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January 1938

Test 310: M-M Twin City Model UTS (Gasoline)

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 310

Dates of test: October 24 to November 16, 1938.
Name and model of tractor: M-M TWIN CITY UTS (Gasoline)
Manufacturer: Minneapolis-Moline Power Implement Company, Minneapolis, Minnesota.
Manufacturer's rating: NOT RATED.

B E L T 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 used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.		Cool- ing med.	Air	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

42.88	1274	4.112	10.43	0.589	0.000	182	75	29.000
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

41.67	1273	3.725	11.19	0.549	0.000	185	80	28.950
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*TEST D - ONE HOUR

38.31	1275	3.733	10.26	0.598	0.000	178	80	28.950
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

38.17	1277	3.733	10.23	0.600	--	178	80	--
1.46	1364	1.578	0.93	6.637	--	152	78	--
19.79	1312	2.629	7.53	0.816	--	154	78	--
40.35	1231	3.708	10.88	0.564	--	178	78	--
10.17	1340	2.028	5.01	1.224	--	158	77	--
29.21	1296	2.985	9.79	0.628	--	159	75	--
23.19	1304	2.777	8.35	0.735	0.000	163	77	28.950

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	

TEST F - 100% MAXIMUM LOAD - Third - GEAR

39.00	3285	4.45	1276	6.63	-----	Not Recorded	-----	185	79	28.880
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TEST G - OPERATING MAXIMUM LOAD

30.02	4959	2.27	1275	16.51	-----	Not Recorded	-----	161	63	28.940
37.40	4481	3.13	1276	10.86	-----	" "	-----	172	71	28.975
38.12	3195	4.47	1277	6.24	-----	" "	-----	184	80	28.900
38.22	2367	6.06	1275	4.38	-----	" "	-----	177	76	28.865

*TEST H - TEN HOURS - Third - GEAR

30.90	2559	4.53	1275	4.96	3.513	8.80	0.698	0.011	160	64	28.890
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*Formerly called RATED LOAD; see REMARKS 4, page 3.

FUEL, OIL, AND TIME

BRIEF SPECIFICATIONS

Per front wheel: Cast Iron 39 pounds

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Copy of Report of Official Tractor Test No. 310

REPAIRS AND ADJUSTMENTS

While filling one of the rear tires with water from a barrel carrying approximately 15 pounds air pressure, the valve stem came off the inner tube. A new stem was vulcanized to the tube and it was used throughout the drawbar tests.

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 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, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 97.2% of maximum belt horsepower.

	RUBBER TIRES	
	Drawbar	Belt
2. Observed maximum horsepower (tests F & B)	39.00	42.88
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	41.15	44.85
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. Ratings).	30.86	38.12
5. An advertised claim of 47 maximum belt horsepower was not substantiated by the results of this test.		

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 310.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers