												
20.47	1303	10	Kero									
21.30	1318	10	"									
1.22	1359	10	"									
5.71	1459	10	"									
11.54	1426	10	"									
16.33	1355.5	10	"									
13.09	1370	60	Kero	2.065	6.34	0.00	0.25	0.25	194	101	67	28.9
MAXIMUM LOAD TEST												
24.94	1321	60	Kero	2.90	8.61	1.25	0.75	2.00	212	109	54	28.9
	Belt Slippage		3.67%									
HALF LOAD TEST												
11.38	1406	60	Kero	1.91	5.96	0.09	0.06	0.15	197	101	55	28.9
	Belt Slippage		0.36%									

\*Taken in discharge line from engine.

Aver.

Remarks Kerosene used for fuel in this test weighed 6.74 lbs per gallon.

Report of Official Tractor Test No. 45

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			Water Used per Hour Gallons	*Temperature of Cooling Fluid Deg. F.	Temperature of Atmosphere Deg. F.	Average Humidity %	Barometric Pressure Inches Mercury
					Ind of Fuel Used	Amount Used per Hour Gallons	Horse Power Hours per Gallon					
RATED LOAD TEST. TEN HOURS												
13.47	1395	3.62	1386	4.3	Kero	2.67	5.04	0.51	195	85	46	28.7
MAXIMUM LOAD TEST (130.0 ft.)												
15.52	1734	3.36	1305	8.8	Kero	-----Not Recorded -----			200	92	44	28.7

\*Taken in discharge line from engine.

Remarks \*\*For computing slippage, the outside length of the track was used.

Oil Consumption:

During the complete test consisting of about 30 hours running the following oil was used:

For the engine, 5 $\frac{3}{4}$  gallons of Mobiloil "BB"

For the transmission,  $\frac{1}{2}$  gallons of 600 W

Report of Official Tractor Test No. 45.

Miscellaneous Tests:

Tractor climbed 45° incline easily. Turning radius was verified. Tractor was operated in mud, heavy loads causing excessive slippage. While pulling rated load a length of 36 inches of each track rested on the ground, or a total of 576 square inches of traction surface.

Repairs and Adjustments. Endurance:

Fuel pipe broke, probably caused by vibration; broken second time in connecting to weighing tank.

No other repairs or adjustments were necessary.

Oil gauge on lubricating system did not register during the test.

It is our opinion that the repairs and adjustments made during the test are of minor importance and should not disqualify the tractor.

Brief Specifications Cletrac Model "W" 12-20 H. P. tractor.

Motor: 4 cylinder, vertical, overhead valves, removable head. Bore 4", stroke 5 1/2". Rated speed 1265 r. p. m.

Chassis: Crawler track. 50" on ground, 8" wide. Speed normal 3 1/2 mi. per hr, variable 1 to 4 miles per hour.

Total weight: 3300 lbs.

General Remarks:

In the advertising literature submitted with the application for test of this tractor we find some claims and statements which cannot be directly compared with the results of this test.

It is our opinion that these are not excessive or unreasonable except the following:

"It is easy to line up and easy to keep lined up on belt work".

"20 Horse power at belt without strain in any part".

"It burns kerosene or distillate or gasoline perfectly, and used less than two gallons of fuel per working hour".

"The Cletrac plows an acre an hour--10 acres a day--and does it on not more than 2 gallons of fuel per acre".

"For example in operating the larger types of ensilage cutters the Cletrac might use, say 1 1/2 gallons of kerosene an hour while on lighter work it would use less than a gallon".

We, the undersigned, certify that above is a true and correct report of official tractor test No. 45.

Fred R. Mohawec  
Engineer-in-charge

Oscar W. Goguen

E. E. Brackett

C. W. Smith  
Board of Tractor Test Engineers.