January 1920

Test 030: Aultman-taylor 30-60

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

Report of Official Tractor Test No. 30

Dates of test June 30, to July 20, 1920.

Name, model and rating of tractor Aultman-Taylor 30-60

Serial No. Engine 3455 Serial No. Chassis 3455

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

Tractor equipment used Eiseman Model G4 Mag; Kingston Model E Carb.

Style and dimensions of wheel lugs Spade 4½" x 10" 12" Extension rims.

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												
60.29	553	120	Kero	6.92	8.71	x	x	6.00	190	80	64	29.0
	Belt	Slippage 2.14%										
VARYING LOAD TEST												
59.59	547.5	10	Kero									
64.73	532	10	"									
2.13	584.5	10	"									
25.725	574.5	10	"									
35.75	569.5	10	"									
46.44	568	10	"									
Aver. 38.15	563	60	Kero	5.88	6.49	x	x	4.00	191	92	50	28.8
MAXIMUM LOAD TEST												
75.49	562	60	Kero	10.12	7.46	x	x	9.00	174	94	50	28.75
30.10	556	60	Gaso	9.10	8.80	x	x	8.00	156	82	34	28.8
HALF LOAD TEST												
37.00	591	60	Kero	5.665	6.53	x	x	3.00	191	82	50	28.8
	Belt	Slippage 2.03%										

*Taken in discharge line from engine.

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

Gasoline used in this test weighed 6.16 lbs per gallon.

x Water for fuel mixture and radiator could not be measured separately.

In the varying load test it was necessary to change the adjustment of the water feed to fuel mixture for each change in load.

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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			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 (9 Hr. 53 Min.)												
35.09	5184	2.54	552	2.0	Kero	7.055	4.97	5.61	176	90.5	60	28.6
MAXIMUM LOAD TEST (1st 123.9 Ft; 2nd 123.4 Ft.)												
55.35	7960	2.61	580	3.9	Kero	----- Not Recorded -----			164	90	60	28.8
58.05	9160	2.38	520	4.3	Gaso	"	"		166	90	60	28.8

*Taken in discharge line from engine.

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

Oil Consumption:

During the complete test consisting of about 44 hours running the following oil was used:

For the engine, 17¼ gallons of Sinclair Liberty Aero.

For the transmission, 2 gallons of Stanolind Tractor Oil, 1¾ gallon used oil.

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Repairs and Adjustments. Endurance:

The fan and water pump belt was tightened once.
Cleaned fuel strainer once.
At the end of the test there were water leaks at the carburetor connection, at the thermometer connection and at the stuffing box of the water circulation control valve. These leaks can all be stopped by tightening threaded joints. Braces from master gears to drive wheel rims were a little loose but could be tightened by tightening nuts on these braces. Spark plugs were slightly fouled but were firing regularly.
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 repairs.
Repairs and adjustments during this test do not indicate any important mechanical defect in this tractor.

Brief Specifications Aultman-Taylor 30-60 H.P. Tractor.

Engine: Four cylinder, horizontal, valve-in-head. Bore 7", stroke 9", rated speed 500 to 550 r.p.m.
Chassis: Four wheel. Rated speed 2.20 to 2.42 mi. per hr. (A faster and also a slower speed gear may be substituted for the gear with which the tractor was equipped for this test.)
Total Weight: 24450 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 as reported above. It is our opinion that none of these statements or claims are unreasonable or excessive except the following:

"We guarantee this tractor to move more cubic feet of earth in a given length of time with less fuel and less maintenance cost, using the same tools, working under the same conditions—than any other make of tractor regardless of its size or rating."

"---it is still first in the large tractor field, because no other tractor can produce a similiar record for faithful, economical performance over a period of ten or more years."

"In fact they (the 22-45 and 30-60) have established records for power and economy that have never even been closely approached by any other tractor".

"We can safely say that they are the best designed and best built tractor motors used on any heavy duty tractor."

(We do not approve the comparisons with other tractors quoted above for the reason that proof is lacking.)

We, the undersigned, certify that above is a true and correct report of official tractor test No. 30

Claude K. Shedd
Engineer-in-Charge

Oscar W Sjogren
E E Brackett
Giles W Haney
Board of Tractor Test Engineers.