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Nebraska Tractor Tests

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January 1934

## Test 231: McCormick-Deering "W-12" (Gasoline)

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 231

Dates of test: November 13 to 16, 1934.

Name and model of tractor: McCORMICK-DEERING "W-12" (Gasoline)

Manufacturer: International Harvester Company, Chicago, Illinois.

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 - 10.46 H.P. Belt - 16.07 H.P.

One carburetor setting (95.4% 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. : :R.P.M. : :per :hour	H.P. : :hrs.per:H.P. : :gal. : :hour	Lbs.per: :ing. : : : : :	Water consumption : per hour gallons : Cool- : : fuel : : : : :	In : : : : : : :	Total : : : : : :	Temp. : : Deg. F. : : : : : : : : med. : : :	:Barometer :Inches of :Mercury : : : :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR

17.65	: 1700	: 1.752	: 10.07	: 0.611	: 0.000	: 0.000	: 0.000	: 193	: 60	: 29.170
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RATED LOAD TEST. ONE HOUR

16.17	: 1700	: 1.653	: 9.78	: 0.629	: 0.000	: 0.000	: 0.000	: 193	: 61	: 29.120
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\*VARYING LOAD TEST. TWO HOURS

16.21	: 1699	: 1.650	: 9.81	: 0.627	: --	: --	: --	: 193	: 62	: --
9.73	: 1812	: 0.834	: 0.88	: 7.027	: --	: --	: --	: 193	: 61	: --
8.49	: 1757	: 1.195	: 7.10	: 0.866	: --	: --	: --	: 194	: 63	: --
17.08	: 1633	: 1.721	: 9.92	: 0.620	: --	: --	: --	: 194	: 61	: --
4.25	: 1795	: 0.975	: 4.36	: 1.412	: --	: --	: --	: 193	: 61	: --
12.43	: 1739	: 1.424	: 8.73	: 0.705	: --	: --	: --	: 193	: 61	: --
9.87	: 1739	: 1.300	: 7.59	: 0.811	: 0.000	: 0.000	: 0.000	: 193	: 61	: 29.103

\*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. : : : : %	Slip : :on : :drive : :wheels : : : : %	Fuel Consumption : H.P. : :Gals. : : hr. : : per : H.P. : : gal. : : hour	Water: :used : :Gal. : :per :hour	Temp. : : : : : : : : : : med. : : :	:Barometer :Inches of :Mercury : : : :
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RATED LOAD TEST. TEN HOURS. SECOND GEAR

10.52	: 1250	: 3.16	: 1700	: 2.19	: 1.662	: 6.33	: 0.972	: 0.054	: 190	: 52	: 28.900
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MAXIMUM LOAD TEST

13.52	: 2140	: 2.37	: 1701	: 3.53	: -----	: Not Recorded	: -----	: 195	: 56	: 29.300
12.65	: 1507	: 3.15	: 1703	: 2.57	: -----	: " "	: -----	: 194	: 63	: 28.975
11.57	: 1065	: 4.07	: 1699	: 2.02	: -----	: " "	: -----	: 189	: 60	: 28.950

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AGRICULTURAL COLLEGE, LINCOLN

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. WS 637 Type 4 Cylinder, Vertical  
Head I Mounting Lengthwise  
Bore and stroke: 3" x 4" Rated R.P.M. 1700  
Port Diam. Valves: Inlet 1 3/16" Exhaust 1 3/16"  
Belt pulley: Diam. 13 1/4" Face 6 1/4" R.P.M. 787  
Magneto: Own Model F-4  
Carburetor: Own Model A-10 Size 1 inch  
Governor: Own No. None Type Centrifugal  
Air Cleaner: Own Type Oil-washed wire filter  
Lubrication: Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. WS 687 Drive Enclosed gear  
Clutch: Rockford Type Single plate - dry disc operated by foot pedal  
Advertised speeds, miles per hour: Low 2 1/4  
Intermediate 2 3/4 High 3 3/4 Reverse 2 1/4  
Drive wheels: Diameter 42 inches Face 8 inches  
Lugs: Type Spade No. per wheel 24 Size 4" high x 2 5/8" face  
Extension rims: None  
Seat: Upholstered  
Total weight as tested (with operator) 3,360 pounds.

FUEL AND OIL:

Fuel: Gasoline Weight per gallon 6.15 pounds  
Oil: S.A.E. Viscosity No. 30  
Total oil to motor 1.532 gallons  
Total drained from motor 1.058 gallons  
Total time motor was operated 33 hours

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

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REPAIRS AND ADJUSTMENTS

At the end of the rated load drawbar test the manifold bolt, which holds the choke rod bracket, was found to be loose.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout 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. 231.

\_\_\_\_\_  
Carlton L. Zink  
Engineer-in-charge

\_\_\_\_\_  
E. E. Brackett

\_\_\_\_\_  
C. W. Smith

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E. B. Lewis  
Board of Tractor Test Engineers