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January 1929

## Test 159: Caterpillar Model 15 15-20

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 159

Dates of test: May 9th to 14th, 1929.

Name, model and rating of tractor: Caterpillar "15" 15-20

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 :	: Fuel Consumption : : Gals. : : H. P. : : R.P.M. : : per : : hour :	: Lbs. @ : : H.P. : : ing :	: Water consumption : : per hour gallons :	: Cool- : : In : : fuel : : Total : : med. :	: Temp. : : Deg. F. :	: Barometer : : Inches of : : Mercury :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR ( 96.4% of maximum load)

24.77	: 1249	: 3.005	: 8.24	: 0.748	: 0.0	: 0.0	: 0.0	: 182	: 71	: 28.70
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RATED LOAD TEST. ONE HOUR

20.04	: 1250	: 2.626	: 7.63	: 0.808	: 0.0	: 0.0	: 0.0	: 202	: 72	: 28.65
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\*VARYING LOAD TEST. TWO HOURS

20.04	: 1250	: 2.655	: 7.55	: 0.817	: 0.0	: 0.0	: 0.0	: 201	: 73	:
0.73	: 1244	: 1.167	: 0.63	: 9.863	: 0.0	: 0.0	: 0.0	: 188.5	: 71	:
10.35	: 1287	: 1.887	: 5.48	: 1.125	: 0.0	: 0.0	: 0.0	: 201.5	: 71.5	:
20.88	: 1243	: 2.713	: 7.70	: 0.802	: 0.0	: 0.0	: 0.0	: 198.5	: 72	:
5.26	: 1305	: 1.517	: 3.47	: 1.779	: 0.0	: 0.0	: 0.0	: 192.5	: 72	:
14.93	: 1239	: 2.159	: 6.92	: 0.892	: 0.0	: 0.0	: 0.0	: 199	: 72	:
12.11	: 1261	: 2.016	: 6.01	: 1.027	: 0.0	: 0.0	: 0.0	: 197	: 72	: 28.68

\*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 : : % :	: Fuel Consumption : : H. P. : : Lbs. : : per : : Gal. : : hr. : : per : : gal. : : hour :	: Water : : used : : Gal. : : per : : hour :	: Temp. : : Cool- : : Air : : ing : : med. :	: Barometer : : Inches of : : Mercury :
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RATED LOAD TEST. TEN HOURS Intermediate GEAR

15.00	: 2179	: 2.58	: 1255	: 0.57	: 2.596	: 5.78	: 1.068	: 0.0	: 195	: 79	: 28.68
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MAXIMUM LOAD TEST

21.79	: 3175	: 2.57	: 1251	: 1.60	: ----- Not Recorded -----			: 183	: 70	: 28.90
21.29	: 4166	: 1.92	: 1258	: 4.31	: ----- " " -----			: 193	: 70	: 28.90
19.46	: 2039.5	: 3.58	: 1263	: 0.84	: ----- " " -----			: 188	: 69	: 28.87

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. PV14 Type 4 Cylinder Vertical  
Head "L" Mounting Lengthwise  
Bore and stroke:  $3\frac{3}{4}$  x 5 in. Rated R.P.M. 1250  
Port Dia. Valves: Inlet  $1\frac{5}{8}$ " Exhaust  $1\frac{7}{16}$ "  
Belt pulley: Diam.  $10\frac{1}{2}$  in. Face  $6\frac{1}{2}$  in. R.P.M. 950  
Magneto: Eisemann Model "G4"  
Carburetor: Ensign Model "BeV" Size 1"  
Governor: Own No. - - - - - Type Fly-ball  
Air Cleaner: Pomona "Vortox" Type Oil filter  
Lubrication: Pressure and Splash

CHASSIS: Type Crawler Serial No. PV14 Drive enclosed gear  
Clutch: Own Type single plate operated by foot  
Advertised speeds, miles per hour: Low 1.985  
Intermediate 2.58 High 3.568 Reverse 2.06  
Tracks: Length 15.31' Face 10"  
Lugs: Integral with shoe Shoes per track 30  
Extension rims: Width none Seat Upholstered  
Total weight as tested (with operator) 5931 pounds.

FUEL AND OIL

Fuel: Gasoline Weight per gallon 6.17  
Oil: Mobiloil BB To fill crankcase  $2\frac{1}{2}$  gallons  
Additional amount used during test None  
Total number of hours of test 37

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

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. 159.

Lew Wallace  
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis

Board of Tractor Test Engineers