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Larsen

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January 1935

## Test 246: McCormick-Deering Model WD-40

Tractor Museum

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 246

Dates of test: September 23 to 27, 1935.  
Name and model of tractor: McCORMICK-DEERING "WD-40"  
Manufacturer: International Harvester Co., Chicago, Illinois.  
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	:	Water Consumption	:	Temp. :	:	Barometer
:speed :	Gals. :	H. P. :	Lbs. Per :	Cool- :	In :	Cool-:	Inches of	
:R.P.M. :	per :	hrs.per :	H. P. :	ing :	fuel :	Total :	Air:Mercury	
:	hour :	Gal. :	hour :	:	:	med. :	:	

TESTS B AND C 100% MAXIMUM LOAD. TWO HOURS

48.79 : 1100 : 3.350 : 14.56 : 0.507 : 0.000 : 0.000 : 0.000 : 190 : 81 : 28.735

TEST D RATED LOAD. ONE HOUR

44.10 : 1099 : 3.003 : 14.69 : 0.502 : 0.000 : 0.000 : 0.000 : 191 : 77 : 28.720

TEST E \*VARYING LOAD. TWO HOURS

44.06	: 1097	: 3.000	: 14.69	: 0.502	: --	: --	: --	: 191	: 77	: --
0.66	: 1232	: 1.191	: 0.55	: 13.318	: --	: --	: --	: 181	: 76	: --
23.15	: 1155	: 2.037	: 11.36	: 0.649	: --	: --	: --	: 182	: 75	: --
47.18	: 1084	: 3.244	: 14.54	: 0.507	: --	: --	: --	: 193	: 75	: --
12.13	: 1195	: 1.602	: 7.57	: 0.974	: --	: --	: --	: 182	: 74	: --
33.10	: 1095	: 2.309	: 14.34	: 0.515	: --	: --	: --	: 182	: 74	: --
27.57	: 1142	: 2.230	: 12.36	: 0.597	: 0.000	: 0.000	: 0.000	: 185	: 75	: 28.715

\*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 :	:	:	
: pull :	per :	speed :	drive:	Gal.:	hour :	per :	Gal. :	Cool-:	Air:	Inches of
: pounds:	hour :	R.P.M.:	wheels:	per :	per :	H.P. :	per :	ing :	:	Mercury
:	:	:	% :	hour:	gal. :	hour :	hour :	med. :	:	

TESTS F AND G MAXIMUM LOAD.

37.21	: 4774	: 2.92	: 1103	: 5.45	: -----	: Not Recorded	: -----	: 190	: 55	: 29.065
36.52	: 3731	: 3.67	: 1099	: 6.94	: -----	: "	: "	: 190	: 53	: 29.090
35.25	: 3021	: 4.38	: 1104	: 5.03	: -----	: "	: "	: 192	: 55	: 29.085

TEST H RATED LOAD. TEN HOURS Second GEAR.

28.09 : 2783 : 3.79 : 1099 : 4.03 : 2.792 : 10.06 : 0.733 : 0.000 : 189 : 52 : 29.200

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Copy of Report of Official Tractor Test No. 246

BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. W.D.C. 677 Type 4 cylinder, vertical diesel  
 Head I Mounting Crankshaft lengthwise  
 Bore and stroke: 4 3/4" x 6 1/2" Rated R.P.M. 1100  
 Port Diam. Valves: Inlet 2" Exhaust 1 3/8"  
 Belt Pulley: Diam. 16 3/4" Face 9" R.P.M. 588  
 Fuel system: Own Model PT 40 No. 3187  
 Magneto: (For starting only) Own Model F-4  
 Carburetor: (For starting only) Own Model R (Modified) Size 1 1/4"  
 Governor: Own No. None Type Centrifugal  
 Air Cleaner: Donaldson Type Combination oil and centrifugal-wire  
screen labyrinth  
 Lubrication: Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. 644 Drive enclosed gear  
 Clutch Own Type single plate-dry disc Operated by foot  
 Advertised speeds, miles per hour: First 2.6 Second 3.4  
 Third 3.9 Reverse 2.4  
 Drive wheels: Diameter 50" Face 12"  
 Lugs: Type Spade No. per wheel 32 Size 5" high x 3 1/2" face  
 Extension rims: Width 6" No. lugs per rim 16 Size 5" high x 3 1/2" face  
 Seat Pressed steel  
 Total weight as tested (with operator) 8450 pounds.

FUEL AND OIL: A #3 furnace oil conforming to the fuel  
 Fuel: specifications of the manufacturer Weight per gallon 7.38  
 Oil: S.A.E. #30 The oil was drained  
 once - at the end  
 Total oil to motor 3.307 gallons of the test.  
 Total drained from motor 3.370 gallons  
 Total time motor was operated 47 hours

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLNCopy of Report of Official Tractor Test No. 246REPAIRS 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. The fuel pumps were set by the manufacturer to deliver a maximum observed belt horsepower of not less than 48.25 in test B. Tests C, D, E, F, G, and H were made with the same setting. The figures obtained in tests B and F were used in determining the ratings recommended by the A.S.A.E. and S.A.E. tractor rating codes.

Observed maximum horsepower (tests B &amp; F) Drawbar 36.52 Belt 48.79

Sea level (calculated) maximum horsepower Drawbar 37.32 Belt 51.81  
(Based on 60° F. and 29.92" Hg.)Highest permissible horsepower ratings Drawbar 27.99 Belt 44.04  
(As recommended by A.S.A.E. and S.A.E. codes)

The 100% maximum belt and drawbar tests were not included in reports issued from 1928 to 1934 inclusive, except in those cases where the 100% maximum setting was used throughout the complete test.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 246.

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

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

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

E. B. Lewis  
\_\_\_\_\_  
Board of Tractor Test Engineers