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January 1937

Test 280: McCormick-Deering Tractor Model T-40 (Distillate)

Tractor Museum

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 280

Dates of test: April 7 to 29, 1937.

Name and model of tractor: McCORMICK-DEERING TracTracTor T-40 (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. per gal.	Lb. per H.P. hr.	Cooling	In fuel	Total	Cooling med.	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS										
49.34	1753	5.459	9.04	0.765	0.000	0.000	0.000	178	77	28.980
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR										
48.15	1752	4.734	10.17	0.679	0.000	0.000	0.000	187	82	28.900
*TEST D - ONE HOUR										
44.45	1750	4.548	9.77	0.707	0.000	0.000	0.000	181	85	28.830
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)										
44.44	1746	4.528	9.81	0.704	--	--	--	183	86	--
0.74	1879	1.858	0.40	17.351	--	--	--	191	82	--
23.18	1817	2.944	7.87	0.877	--	--	--	193	86	--
46.59	1714	4.693	9.93	0.696	--	--	--	191	86	--
12.09	1854	2.475	4.88	1.414	--	--	--	193	84	--
34.39	1789	3.586	9.59	0.721	--	--	--	192	84	--
26.91	1800	3.347	8.04	0.860	0.000	0.000	0.000	190	84	28.790

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											
42.63	5758	2.78	1752	1.59	-----Not Recorded-----			172	73	28.480	
TEST G - OPERATING MAXIMUM LOAD											
41.53	9023	1.73	1751	3.85	-----Not Recorded-----			172	55	28.405	
40.96	6982	2.20	1753	2.61	-----" "-----			168	57	28.380	
40.77	5500	2.78	1754	1.59	-----" "-----			185	71	28.485	
40.31	4696	3.22	1749	1.50	-----" "-----			184	76	28.455	
39.15	3630	4.04	1752	1.50	-----" "-----			181	75	28.450	
*TEST H - TEN HOURS - Third GEAR											
33.95	4599	2.77	1751	1.85	4.255	7.98	0.866	0.000	177	51	28.540

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

Copy of Report of Official Tractor Test No. 280

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 F 6
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 integral with shoes No. per track 38
Size 2" high x 16" face
Seat Upholstered
Total weight as tested (with operator) 12,770 pounds.

TIME, FUEL, AND OIL:

Total time motor was operated 92 hours
Fuel Distillate Weight per gallon 6.91 pounds.
Oil S.A.E. Viscosity No. 30
Total oil to motor 5.877 gallons
Total drained from motor 4.805 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 97.6% of maximum horsepower.
2. Observed maximum horsepower (tests F & B) Drawbar 42.63 Belt 49.34
3. Sea level (calculated) maximum horsepower Drawbar 45.34 Belt 51.76
(based on 60° F. and 29.92" Hg.)
4. Seventy-five per cent of calculated maximum Drawbar 34.01 Belt 44.00
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. 280.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers