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Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F. Larsen

January 1926

Test 128: Hart-Parr 18-36

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT

AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 128.

Dates of test: October 18th to 25th, 1926

Name, model and rating of tractor: Hart-Parr 18-36

Serial No. Engine: 26145

Serial No. Chassis: 26145

Manufacturer: Hart-Parr Company, Charles City, Iowa

Tractor equipment used: Robt. Bosch "2U4/2" Mag., Stromberg "MB3" Carb.

Style and dimensions of wheel lugs: Spade 3-1/2" high, 4" wide, 7" extension rims.

BRAKE HORSE POWER TESTS

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RATED LOAD TEST

36.53 :802 : 120 :Dist. :3.749 : 9.74:1.770: *** :1.770 : 187 : 75 : 63 : 28.60

**VARYING LOAD TEST

36.56 :802	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
36.92 :799	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
1.09 :835.5	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
9.56 :835	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
18.80 :822.5	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
27.95 :816	:	10	:		:		:		:		:		:		:		:		:		:		:		:	
22.09 :818.5	:	60	:	Dist.	:	2.866	:	7.71	:	0.77	:	***	:	0.77	:	175	:	75	:	63	:	28.54	:		:	

MAXIMUM LOAD TEST

42.85 :795 : 60 :Dist. :5.029 : 8.52:1.97 : *** :1.97 : 178 : 71 : 52 : 28.90

HALF LOAD TEST

18.94 :829 : 60 :Dist. :2.828 : 6.70:0.00 :0.00 :0.00 : 183 : 85 : 49 : 28.50

* Taken in discharge line from engine.

** The last line is the average for the hour.

***The water used with the fuel was taken from the cooling system.

REMARKS: The distillate used as fuel in these tests weighed 6.88 pounds per gallon.
At half load and under the engine missed intermittently.

Copy of Report of Official Tractor Test No. 128

DRAWBAR HORSE POWER TESTS

	: Draw	: Speed	: Crank	: Slip	: Fuel Consumption			: Water	Temp. Deg. F.			
					: Kind	: Amt.	: H.P.		: Cooling	: Air		
H. P.	: Bar	: Miles	: Shaft	: on	: Used	: Per	: Hrs.	: Per	: Fluid	:	: Average	: Height of
Dev.	: Pull	: Per	: Speed	: Drive	:	: Hour	: Per	: Hour	: *	:	: Humidity	: Barometer
	: Pounds	: Hour	: R.P.M.	: Wheels	:	: Gals.	: Gal.	: Gals.	:	:	: %	: In Inches
	:	:	:	: %	:	:	:	:	:	:	:	:

RATED LOAD TEST. TEN HOURS

32.10 : 2247.5 : 3.02 : 736 : 4.94 : Dist.: 2.783 : 6.50 : 1.22 : 177 : 62 : 37.5 : 28.72

MAXIMUM LOAD TEST

32.255: 4075 : 2.97 : 745.5: 8.575 : Dist.: -- NOT RECORDED --: 170 : 58 : 51 : 28.50

30.17 : 5535 : 2.045 : 790 : 16.14 : Dist.: -- NOT RECORDED --: 162 : 62 : 51 : 28.50

*Taken in discharge line from engine.

REMARKS: The rated load and first maximum tests were made in high gear; the second maximum test was made in low gear. The average distance traveled by the tractor without drawbar load per revolution of the drive wheels was used as a basis for calculating the slippage of the drive wheels. The crankshaft speeds on the rated load and on the first maximum drawbar load are low due to an error in calculations made by observer during test which were not discovered until too late for correction.

OIL CONSUMPTION:

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

For the engine 7-3/4 Gallons of Mobiloil "B"

For the transmission, none added (gallons of light transmission oil

Copy of Report of Official Tractor Test No. 128.

REPAIRS AND ADJUSTMENTS

Before the half load brake test was run the spark gap in the spark plugs was adjusted to 0.020" gap. During the maximum drawbar test one spark plug was replaced. Two small screws were lost out of carburetor air connection during the test.

No other repairs or adjustments were necessary during this test. At the end of the test the tractor was in good running order and there were no indications of undue wear nor of any weakness which might require early repair.

BRIEF SPECIFICATIONS

Motor: Own, two cylinder, valve-in-head, mounted crankshaft crosswise. Bore, 6-3/4", stroke 7". Rated speed 800 R.P.M.
Magneto: Robert Bosch "ZU4/2". Carburetor Stromberg "EB3".
Lubricator: Madison Kipp.

Air Cleaner: Donaldson, dry centrifugal type.
Governor: Own, fly-ball type.

Chassis: Four wheels, two drivers, enclosed gear drive, dry plate clutch. Advertised speeds: Low, 2 miles per hour, high, 3 miles per hour, reverse 2-1/2 miles per hour.

Total weight as tested (with operator) 7325 pounds.

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 as reported above. It is our opinion that none of these are excessive or unreasonable.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 128.

Lew Wallace

Oscar W. Sjogren

E. L. Brackett

C. W. Smith

Board of Tractor Test Engineers