

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Varying Date Oct. 25, 1928 Test No. 1532
Name, model and rating of tractor John Deere 10-20 Model "GP"
Serial No. Engine 200112 Serial No. Chassis 200112
Tractor equipment Fairbanks-Morse Mfg. Engine "B.J." Carb
Manufacturer John Deere Tractor Co., Waterloo, Ia.
Tractor submitted for test by " " " "
Tractor operated by Lamb Brake operated by Wallace
Brake used, Sprague. Brake arm 21 inches. Brake const. $(\frac{2\pi A}{33000}) = \frac{1}{3000}$
Description of belt used 6" Rubber 3/8" Avg thickness
Size of engine pulley (circumference at crown) 3.494 ft.
Size of brake pulley (circumference at crown) 2.605 ft.
Kind of fuel used Kerosene Fuel test No. " Wt. per gal., lbs. 6.80
Kind and grade of oil used in engine Mobil Oil A
Kind and grade of oil used in transmission " C
Humidity — per cent. Barometric pressure 28.95 inches mercury
Temperature of atmosphere 62 ° F.
Fuel consumption:
Total for test, gals. 3.659 Gals. per hour 1.829
Lbs. per H. P. hour 0.980 H. P. hours per gal. 6.94
Carburetor adjustments (degrees open) F.V. H.S. 1/2 turn open
H.S. 1/2 turn open

Water consumption:

Total in radiator during test, gals. 0.97
Total in fuel mixture during test, gals. —
Total used during test, gals. 0.97

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 1532

F. N. Lamb Operator Levi Wallace Observer

Operator Levi Wallace Observer

Engineer-in-charge

Log of Official Tractor Brake Horse Power Test No. 1530

Oct 26, 1928

Reading No.	Time	Engine Crank Shaft Speed		Engine Belt Pulley Speed		Brake Speed		Belt Slipage % 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.
** Observer				9442			1845									
1	10 05			8491	951		2332	1237			126.00				195	54
2	15			7541	950		2670	1238			113.00	2.94		2.585	195	54
3	10 25										120.14	2.92				
4	Av 9		950.5	950.5	950.5	832.1	1237.5		49.0	20.21	5.86	0.870		7.82	195	56.5
5	0 25			6514	1022		4404	1339	28		120.14				171	60
6	35			5448	1021		6247	1338			126.6	1.44		1253	175	60
7	45										173.0	1.36				
8	Av 9		1021.5	1021.5	1021.5	823	1338.5		28.5	12.5	2.84	6.816		1.00	173	60
9	0 45										173.0					
10	55			4516	982		7533	1286			15.12	1.58		1.429	176	62
11	1 05			3524	989		8223	1290			14.06	1.66			197	63
12	Av 9			1845	942		12883	1288	34.5	10.52	3.240	9.224		7.36	196.5	62.5
13																
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. 1532

Oct. 26, 1928

Reading No. (1)	Time (2)	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % of Column (7) (11)	Net Brake Load Pounds (12)	B. H. P. (13)	Fuel		Water Used		Temperatures	
		Counter Reading (3)	R. P. M. (4)	Counter Reading (5)	R. P. M. (6)	Surface Speed Ft. per Min. (7)	Counter Reading (8)	R. P. M. (9)	Surface Speed Ft. per Min. (10)				Scale Reading Pounds (14)	Amount Used Pounds (15)	In Radiator Pounds (16)	In Fuel Mixture Pounds (17)	*Cooling Fluid Deg. F. (18)	Atmosphere Deg. F. (19)
** Observer	4:00																	
1	11:05			3529			8823				54.0		114.06					
2	11:15			2586	943		8049	1226			"		111.04	3.02		2.628	198	63
3	11:25			1648	938		1268	1219			"		108.10	2.94			199	64
4	Avg.		940.5		940.5	3336		1222.5	3311	0.75	54.0	32.01		5.96	0.812	8.38	198.5	63.5
5	11:35										12.3		108.10					
6	11:45			0667	981		2552	1284			"		106.58	1.52		1.341	186	64
7	11:55			9689	978		3834	1282			"		105.06	1.52			185	64
8	Avg.		979.5		979.5	3474		1283	3474	0.00	12.3	5.26		3.04	1.734	3.72	186.5	64
9	11:45										368		105.06					
10	11:55			8712	977		5110	1276			"		103.12	1.94		1.738	201	64
11	12:05			7740	972		6379	1269			"		101.12	2.00			198	66
12	Avg.							1272.5			368	156.1		3.94	0.757	8.98	199.5	65
13																		
Total														24.88	6.12			
Average			975		975	3458		1274	3450	0.23	29.9	12.70					193	62

