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January 1937

Test 281: McCormick-Deering Tractor Model T-40 (Gasoline)

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. 281

Dates of test: May 4 to 14, 1937.

Name and model of tractor: McCORMICK-DEERING Tractor T-40 (Gasoline).

Manufacturer: International Harvester Company, Chicago, Illinois.

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.	Cooling	In fuel	Total	Cooling med	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS										
51.67	1749	6.170	8.37	0.728	0.000	0.000	0.000	171	68	28.835
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR										
50.07	1750	5.408	9.26	0.659	0.000	0.000	0.000	184	75	28.820
*TEST D - ONE HOUR										
46.12	1751	5.161	8.94	0.683	0.000	0.000	0.000	182	77	28.810
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)										
46.08	1750	5.149	8.95	0.682	--	--	--	182	78	--
0.71	1896	2.139	0.33	18.380	--	--	--	184	77	--
23.93	1819	3.408	7.02	0.869	--	--	--	183	78	--
48.89	1716	5.233	9.34	0.653	--	--	--	187	77	--
12.45	1857	2.749	4.53	1.347	--	--	--	187	76	--
35.34	1792	4.372	8.08	0.755	--	--	--	180	75	--
27.90	1805	3.842	7.27	0.840	0.000	0.000	0.000	184	77	28.795

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.		Barometer Inches of Mercury
					Gal. per hr.	H. P. per gal.	Lb. per H.P. hr.		Cooling med.	Air	
TEST F - 100% MAXIMUM LOAD - <u>Third</u> GEAR											
44.28	6051	2.74	1749	2.57	-----Not Recorded-----			178	74	28.765	
TEST G - OPERATING MAXIMUM LOAD											
44.06	9553	1.73	1750	3.64	-----Not Recorded-----			189	80	28.780	
44.18	7554	2.19	1752	2.89	-----" "-----			189	80	28.805	
42.39	5778	2.75	1749	2.34	-----" "-----			191	77	28.755	
43.31	5058	3.21	1750	1.79	-----" "-----			170	53	29.070	
42.74	3984	4.02	1748	1.79	-----" "-----			170	57	29.040	
*TEST H - TEN HOURS - <u>Third</u> GEAR											
35.19	4771	2.77	1750	1.88	4.976	7.07	0.862	0.000	184	61	28.935

*Formerly called RATED LOAD; see REMARKS 4, page 3.

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. TKE 608 Type 6 cylinder, vertical
Head I Mounting Crankshaft lengthwise
Bore and stroke: 3 3/4" x 4 1/2" Rated R.P.M. 1750
Port Diam. Valves: Inlet 1.625" Exhaust 1.5"
Belt pulley: Diam. 16 3/4" Face 9" R.P.M. 619
Magneto Own Model F6
Carburetor Zenith Model 50-AY12 Size 1 1/2"
Governor Own Type Centrifugal
Air Cleaner Own Type Oil-washed, wire-filter
Lubrication Pressure

CHASSIS: Type Tracklayer Serial No. TKC 6655 Drive Enclosed gear
Clutch Rockford Type Single-plate, dry Operated by Hand
Advertised speeds, miles per hour: First 1.75 Second 2.25
Third 2.75 Fourth 3.25 Fifth 4.00 Reverse 2.25
Measured length of track 19.106' Face 16"
Lugs: Type Cleats inegral with shoes No. per track 38
Size 2" high x 16" wide
Seat Upholstered
Total weight as tested (with operator) 12,770 pounds.

TIME, FUEL, AND OIL:

Total time motor was operated 77 hours
Fuel Gasoline Weight per gallon 6.10 pounds.
Oil S.A.E. Viscosity No. 30
Total oil to motor 3.548 gallons
Total drained from motor 1.744 gallons

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

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 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 96.9% of maximum horsepower.
2. Observed maximum horsepower (tests F & B) Drawbar 44.28 Belt 51.67
3. Sea level (calculated) maximum horsepower Drawbar 46.67 Belt 54.05
 (based on 60° F. and 29.92" Hg.)
4. Seventy-five per cent of calculated maximum Drawbar 35.00 Belt 45.94
 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. 281.

 Carlton L. Zink
 Engineer-in-charge

 E. E. Brackett

 C. W. Smith

 L. W. Hurlbut
 Board of Tractor Test Engineers