January 1937

Test 284: Oliver Hart-Parr Standard 70 KD

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

Copy of Report of Official Tractor Test No. 284

Dates of test: June 24 to 30, 1937.
Name and model of tractor: OLIVER HART PARR STANDARD 70 KD.
Manufacturer: Oliver Farm Equipment Company, Charles City, Iowa.
Manufacturer's rating: NOT RATED.

B R A K E H O R S E P O W E R T E S T S

H. P.	Crank Shaft speed R.P.M.	Fuel Consumption			Water Consumption per hour gallons			Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H.P. hr.	Cooling	In fuel	Total	Cooling med.	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS										
26.75	1500	3.380	7.91	0.877	0.000	0.000	0.000	159	75	28.880
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR										
25.67	1502	2.419	10.61	0.654	0.000	0.000	0.000	190	80	28.890
*TEST D - ONE HOUR										
24.19	1500	2.308	10.48	0.662	0.000	0.000	0.000	190	80	28.920
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)										
24.19	1502	2.304	10.50	0.661	--	--	--	191	80	--
0.58	1613	1.102	0.53	13.190	--	--	--	193	80	--
12.39	1542	1.656	7.48	0.927	--	--	--	191	81	--
25.70	1468	2.429	10.58	0.656	--	--	--	198	79	--
6.43	1585	1.357	4.74	1.465	--	--	--	191	80	--
18.42	1525	2.049	8.99	0.772	--	--	--	190	79	--
14.62	1539	1.816	8.05	0.862	0.000	0.000	0.000	190	80	28.950

D R A W B A R H O R S E P O W E R T E S T S

H. P.	Draw bar pull Pounds	Speed miles per hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used Gal. per hr.	Temp.		Barometer Inches of Mercury
					Gal. per hr.	H. P. hr. per gal.	Lb. per H.P. hr.		Cooling med.	Air	
TEST F - 100% MAXIMUM LOAD - Third GEAR											
19.83	1535	4.85	1498	5.71	----- Not Recorded ------				159	88	28.775
TEST G - OPERATING MAXIMUM LOAD											
15.85	2634	2.26	1504	22.15	----- Not Recorded ------				165	82	28.790
19.16	1937	3.71	1500	6.42	----- " " ------				176	78	28.840
18.31	1414	4.86	1503	5.84	----- " " ------				171	86	28.800
16.91	957	6.63	1501	5.77	----- " " ------				173	76	28.840
*TEST H - TEN HOURS - Third GEAR											
15.92	1230	4.85	1502	5.39	2.438	6.53	1.063	0.163	186	85	28.755

*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Distillate Weight per gallon 6.94 pounds

Oil: S.A.E. No. 30 To motor 2.503 gal. Drained from motor 0.779 gal.

Total time motor was operated 49 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 2.44 Second 3.32

Third 4.33 Fourth 5.88 Reverse 2.44

Belt pulley: Diameter 12 3/4" Face 7 1/4" R.P.M. 774

Clutch Borg & Beck Type Single-plate, dry Operated by Foot pedal

Seat Canvas Hammock

Total weight as tested (with operator) 3500 pounds

MOTOR: Make Own Serial No. 0 - 13477 Type 6 cylinder, vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3 1/8" x 4 3/8" Rated R.P.M. 1500

Port diameter valves: Inlet 1.375" Exhaust 1.0625"

Magneto: Make American Bosch Model MJB6A - 302

Carburetor: Make Zenith Model 124-1/2 EX Size 1 1/4"

Governor: Make Handy Type Variable-speed, centrifugal

Air cleaner: Make Donaldson Type Oil-washed, wire-screen filter

CHASSIS: Type Standard Serial No. 300940 KD Drive Enclosed gear

Tread width: Rear 48" Front 45"

Drive wheels: Type Standard No. 2 Diameter 42" Face 10"

Lugs: Type Spade No. per wheel 20 Size 5" high x 3" face

Front wheels: Type Standard No. 2 Diameter 27" Face 4 1/2"

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REPAIRS AND ADJUSTMENTS

During the rated load drawbar test the center steering shaft dropped out of the front steering arm. The shaft was put into place and the clamping bolt tightened.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 96.0% of maximum horsepower.

2. Observed maximum horsepower (tests F & B) Drawbar 19.83 Belt 26.75

3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.) Drawbar 21.16 Belt 28.11

4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings). drawbar 15.87 Belt 23.89

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 284.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers