January 1920

Test 009: Rumely Oil Pull Model "H" 16-30

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY FARM, LINCOLN

Report of Official Tractor Test No. 9

Dates of test April 24 to May 21, 1920.

Name, model and rating of tractor Oil Pull Model "H" 16-30

Serial No. Engine 4925 Serial No. Chassis

Manufacturer Advance-Rumely Co., La Porte, Ind.

Tractor equipment used Bosch DU2 Magneto. Own make Carburetor.

Style and dimensions of wheel lugs Angle 2 inches high.

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												
30.50	532	120	Kero	3.070	9.94	none	3.28	3.28	197	68	58	28.7
		Belt	slippage 1.54%									
VARYING LOAD TEST												
30.40	531	10	Kero									
30.83	528.5	10	"									
1.31	567.5	10	"									
8.22	562	10	"									
15.81	550.5	10	"									
23.31	542.5	10										
Aver. 18.66	544	60	Kero	2.009	9.28	none	1.70	1.70	200.5	69	58	28.7
MAXIMUM LOAD TEST												
33.52	537	60	Kero	5.960	5.62	none	7.37	7.37	164	68	54	28.9
		Belt	Slippage 1.37%									
HALF LOAD TEST												
15.93	553	60	Kero	1.976	8.06	none	1.31	1.31	193	69	64	28.9
		Belt	slippage 1.12%									

*Taken in discharge line from engine.

Remarks The kerosene used weighed 6.80 lbs per gallon.

Brief Specifications of Oil Pull Model "H" 16-30 H.P. Tractor.

Engine: Twin cylinder, opposed cranks, horizontal, valve-in-head. Bore 7", stroke 8½". Rated speed 530 r.p.m.

Chassis: Four wheel. Rated speeds: low gear, 2.1 mi. per Hr. high gea r 3 mi. per Hr.

Total weight 9506 lbs.

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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 Hrs. 51 Min.)												
16.68	3036	2.06	540	8.9	Kero	2.662	6.27	2.75	186	74	55	28.5
MAXIMUM LOAD TEST (1st 132.6 ft; 2nd 148.0 ft)												
22.90	4674	1.84	535	16.29	Kero	----Not recorded-----			182	78	54	28.7
21.22	2873	2.77	530	9.22	"	"	"		165	81	54	28.7

*Taken in discharge line from engine.

Remarks ** For computing slippage the circumference of the drive wheels was taken at points of lugs. The rated load test and the first maximum test were made with the tractor in low gear. The second maximum test was made with the tractor in high gear.

Oil Consumption:

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

For the engine, 7 gallons of Mobiloil B and 8-1/2 gal. of Veedol extra heavy.

For the transmission, added 1/2 gallons of 600 W and 1-3/4 gallond of used crank case oil.

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Miscellaneous Tests: None.

Repairs and Adjustments. Endurance.

April 30. Put in new intake valves. The valves removed had been ground leaving shoulders. All valves were re-ground; push rods adjusted, breaker points on magneto adjusted; and new spark plugs put in. Spark plugs removed were dirty.

May 21. Clutch was adjusted.

May 22. At the end of the test the cylinder head was removed and the valves found to be in good condition. The gasoline line between pump and carburetor leaked.

With the exception noted above the tractor was apparently in good order at the end of the test and there was no indication of undue wear in any part nor of any weakness which might require early repairs.

Repairs and adjustments necessary during this test do not, in our opinion, indicate any mechanical defect of more than minor importance in this model of tractor.

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 the test as reported above. It is our opinion that none of these statements or claims are unreasonable or excessive except the following, statements quoted from their general catalog:

Page 6. "And the proper weight, plus proper distribution of weight gives 100 per cent traction even under adverse conditions."

Page 8. "-- the two cylinder, low speed engines are much better suited to tractor use than any other types now in use-- that the former show an advantage of approximately 20% greater drawbar efficiency."

Page 9. "Its record of.7 lbs kerosene per brake horse power has not been equalled in public demonstrations by any other kerosene burning tractor, before or since."

"Take any official tests or demonstrations held since 1912-- figure the average on any and all tests and you will find that the Oil Pull not only hold the record for the best average and uniformity, on maximum power developed and low fuel consumption-- but that no tractor has yet demonstrated by consecutive tests its ability to rank second to the Oil Pull."

Page 13. "--our own and public tests have proved it to be without exception, the most efficient and economical system of oil combustion."

Page 14. "--All air going into the engine must first pass thru a patented air cleaner which removes all dirt and grit---".

We, the undersigned, certify the above is a true and correct report of Official Tractor Test No. 9.

Claude K. Shedd
Engineer-in-Charge

Oscar W. Jorgensen
E. E. Brackett
C. W. Smith
Board of Tractor Test Engineers.

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