*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 Motor missing on 1/4 load.

Water to Rad.
9.46 - 1.34 = 8.12

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Maximum Date Oct 24 1928 Test No. 153 b
Name, model and rating of tractor John Deere 10-20 Model "GP"
Serial No. Engine 200112 Serial No. Chassis 200112
Tractor equipment Fairbanks-Morse Mop, Engine "B.T. Carb"
Manufacturer John Deere Tractor Co, Waterloo, Ia
Tractor submitted for test by "
Tractor operated by Laub Brake operated by Wallace
Brake used, Sprague. Brake arm 21 inches. Brake const. $(\frac{2nA}{33000}) = \frac{1}{3000}$
Description of belt used 6" Rubber 9/32 Avg. Thickness
Size of engine pulley (circumference at crown) 3.444 ft.
Size of brake pulley (circumference at crown) 2.605 ft.
Kind of fuel used Kerosene Fuel test No. " Wt. per gal., lbs. 6.80
Kind and grade of oil used in engine MOB. A
Kind and grade of oil used in transmission "
Humidity " per cent. Barometric pressure 29.03 inches mercury
Temperature of atmosphere 66 ° F.
Fuel consumption:
Total for test, gals. 7.9706 Gals. per hour 3.9853
Lbs. per H. P. hour 1.057 H. P. hours per gal. 6.43
Carburetor adjustments (degrees open) Fuel Valve High Speed 1.3
turns Low Speed 5/8 turns W.V. 1 1/4 turns open

Water consumption:

Total in radiator during test, gals. 4.44
Total in fuel mixture during test, gals. "
Total used during test, gals. 4.44

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 153 b

F. M. Laub Operator Lew Wallace Observer
Operator Lew Wallace Observer
Engineer-in-charge

Log of Official Tractor Brake Horse Power Test No. 1536

Oct 24, 1928

Reading No. (1)	Time (2)	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % of Column (7) (11)	Net Brake Load Pounds (12)	B. H. P. (13)	Fuel		Water Used		Temperatures	
		Counter Reading (3)	R. P. M. (4)	Counter Reading (5)	R. P. M. (6)	Surface Speed Ft. per Min. (7)	Counter Reading (8)	R. P. M. (9)	Surface Speed Pulley Ft. per Min. (10)				Scale Reading Pounds (14)	Amount Used Pounds (15)	In Radiator Pounds (16)	In Fuel Mixture Pounds (17)	*Cooling Fluid Deg. F. (18)	Atmosphere Deg. F. (19)
** Observer				3015			8013											
1	9 45			2065	950	3370	9248	1235	3344	0.77	62.3	25.61	141.20				185	62
2	55			1120	945		0497	1229			"		136.60	4.60			191	62
3	10 05			0166	954		1717	1240			"		132.10	4.50			191	64
4	15			9215	951	3373	2954	1237	3350	0.68	"		127.60	4.50			191	64
5	25			8264	951		4191	1237			62.4		123.04	4.54			187	65
6	35			7315	949		5424	1233			62.2		118.58	4.46			191	65
7	45			6356	957		6672	1248			62.3		114.06	4.52			191	67
8	55			5407	949		7905	1233			62.3		109.54	4.52			190	68
9	11 05			4456	951		9142	1237			62.1		105.00	4.54			193	67
10	15			3516	946		0371	1229			62.3		100.50	4.50			190	68
11	25			2565	945		1599	1228			62.1		96.00	4.50			192	67
12	35			1609	956		2841	1242			62.3		91.50	4.50			190	68
13	11 45			0663	946		4070	1229			62.3		87.00	4.50	37.00		192	67
Total														54.20	37.00			
Average			950		950	3370		1235	3344	0.77	62.27	25.63					190	66

*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

Water to Rad.

