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January 1929

Test 163: Minneapolis 39-57

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 163

Dates of test: June 5th to 14th, 1929

Name, model and rating of tractor: The Minneapolis 39-57

Manufacturer: The Minneapolis Threshing Machine Co., Hopkins, Minn.

B R A K E H O R S E P O W E R T E S T S

	:Crank	:	Fuel Consumption	:	Water consumption	:	Temp.	:	
	:shaft	:		:	:per hour gallons	:	Deg. F.	:	:Barometer
H. P.	:speed	:Gals.	:H. P.	:Lbs. @	:Cool- :In	:	:Cool- :	:	:Inches of
	:R.P.M.	:per	:hrs. @	:H.P.	:ing :fuel	:Total	:ing	:Air	:Mercury
	:	:hour	:gal.	:hour	:	:	:med.	:	:

OPERATING MAXIMUM LOAD TEST. ONE HOUR (98.9% of Maximum load)

64.55	:1004	:	6.367	:	10.14	:	0.608	:	0.0	:	0.0	:	0.0	:	197	:	72	:	28.69
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RATED LOAD TEST. ONE HOUR

57.39	: 997	:	6.445	:	8.90	:	0.692	:	0.0	:	0.0	:	0.0	:	185	:	72	:	28.70
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*VARYING LOAD TEST. TWO HOURS

57.48	: 995	:	6.351	:	9.05	:	0.681	:	0.0	:	0.0	:	0.0	:	189	:	70	:	
1.31	:1131	:	2.513	:	0.52	:	11.817	:	0.0	:	0.0	:	0.0	:	158.5	:	71	:	
30.44	:1051	:	4.276	:	7.12	:	0.865	:	0.0	:	0.0	:	0.0	:	171	:	72	:	
63.88	:1000.5	:	6.360	:	10.04	:	0.613	:	0.0	:	0.0	:	0.0	:	203.5	:	76	:	
15.84	:1090	:	3.575	:	4.43	:	1.390	:	0.0	:	0.0	:	0.0	:	165.5	:	74	:	
44.42	:1025	:	5.474	:	8.11	:	0.759	:	0.0	:	0.0	:	0.0	:	184.5	:	75	:	
36.71	:1049	:	4.758	:	7.72	:	0.798	:	0.0	:	0.0	:	0.0	:	180	:	73	:	28.78

*20 minute runs. Last line is average for two hours.

D R A W B A R H O R S E P O W E R T E S T S

	:Draw	:Speed	:Crank	:Slip	:Fuel Consumption	:Water:	Temp.	:	
	:Bar	:miles	:shaft	:on	:H.P.	:Lbs.	:used	:	:Barometer
H. P.	:pull	:per	:speed	:drive	:Gal.	:hr.	:per	:Gal.	:Cool-
	:pounds	:hour	:R.P.M.	:wheels	:per	:per	:H.P.	:per	:Air
	:	:	:	: %	:hour	:gal.	:hour	:hour	:Inches of
	:	:	:	:	:	:	:	:med.	:Mercury
	:	:	:	:	:	:	:	:	:

RATED LOAD TEST. TEN HOURS. High GEAR.

39.84	:3723	:	4.01	:	992	:	4.03	:	5.878	:	6.78	:	0.909	:	0.19	:	187	:	91	:	28.78
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MAXIMUM LOAD TEST

47.57	:4356	:	4.09	:	1006	:	3.50	:	-----	:	Not recorded	:	-----	:	184	:	89	:	28.60
47.77	:5950	:	3.01	:	1002	:	6.67	:	-----	:	" "	:	-----	:	182	:	97	:	28.60

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BRIEF SPECIFICATIONS

MOTOR: Make Stearns Serial No. 282024 Type 4 Cylinder vertical
Head "I" Mounting Lengthwise
Bore and stroke: 5-1/2 x 6-1/2 in. Rated R.P.M. 1000
Port Dia. Valves: Inlet 2-1/4" Exhaust 2-1/4"
Belt pulley: Diam. 20 in. Face 8-1/2 in. R.P.M. 620
Magneto: American Bosch Model "ZR4 Ed34"
Carburetor: Stromberg Model "M4" Size 1 3/4"
Governor: Kingston No. Type Fly-ball
Air Cleaner: Donaldson "Simplex" Type Oil filter
Lubrication: Pressure

CHASSIS: Type 4 Wheels Serial No. 9574 Drive Enclosed gear
Clutch: Twin Disc Type Dry disc operated by hand
Advertised speeds, miles per hour: Low 3.00
Intermediate none High 3.90 Reverse 2.49
Drive wheels: Diameter 58" Face 19-1/2"
Lugs: Type Spade No. per wheel 64 Size 4.2" High x 3.7" Face
Extension rims: Width 7" Seat Pressed Steel
Total weight as tested (with operator) 9695 pounds.

FUEL AND OIL

Fuel: Gasoline Weight per gallon 6.16 pounds
Oil: Mobiloil B To fill crankcase 5 gallon
Additional amount used during test 2 gallon
Total number of hours of test 40

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REPAIRS AND ADJUSTMENTS

During the rated drawbar test the fan belt was tightened. During the low gear maximum drawbar test the gears slipped out of mesh several times. It was necessary to lock the gear shift lever in place with a block of wood.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

The results of this test indicate that the rating of this tractor does not exceed the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 163.

Low Wallace
Engineer-in-Charge

E. E. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers