

UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY FARM, LINCOLN

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Varying Date Sept. 24, 1920. Test No. 64c
Name, model and rating of tractor Uncle Sam Model C-20 20-30
Serial No. Engine 226-2JB Serial No. Chassis 1152
Tractor equipment Dixie Mod. 46C Mag., Bennett Carb.
Manufacturer U.S. Tractor & Machinery Co., Menasha, Wis.
Tractor submitted for test by " " " " "
Tractor operated by Laub Brake operated by Booth
Brake used Sprague Brake arm ft. _____ Brake const. $(\frac{2\pi A}{33000}) = 1/3000$
Description of belt used 8" Klingtite
Size engine pulley (circumference at crown) 2.927' HK
Size brake pulley (circumference at crown) 2.604' HK
Kind of fuel used Kerosene Fuel test No. 119 Wt. per gal., lbs. 6.78
Kind and grade of oil used in engine Mobil oil BB
Kind and grade of oil used in transmission " C
Humidity 56 % Barometric pressure 28.3 inches mercury.
Temperature of atmosphere 77.5 ° F.
Fuel consumption:
Total for test, gals. 3.900 Gals. per hour 3.900
Gals. per H. P. hour 0.2091 H. P. hours per gal. 4.78
Carburetor adjustments (degrees open) 2-3/8 turns open.

Water consumption:

Total in radiator during test, gals. 0.206
Total in fuel mixture during test, gals. 0.00
Total used during test, gals. 0.206
Gals. per H. P. hour _____ H. P. hours per gal. _____

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 64c.

Fred N Laub Operator W. H. Booth Observer.
Operator _____ Observer. _____

Fred R Nohavee

Engineer-in-charge.

Log of Official Tractor Brake Horse Power Test No. 64c

Sept. 24, 1920.

Reading No.	Time	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % of Column (7)	Net Brake Load Pounds	B. H. P.	Fuel		Water Used		Temperatures	
		Counter Reading	R. P. M.	Counter Reading	R. P. M.	Surface Speed Ft. per Min.	Counter Reading	R. P. M.	Surface Speed Ft. per Min.				Scale Reading Pounds	Amount Used Pounds	In Radiator Pounds	In Fuel Mixture Pounds	*Cooling Fluid Deg. F.	Atmosphere Deg. F.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
** Observer			FNL	WHB	WHB	WHB	WHB	WHB	WHB	WHB	WHB	WHB	FNL	WHB	FNL	FNL	FNL	FNL
1	9:00		8659				6131				80.5		46.64					
2	:01		9654	995			7232	1101									194	79
3	:08		0678	1024			8364	1132									196	78
4	:10	Avg.		1009.5				1116.5			80.5	30.04	41.34	5.30				
5	:10										81.0		41.34					
6	:11		1668	990			9459	1095									196	78
7	:18		2583	915			0471	1012									196	79
8	:20	Avg.		952.5				1053.5			81.0	28.43	36.10	5.24				
9	:20										10.0		36.10					
10	:21		3676	1093			1685	1214									196	78
11	:28		4781	1105			2912	1227									182	76
12	:30	Avg.		1099				1220.5			10.0	4.06	32.64	3.46				
13	:30										20.1							
Total																		
Average																		

*Taken in discharge line from engine.

**Each observer will place his initials at the head of each column in which he records his observations.

Remarks

Log of Official Tractor Brake Horse Power Test No. 64c(Continued)

Sept. 24, 1920.

Reading No.	Time	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % of Column (7)	Net Brake Load Pounds	B. H. P.	Fuel		Water Used		Temperatures	
		Counter Reading	R. P. M.	Counter Reading	R. P. M.	Surface Speed Ft. per Min.	Counter Reading	R. P. M.	Surface Speed Pulley Ft. per Min.				Scale Reading Pounds	Amount Used Pounds	In Radiator Pounds	In Fuel Mixture Pounds	*Cooling Fluid Deg. F.	Atmosphere Deg. F.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
** Observer				FNL	WHB		WHB				WHB	WHB	FNL	WHB	FNL	FNL	FNL	FNL
1	9:31			4781	1073		6131	1191			20.1		32.64				176	76
2	:38			5854	1075		5296	1193									180	76
3	:40	Average			1074			1192			20.17.99		29.10	3.54				
4	:40										40.25		29.10					
5	:41			7985	1056		6466	1170									178	77
6	:48			9037	1052		7632	1166									176	77
7	:50	Average			1054			1168			40.2515.7		24.94	4.16				
8	:50										60.4		24.94					
9	:51			0075	1038		8781	1149									178	78
10	:58			1108	1033		9924	1143									180	78
11	10:00	Average			1035.5			1146			60.423.1		20.20	4.74				
12																		
13																		
Total	1 Hr.													26.44	1.72			
Average			1037		1037	3035		1149	2992	1.42	48.718.65						186	77.5

*Taken in discharge line from engine.

**Each observer will place his initials at the head of each column in which he records his observations.

Remarks.....

Oil leaked around fly wheel bearing

FUEL

43.50- 9.74 = 33.76

WATER

9.46 - 7.74 = 1.72