January 1936

Test 264: Farmall F-20

Nebraska Tractor Test Laboratory Collected by Larsen Museum

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Copy of Report of Official Tractor Test No. 264

**Dates of test:** July 20 to 29, 1936.

**Name and model of tractor:** McCormick-Deering Farmall F-20

**Manufacturer:** International Harvester Company, Chicago, Illinois.

**Manufacturer's rating:** NOT RATED.

### Brake Horse Power Tests

<table>
<thead>
<tr>
<th>H.P.</th>
<th>Fuel Consumption</th>
<th>Water Consumption</th>
<th>Temp.</th>
<th>Deg. F.</th>
<th>Barometer</th>
<th>Speed</th>
<th>Gals.</th>
<th>H.P.</th>
<th>lbs. per</th>
<th>Cool</th>
<th>In.</th>
<th>Cool</th>
<th>Inches of</th>
<th>R.P.M. per hour</th>
<th>H.P.</th>
<th>ing</th>
<th>fuel</th>
<th>Total</th>
<th>ing</th>
<th>Air</th>
<th>Mercury</th>
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<td>3.114</td>
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<td>0.000</td>
<td>209</td>
<td>94</td>
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<td>2.728</td>
<td>9.82</td>
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</tbody>
</table>

*20 minute runs. Last line is average for two hours.*

### Draw Bar Horse Power Tests

<table>
<thead>
<tr>
<th>H.P.</th>
<th>Speed</th>
<th>Crank</th>
<th>Slip</th>
<th>Fuel Consumption</th>
<th>Water</th>
<th>Temp.</th>
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<tbody>
<tr>
<td>20.47</td>
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<td>3.74</td>
<td>1202</td>
<td>5.57</td>
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<td>18.76</td>
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<td>18.97</td>
<td>2307</td>
<td>3.08</td>
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<td>8.56</td>
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<tr>
<td>18.68</td>
<td>1896</td>
<td>3.70</td>
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<td>18.20</td>
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<td>4.41</td>
<td>1196</td>
<td>4.38</td>
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<td>210</td>
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</tbody>
</table>

*20 minute runs. Last line is average for two hours.*
UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 264

BRIEF SPECIFICATIONS

MOTOR:
Make: Own Serial No. FA-59794 Type: 4 cylinder, vertical

Head: I Mounting: Crankshaft lengthwise

Bore and stroke: 3 3/4" x 5" Rated R.P.M.: 1200

Port Diam. Valves: Inlet 1.562 Exhaust 1.562

Belt pulley: Diam. 15 1/4" Face 6 1/2" R.P.M. 654

Magneto: Own Model: F4

Carburetor: Zenith Model: K-5 Size: 1 1/4"

Governor: Own No. -- Type: Centrifugal

Air Cleaner: Own Type: Oil-washed, wire-filter

Lubrication: Circulating splash

CHASSIS:
Type: 4 wheels, 2 drivers Serial No. FA-59794 Drive: Enclosed gear

Clutch: Own Type: Single-plate, dry Operated by: Foot pedal

Advertised speeds, miles per hour:

First 2.25 Second 2.75

Third 3.25 Fourth 3.75 Reverse 2.75

Drive wheels: Diam. 42" Face 12"

Lugs: Type: Spade No. per wheel: 12 Size: 3 1/2" face x 5" high

Seat: Pressed steel

Total weight as tested (with operator) 4400 pounds.

FUEL AND OIL:

Fuel: Distillate Weight per gallon: 6.90 pounds.

Oil: S.A.E. Viscosity No. 40

Total oil to motor 3.204 gallons

Total drained from motor 4.901 gallons

Total time motor was operated 50 hours

The oil was drained to the middle crankcase petcock after each 10 hours of operation and 2 quarts of new oil was added. The oil was completely drained at the end of the test.
REPAIRS AND ADJUSTMENTS

During the limber-up test it was found that the hook on one end of the clutch pedal return spring was broken. The end of the spring was bent to form a new hook.

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 95.7% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 20.47 Belt 27.97
Sea level (calculated) maximum horsepower
(Based on 60°F. and 29.92" Hg.)

Drawbar 22.03 Belt 38.15

Highest permissible horsepower ratings
(As recommended by A.S.A.E. and S.A.E. codes)

Drawbar 16.52 Belt 25.63

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 264.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers