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Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F. Larsen

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January 1932

## Test 206: Caterpillar Model 35

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. 206

Dates of test: June 6 to 24, 1932.  
 Name and model of tractor: CATERPILLAR "35"  
 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 - 29.15 H.P. Belt - 39.58 H.P.  
 One carburetor setting (98.8% of maximum) was used throughout 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
		:Gals. : H.P. : Lbs. @	: per hour gallons	: Deg. F.	
		:speed: hrs. @: H.P.	: Cool- : In :	: Cool-:	: Inches of
		:R.P.M.: per	: ing : fuel : Total:	: ing : Air :	: Mercury
		: : hour : gal. : hour	: : : : med. : :		

OPERATING MAXIMUM LOAD TEST. ONE HOUR

43.80 : 850 : 4.924 : 8.90 : 0.682 : 0.00 : 0.00 : 0.00 : 181 : 75 : 28.850
---

RATED LOAD TEST. ONE HOUR

39.79 : 850 : 4.399 : 9.05 : 0.671 : 0.00 : 0.00 : 0.00 : 183 : 76 : 28.850
---

\*VARYING LOAD TEST. TWO HOURS

39.85 : 854 : 4.359 : 9.14 : 0.664 : -- : -- : -- : 184 : 77 : --
0.65 : 947 : 1.928 : 0.34 : 18,000 : -- : -- : -- : 178 : 78 : --
21.65 : 923 : 3.084 : 7.02 : 0.865 : -- : -- : -- : 181 : 77 : --
40.41 : 787 : 4.567 : 8.85 : 0.686 : -- : -- : -- : 186 : 77 : --
11.02 : 933 : 2.540 : 4.34 : 1.399 : --- : --- : --- : 183 : 77 : --
30.43 : 870 : 3.687 : 8.25 : 0.735 : -- : -- : -- : 178 : 77 : --
24.99 : 885 : 3.361 : 7.44 : 0.816 : 0.00 : 0.00 : 0.00 : 181 : 77 : 28.835

\*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
	:Bar :miles :shaft: on :	: H.P. :Lbs. :used :	: Gal. :Cool-:Air	: Inches of	
	:pull :per :speed:drive	:Gal. : hour :per	:Gal. :per	: ing :	: Mercury
	:pounds:hour :R.P.M.:wheels	:per : per :H.P. :per	:per	: med. : :	
	: : : : %	:hour : gal. :hour :hour			

RATED LOAD TEST. TEN HOURS. SECOND GEAR.

29.37 : 4470 : 2.46 : 850 : 0.87 : 3.789 : 7.75 : 0.783 : 0.00 : 180 : 85 : 28.750
--

MAXIMUM LOAD TEST

35.77 : 8169 : 1.64 : 849 : 2.82 : ----- : Not Recorded----- : 189 : 96 : 28.875
36.22 : 5542 : 2.45 : 849 : 1.21 : ----- : " " ----- : 190 : 92 : 28.890
34.42 : 4005 : 3.22 : 852 : 0.95 : ----- : " " ----- : 192 : 94 : 28.895
31.36 : 2574 : 4.57 : 850 : 0.75 : ----- : " " ----- : 189 : 94 : 28.895

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 5 C 107 Type 4 Cylinder, Vertical  
Head I Mounting Lengthwise  
Bore and stroke: 4 7/8" x 6 1/2" Rated R.P.M. 850  
Port Dia. Valves: Inlet 1 5/8" Exhaust 1 5/8"  
Belt pulley: Diam. 12" Face 8 1/2" R.P.M. 850  
Magneto: Eisemann Model G V 4  
Carburetor: Ensign Model A e S c Size 1 1/2"  
Governor: Own No. None Type Flyball  
Air Cleaner: Own under Vortex patents Type Centrifugal, oil and matted wire  
Lubrication: Pressure

CHASSIS: Type Tracklayer Serial No. 5 C 107 Drive Enclosed gear  
Clutch: Own Type Single plate - dry operated by hand lever  
Advertised speeds, miles per hour: First 1.7 Second 2.5  
Third 3.2 Fourth 4.6 Reverse 1.9  
Measured length of track 19.210 feet Face 14 inches  
Lugs: Type Cleats integral with shoes No. per track 34 Size 14" x 1 3/4"  
Extension rims: None  
Seat: Upholstered  
Total weight as tested (with operator) 12830 pounds.

FUEL AND OIL:

Fuel: Gasolino Weight per gallon 6.07 pounds  
Oil: S.A.E. Viscosity No. 50 The oil was drained once -  
at the end of the test.  
Total oil to motor 3.978 gallons  
Total drained from motor 3.752 gallons  
Total time motor was operated 39 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. 206.

Carlton L. Zink  
\_\_\_\_\_  
Engineer-in-charge

E. E. Brackett  
\_\_\_\_\_

C. W. Smith  
\_\_\_\_\_

E. B. Lewis  
\_\_\_\_\_  
Board of Tractor Test Engineers