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Nebraska Tractor Tests

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Larsen

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January 1940

## Test 339: Ford 9N

Nebraska Tractor Test Lab

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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.	H. P. hr. per gal.	Lb. per H. P. hr.	Water used gal. per hr.	Temp. Deg. F. Cool- ing med.	: Barometer : Inches of : Mercury :
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## TEST B - 100% MAXIMUM LOAD - TWO HOURS

23.56	: 2000	: 2.434	: 9.68	: 0.623	: 0.000	: 183	: 55	: 29.390
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## TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

23.07	: 2001	: 2.368	: 9.74	: 0.619	: 0.000	: 179	: 51	: 29.410
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## \*TEST D - ONE HOUR

20.24	: 1996	: 2.310	: 8.76	: 0.688	: 0.000	: 171	: 51	: 29.390
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## 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	: 8.31	: 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 : drive : wheels : % :	Slip : on : drive : per : hr. :	Fuel Consumption Gal. hr. per gal. hr. :	H.P. Lb. per H.P. per gal. hr. :	Water used gal. per hr. :	Temp. Deg. F. Cool- ing med. :	: Barometer : Inches of : Mercury :
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TEST F - 100% MAXIMUM LOAD - Second - GEAR

16.31	: 2146	: 2.85	: 1400	: 13.55	: -----	: Not Recorded	: -----	: 182	: 53	: 28.690
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## 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
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\*Formerly called RATED LOAD; see REMARKS 4, page 3.



UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
 AGRICULTURAL COLLEGE, LINCOLN

Report of Official Tractor Test No. 339FUEL, 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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Report of Official Tractor Test No. 339

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.

	<u>DRAWBAR</u>	<u>BELT</u>
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.

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 Engineer-in-charge

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 Board of Tractor Test Engineers