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January 1927

Test 137: Shaw Model T 45

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. 137

Dates of test: June 7th to 23rd, 1927

Name, model and rating of tractor: Shaw Model T45

Serial No. Engine: 795 Serial No. Chassis: 795

Manufacturer: Shaw Mfg. Co., Galesburg, Kansas

Tractor equipment used: Own, Mag., Tillotson "MS7A" Carb.

Style and dimensions of wheel lugs: Spades 2" high, 3" wide. 3" extension rims.

BRAKE HORSE POWER TESTS

H. P. Dev.	:Crank :Shaft	:Time : of	:Fuel Consumption	:Water Consumption	:Temp.	:Average Humidity	:Height of Barometer
:R.P.M.	:Speed	:Test	:Kind:Gals.:h. P.:Cool.: In :Total :Cool.: ing :Air:	:Gals. per hour***	:Deg. F. *	%	Inches
:	:R.P.M.	:Min.	: of :per :hrs. @	: Fuel:Hour :	:	:	:

RATED LOAD TEST

1.51	:1611	: 60	:Gasol.:0.319:	4.73:	-	:	-	:	-	:81	: 33	: 28.77
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**VARYING LOAD TEST

1.50	:1595.5	: 10	:	:	:	:	:	:	:	:	:	:
1.64	:1570	: 10	:	:	:	:	:	:	:	:	:	:
0.11	:1533	: 10	:	:	:	:	:	:	:	:	:	:
0.37	:1519	: 10	:	:	:	:	:	:	:	:	:	:
0.75	:1575	: 10	:	:	:	:	:	:	:	:	:	:
1.13	:1581.5	: 10	:	:	:	:	:	:	:	:	:	:
0.91	:1562	: 60	:Gasol.:0.251:	3.63:	-	:	-	:	-	:71	: 77	: 28.65

MAXIMUM LOAD TEST

1.68	:1610	:120	:Gasol.:0.350:	4.80:	-	:	-	:	-	:80	: 35	: 28.80
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HALF LOAD TEST

0.75	:1568	: 60	:Gasol.:0.166:	4.52:	-	:	-	:	-	:72	: 76	: 28.62
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*Taken in discharge line from engine.

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

***The motor used in this test was air cooled.

REMARKS: The gasoline used as fuel in this test weighed 6.14 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

H. P. Dev.	: Draw	: Speed	: Crank	: Slip	: Fuel Consumption			: Water	: Temp. Deg. F. **:		: Average	: Height of
	: Bar	: Miles	: Shaft	: on	: Amt.	: H. P.	: Used	: Cooling	: Air	: Humidity	: Barometer	
	: Pull	: Per	: Speed	: Drive	: Kind	: per	: Hrs.	: Per	: Fluid	:	: %	: In Inches
	: Pounds	: Hour	: R.P.M.	: Wheels	: Used	: hour	: Per	: Hour	: *	:	:	:
	:	:	:	: $\frac{1}{2}$:	: Gals.	: Gal.	: Gals.	:	:	:	:

RATED LOAD TEST. TEN HOURS

0.53 : 145 : 1.37 : 1627 : 28.64 : Gaso. : 0.30 : 1.77 : 0.00 : - : 82 : 37 : 28.84

MAXIMUM LOAD TEST

G.705 : 159.5 : 1.65 : 1792 : 21.88 : Gaso. : -- NOT RECORDED -- : - : 80 : 66 : 28.48

G.55 : 222.5 : 0.93 : 2363 : 37.75 : Gaso. : -- NOT RECORDED -- : - : 79.5 : 66 : 28.48

* Taken in discharge line from engine.

**Air cooled.

REMARKS: The rated load and first maximum tests were made 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 several complete revolutions of the drive wheels was taken as a basis for calculating the slippage.

OIL CONSUMPTION:

During the complete test consisting of about 31 hours running the following oil was used:
 For the engine, 3-1/2 pints of Mobiloil "A". 3 pints to fill crankcase, 1/2 pint added during test.
 For the transmission, 1/2 pint of Polarine extra heavy.

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REPAIRS AND ADJUSTMENTS

No 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: Briggs & Stratton, one cylinder, air cooled, mounted crankshaft crosswise, L-head. Bore 2-3/4", Stroke 3". Rated speed 1600 R.P.M.

Belt pulley 3" diam. 2-1/2" face. Operates at crankshaft speed.

Magneto: Own, carburetor, Tillotson "MS7A".

Air cleaner: None.

Governor: Own, pneumatic type.

Chassis: Two wheels, both drivers, open chain and gear drive, clutch own make expanding band. Advertised speeds: Low, 1 mile per hour, high 1-3/7 miles per hour.

Total weight as tested 437 pounds.

REMARKS

In the advertising literature submitted with the specifications for test of this tractor we find the following claim which is not substantiated by the results of the test: Exhibit "B" "T45 DRAWBAR PULL-650 lbs. On low gear, this pulls a 1-1/2 ton load on light cart or wagon." This literature contains other 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. 137.

Lew Wallace
Enginer-in-charge

Oscar W. Sjogren

E. E. Brackett

C. W. Smith

Board of Tractor Test Engineers