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January 1930

Test 177: Massey-Harris (General Purpose)

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. 177

Dates of test: May 5th to 27th, 1930.

Name and model of tractor: MASSEY-HARRIS "GENERAL PURPOSE"

Manufacturer: The Massey-Harris Co., Racine, Wisconsin.

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 - 15 H.P. Belt - 22 H.P.

One carburetor setting (100% 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. :Lbs. @ : : R.P.M.: per :hrs. @:H. P. : : : hour :gal. :hour :	Water consumption : per hour gallons : : Cool- : In : :Cool- : : ing : fuel : Total:ing : Air : : : : :med. : :	Temp. : Deg. F. : : : : : : : : : : : : : : : :	: :Barometer :Inches of :Mercury : :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR

24.84	: 1198	: 3.008	: 8.26	: 0.735	: 0.00	: 0.00	: 0.00	: 180	: 66	: 28.75
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RATED LOAD TEST. ONE HOUR

22.10	: 1201	: 2.707	: 8.16	: 0.743	: 0.00	: 0.00	: 0.00	: 182	: 71	: 28.82
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*VARYING LOAD TEST. TWO HOURS

22.26	: 1210	: 2.699	: 8.25	: 0.733	: --	: --	: --	: 182	: 70	: --
1.52	: 1329	: 1.196	: 1.27	: 4.776	: --	: --	: --	: 178	: 69	: --
11.82	: 1292	: 1.893	: 6.24	: 0.972	: --	: --	: --	: 174	: 67	: --
23.82	: 1148	: 2.906	: 8.20	: 0.741	: --	: --	: --	: 178	: 64	: --
6.03	: 1323	: 1.468	: 4.11	: 1.478	: --	: --	: --	: 175	: 63	: --
17.46	: 1269	: 2.308	: 7.56	: 0.802	: --	: --	: --	: 178	: 62	: --
14.17	: 1262	: 2.079	: 6.82	: 0.890	: 0.00	: 0.00	: 0.00	: 178	: 66	: 28.83

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

15.64	: 1622	: 3.62	: 1208	: 2.75	: 2.581	: 6.06	: 1.008	: 0.022	: 187	: 86	: 28.78
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MAXIMUM LOAD TEST

19.22	: 1594	: 4.52	: 1201	: 1.23	: -----	: Not Recorded	: -----	: 178	: 71	: 29.00
19.65	: 2050	: 3.58	: 1198	: 3.38	: -----	: " "	: -----	: 168	: 78	: 29.00
19.91	: 3247	: 2.30	: 1201	: 8.26	: -----	: " "	: -----	: 178	: 73	: 29.00

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BRIEF SPECIFICATIONS

MOTOR: Make Hercules Serial No. 220622 Type Vertical
Head "L" Mounting Lengthwise
Bore and stroke: 4 x 4 $\frac{1}{2}$ in. Rated R.P.M. 1200
Port Dia. Valves: Inlet 1 $\frac{1}{2}$ " Exhaust 1 3/8"
Belt pulley: Diam. 12 in. Face 6 $\frac{1}{2}$ in. R.P.M. 802
Magneto: American Bosch Model U4-ED2
Carburetor: Zenith Main jet No. 17 Model 94T0 Size 1"
Compensator No. 19
Venturi No. 18
Governor: Hercules No. None Type Flyball
Air Cleaner: Massey-Harris Type Oil circulated over wool
Lubrication: Pressure

CHASSIS: Type 4 wheels, all drivers Serial No. 300089 Drive Enclosed gear
Clutch: Twin disc Type Single plate operated by hand
Advertised speeds, miles per hour: Low 2.20
Intermediate 3.20 High 4.00 Reverse 2.50
Drive wheels: Diameter 38" Face 8"
Lugs: Type Spade No. per wheel 20 Size 3.50" high, 2.88" wide at base, 2.50" wide at top
Extension rims: None Seat Pressed Steel
Total weight as tested (with operator) 4100 pounds.

FUEL AND OIL:

Fuel: Gasoline Weight per gallon 6.07 pounds used on brake test
6.11 pounds used on drawbar test

Oil: S.A.E. Viscosity No. 30

Total oil to motor 1.173 gallons

Total drained from motor 0.693 gallons

Total time motor was operated 51 hours

The oil was drained
from the crankcase
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 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 no claims and statements which, in our opinion, are unreasonable or excessive.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 177.

Carlton L. Zink
Engineer-in-charge

E. F. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers