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January 1937

Test 278: McCormick-Deering Model T-35 (Distillate)

Tractor Museum

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 278

Dates of test: April 19 to May 10, 1937.

Name and model of tractor: McCORMICK-DEERING T-35 (Distillate).

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

42.17	1750	4.722	8.93	0.774	0.000	0.000	0.000	173	58	28.860
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

40.37	1750	4.213	9.58	0.721	0.000	0.000	0.000	172	58	28.845
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*TEST D - ONE HOUR

37.29	1751	3.832	9.73	0.710	0.000	0.000	0.000	184	64	28.850
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

37.13	1748	3.812	9.74	0.709	--	--	--	186	65	--
0.67	1884	1.671	0.40	17.239	--	--	--	194	65	--
19.51	1830	2.666	7.32	0.944	--	--	--	182	65	--
39.68	1726	4.003	9.91	0.697	--	--	--	172	63	--
10.07	1859	2.188	4.60	1.501	--	--	--	186	67	--
28.76	1801	3.195	9.00	0.768	--	--	--	181	68	--
22.64	1808	2.923	7.75	0.892	0.000	0.000	0.000	183	65	28.850

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 - Third GEAR

35.04	4721	2.78	1757	1.48	-----Not Recorded-----			168	82	28.790
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TEST G - OPERATING MAXIMUM LOAD

33.85	7267	1.75	1752	2.63	-----Not Recorded-----			173	66	28.810
35.38	5984	2.22	1752	1.65	----- " " -----			170	72	28.765
34.03	4603	2.77	1749	1.40	----- " " -----			175	84	28.775
32.89	3830	3.22	1750	1.36	----- " " -----			176	80	28.770
32.34	2987	4.06	1751	0.87	----- " " -----			176	79	28.775

*TEST H - TEN HOURS - Third GEAR

27.79	3756	2.78	1751	1.44	3.399	8.18	0.845	0.000	187	71	28.845
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*Formerly called RATED LOAD; see REMARKS 4, Page 3.

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AGRICULTURAL COLLEGE, LINCOLNCopy of Report of Official Tractor Test No. 278BRIEF SPECIFICATIONS

MOTOR: Make own Serial No. FTM2306 Type 6 cylinder, vertical
Head I Mounting Crankshaft lengthwise
Bore and stroke: 3 5/8" x 4 1/2" Rated R.P.M. 1750
Port Diam. Valves: Inlet 1 5/8" Exhaust 1 1/2"
Belt pulley: Diam. 16 3/4" Face 9" R.P.M. 619
Magneto own Model F-6
Carburetor Zenith Model K-5-1/2 S Size 1 3/8"
Governor own Type Centrifugal
Air Cleaner Donaldson Type Oil-washed, wire-screen filter
Lubrication Pressure

CHASSIS: Type Tracklayer Serial No. TKBB604 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 18.07' Face 13"
Lugs: Type Cleats integral with shoes No. per track 36
 Size 2" high x 13" face
Seat Upholstered
Total weight as tested (with operator) 10,600 pounds.

TIME, FUEL, AND OIL:

Total time motor was operated 62 hours
Fuel Distillate Weight per gallon 6.91 pounds.
Oil S.A.E. Viscosity No. 30
Total oil to motor 2.559 gallons
Total drained from motor 1.766 gallons

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Copy of Report of Official Tractor Test No. 278

REPAIRS AND ADJUSTMENTS

During the preliminary drawbar tests and before any official drawbar tests were made, kerosene was applied to the track link joints to relieve stiffness.

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 95.7% of maximum horsepower.
2. Observed maximum horsepower (tests F & B) Drawbar 35.04 Belt 42.17
3. Sea level (calculated) maximum horsepower Drawbar 37.18 Belt 43.60
(based on 60° F. and 29.92" Hg.)
4. Seventy-five per cent of calculated maximum Drawbar 27.89 Belt 37.06
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. 278.

Carlton L. Zink

Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut

Board of Tractor Test Engineers