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Larsen

January 1934

Test 224: Caterpillar Model R-5

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 224

Dates of test: July 12 to 20, 1934.

Name and model of tractor: "CATERPILLAR" "R-5"

Manufacturer: Caterpillar Tractor Company, Peoria, Illinois.

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 - 41.24 H.P. Belt - 54.64 H.P.

One carburetor setting (98.9% of maximum) was used thruout this test.

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 :	: Water Consumption :	: Temp. :	: Barometer :
:speed :	:Gals. :	: H. P. :	: per hour gallons :	: Deg. F. :	:Inches of :
:R.P.M. :	: per :	: hrs. per :	: H. P. :	: Cool- : : ing :	: Cool- : : ing :
:	: hour :	: gal. :	: hour :	: fuel : : Total :	: Air : : Mercury :
:	:	:	:	: med. : :	:

OPERATING MAXIMUM LOAD TEST. ONE HOUR

58.89	: 950	: 6.112	: 9.64	: 0.640	: 0.000	: 0.000	: 0.000	: 199	: 111	: 28.835
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RATED LOAD TEST. ONE HOUR

54.83	: 950	: 5.684	: 9.65	: 0.640	: 0.000	: 0.000	: 0.000	: 198	: 114	: 28.820
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*VARYING LOAD TEST. TWO HOURS

54.97	: 952	: 5.684	: 9.67	: 0.638	: --	: --	: --	: 200	: 116	: --
0.63	: 997	: 2.222	: 0.28	: 21.762	: --	: --	: --	: 166	: 115	: --
28.16	: 978	: 3.909	: 7.20	: 0.857	: --	: --	: --	: 179	: 117	: --
57.83	: 935	: 6.112	: 9.46	: 0.652	: --	: --	: --	: 201	: 116	: --
14.38	: 989	: 2.990	: 4.81	: 1.283	: --	: --	: --	: 176	: 114	: --
41.67	: 978	: 4.823	: 8.64	: 0.714	: --	: --	: --	: 186	: 115	: --
32.94	: 971	: 4.290	: 7.68	: 0.804	: 0.000	: 0.000	: 0.000	: 184	: 115	: 28.800

*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 :	: Speed :	: Crank :	: Slip :	: Fuel Consumption :	: Water :	: Temp. :	: Barometer :
: pull :	: bar :	: miles :	: shaft :	: on :	: H. P. :	: Lbs. :	: used :	: Inches of :
: pounds :	: per :	: hour :	: speed :	: drive :	: Gal. :	: hour :	: per :	: Air :
:	:	:	: R.P.M. :	: wheels :	: per :	: per :	: H.P. :	: Mercury :
:	:	:	:	: % :	: hour :	: gal. :	: hour :	: med. : :

RATED LOAD TEST. TEN HOURS. SECOND GEAR.

41.29	: 5649	: 2.74	: 950	: 1.30	: 5.511	: 7.49	: 0.824	: 0.000	: 187	: 103	: 28.540
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MAXIMUM LOAD TEST

48.93	: 10384	: 1.77	: 945	: 5.96	: -----	: Not Recorded	: -----	: -----	: 178	: 85	: 28.660
49.44	: 6778	: 2.74	: 952	: 1.73	: -----	: " "	: -----	: -----	: 188	: 96	: 28.660
48.20	: 5049	: 3.58	: 950	: 1.32	: -----	: " "	: -----	: -----	: 191	: 101	: 28.660
44.83	: 3288	: 5.11	: 952	: 0.77	: -----	: " "	: -----	: -----	: 185	: 106	: 28.660

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 5E3001 Type 4 Cylinder, Vertical
Head I Mounting Lengthwise
Bore and stroke: 5 1/2" x 6 1/2" Rated R.P.M. 950
Port Dia. Valves: Inlet 1 5/8" Exhaust 1 5/8"
Belt pulley: Diam. 12" Face 8 1/2" R.P.M. 950
Magneto: Eisemann Model G T 4
Carburetor: Ensign Model K e d Size 1 1/2"
Governor: Own No. None Type Centrifugal Flyball
Air Cleaner: Own under Vortex patent Type Combination oil and centrifugal
Lubrication: Pressure

CHASSIS: Type Tracklayer Serial No. 5E3001 Drive Enclosed gear
Clutch: Own Type Single plate - dry operated by Hand lever
Advertised speeds, miles per hour: First 1.9 Second 2.8
Third 3.6 Fourth 5.1 Reverse 2.1
Measured length of track: 19.199 feet Face 18 inches
Lugs: Type Cleats integral with shoes No. per track 34 Size 18" x 1 7/8"
Extension rims: None
Seat: Upholstered
Total weight as tested (with operator) 13,675 pounds.

FUEL AND OIL:

Fuel: Gasoline Weight per gallon 6.17 pounds
Oil: S. A. E. Viscosity No. 40 The oil was drained once -
at the end of the test.
Total oil to motor 3.701 gallons
Total drained from motor 3.060 gallons
Total time motor was operated 41 hours

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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.

The track and lug equipment used in the drawbar tests is the same as that described 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. 224.

Carlton L. Zink

Engineer-in-charge

E. E. Brackett

C. W. Smith

E. E. Lewis

Board of Tractor Test Engineers