

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 1920

Test 031: Aultman-Taylor 15-30

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

Museum, Tractor, "Test 031: Aultman-Taylor 15-30" (1920). *Nebraska Tractor Tests*. 650.
<https://digitalcommons.unl.edu/tractormuseumlit/650>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY FARM, LINCOLN

Report of Official Tractor Test No. 31

Dates of test July 1 to July 8, 1920.

Name, model and rating of tractor Aultman-Taylor 15-30

Serial No. Engine 2622 Serial No. Chassis 3317

Manufacturer Aultman-Taylor Machinery Co., Mansfield, Ohio.

Tractor equipment used Kingston Model L Carburetor; Eiseman Model G4 Mag.

Style and dimensions of wheel lugs Spade 4" x 4"; 8 1/2" extension rims.

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												
30.40	906	120	Kero	4.08	7.44	0.375	0.00	0.375	191	83	77	28.6
	Belt Slippage		1.51%									
VARYING LOAD TEST												
30.60	913	10	Kero									
31.02	904	10	"									
1.51	968	10	"									
8.19	956	10	"									
16.05	952	10	"									
23.59	929	10	"									
18.82	937	60	Kero	3.04	6.20	0.00	0.00	0.00	177	84	76	28.6
MAXIMUM LOAD TEST												
34.37	898	60	Kero	5.79	5.94	0.125	0.00	0.125	180	73	64	28.7
	Belt Slippage		1.19%									
HALF LOAD TEST												
15.83	938	60	Kero	2.58	6.14	0.125	0.00	0.125	163	84	75	28.6
	Belt Slippage		0.93%									

Aver.

*Taken in discharge line from engine.

Remarks Kerosene used in this test weighed 6.75 lbs per gallon.

Report of Official Tractor Test No. 31

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
					Kind of Fuel Used	Amount Used per Hour Gallons	Horse Power Hours per Gallon					
RATED LOAD TEST. TEN HOURS												
15.73	2497	2.36	816	5.4	Kero	4.02	3.91	0.00	175	77	46	28.9
MAXIMUM LOAD TEST (96.1 ft.)												
21.19	2838	2.80	944	5.9	Kero	--- Not Recorded ---			174	85	37	28.9

*Taken in ϕ Large line from engine.

Remarks ** For computing slippage, circumference of drive wheels was taken at points of lugs.

Oil Consumption:

During the complete test consisting of about 35 hours running the following oil was used:

For the engine, 5 gallons of Sinclair Liberty Aero

For the transmission, 1½ gallons of 600W, 1 gal Stanolind Tractor Oil, 1½ gallon used oil.

Report of Official Tractor Test No. 31.

Repairs and Adjustments. Endurance:

The fly wheel key loosened and was driven in.
The governor was adjusted so that it would prevent excessive speed at no load.

Bolt lost from hand throttle and was replaced.

At the end of the test cylinders 3 and 4 appeared to have been slightly scored but were properly lubricated and polished at the time of this examination. Spark plugs on cylinders 2 and 3 had some carbon deposit and were slightly oily. The crank case oil gage did not indicate correctly. Clutch collar bolts were loose. With the exceptions noted above the tractor was apparently in good condition and there was no indication of undue wear in any part nor of any weakness which might require early repair.

It is our opinion that the repairs and adjustments necessary during this test do not indicate any mechanical defect of more than minor importance.

Brief Specifications Aultman-Taylor 15-30 H.P. Tractor.

Engine: Four cylinder, vertical, L-head. Bore 5", Stroke 6½".
Rated speed 900 r.p.m.

Chassis: Four wheel. Rated speed 2.49 mi. per hour.

Total weight 8240 lbs.

General Remarks:

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 this test. It is our opinion that none of these statements or claims are unreasonable or excessive except the following:

"And it gets every ounce of power out of the fuel that there is in it."

"In plowing for example, this 15-30 does double the work of the two plow-tractor in the same time, with less than one half the operating cost, and in doing the work it travels only one half the distance so naturally lasts once again as long."

"This size develops 30 horse power at the belt with several horse power reserve." (We do not approve this statement for the reason that it is indefinite and therefore likely to be misleading.)

"---enable the 15-30 to work on plowed ground without packing the soil."

We, the undersigned, certify that above is a true and correct report of official tractor test No. 31.

Claude K. Shedd
Engineer-in-Charge

Oscar W. Sjogren
E. E. Brackett

Jiles W. Harney
Board of Tractor Test Engineers.