January 1934

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

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/tractormuseumlit

Part of the Applied Mechanics Commons

http://digitalcommons.unl.edu/tractormuseumlit/838

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - 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'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 throughout this test.

### Drawbar Horse Power Tests

<table>
<thead>
<tr>
<th>H. P.</th>
<th>Drawbar Horse Power</th>
<th>Cool-2 / Air</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.16</td>
<td>1700</td>
</tr>
</tbody>
</table>

**Rated Load Test. Ten Hours, Second Gear**

| H. P. | 10.52 | 1250 | 3.16 | 1700 | 2.19 | 6.33 | 0.972 | 0.054 | 190 | 52 | 28.500 |

**Maximum Load Test**

<table>
<thead>
<tr>
<th>H. P.</th>
<th>13.52</th>
<th>2140</th>
<th>2.77</th>
<th>1701</th>
<th>3.63</th>
<th>------</th>
<th>Not Recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.65</td>
<td>1607</td>
<td>3.15</td>
<td>1703</td>
<td>2.57</td>
<td>------</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>11.57</td>
<td>1086</td>
<td>4.07</td>
<td>1699</td>
<td>2.02</td>
<td>------</td>
<td>&quot;</td>
<td></td>
</tr>
</tbody>
</table>

---

**Braking Horse Power Tests**

| H. P. | 17.65 | 1700 | 1.752 | 10.07 | 0.611 | 0.000 | 0.000 | 193 | 60 | 29.170 |

**Rated Load Test. One Hour**

| H. P. | 16.17 | 1700 | 1.653 | 9.78 | 0.629 | 0.000 | 0.000 | 0.000 | 193 | 61 | 29.120 |

**Varying Load Test. Two Hours**

| H. P. | 16.21 | 1699 | 1.65 | 9.81 | 0.627 |------|------|------|------|------|------|
|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 0.73  | 1612  | 0.834 | 0.89 | 7.027 |------|------|------|------|------|------|
| 8.49  | 1757  | 1.195 | 7.10 | 0.866 |------|------|------|------|------|------|
| 17.08 | 1633  | 1.721 | 9.92 | 0.620 |------|------|------|------|------|------|
| 4.25  | 1795  | 0.975 | 4.36 | 1.412 |------|------|------|------|------|------|
| 12.43 | 1739  | 1.424 | 0.735 |------|------|------|------|------|------|------|
| 3.87  | 1739  | 1.300 | 7.59 | 0.811 |------|------|------|------|------|------|

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

---

**Operating Maximum Load Test. One Hour**

| H. P. | 17.65 | 1700 | 1.752 | 10.07 | 0.611 | 0.000 | 0.000 | 193 | 60 | 29.170 |
**BRIEF SPECIFICATIONS**

**MOTOR:**
- Make: Own
- Serial No.: WS 637
- Type: 4 Cylinder, Vertical
- Head: I
- Mounting: Longhwise
- Bore and stroke: 3" x 4"
- Rated R.P.M.: 1700
- Port Dia. 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: 1.588 gallons
- Total time motor was operated: 33 hours

The oil was drained once - at the end of the test.
At the end of the rated load drawbar test the manifold bolt, which holds the choke rod bracket, was found to be loose.

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. Brockott

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers