

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 1936

Test 266: Massey-Harris Pacemaker

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

Museum, Tractor, "Test 266: Massey-Harris Pacemaker" (1936). *Nebraska Tractor Tests*. 869.

<https://digitalcommons.unl.edu/tractormuseumlit/869>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 266

Dates of test: August 10 to 19, 1936.

Name and model of tractor: MASSEY-HARRIS FACEMAKER

Manufacturer: Massey-Harris Company, Racine, Wisconsin.

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 :	Fuel Consumption :	Water Consumption :	Temp. :	Barometer :			
shaft :	speed :	Gals. :	H. P. :	Lbs. per :	Cool- :	In :	Cool- :	Inches of :
R.P.M. :	per :	hrs. per :	H. P. :	ing :	fuel :	Total :	ing :	Air :
hour :	gal. :	hour :	hour :	ing :	med. :	med. :	med. :	Mercury :

TEST B 100% MAXIMUM LOAD. TWO HOURS

29.09 : 1200 : 3.141 : 9.26 : 0.745 : 0.000 : 0.000 : 0.000 : 191 : 87 : 28.645

TEST C OPERATING MAXIMUM LOAD. ONE HOUR

27.52 : 1199 : 2.648 : 10.39 : 0.664 : 0.000 : 0.000 : 0.000 : 182 : 83 : 28.615

TEST D RATED LOAD. ONE HOUR

26.69 : 1201 : 2.599 : 10.27 : 0.672 : 0.000 : 0.000 : 0.000 : 181 : 85 : 28.630

TEST E *VARYING LOAD. TWO HOURS

26.68 : 1201 : 2.591 : 10.30 : 0.670 : -- : -- : -- : 182 : 86 : --

0.82 : 1272 : 1.157 : 0.71 : 9.732 : -- : -- : -- : 154 : 86 : --

14.00 : 1243 : 1.800 : 7.78 : 0.887 : -- : -- : -- : 163 : 84 : --

27.24 : 1182 : 2.570 : 10.60 : 0.651 : -- : -- : -- : 184 : 84 : --

7.09 : 1256 : 1.396 : 5.08 : 1.358 : -- : -- : -- : 157 : 84 : --

20.07 : 1223 : 2.222 : 9.03 : 0.764 : -- : -- : -- : 171 : 84 : --

15.98 : 1229 : 1.956 : 8.17 : 0.844 : 0.000 : 0.000 : 0.000 : 168 : 84 : 28.635

*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. :	Barometer :
bar :	miles :	shaft :	on :	H. P. :	Lbs. :	used :	Barometer :	Inches of :
pull :	per :	speed :	drive :	Gal. :	hour :	per :	Gal. :	Cool- :
pounds :	hour :	R.P.M. :	wheels :	per :	per :	H.P. :	per :	ing :
hour :	hour :	hour :	hour :	hour :	gal. :	hour :	hour :	med. :

TEST F 100% MAXIMUM LOAD. Second GEAR

19.76 : 2051 : 3.61 : 1200 : 9.19 : -----Not Recorded----- : 207 : 102 : 28.785

TEST G OPERATING MAXIMUM LOAD

18.45 : 2878 : 2.40 : 1202 : 18.09 : -----Not Recorded----- : 208 : 105 : 28.730

19.08 : 1983 : 3.61 : 1198 : 9.14 : ----- " " ----- : 203 : 100 : 28.790

18.63 : 1499 : 4.66 : 1198 : 5.68 : ----- " " ----- : 208 : 109 : 28.690

10.61 : 394 : 10.10 : 1201 : 1.81 : ----- " " ----- : 205 : 108 : 28.730

TEST H RATED LOAD. TEN HOURS. Second GEAR

16.21 : 1658 : 3.67 : 1199 : 7.82 : 2.439 : 6.65 : 1.038 : 0.030 : 182 : 87 : 28.700

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 266

BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 107012 Type 4 cylinder, vertical
 Head I Mounting Crankshaft lengthwise
 Bore and stroke: 3 7/8" x 5 1/4" Rated R. P. M. 1200
 Port Diam. Valves: Inlet 1 3/8" Exhaust 1 1/2"
 Belt pulley: Diam. 12" Face 6 1/4" R.P.M. 831
 Magneto American Bosch Model U4ED4V1
 Carburetor Kingston Size 1 1/4"
 Governor: Handy No. R02281-C Type Centrifugal
 Air Cleaner: Own Type Oil circulated over wool
 Lubrication: Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. 107484 Drive Enclosed gear
 Clutch Twin Disc Type Single-Plate, dry Operated by Hand
 Advertised speeds, miles per hour: First 2.4 Second 3.3
 Third 4.1 Fourth 8.5 Reverse 3.0
 Drive wheels: Diameter 44" Face 10"
 Lugs: Type Spade No. per wheel 24 Size 2 1/2" face x 5" high
 Seat Pressed steel
 Total weight as tested (with operator) 4050 pounds.

FUEL AND OIL:

Fuel Distillate Weight per gallon 6.90 pounds.
 Oil S.A.E. Viscosity No. 40
 Total oil to motor 3.056 gallons
 Total drained from motor 3.536 gallons
 Total time motor was operated 40 hours

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

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 266

REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

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 and 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 94.6% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 19.76 Belt 29.09

Sea level (calculated) maximum horsepower Drawbar 21.36 Belt 31.16
 (Based on 60° F. and 29.92" Hg.)

Highest permissible horsepower ratings Drawbar 16.02 Belt 26.49
 (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. 266.

Carlton L. Zink
 Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
 Board of Tractor Test Engineers