9.20 - 1.34

9.50 - 1.36

9.40 - 1.36

9.40 - 1.36

37.50 - 5.42 = 32.08

9.46 - 4.54

46.96 - 9.96 = 37.00

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Maximum Date Oct 25, 1928 Test No. 153C
Name, model and rating of tractor John Deere 10-20 Model "EP"
..... Serial No. Engine 200112 Serial No. Chassis 200112
Tractor equipment Fairbanks Morse Mag. Ensign "BJ" Carb
Manufacturer John Deere Tractor Co., Waterloo, Ia.
Tractor submitted for test by "
Tractor operated by Laub Brake operated by Wallace
Brake used, Sprague. Brake arm 21 inches. Brake const. $(\frac{2nA}{33000}) = \frac{1}{3000}$
Description of belt used 6" Rubber 9/32" (Avg. thickness)
Size of engine pulley (circumference at crown) 3.444 ft.
Size of brake pulley (circumference at crown) 3.605 ft.
Kind of fuel used Kerosene Fuel test No. " Wt. per gal., lbs. 6.80
Kind and grade of oil used in engine Mob. A
Kind and grade of oil used in transmission " C
Humidity " per cent. Barometric pressure 29.03 inches mercury
Temperature of atmosphere 62 ° F.

Fuel consumption:

Total for test, gals. 2.7206 Gals. per hour 2.7206
Lbs. per H. P. hour 0.741 H. P. hours per gal. 9.18
Carburetor adjustments (degrees open) H.S. 1/2 turn open L.S. 1/2 turn open
W.V. 7/8 turns open

Water consumption:

Total in radiator during test, gals. 1.54
Total in fuel mixture during test, gals. "
Total used during test, gals. 1.54

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 153C

F. N. Laub Operator Lew Wallace Observer
..... Operator Lew Wallace Observer

Engineer-in-charge

Log of Official Tractor Brake Horse Power Test No. 153C

Oct 25, 1928

Reading No.	(1)	Time (2)	Engine Crankshaft Speed		Engine Belt Pulley Speed			Brake Speed		Belt Slipage % of Column (7)	Net Brake Load Pounds (12)	B. H. P. (13)	Fuel		Water Used		Temperatures	
			Counter Reading (3)	R. P. M. (4)	Counter Reading (5)	R. P. M. (6)	Surface Speed Ft. per Min. (7)	Counter Reading (8)	R. P. M. (9)	Surface Speed Ft. per Min. (10)			Scale Reading Pounds (14)	Amount Used Pounds (15)	In Radiator Pounds (16)	In Fuel Mixture Pounds (17)	*Cooling Fluid Deg. F. (18)	Atmosphere Deg. F. (19)
** Observer																		
1		1 55			9360	906	3355	5022	1231	3334	605	8483	13154				200	62
2		2 05			8414	955		6253	1242		"		12850	3.04			200	61
3		15			7454	961		7495	1251		"		12544	3.06			200	61
4		25			6498	960		8746	1248		"		12232	3.12			200	61
5		35			5538	948		4994	1231		610		11924	3.08			200	62
6		45			4390	946		1225	(2.57)		"		11616	3.08			198	62
7		2 55			3644	922		2582	1203		"		11304	3.12			195	64
8					2722			3785										
9																		
10																		
11																		
12																		
13																		
Total									1234	3342	60.7	2497		18.50	12.86		199	62
Average									1252									

*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

9480 - 1276
 9486 - 484
 Water to Rad.
 9.46 - 1.34 = 8.12
 9.44 - 4.70 = 4.74
 12.86

