January 1941

Test 371: McCormick-Deering Model W-9 (Distillate)

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

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Dates of test: June 4 to 17, 1941
Name and model of tractor: McCORMICK-DEERING W-9 (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

Hp.	Crank-shaft Speed R.P.M.	Fuel Consumption			Water Used	Temperature Deg. F.		Barometer
		Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.	Gal. per Hr.	Cooling Medium	Air	Inches of Mercury
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
46.36	1500	4.264	10.87	0.637	0.000	188	81	28.875
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
45.40	1500	4.113	11.04	0.627	0.000	191	84	28.870
*** TEST D - ONE HOUR**								
41.79	1500	3.952	10.57	0.654	0.000	198	84	28.860
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
41.87	1500	3.945	10.61	0.652	- ---	198	84	-- ---
1.37	1594	2.080	0.66	10.510	- ---	198	83	-- ---
21.67	1554	3.022	7.17	0.965	- ---	195	83	-- ---
44.51	1462	4.036	11.03	0.627	- ---	191	84	-- ---
11.02	1572	2.527	4.36	1.587	- ---	202	85	-- ---
31.77	1517	3.468	9.16	0.755	- ---	198	84	-- ---
25.37	1533	3.180	7.98	0.867	0.000	197	84	28.850

* Formerly called RATED LOAD; see REMARKS 4, page 5.

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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

Hp.	Draw-bar Pull Lbs.	Speed Miles per Hr.	Crank-shaft Speed R.P.M.	Slip of Drive Wheels %	Fuel Consumption			Water Used Gal. per Hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cool-ing Med.	Air	

Rear wheels, tires and added weight used in Tests F, G and H: Cast iron wheels; 14.00-32--13.50-32, 6 ply tires and 1880 lbs. added weight per wheel.

TEST F - 100% MAXIMUM LOAD - Third GEAR

42.67	3832	4.18	1501	5.73	------- Not Recorded -------				183	59	28.615

TEST G - OPERATING MAXIMUM LOAD

35.36	6577	2.02	1499	13.56	------- Not Recorded -------				179	61	28.770
39.34	5113	2.89	1500	8.22	" "				192	59	28.700
41.48	3724	4.18	1500	5.59	" "				188	63	28.615
40.57	2947	5.16	1500	4.29	" "				191	60	28.615

* TEST H - TEN HOURS - Third GEAR

33.97	3022	4.22	1499	4.69	3.627	9.37	0.739	0.000	198	59	28.720

TEST J - OPERATING MAXIMUM LOAD

Same wheels and tires as used in Tests F, G and H. All added weight removed from tractor (liquid, cast iron or any other added forms). Third gear.

38.73	3735	3.89	1500	14.60	------- Not Recorded -------				187	70	28.850

TEST K - OPERATING MAXIMUM LOAD

Rear wheels, tires and added weight used: Cast iron wheels; 13.00-32--12.75-32, 6 ply tires and no added weight per wheel (** Combination No. 2). Third gear.

37.67	3733	3.78	1499	14.34	------- Not Recorded -------				189	69	28.850

* Formerly called RATED LOAD; see REMARKS 4, page 5.

** Combination No. 1: Includes wheels, tires and added weight recommended in the manufacturer's published specifications.

Combination No. 2: When the manufacturer does not make a specific recommendation, then the tires used are the smallest size and ply and the wheels are the lightest listed in published specifications or the application for test.

See Page 3 for specifications on wheels, tires and weight.

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FUEL, OIL and TIME

Fuel Distillate Octane 38 Weight per gallon 6.92 pounds

Oil: S.A.E. No. 20 To motor 2.701 gal. Drained from motor 2.021 gal.

Total time motor was operated 57 hours.

TIRES, WHEELS and WEIGHT

		Tests F, G & H	Test J	Test K
Rear Wheel: (each)	Type and Weight	Cast Iron, 268 lbs	Cast Iron, 268 lbs	Cast Iron, 268 lbs
	Liquid Ballast	480 lbs	None	None
	Added Cast Iron	1400 lbs	None	None
Rear Tires:	No., Size & Ply	2, 14.00-32--13.50-32, 6 ply	2, 14.00-32--13.50-32, 6 ply	2, 13.00-32--12.75-32, 6 ply
	Type of Tread	All Weather	All Weather	All Weather
	Make	Goodyear	Goodyear	Goodyear
	Air Pressure	16 lbs	16 lbs	16 lbs
Front Wheel: (each)	Type and Weight	Cast Iron, 60 lbs	Cast Iron, 60 lbs	Cast Iron, 60 lbs
	Liquid Ballast	None	None	None
	Added Cast Iron	None	None	None
Front Tires:	No., Size & Ply	2, 7.50-18, 4 ply	2, 7.50-18, 4 ply	2, 7.50-18, 4 ply
	Type of Tread	Rib Tread	Rib Tread	Rib Tread
	Make	Goodyear	Goodyear	Goodyear
	Air Pressure	28 lbs	28 lbs	28 lbs
Height of Drawbar		18 3/4"	20"	18 1/2"
Static Weight:	Rear End	7720 lbs	3940 lbs	3910 lbs
	Front End	2290 lbs	2270 lbs	2290 lbs
Total Weight as Tested (With operator)		10,190 lbs	6390 lbs	6380 lbs

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CHASSIS

Type Standard Serial No. WCB747 Drive Enclosed gear

Tread width: Rear 53" Front 52 1/4"

Advertised speeds, miles per hour: First 2 3/8 Second 3 1/8 Third 4 3/8

Fourth 5 3/8 Fifth 15 3/8 Reverse 2 7/8

Belt pulley: Diam. 14" Face 8.5" R.P.M. 707 Belt speed 2593 f.p.m.

Clutch: Make Own Type Dry disc Operated by Foot

Seat Pressed steel with canvas covered felt pad

Brakes: Make Own Type External contracting bands

Location Ends of differential shafts

Gear reduction (brake drum to rear wheel) 5.667 to 1

Operated by Right foot on adjacent pedals, either independently or interlocked

Locked by Pawl and ratchet on right hand pedal

Equalization By springs when pedals are locked together

MOTOR

Make Own Serial No. WCBM600 Type 4 cylinder, vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 4.4" x 5.5" Rated R.P.M. 1500

Port diameter valves: Inlet 1.875" Exhaust 1.688"

Magneto: Make Own Model H-4

Carburetor: Make Own Model E-13 Size 1 3/8"

Governor: Make Own Type Variable speed, centrifugal

Air Cleaner: Make Donaldson Type Oil-washed wire screen filter

Oil Filter: Make Motor Improvements, Inc. Type Partial flow with replaceable bakelite impregnated paper element.

Cooling medium temperature control Bishop & Babcock thermostat and Defiance radiator shutters

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REPAIRS AND ADJUSTMENTS.

No repairs or adjustments.

REMARKS

1. All results shown on pages 1 and 2 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, H, J and K were made with an operating setting of the carburetor (selected by the manufacturer) of 98.2% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F & B)	42.67	46.36
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	44.59	49.00
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)	33.44	41.65

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 371.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers