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January 1926

Test 127: Twin City Model F T 21-32

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT

AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 127

Dates of test: October 7th to 13th, 1926
 Name, model and rating of tractor: Twin City Model F T 21-32
 Serial No. Engine: 100026 Serial No. Chassis: 150026
 Manufacturer: Minneapolis Steel & Machinery Co., Minneapolis, Minnesota
 Tractor equipment used: American Bosch ~~Ed~~ 26" Mag. Zenith "U6" Carb.
 Style and dimensions of wheel lugs: Spade 48 per wheel, 3-1/2" high x 2-1/2 x 3
 Extension rims 6" wide.

BRAKE HORSE POWER TESTS

H. P. Shaft	Dev.	Speed	Test	R.P.M.	Min.	Time	Fuel Consumption	Kind	Gals.	per	hrs.	H. P.	Cooling	In	Total	Cooling	Air	Temp.	Deg. F.	*	Average	Humidity	Height of	Barometer	In	Inches
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

RATED LOAD TEST

32.34: 1004 : 120 : Kero. : 3.3545 : 9.64 : 0.00 : 0.00 : 0.00 : 181 : 74 : 83 : 28.64

**VARYING LOAD TEST

32.21: 1001 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
32.36: 995 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
0.75: 1087 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
8.65: 1069 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
17.08: 1057 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
25.27: 1044 : 10	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
19.83: 1042 : 60	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

MAXIMUM LOAD TEST

35.875: 999 : 60 : Kero. : 4.316 : 8.31 : 0.00 : 0.00 : 0.00 : 172 : 70 : 85 : 28.70

HALF LOAD TEST

16.62: 1029 : 60 : Kero. : 2.440 : 6.81 : 0.00 : 0.00 : 0.00 : 190 : 73 : 61 : 28.89

* Taken in discharge line from engine.

** The last line is the average for the hour.

REMARKS: The kerosene used as fuel weighed 6.77 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

H. P. Dev.	Draw Bar	Speed : Miles	Crank : Shaft	Slip : on	Fuel Consumption			Water : Used	Temp. Deg. F.		Average Humidity	Height of Barometer
					Kind	Amt.	H.P.		Cooling	Air		
		Per	Speed	Drive		Hour	Per	Hour	*		%	Inches
	Pounds	Hour	R.P.M.	Wheels		Gals.	Gal.	Gals.				
				%								

RATED LOAD TEST. TEN HOURS

22.30	: 2661	: 3.14	: 999	: 2.89	: Kero.	: 3.425	: 6.51	: 0.04	: 180	: 64.5	: 51	: 28.89
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MAXIMUM LOAD TEST

27.75	: 3531	: 2.945	: 992	: 8.88	: -- NOT RECORDED --				: 175	: 55.5	: 55.	: 28.91
31.05	: 5092.5	: 2.28	: 997	: 5.93	: -- NOT RECORDED --				: 170	: 62	: 52	: 28.83

* Taken in discharge line from engine.

REMARKS: The rated load and first maximum load tests were run in high gear. The second maximum load test was made in low gear.
The distance advanced by the tractor without load on level ground for one complete revolution of the drive wheels was taken as a basis for calculating track slippage.
The power desired for the rated load test was 21 horse power but the operator had the load slightly heavier than intended.

OIL CONSUMPTION:

During the complete test consisting of about 36 hours running the following oil was used:
For the engine, 3-1/4 gallons of Mobiloil A, 2-1/2 gallons to fill crankcase, 3 quarts were added.
For the transmission, none.

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REPAIRS AND ADJUSTMENTS

During the limber up run and the high gear maximum test the clutch was adjusted. During the maximum low gear test the gear shift lever was locked in place.

No other repairs or adjustments were necessary during this test. At the end of the test the tractor was in good running order and there were no indications of undue wear nor of any weakness which might require early repair.

BRIEF SPECIFICATIONS

Motor: Own, 4 cylinder, valve-in-head, mounted crankshaft lengthwise.
Bore 4-1/2". Stroke 6". Rated speed 1000 R.P.M.

Magneto: American Bosch "ZR4 Ed26."

Carburetor: Zenith "U6."

Air Cleaner: Bennett, dry centrifugal type.

Governor: Own, fly ball type.

Chassis: Four wheels, two drivers, enclosed gear drive, twin dry disc clutch. Advertised speeds: Low 2.2 miles per hour, high 2.9 miles per hour, reverse 1.75 miles per hour.

Total weight as tested (with operator) 6189 pounds.

REMARKS

In the advertising literature submitted with the specifications and application for test of this tractor, we find some claims and statements which cannot be directly compared with the results of this test as reported above. It is our opinion that none of these are excessive or unreasonable.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 127.

Lew Wallace
Engineer-in-Charge

Oscar W. Sjogren

E. E. Brackett

C. W. Smith
Board of Tractor Test Engineers