January 1920

Test 004: Case 15-27

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

Official Tractor Test No. 4

Miscellaneous Tests: None

Repairs and Adjustments. Endurance:

The clutch was tightened on April 3rd during the limbering up run and again on April 30 after about 30 hours operation.

No other adjustment were made during the test except adjustments of carburetor and governor.

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 that might call for early repai

Brief Specifications Case 15-27 H.P. Tractor

Engine: Four cylinder, vertical, valve-in-head, Bore 4-$\frac{1}{2}$", stroke 6", rated speed 900 rpm.

Chassis: Four wheel. Rated speeds: low gear 2$\frac{1}{4}$ mi per hr., high gear 3 mi. per hr.

Total weight 6460 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 results of this 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. 4.

Claude K. Shedd
Engineer-in-Charge

Oscar W. Sjogren

E. E. Brackett

Jiles W. Haney

Board of Tractor Test Engineers

University of Nebraska
Agricultural Engineering Department
University Farm, Lincoln

Official Tractor Test No. 4

Dates of Test April 2 to April 30, 1920 Name, model and rating of tractor Case 15-27 Serial No. Engine 34503
Rated RPM 900 Manufacturer J. I. Case Threshing Machine Co., Racine, Wis. Tractor Equipment used Berling Eq 41
Magneto, Kingston Model L Carburetor Style and dimensions of wheel lugs Spade 2-3/4" high x 4" long./ 8" Extension rims.

Brake Horse Power Tests

	Hp	Crank shaft speed rpm	Length of Test min	Fuel Consumption Kind of Fuel	Cal per hr	Hp hr per gal	Water Consumption Gallons Per Hour In radiator	In fuel mixture	Total	Temp Deg. F. Cooling med	Air	Humidity	Barometer inches of Mercury
						Rated Load Test							
	27.52	914.5	120	Kero.	2.68	10.27	0.017	0.098	0.115	184.8	65.2	58	28.7
	Belt slippage 2.18%												
						Varying Load Test							
	27.31	907.5	30	Kero									
	26.97	846.5	10	Kero									
	1.56	993.5	10	Kero									
	7.05	966.0	10	Kero									
	13.90	953.0	10	Kero									
	20.44	935.5	10	Kero									
Av.	16.71	933.6	60	Kero	1.970	8.48	None	0.307	0.307	182.0	61.5	61	28.8
						Maximum Load Test							
	31.23	924.4	60	Kero	3.156	9.90	0.201	0.245	0.446	202.6	60.1	73	28.4
	Belt slippage 2.02%												
						Half Load Test							
	14.30	947.6	60	Kero	1.773	8.06	0.24	0.206	0.446	182.9	66.1	38	28.7
	Belt slippage 1.87%												

Remarks: The kerosene used in brake horse power tests on this tractor weighed 6.71 lbs per gallon.

Drawbar Horse Power Tests

Hp	Draw bar pulls lbs	Speed miles per hour	Crank shaft speed rpm	Slip of drivers % **	Fuel Consumption Kind of Fuel used	G Al per hr	Hp hr per gal	Water used per hr gals	Temp Degrees F Cooling med	Air	Average Humidity %	Barometer inches of Mercury
					Rated Load Test Ten			Hours (Ten	hours, 2 min.)			
15.76	2700	2.19	927	14.16	Kero.	2.50	6.30	0.22	174.8	55.6	47	28.65
				Maximum Load Test (1st 115.3	ft; 2nd 126.7 ft)							
18.80	3440	2.05	950	23.4	Kero.	----Not measured----			180	58	57	28.9
21.81	2840	2.88	850	15.8	Kero.	"	"		178	56	57	28.9

Remarks:

The kerosene used in drawbar test weighed 6.80 lbs per gallon.

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

Oil Consumption: During the complete test consisting of about 37 hours running the following oil was used:

For the engine, 11.5 gallons of Mobiloil BB
For the Transmission Gallons of None added