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Tractor Test and Power Museum, The Lester F. Larsen

January 1931

Test 197: Minneapolis- Moline Universal model MT

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. 197

Dates of test: September 30 to October 8, 1931.

Name and Model of tractor: MINNEAPOLIS-MOLINE UNIVERSAL MODEL MT

Manufacturer: Minneapolis-Moline Power Implement Co., Minneapolis, Minn.

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 - 13.81 H.P. Belt - 25.17 H.P.

One carburetor setting (96.8% 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 : : hour :	: Water consumption : : per hour gallons : :Cool- : In : :ing : fuel :Total : : : : :med. : :	Temp. : : Deg. F. : :Cool- : :ing : Air : :med. : :	:Barometer :Inches of :Mercury : :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR

26.68	: 1000	: 2.608	: 10.23	: 0.633	: 0.00	: 0.00	: 0.00	: 206	: 91	: 28.625
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RATED LOAD TEST. ONE HOUR

25.09	: 999	: 2.400	: 10.45	: 0.648	: 0.00	: 0.00	: 0.00	: 201	: 90	: 28.610
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*VARYING LOAD TEST. TWO HOURS

25.08	: 1002	: 2.394	: 10.48	: 0.647	: --	: --	: --	: 202	: 90	: --
0.69	: 1098	: 0.973	: 0.71	: 9.565	: --	: --	: --	: 202	: 88	: --
13.17	: 1052	: 1.650	: 7.98	: 0.850	: --	: --	: --	: 202	: 89	: --
25.55	: 971	: 2.482	: 10.29	: 0.659	: --	: --	: --	: 200	: 88	: --
6.78	: 1062	: 1.292	: 5.25	: 1.292	: --	: --	: --	: 202	: 87	: --
19.18	: 1042	: 2.009	: 9.55	: 0.710	: --	: --	: --	: 203	: 86	: --
15.46	: 1038	: 1.800	: 8.59	: 0.789	: 0.00	: 0.00	: 0.00	: 202	: 88	: 28.600

*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 :Gal. : hr. :per :per : H.P. : :hour : gal. :hour	: Water : :used : :Gal. :Cool- : :per :ing : :hour :med. : :	Temp. : : : :Air : : : : : :	:Barometer :Inches of :Mercury : :
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RATED LOAD TEST. TEN HOURS INTERMEDIATE Gear.

13.77	: 1460	: 3.54	: 999	: 2.00	: 2.424	: 5.64	: 1.202	: 0.00	: 195	: 66	: 28.900
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MAXIMUM LOAD TEST

18.17	: 2889	: 2.36	: 1001	: 5.14	: -----	: Not Recorded	: -----	: 204	: 54	: 29.210
16.54	: 1777	: 3.49	: 999	: 3.23	: -----	: " "	: -----	: 198	: 59	: 29.198
13.40	: 1072	: 4.69	: 1000	: 2.02	: -----	: " "	: -----	: 197	: 67	: 29.125

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 376609 Type Vertical
Head I Mounting Lengthwise
Bore and stroke: 4 1/4" x 5" Rated R.P.M. 1000
Port Dia. Valves: Inlet 1 5/8" Exhaust 1 5/8"
Belt pulley: Diam. 14" Face 7" R.P.M. 715
Magneto: American Bosch Model U4 ED4 V2
Carburetor: Schebler Model T T Size 1"
Governor: Own No. None Type Fly-ball
Air Cleaner: Donaldson Type 2-Unit - Dry centrifugal and oily fibre
Lubrication: Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. 525001 Drive Enclosed gear
Clutch: Twin disc Type single plate operated by hand
Advertised speeds, miles per hour: Low 2.1
Intermediate 3.13 High 4.15 Reverse 1.8
Drive wheels: Diameter 42" Face 10"
Lugs: Type Spade No. per wheel 20 Size 3" wide, 4" high
Extension rims: None
Seat: Pressed steel
Total weight as tested (with operator) 5235 pounds.

FUEL AND OIL:

Fuel: Kerosene Weight per gallon 6.78 pounds
Oil: S. A. E. Viscosity #30
Total oil to motor 5.034 gallons
Total drained from motor 4.273 gallons
Total time motor was operated 59 hours

The oil was drained
twice: once at the
end of the belt run
and again 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. 197.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers