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January 1937

## Test 287: Allis-Chalmers Model L-0

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. 287

Dates of test: September 9 to 22, 1937.

Name and model of tractor: ALLIS-CHALMERS L-0

Manufacturer: Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin.

Manufacturer's rating: NOT RATED.

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			Water Consumption per hour gallons			Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.	Cool- ing	In fuel	Total	Cool- ing med.	Air	

TESTS B AND C - MAXIMUM LOAD - TWO HOURS

91.56	1049	7.351	12.46	0.560	0.000	0.000	0.000	130	55	29.075
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\*TEST D - ONE HOUR

79.92	1049	6.649	12.02	0.581	0.000	0.000	0.000	129	59	29.070
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

79.91	1045	6.597	12.11	0.576	--	--	--	136	64	--
1.02	1140	2.742	0.37	18.765	--	--	--	152	64	--
41.84	1090	4.586	9.12	0.765	--	--	--	155	64	--
88.58	1031	7.203	12.30	0.568	--	--	--	145	66	--
21.38	1109	3.593	5.95	1.173	--	--	--	155	65	--
61.23	1063	5.484	11.17	0.625	--	--	--	157	64	--
48.99	1080	5.035	9.73	0.717	0.000	0.000	0.000	150	64	29.060

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 hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used Gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per hr.	H. P. per gal.	Lb. per H.P. hr.		Cool- ing med.	Air	

TESTS F AND G - MAXIMUM LOAD

76.42	20273	1.41	1050	4.83	-----	Not Recorded		-----	140	69	29.020
76.75	15341	1.88	1052	3.44	-----	"	"	-----	155	78	28.960
70.77	10167	2.61	1049	2.55	-----	"	"	-----	185	90	28.760
70.04	7598	3.46	1051	1.46	-----	"	"	-----	170	86	28.800
65.66	5067	4.86	1049	0.95	-----	"	"	-----	150	74	29.010
57.12	3360	6.38	1051	0.70	-----	"	"	-----	150	74	29.020

\*TEST H - TEN HOURS - Second GEAR

61.08	12077	1.90	1050	2.17	6.252	9.77	0.714	0.000	161	93	28.845
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\*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Commercial diesel fuel Weight per gallon 6.98 pounds  
Oil: S.A.E. No. 30 To motor 6.299 gal. Drained from motor 5.072 gal.  
Total time motor was operated 48 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 1.48 Second 1.94 Third 2.68  
Fourth 3.50 Fifth 4.90 Sixth 6.41 Reverse 1.72 and 2.25

Belt pulley: Diameter 20" Face 15" R.P.M. 580

Clutch Own Type Double-plate, dry Operated by Hand

Seat Upholstered

Total weight as tested (with operator) 24925 pounds  
6 cylinder, vertical, fuel  
MOTOR: Make Own Serial No. LO 15441 Type injection, spark ignition

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 5 1/4" x 6 1/2" Rated R.P.M. 1050

Port diameter valves: Inlet 2.25" Exhaust 1.875"

Fuel system: Make Deco Model PB - 200 - 3

Ignition system: Make Mallory Model MO 4 Type 90

Governor: Make Own Type Variable-speed, centrifugal

Air cleaner: Make United Type Oil-washed, steel-wool filter

CHASSIS: Type Tracklayer Serial No. LO 2459 Drive Enclosed gear

Tread width 68" Measured length of track 22.922'

Cleats: Type Integral with shoes No. per track 35

Size 2 1/2" high x 20" long

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REPAIRS AND ADJUSTMENTS

The fuel transfer pump pressure gauge failed during the maximum drawbar tests. It was replaced with another gauge.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with fuel pumps set to develop 15300 pounds observed maximum drawbar pull in second gear (selected by the manufacturer) and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with the same setting.
2. Observed maximum horsepower (tests F & B)      Drawbar 76.75    Belt 91.56
3. Sea level (calculated) maximum horsepower      Drawbar 80.66    Belt 93.76  
    (based on 60° F. and 29.92" Hg.)
4. Seventy-five per cent of calculated maximum Drawbar 60.50    Belt 79.70  
    drawbar horsepower and eighty-five per cent  
    of calculated maximum belt horsepower (form-  
    erly A.S.A.E. and S.A.E. ratings.)

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 287.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

Ivan D. Wood

L. W. Hurlbut  
Board of Tractor Test Engineers