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Test 931: International 4100 (Diesel)

Tractor Museum

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# NEBRASKA TRACTOR TEST 931 - INTERNATIONAL 4100 DIESEL

## DRAWBAR PERFORMANCE

<table>
<thead>
<tr>
<th>Hp</th>
<th>Drawbar pull lbs</th>
<th>Speed miles/hr</th>
<th>Crankshaft speed rpm</th>
<th>Slip of drivers %</th>
<th>Fuel Consumption Lb GAL Drained</th>
<th>Air Airways Air Temp Degrees F Barometer inches of Mercury</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% of Pull at Maximum Power</td>
<td>100% of Maximum Power</td>
<td>5% of Pull at Maximum Power</td>
<td>75% of Pull at Maximum Power</td>
<td>50% of Pull at Maximum Power</td>
<td>25% of Pull at Maximum Power</td>
<td>10% of Pull at Maximum Power</td>
</tr>
</tbody>
</table>

### MAXIMUM POWER WITH BALLAST

- **78.30 HP**
- **10525 lb**
- **19100 lb**
- **348 inches**

### MAXIMUM POWER WITHOUT BALLAST

- **115.42 HP**
- **111.90 HP**
- **107.80 HP**
- **114.58 HP**

### VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST

- **Maximum Available Power—Two Hours—4th Gear**
- **75% of Pull at Maximum Power—Ten Hours—4th Gear**
- **50% of Pull at Maximum Power—Two Hours—4th Gear**

### VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—4th Gear

- **Pounds pull**
- **7501 lb**
- **8300 lb**
- **9110 lb**

### TIRES, BALLAST and WEIGHT

<table>
<thead>
<tr>
<th>Rear tires</th>
<th>Ballast</th>
<th>No, size, ply &amp; psi</th>
<th>Two 18.4-30; 8</th>
<th>20</th>
<th>1205 lb each</th>
<th>None</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front tires</td>
<td>Ballast</td>
<td>No, size, ply &amp; psi</td>
<td>Two 18.4-30; 8</td>
<td>20</td>
<td>758 lb each</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Height of drawbar</td>
<td></td>
<td>15 inches</td>
<td></td>
<td></td>
<td></td>
<td>16½ inches</td>
<td></td>
</tr>
<tr>
<td>Static weight</td>
<td></td>
<td>Rear</td>
<td>8900 lb</td>
<td></td>
<td>5690 lb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total weight with operator</td>
<td></td>
<td></td>
<td>19100 lb</td>
<td></td>
<td>15175 lb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MAXIMUM POWER WITH BALLAST—4th Gear

- **Horsepower**
- **116.15 HP**
- **115.77 HP**
- **110.82 HP**

### MAXIMUM POWER WITHOUT BALLAST—4th Gear

- **Horsepower**
- **115.42 HP**
- **111.90 HP**
- **107.80 HP**

### DRAWBAR PERFORMANCE—4th Gear

- **Crankshaft speed, rpm**
- **2393 2160 1918 1678 1445 1201**

### Slip of drivers, %

- **3.93 4.42 4.69 4.83 4.69 4.55**

### TIRES, BALLAST and WEIGHT

- **Height of drawbar**
- **15 inches**
- **16½ inches**

### REPAIRS and ADJUSTMENTS

- **No repairs**

### REMARKS

- **All test results were determined from observed data obtained in accordance with the SAE and ASAE test code.**
- **Seventh and eighth gears were not run as they exceeded 15 mph.**

- **The undersigned, certify that this is a true and correct report of official Tractor Test 931.**
- **L. F. LARSEN**
- **Engineer-in-Charge**
- **G. W. STEINBRUEGGE, Chairman**
- **J. J. SULEK**
- **D. E. LANE**
- **Board of Tractor Test Engineers**

The University of Nebraska Agricultural Experiment Station

E. F. Frolik, Dean; H. H. Kramer, Director, Lincoln, Nebraska

Department of Agricultural Engineering

**Dates of Test:** NOVEMBER 19 TO NOVEMBER 24, 1965

**Manufacturer:** INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILLINOIS

**FUEL, OIL and TIME**

- **Fuel No 2 diesel**
- **Cetane No 57.0 (rating taken from oil company's typical inspection data)**
- **Specific gravity converted to 60°/60° = 0.8512**
- **Weight per gallon = 6.920 lb**
- **Oil SAE 30 API service classification MS, DG, DS To motor 5.850 gal Drained from motor 2.807 gal**
- **Transmission lubricant IH HyTran fluid Final drive lubricant SAE 90 Type multi-purpose lubricant**
- **Total time engine was operated = 354½ hours.**

**ENGINE**

- **Make International diesel Type 6 cylinder vertical with turbocharger Serial No DT 429 10007**
- **Crankshaft mounted lengthwise Bore and stroke = 4.42 x 4.42 /60°**
- **Compression ratio = 16.0 to 1**
- **Displacement = 429 cu in Crank system = 12 volt electric (two 6-volt batteries)**
- **Lubrication pressure Air cleaner Primary air filter with replaceable pleated paper element Oil filter* cool engine coolant heat exchanger for crankcase oil and radiator for transmission and hydraulic oil Fuel filter**
- **Primary filter with replaceable pleated paper element Oil cooler**
- **Muffler was not used Cooling medium temperature control thermostat.**

**CHASSIS Type 4-wheel drive Serial No 502**

- **Rated rpm 2400**
- **Bore and stroke = 4.42 x 4.42 /60°**
- **Center of gravity = 63.0° Vertical distance above roadway = 39.5°**
- **Horizontal distance from center of rear wheel**
- **Hydraulic control system**
- **Direct engine drive Transmission selective gear fixed ratio Advertised speeds mph**
- **Transmission and hydraulic oil Fuel filter**

**REMARKS**

- **All test results were determined from observed data obtained in accordance with the SAE and ASAE test code.**

- **Seventh and eighth gears were not run as they exceeded 15 mph.**

- **The undersigned, certify that this is a true and correct report of official Tractor Test 981.**

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

J. J. SULEK

D. E. LANE

Board of Tractor Test Engineers

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