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January 1948

Test 398: Allis-Chalmers Model G

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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Copy of Report of Official Tractor Test No. 398

Dates of test: July 16 to July 30, 1948

Name and model of tractor: ALLIS-CHALMERS G

Manufacturer: ALLIS-CHALMERS MANUFACTURING COMPANY, Milwaukee, Wisconsin

Manufacturer's rating: None

HORSEPOWER SUMMARY

	DRAWBAR	BELT
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	9.59	10.91
2. Observed maximum horsepower (tests F & B)	9.04	10.33
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	7.19	9.27

REMARKS

No repairs or adjustments.

FUEL, OIL and TIME

Fuel Gasoline Octane 74* Weight per gallon 6.168 pounds
Oil SAE No. 20 To motor 0.729 gal. Drained from motor 0.692 gal.
Total time motor was operated 45 hours

* Octane rating taken from oil company's typical inspection data.

We, the undersigned, certify that this is a true and correct report of official tractor test No. 398.

L. F. Larsen
 Engineer in Charge

C. W. Smith

F. D. Yung

L. W. Hurlbut
 BOARD OF TRACTOR TEST ENGINEERS

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All results shown on pages 2 and 3 were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower 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, H, and J were made with an operating setting of the carburetor (selected by the manufacturer) of 97.5% of maximum belt horsepower.

B E L T H O R S E P O W E R T E S T S

Horse- power	Crank shaft speed rpm	Fuel Consumption			Water used gal per hr	Temperature		Barometer Inches of Mercury
		gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med °F	Air °F	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

10.33	1798	1.173	8.81	0.700	0.00	198	75	28.750
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

10.07	1802	1.112	9.06	0.681	0.00	198	76	28.750
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*TEST D - ONE HOUR

9.37	1806	1.072	8.74	0.705	0.00	198	80	28.750
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

9.38	1807	1.060	8.85	0.697	- --	198	83	-- --
1.64	1899	0.655	2.50	2.463	- --	175	83	-- --
4.87	1869	0.841	5.79	1.066	- --	192	85	-- --
9.68	1726	1.099	8.81	0.700	- --	199	86	-- --
2.46	1883	0.710	3.46	1.780	- --	182	87	-- --
7.26	1861	0.934	7.77	0.793	- --	198	87	-- --
5.88	1841	0.884	6.65	0.928	0.00	191	85	28.760

* Formerly called RATED LOAD, see HORSEPOWER SUMMARY 3, page 1.

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

Horse- power	Draw bar pull lb	Speed mph	Crank shaft speed rpm	Slip on drive wheels %	Fuel Consumption			Water used gal per hr	Temperature		Barometer Inches of Mercury
					gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med °F	Air °F	

Rear wheels, tires and added weight used in Tests F, G, and H: Pressed Steel wheels; 6-30, 2 ply tires and no added weight per wheel.

TEST F - 100% MAXIMUM LOAD - 2nd GEAR

9.04	1096	3.09	1803	11.00	-----Not Recorded-----				190	78	28.700
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TEST G - OPERATING MAXIMUM LOAD

3.83	1143	1.26	1805	19.90	-----Not Recorded-----				174	84	28.970
5.92	1167	1.90	1799	13.15	" "				180	77	28.970
8.94	1062	3.16	1804	9.19	" "				188	73	28.970
8.86	512	6.49	1800	3.57	" "				189	78	28.750

*TEST H - TEN HOURS - 2nd GEAR

7.26	851	3.20	1799	7.80	0.950	7.64	0.807	0.00	192	89	28.848
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TEST J - OPERATING MAXIMUM LOAD - 2nd GEAR

8.96	1080	3.11	1800	10.30	-----Not Recorded-----				180	80	28.970
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* Formerly called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

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TIRES, WHEELS and WEIGHT

		Tests F, G, & H	Test J
Rear Wheel: Type		Pressed Steel	Pressed Steel
(each)			
	Liquid Ballast	None	None
	Added Cast Iron	None	None
Rear Tires: No. Size & Ply		2 6-30 2 ply	2 6-30 2 ply
	Type of Tread	Champion Ground Grip	Champion Ground Grip
	Make	Firestone	Firestone
	Air Pressure	12 lb	12 lb
Front Wheel: Type		Cast Disc	Cast Disc
(each)			
	Liquid Ballast	None	None
	Added Cast Iron	100 lb	None
Front Tires: No. Size & Ply		2 4.00-12 2 ply	2 4.00-12 2 ply
	Type of Tread	Triple Rib	Triple Rib
	Make	Goodyear	Goodyear
	Air Pressure	15 lb	15 lb
Height of Drawbar		12 1/2 inches	12 1/2 inches
Static Weight: Rear End		1080 lb	1080 lb
	Front End	484 lb	284 lb
Total Weight as Tested (with Operator)		1749 lb	1549 lb