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Rated Date Oct 25, 1928 Test No. 153d
Name, model and rating of tractor John Deere 10-20 Model "GP"
Serial No. Engine 200112 Serial No. Chassis 200112
Tractor equipment Fairbanks Morse Mfg. Ensign "BJ" Carb
Manufacturer John Deere Tractor Co., Waterloo, Ia.
Tractor submitted for test by "
Tractor operated by Laub Brake operated by Wallace
Brake used, Sprague. Brake arm 21 inches. Brake const. $\left(\frac{2nA}{33000}\right) = \frac{1}{3000}$
Description of belt used 6" Rubber 3/32 Avg. thickness
Size of engine pulley (circumference at crown) 3.444 ft.
Size of brake pulley (circumference at crown) 2.605 ft.
Kind of fuel used Kerosene Fuel test No. " Wt. per gal., lbs. 6.80
Kind and grade of oil used in engine Mobil 1-A
Kind and grade of oil used in transmission "
Humidity " per cent. Barometric pressure " inches mercury
Temperature of atmosphere 62 ° F.
Fuel consumption:
Total for test, gals. 2.3618 ✓ Gals. per hour 2.3618 ✓
Lbs. per H. P. hour 0.295 ✓ H. P. hours per gal. 8.55 ✓
Carburetor adjustments (degrees open) F.V. H.S. 1/2 turn open L.S.
1/2 turn open
W.V. 3/4 turn open
Water consumption:
Total in radiator during test, gals. 0.93 ✓
Total in fuel mixture during test, gals. "
Total used during test, gals. 0.93 ✓

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 153d

F. N. Lamb Operator Law Wallace Observer
Operator Law Wallace Observer
Engineer-in-charge

Log of Official Tractor Brake Horse Power Test No. 153 d

Oct. 25, 1928

Reading No. (1)	Time (2)	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % of Column (7) (11)	Net Brake Load Pounds (12)	B. H. P. (13)	Fuel		Water Used		Temperatures	
		Counter Reading (3)	R. P. M. (4)	Counter Reading (5)	R. P. M. (6)	Surface Speed Ft. per Min. (7)	Counter Reading (8)	R. P. M. (9)	Surface Speed Pulley Ft. per Min. (10)				Scale Reading Pounds (14)	Amount Used Pounds (15)	In Radiator Pounds (16)	In Fuel Mixture Pounds (17)	*Cooling Fluid Deg. F. (18)	Atmosphere Deg. F. (19)
** Observer				2722			3785											
1	3 ¹⁰			1774	948	3363	5021	1236	3347	0.48	49.0	20.19	108.66				197	63
2	20			0826	948		6258	1237			"		105.90	2.76			197	62
3	30			9876	950		7496	1238			"		103.26	2.64			197	62
4	40			8428	948		8733	1237			"		100.60	2.66			197	62
5	50			7478	950		9972	1239			"		97.94	2.66			198	62
6	4 ⁰⁰			7028	950		1212	1240			"		95.20	2.74			196	59
7	4 ¹⁰			6085	943		3441	1229			"		12.60	2.60			196	61
8																		
9																		
10																		
11																		
12																		
13																		
Total														16.06	7.76			
Average			748		948	3363		1237	3350	0.39	49.0	20.20					197	62

*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

Water to Rad.

4.70 - 1.34 = 3.36

8.60 - 4.20 = 4.40

7.76

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN
Record of Official Tractor Drawbar Horsepower Test

