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January 1936

Test 267: Oliver Hart-Parr Row Crop 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. 267

Dates of test: August 20 to 31, 1936.

Name and Model of tractor: OLIVER HART PARR ROW-CROP "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 :	Fuel Consumption : Gals. : H. P. : Lbs. per :	Water Consumption : per hour gallons :	Temp. : Deg. F. :	: Barometer
: speed :	: R.P.M. :	: hrs. per :	: H. P. :	: ing :	: fuel :
: : hour :	: gal. :	: hour :	: : :	: : :	: : :

TEST B 100% MAXIMUM LOAD. TWO HOURS

27.15	: 1500	: 3.346	: 8.11	: 0.852	: 0.000	: 0.000	: 0.000	: 167	: 80	: 28.730
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TEST C OPERATING MAXIMUM LOAD. ONE HOUR

26.09	: 1500	: 2.534	: 10.30	: 0.671	: 0.000	: 0.000	: 0.000	: 173	: 76	: 28.770
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TEST D RATED LOAD. ONE HOUR

24.80	: 1502	: 2.384	: 10.40	: 0.664	: 0.000	: 0.000	: 0.000	: 182	: 83	: 28.755
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TEST E *VARYING LOAD. TWO HOURS

24.69	: 1497	: 2.392	: 10.32	: 0.670	: --	: --	: --	: 183	: 85	: --
0.81	: 1636	: 1.142	: 0.71	: 9.741	: --	: --	: --	: 200	: 84	: --
12.53	: 1519	: 1.585	: 7.91	: 0.874	: --	: --	: --	: 203	: 87	: --
24.80	: 1466	: 2.397	: 10.35	: 0.668	: --	: --	: --	: 188	: 88	: --
6.54	: 1583	: 1.355	: 4.83	: 1.431	: --	: --	: --	: 191	: 88	: --
18.49	: 1497	: 1.906	: 9.70	: 0.712	: --	: --	: --	: 185	: 91	: --
14.64	: 1533	: 1.796	: 8.15	: 0.848	: 0.000	: 0.000	: 0.000	: 191	: 87	: 28.770

*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 :	Crank : : shaft :	Slip : : on :	Fuel Consumption : H. P. : Lbs. :	Water: : used :	Temp. : : :	: Barometer
: pull :	: per :	: speed :	: drive :	: Gal. :	: hour :	: per :	: Gal. :	: Cool-:
: pounds :	: hour :	: R.P.M. :	: wheels :	: per :	: per :	: H.P. :	: per :	: ing :
: : :	: : :	: % :	: hour :	: gal. :	: hour :	: hour :	: med. :	: : :

TEST F 100% MAXIMUM LOAD. Third GEAR.

20.48	: 1778	: 4.32	: 1498	: 8.61	: -----	: Not Recorded	: -----	: 175	: 95	: 28.715
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TEST G OPERATING MAXIMUM LOAD.

15.02	: 2523	: 2.23	: 1499	: 16.46	: -----	: Not Recorded	: -----	: 183	: 69	: 28.960
19.22	: 2220	: 3.25	: 1498	: 10.92	: -----	: "	: "	: 210	: 102	: 28.595
19.97	: 1726	: 4.34	: 1500	: 8.34	: -----	: "	: "	: 177	: 90	: 28.730
17.56	: 1071	: 6.15	: 1497	: 4.65	: -----	: "	: "	: 210	: 104	: 28.640

TEST H RATED LOAD. TEN HOURS Third GEAR.

16.45	: 1363	: 4.53	: 1500	: 4.40	: 2.269	: 7.25	: 0.953	: 0.065	: 184	: 77	: 28.760
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Copy of Report of Official Tractor Test No. 267

BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 01157 Type 6 cylinder, vertical
 Head I Mounting Crankshaft lengthwise
 Bore and stroke: 3 1/8" x 4 3/8" Rated R.P.M. 1500
 Port Diam. Valves: Inlet 1 3/8" Exhaust 1 1/16"
 Belt pulley: Diam. 12 3/4" Face 6 1/2" R.P.M. 774
 Magneto American Bosch Model MJB6A-302
 Carburetor Zenith Model 124 1/2 EX Size 1 1/4"
 Governor: Handy Type Centrifugal
 Air Cleaner: Donaldson Type Ejector and oil-washed wire-screen
filter

Lubrication Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. 202845KD Drive Enclosed gear
 Clutch Borg & Beck Type Single-plate, dry Operated by Foot pedal
 Advertised speeds, miles per hour: First 2.44 Second 3.32
 Third 4.33 Fourth 5.88 Reverse 2.44
 Drive wheels: Type Skeleton Diameter 55" Face 1/2"
 Lugs: Type Spade No. per wheel 36 (24 offset and 12 spacer)
 Size 3 1/8" high x 4 1/2" face (offset) and 6" face (spacer)
 Extension of tractive surface by Spacer lugs and 1/2" extension rim
 Seat Canvas hammock
 Total weight as tested (with operator) 3900 pounds.

FUEL AND OIL:

Fuel: Distillate Weight per gallon 6.91 pounds.
 Oil: S.A.E. Viscosity No. 30
 Total oil to motor 2.019 gallons
 Total drained from motor 1.045 gallons
 Total time motor was operated 44 hours

The oil was drained
 once - at the end
 of the test.

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLNCopy of Report of Official Tractor Test No. 267REPAIRS AND ADJUSTMENTS

Before any official belt data was obtained, the belt pulley bevel gear adjustment was checked. It was found that one bevel pinion tooth was broken. This pinion was replaced with a new one.

During the rated load drawbar test, the radiator temperature indicator became in-operative.

REMARKS

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. These figures were used in determining the ratings recommended by the A.S.A.E. and S.A.E. tractor rating codes. Tests C, D, E, G and H were made with an operating setting of the carburetor (selected by the manufacturer) of 96.1% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 20.48 Belt 27.15

Sea level (calculated) maximum horsepower Drawbar 22.04 Belt 28.81
(Based on 60° F. and 29.92" Hg.)

Highest permissible horsepower ratings Drawbar 16.53 Belt 24.49
(As recommended by A.S.A.E. and S.A.E. codes)

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 267.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers