January 1940

Test 339: Ford 9N

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Report of Official Tractor Test No. 339

Dates of test: April 9 to 18, 1940.
Name and model of tractor: FORD-FERGUSON SYSTEM 9N
Manufacturer: Ferguson-Sherman Manufacturing Corporation, Dearborn, Michigan.
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: Gal. per hr.	Fuel Consumption: H. P. hr. per gal.	Fuel Consumption: Lb. per H. P. hr.	Water used gal. per hr.	Temp. Deg. F.: Cooling med.	Temp. Deg. F.: Air	Barometer Inches of Mercury
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
23.56	2000	2.434	9.68	0.623	0.000	183	55	29.390
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
23.07	2001	2.368	9.74	0.619	0.000	179	51	29.410
***TEST D - ONE HOUR**								
20.24	1996	2.310	8.76	0.688	0.000	171	51	29.390
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
20.14	1985	2.301	8.75	0.690	--	171	50	--
2.11	2172	1.199	1.76	3.427	--	135	50	--
10.62	2105	1.682	6.31	0.955	--	146	48	--
22.14	1872	2.264	9.78	0.617	--	178	51	--
5.45	2135	1.363	4.00	1.508	--	137	48	--
15.56	2063	1.990	7.82	0.771	--	157	48	--
12.67	2056	1.800	7.04	0.857	0.000	154	49	29.385

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: Gal. per hr.	Fuel Consumption: H.P. hr. per gal.	Fuel Consumption: Lb. per H.P. hr.	Water used gal. per hr.	Temp. Deg. F.: Cooling med.	Temp. Deg. F.: Air	Barometer Inches of Mercury
TEST F - 100% MAXIMUM LOAD - Second - GEAR											
16.31	2146	2.85	1400	13.55	----- Not Recorded -----				182	53	28.690
TEST G - OPERATING MAXIMUM LOAD											
12.61	2236	2.11	1403	17.33	----- Not Recorded -----				169	43	28.670
15.92	2101	2.84	1404	14.46	----- " " -----				198	67	28.490
17.02	872	7.32	1399	4.45	----- " " -----				187	57	28.740
***TEST H - TEN HOURS - Second - GEAR**											
12.80	1568	3.06	1399	6.70	1.610	7.95	0.758	0.000	178	60	28.855

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

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 71 Weight per gallon 6.03 pounds

Oil: S.A.E. No. 20 To motor 1.413 gal. Drained from motor 1.065 gal.

Total time motor was operated 64 hours

BRIEF SPECIFICATIONS

Advertised speeds miles per hour: First 2.51 Second 3.23

Third 7.48 Reverse 2.69

Belt pulley: Diam. 9.0" Face 6.5" R.P.M. 1358 Belt Speed 3199 f.p.m.

Clutch: Make Long Type Dry plate Operated by foot

Seat Pressed steel

Total weight as tested (With operator) 3375 pounds

MOTOR

Make Own Serial No. 9N 12840 Type 4 cylinder, vertical

Head L Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3-3/16" x 3-3/4" Rated R.P.M. (Drawbar 1400
(Belt 2000

Port diameter valves: Inlet 1.37" Exhaust 1.11"

Ignition: Type 6 volt battery Make Own Distributor Model 9N

Generator: Make Own Starter: Make Own

Carburetor: Make Marvel-Schebler Model TSX-33 Size 7/8"

Governor: Make Novi Type Variable speed, centrifugal

Air Cleaner: Make United Type Oil-washed crimped wire filter

Oil filter: Make Ford-Fram Type Renewable waste pack element

Cooling medium temperature control: Dole thermostat

CHASSIS

Type Standard Serial No. 9N 12840 Drive Enclosed gear

Tread width: Rear 48" - 76" Front 48" - 76"

Rear tires: No. 4 Size 8.00 x 32 - 4 ply Air pressure 12 Pounds

Front tires: No. 2 Size 4.00 x 19 - 4 ply Air pressure 26 Pounds

Added weight: Per rear tire - Calcium Chloride Solution 151 Pounds

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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 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 98.7% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F & B)	16.31	23.56
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	16.90	23.87
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)	12.68	20.29

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 339.

Engineer-in-charge

Board of Tractor Test Engineers