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January 1930

Test 176: Oliver Hart-Parr Row Crop

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 176

Dates of test: April 14 to 24, 1930.

Name and model of tractor: Oliver Hart-Parr ROW CROP

Manufacturer: Oliver Farm Equipment Co., Hart-Parr Division, Charles City, Iowa.

Manufacturer's rating: NOT RATED.

Highest rating permissible under the recommendations of the A.S.A.E. and

S.A.E. Tractor Rating Codes: Drawbar - 18 H.P. Belt - 27 H.P.

One carburetor setting (94% of maximum) was used thruout this test.

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

H. P.	:Crank : :shaft :	Fuel Consumption : Gals. : :H.P. : : R.P.M. : : per : hour :	: H.P. : : Lbs. @ : : H.P. : : gal. : : hour :	: Water consumption : : per hour gallons : : Cool- : : In : : fuel : : Total : : med. :	Temp. : : Deg. F. : : Barometer : : Inches of : Mercury :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR

29.72	: 1148	: 3.064	: 9.70	: 0.695	: 0.00	: 0.00	: 0.00	: 192	: 71	: 28.96
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RATED LOAD TEST. ONE HOUR

27.11	: 1150	: 2.749	: 9.86	: 0.694	: 0.00	: 0.00	: 0.00	: 178	: 63	: 28.90
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*VARYING LOAD TEST. TWO HOURS

27.16	: 1153	: 2.795	: 9.72	: 0.694	: 0.00	: 0.00	: 0.00	: 180	: 66	: 28.93
2.12	: 1414	: 1.331	: 1.59	: 4.251	: 0.00	: 0.00	: 0.00	: 182	: 64	: 28.94
14.41	: 1219	: 1.861	: 7.74	: 0.870	: 0.00	: 0.00	: 0.00	: 187	: 65	: 28.95
28.63	: 1127	: 2.853	: 10.04	: 0.672	: 0.00	: 0.00	: 0.00	: 188	: 66	: 28.96
7.29	: 1230	: 1.429	: 5.10	: 1.321	: 0.00	: 0.00	: 0.00	: 176	: 66	: 28.97
21.22	: 1196	: 2.275	: 9.33	: 0.722	: 0.00	: 0.00	: 0.00	: 180	: 65	: 28.98
17.52	: 1223	: 2.091	: 8.38	: 0.804	: 0.00	: 0.00	: 0.00	: 182	: 65	: 28.92

*20 minute runs. Last line is average for two hours.

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 :	Speed : : miles : : per : : hour :	:Crank : :shaft : : speed : : R.P.M. : : wheels : : % :	Slip : : on : : drive : : wheels : : % :	Fuel Consumption : Gal. : : hr. : : per : : per : : H.P. : : gal. : : hour :	Water : : used : : Gal. : : per : : per : : H.P. : : gal. : : hour :	Temp. : : Cool- : : Air : : med. : : % :	Barometer : : Inches of : Mercury :
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RATED LOAD TEST. TEN HOURS. Intermediate GEAR.

18.10	: 2067	: 3.28	: 1152	: 5.66	: 2.352	: 7.70	: 0.876	: 0.065	: 178	: 63	: 28.90
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MAXIMUM LOAD TEST

23.55	: 2075	: 4.26	: 1150	: 4.99	: Not Recorded			: 189	: 61	: 28.93
24.40	: 2894	: 5.16	: 1150	: 10.31	: " "			: 183	: 76	: 28.90
22.69	: 3664	: 2.32	: 1152	: 18.03	: " "			: 178	: 71	: 28.88

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 100003 Type Vertical
Head "I" Mounting Lengthwise
Bore and stroke: 4 1/8" x 5 1/4" in. Rated R.P.M. 1150
Port Dia. Valves: Inlet 1 3/4" Exhaust 1 3/4"
Belt pulley: Diam. 14 1/4 in. Face 7 1/2 in. R.P.M. 700
Magneto: American Bosch Model U4-ED2
Carburetor: Ensign Model K Size 1 1/4"
Governor: Own No. None Type Flyball
Air Cleaner: Donaldson 2 unit Type Centrifugal and oily fibre
Lubrication: Pressure

CHASSIS: Type 3 wheels 2 drivers Serial No. None Drive Enclosed gear
Clutch: Borg and Beck Type Single plate operated by foot
Advertised speeds, miles per hour: Low 2.6
Intermediate 3.2 High 4.15 Reverse 2.9
Drive wheels: Diameter 59 1/2" Face 9/16"
Lugs: Type Spade 60 per wheel in 3 rows Size 2.8"x 6" face x 3.25" high.
Extension rims: Width 9/16"
Seat Pressed steel
Total weight as tested (with operator) 4650 pounds.

FUEL AND OIL:
Fuel: Kerosene Weight per gallon 6.74 pounds
Oil: S. A. E. Viscosity No. 30
Total oil to motor 2.465 gallons The oil was drained
Total drained from motor 1.179 gallons from the crankcase
Total time motor was operated 57 hours once - at the end
of the test.

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged thruout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

The drawbar tests were run with drive wheels equipped with spade lugs and with extension rims and lugs as listed on Page 2 of this report.

In the advertising literature submitted with the specifications and application for test of this tractor we find the following claims are not substantiated by the results of this test:

Exhibit "B" - Folder A 135 - "they do end wheel slippage."
"they do not slip."

Exhibit "C" - Folder A 143 - Same as above.

Exhibit "D" - Folder A 144 - "Positive traction at the tip-toe wheels assures delivery of every ounce of engine power to the drawbar."

Exhibit "F" - Folder A 146 - "They do not slip."

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 176.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers