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Larsen

January 1936

Test 269: McCormick-Deering Model WK-40

Tractor Museum

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 269

Dates of test: September 3 to 15, 1936.

Name and model of tractor: McCORMICK-DEERING WK-40

Manufacturer: International Harvester Company, 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 :Gals. : H. P. : :R.P.M. : per : : hour :	:Lbs. per : :H.P. : : hour :	Water Consumption : per hour gallons : In : : fuel : : Total :	Temp. : : Deg. F. : :Cool- : :ing : :med. :	:Barometer :Inches of :Mercury
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TEST B 100% MAXIMUM LOAD. TWO HOURS

49.76 : 1749 : 5.557 : 8.95 : 0.774 : 0.000 : 0.000 : 0.000 : 176 : 85 : 28.925

TEST C OPERATING MAXIMUM LOAD. ONE HOUR

48.53 : 1751 : 4.775 : 10.16 : 0.682 : 0.000 : 0.000 : 0.000 : 188 : 89 : 28.880

TEST D RATED LOAD. ONE HOUR

45.11 : 1749 : 4.570 : 9.87 : 0.702 : 0.000 : 0.000 : 0.000 : 192 : 91 : 28.865

TEST E *VARYING LOAD. TWO HOURS

44.98 : 1748 : 4.567 : 9.85 : 0.704 : -- : -- : -- : 192 : 91 : --

0.78 : 1884 : 1.688 : 0.46 : 15.000 : -- : -- : -- : 201 : 91 : --

23.19 : 1804 : 2.835 : 8.18 : 0.847 : -- : -- : -- : 200 : 91 : --

46.11 : 1718 : 4.654 : 9.91 : 0.699 : -- : -- : -- : 190 : 91 : --

11.94 : 1836 : 2.303 : 5.18 : 1.337 : -- : -- : -- : 203 : 91 : --

34.48 : 1786 : 3.814 : 9.04 : 0.767 : -- : -- : -- : 195 : 90 : --

26.91 : 1795 : 3.310 : 8.13 : 0.852 : 0.000 : 0.000 : 0.000 : 197 : 91 : 28.855

*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. : : wheels : : % :	Slip : : on : : drive : : wheels : : hour :	Fuel Consumption : Gal. : hour : : per : per : hour :	Lbs. : : per : H.P. : : per : hour :	Water: : used : : Gal. : : per : hour :	Temp. : : : :Cool- : :ing : :med. :	:Barometer :Inches of :Mercury
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TEST F 100% MAXIMUM LOAD. Second GEAR.

35.22 : 3873 : 3.41 : 1749 : 6.72 : -----Not Recorded----- : 182 : 89 : 28.660

TEST G OPERATING MAXIMUM LOAD

34.86 : 4982 : 2.62 : 1752 : 7.77 : -----Not Recorded----- : 174 : 87 : 28.540

33.23 : 3656 : 3.41 : 1750 : 6.86 : ----- " " ----- : 184 : 85 : 28.665

32.24 : 3008 : 4.02 : 1748 : 5.41 : ----- " " ----- : 192 : 94 : 28.660

TEST H RATED LOAD. TEN HOURS. Second GEAR.

28.50 : 3117 : 3.43 : 1750 : 6.26 : 4.262 : 6.69 : 1.036 : 0.022 : 194 : 61 : 28.835

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. WKE1979 Type 6 cylinder, vertical
 Head I Mounting Crankshaft lengthwise
 Bore and stroke: 3 3/4" x 4 1/2" Rated R.P.M. 1750
 Port Diam. Valves: Inlet 1 5/8" Exhaust 1 1/2"
 Belt pulley: Diam. 16 3/4" Face 9" R.P.M. 645
 Magneto Own Model F6
 Carburetor Zenith Model 50-AY12 Size 1 1/2"
 Governor Own Type Centrifugal
 Air Cleaner Own Type Oil-washed, wire-filter
 Lubrication Pressure

CHASSIS: Type 4 wheels, 2 drivers Serial No. WKC4625 Drive Enclosed gear
 Clutch Own Type Single-plate, dry Operated by Foot pedal
 Advertised speeds, miles per hour: First 2.375 Second 3.125
 Third 3.625 Reverse 2.25
 Drive wheels: Diam. 50" Face 12"
 Lugs: Type Spade No. per wheel 32 Size 5" high x 3 1/2" face
 Extension rims: Width 6" Lugs per rim 16
 Size lugs 5" high x 3 1/2" face
 Seat Pressed steel
 Total weight as tested (with operator) 7625 pounds.

FUEL AND OIL:
 Fuel Distillate Weight per gallon 6.93 pounds.
 Oil S.A.E. Viscosity No. 40
 Total oil to motor 2.719 gallons
 Total drained from motor 2.046 gallons
 Total time motor was operated 63 hours

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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. 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 97.5% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 35.22 Belt 49.76

Sea level (calculated) maximum horsepower Drawbar 37.79 Belt 52.70
 (Based on 60° F. and 29.92" Hg.)

Highest permissible horsepower ratings Drawbar 28.34 Belt 44.80
 (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. 269.

Carlton L. Zink
 Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
 Board of Tractor Test Engineers