Rated or maximum load Maximum Date Oct. 26, 1928 Test No. 1539
Name, model and rating of tractor John Deere 10-20
Serial No. Engine 200112 Serial No. Chassis 200112
Manufacturer John Deere Tractor Co., Waterloo, Iowa
Tractor submitted for test by "
Tractor equipment Fairbanks-Morse "John Deere" Mag. Engine "BJ" Carb
Style and dimension of lugs Spade 24 per wheel, 4 1/2" H x 3 1/2" x 3 3/4"
Circumference of drive wheels, at face 11.19 Point of lugs 13.55
Tractor operated by Loub Dynamometer car operated by Wallace
Dynamometer used Guiley Load used Dyn. car
Kind of fuel Kerosene Test No. _____ W.t per gal. 6.80 lbs.
Kind and grade of oil used in engine Mob. 4
Kind and grade of oil used in transmission " C
Humidity _____ per cent. Barometric pressure 28.96 ^{Int. Low High} inches.
Temperature of atmosphere 57 ^{Int. Low High} Temperature of engine 185 ^{Int. Low High} 196 193.5
Weather conditions Fair
Condition of track Good

Fuel Consumption:

Total for test, gal. _____ Gals. per hour _____
Pounds per H. P. hour _____ H. P. hours per gal. _____

Water Consumption:

Total used in test, gal. _____ Gal. per hour _____

We, the undersigned, certify that this and attached sheets hereto give a true and correct record of the official tractor test No. 1539

J. N. Lamb Operator. Low Wallace Observer.
_____. Operator. Low Wallace Observer.
_____. Engineer-in-charge

THE UNIVERSITY OF NEBRASKA
DEPARTMENT OF AGRICULTURAL ENGINEERING
Log of Official Tractor Drawbar Horse Power Test No. 1539

Date Oct 26, 1928

Chart and Reading No. (1)	Time (2)	Stop Watch in 400 ft. minutes (3)	*** Engine Crankshaft R. P. M. (4)	Drive Wheel Slippage								Speed		Average Draft Pounds (15)	Drawbar Horsepower (16)	Temperature Degrees F.		Fuel Used Pounds (19)	Water Used Pounds (20)
				Left Wheel		Right Wheel		Av. Rev. Columns 6 and 8 (9)	** Distance Traveled (Feet) (10)	Distance Measured on Ground (Feet) (11)	** Slippage % Columns 10 and 11 (12)	Feet per Minute (13)	Miles per Hour (14)			* Cooling Fluid (17)	Atmosphere (18)		
				Counter Reading (5)	Rev. in 400 ft. (6)	Counter Reading (7)	Rev. in 400 ft. (8)												
****Observer																			
						Intermediate Gear													
6N	10 ⁰⁵	1.33		9388		9405													
				9717	32.9	9732	32.7	32.8				302.7	3.44	1830	16.79	180	52		
6S	10 ¹⁰	1.33		0044	32.7	0059	32.7	32.7				302.5	3.44	1845	16.91	190	52		
Avg.		1.33	943																
						Low Gear													
3N	4 ⁵⁰	1.7785		5106		5118													
				5441	33.5	5449	33.1	33.3				224.5	2.55	2480	16.87	196	52		
3S	4 ⁵⁸	1.72		5780	33.9	5781	33.2	33.55				232.6	2.64	2498	17.60	196	52		
Avg.		1.749	959																
						High Gear													
5N	3 ⁵¹	0.895		2831		2822													
				3146	31.5	3138	31.6	31.55				444.2	5.05	1070	14.40	194	60		
6S	3 ⁵⁶	0.9275		3463	31.7	3454	31.6	31.65				422.9	4.81	1050	13.46	193	60		
Avg.		0.91125	945																

NOTE: Record all stops by the word "Stop" and "Start" in column 1, record time and give full data.

* Taken in discharge line from engine.

** The first figure in this column is calculated at the rim of the wheel, and the second figure at point of the lugs.

*** Engine R. P. M. = Gear Ratio x Column (8)

Column (9)

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

THE UNIVERSITY OF NEBRASKA
AGRICULTURAL ENGINEERING DEPARTMENT
COLLEGE OF AGRICULTURE, LINCOLN
Record of Official Tractor Drawbar Horsepower Test

