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Nebraska Tractor Tests

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Larsen

January 1928

Test 150: Caterpillar Model 20 20-25

Tractor Museum

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 150

Dates of test: May 17 to 29, 1928

Name, model and rating of tractor: Caterpillar "20" 20-25

Manufacturer: Caterpillar Tractor Co., San Leandro, California.

B R A K E H O R S E P O W E R T E S T S

| H. P. | :Crank :shaft :speed :R.P.M. | : Fuel Consumption :Gals. :per :hour | :H. P. :Lbs.⊙ :H.P. :hour | :Water consumption :per hour gallons :Cool-:In :fuel :Total :ing :med. | :Temp. :Deg. F. :Cool- :ing :Air | :Barometer :Inches of :mercury |
|--|---------------------------------------|---|------------------------------------|--|--|--------------------------------------|
| OPERATING MAXIMUM LOAD TEST. ONE HOUR (98% of maximum load) | | | | | | |
| 29.49 | : 1102 | : 3.333 | : 8.85 | : 0.699 | : 0.0 : 0.0 : 0.0 | : 181 : 82 : 28.92 |
| RATED LOAD TEST. ONE HOUR | | | | | | |
| 25.23 | : 1102 | : 3.036 | : 8.31 | : 0.744 | : 0.0 : 0.0 : 0.0 | : 181 : 86 : 28.92 |
| VARYING LOAD TEST. TWO HOURS | | | | | | |
| 25.29 | : 1104 | : 3.029 | : 8.35 | : 0.740 | : 0.0 : 0.0 : 0.0 | : 181 : 86 : 28.91 |
| 1.29 | : 1184 | : 1.825 | : 0.71 | : 8.744 | : 0.0 : 0.0 : 0.0 | : 157 : 85 : 28.91 |
| 13.27 | : 1156 | : 2.379 | : 5.58 | : 1.108 | : 0.0 : 0.0 : 0.0 | : 170 : 37 : 28.91 |
| 25.96 | : 1096 | : 3.097 | : 8.38 | : 0.737 | : 0.0 : 0.0 : 0.0 | : 180 : 86 : 28.91 |
| 6.81 | : 1185 | : 2.049 | : 3.32 | : 1.859 | : 0.0 : 0.0 : 0.0 | : 166 : 88 : 28.91 |
| 19.35 | : 1125 | : 2.670 | : 7.25 | : 0.853 | : 0.0 : 0.0 : 0.0 | : 178 : 88 : 28.91 |
| 15.60 | : 1139 | : 2.508 | : 6.22 | : 0.994 | : 0.0 : 0.0 : 0.0 | : 173 : 87 : 28.91 |

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 :pull :pounds | :Speed :miles :per :hour | :Crank :shaft :speed :R.P.M. | :Slip :on :drive :wheels :% | : Fuel Consumption :Gal. :hr. :per :hour | :Water :Lbs. :used :Gal. :per :hour | :Temp. :Deg. F. :Cool-:Air :ing :med. | :Barometer :Inches of :mercury |
|--|-----------------------------------|-----------------------------------|---------------------------------------|---|--|--|---|--------------------------------------|
| RATED LOAD TEST. TEN HOURS. <u>Intermediate</u> GEAR | | | | | | | | |
| 20.83 | : 2556 | : 3.06 | : 1099 | : 0.45 | : 2.957 | : 7.04 | : 0.878 | : 0.0 : 181 : 83 : 28.81 |
| MAXIMUM LOAD TEST | | | | | | | | |
| 24.77 | : 3006 | : 3.09 | : 1111 | : 0.52 | : ---- | : Not Recorded | : ---- | : 181 : 82 : 28.80 |
| 26.32 | : 5721 | : 1.725 | : 1100 | : 4.37 | : " | : " | : " | : 177 : 79 : 28.60 |
| 23.15 | : 1860 | : 4.67 | : 1103 | : 0.40 | : " | : " | : " | : 169 : 87 : 28.60 |

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. L436 Type 4 Cylinder Vertical
Head "I" Mounting Lengthwise
Bore and stroke: 4 x 5 1/2 in. Rated R.P.M. 1100
Port Dia. Valves: Inlet 1-5/8" Exhaust 1-7/16"
Belt Pulley: Diam. 11-5/8 in. Face 6 1/2 R.P.M. 1100
Magneto: Eisemann Model G4
Carburetor: Ensign Model AE Size 1 1/4
Governor: Own No. ----- Type Flyball
Air Cleaner: Pomona Type Oil Spray
Lubrication: Pressure and Splash

CHASSIS: Type: Crawler Serial No. L436 Drive Enclosed gear
Clutch: Own make Type Single plate operated by hand
Advertised speeds, miles per hour: Low 1.79
Intermediate 3.07 High 4.67 Reverse 2.35
Tracks Length 16.34' Face 11"
Lugs: Type Angles No. per Track 29 Size 1 1/2" High
Extension rims: Width ----- Seat Upholstered
Total weight as tested (with operator) 7822 pounds

FUEL AND OIL

Fuel: Gasoline Weight per gallon 6.18
Oil: Mobiloil B To fill crankcase 4 gallon
Additional amount used during test None
Total number of hours of test 41

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REPAIRS AND ADJUSTMENTS

NONE

REMARKS

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.

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.

The results of this test indicate that the rating of this tractor does not exceed the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 150.

Lew Wallace
Engineer-in-Charge

Oscar W. Sjogren

E. E. Brackett

C. W. Smith
Board of Tractor Test Engineers