Rated or maximum load... Rated Date... Oct. 29, 1928 Test No. 153f
Name, model and rating of tractor... John Deere 10-20
Serial No. Engine... 200112 Serial No. Chassis... 200112
Manufacturer... John Deere Tractor Co., Waterloo, Iowa
Tractor submitted for test by... " " " "
Tractor equipment... Fourbanks Morse "John Deere" Mag. Ensign "BJ" Car 4
Style and dimension of lugs... Spade 24 per wheel 4 1/2" H x 3 1/2" x 3 3/8"
Circumference of drive wheels, at face... 11.19 Point of lugs... 13.55
Tractor operated by... Laub Dynamometer car operated by... Wallace
Dynamometer used... Guiley Load used... Dyn. Car
Kind of fuel... Kerosene Test No. --- W.t per gal. 6.80 lbs.
Kind and grade of oil used in engine... Mob A
Kind and grade of oil used in transmission... " C
Humidity... --- per cent. Barometric pressure... 29.33 inches.
Temperature of atmosphere... 42 Temperature of engine... 185
Weather conditions... Cool & Cloudy
Condition of track... Good

Fuel Consumption:

Total for test, gal. 20.606 Gals. per hour 2.061
Pounds per H. P. hour 1.374 H. P. hours per gal. 4.95

Water Consumption:

Total used in test, gal. 1.6 Gal. per hour 0.16

We, the undersigned, certify that this and attached sheets hereto give a true and correct record of the official tractor test No. 153f

L. A. Laub Operator. Low Wallace Observer.

..... Operator. Low Wallace Observer.

.....
Engineer-in-charge

THE UNIVERSITY OF NEBRASKA
DEPARTMENT OF AGRICULTURAL ENGINEERING

Log of Official Tractor Drawbar Horse Power Test No. 1534

Date Oct. 29, 1928

Chart and Reading No.	Time	Stop Watch in 400 ft. minutes	*** Engine Crankshaft R. P. M.	Drive Wheel Slippage								Speed		Average Draft Pounds	Drawbar Horsepower	Temperature Degrees F.		Fuel Used Pounds	Water Used Pounds
				Left Wheel		Right Wheel		Av. Rev. Columns 6 and 8	** Distance Traveled (Feet)	Distance Measured on Ground (Feet)	** Slippage % Columns 10 and 11	Feet per Minute	Miles per Hour			Cooling Fluid	Atmosphere		
				Counter Reading	Rev. in 400 ft.	Counter Reading	Rev. in 400 ft.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
****Observer	7 ⁰⁹	start test																	
1S	8 ⁰⁵	1.235		1295		1311										181	37		
				1607	31.2	1625	31.4					312.7	3.55	1063	10.07	182	37		
1N	8 ¹⁰	1.295		1420	31.3	1437	31.2									183	37		
2S	8 ⁵⁵	1.275		2234	31.4	2251	31.4					315.5	3.59	1040	9.94	183	37		
2N	9 ⁰⁰	1.27		2548	31.4	2563	31.2									182	40		
3S	10 ⁰⁵	1.27		2862	31.4	2876	31.3					313.2	3.52	1047	9.94	183	40		
3N	10 ¹⁰	1.27		3176	31.4	3189	31.3									185	44		
4S	11 ⁰⁰	1.2725		3490	31.4	3501	31.2					315.1	3.58	1065	10.17	186	44		
4N	11 ⁰⁵	1.28		3804	31.4	3813	31.2									190	45		
5S	11 ⁵⁵	1.275		4117	31.3	4126	31.3					314.3	3.57	1103	10.51	190	45		
5N	12 ⁰⁰	1.27		4429	31.2	4438	31.2									188	46		
6S	1 ⁰⁰	1.28		4743	31.4	4752	31.4					313.7	3.52	1109	10.54	188	46		
6N	1 ⁰⁵	1.27		5055	31.2	5065	31.3												
stop	1 ¹⁴	4 min. Fuel & Water.																	
start	1 ¹⁸																		

NOTE: Record all stops by the word "Stop" and "Start" in column 1, record time and give full data.

* Taken in discharge line from engine.

** The first figure in this column is calculated at the rim of the wheel, and the second figure at point of the lugs.

*** Engine R. P. M. = $\frac{\text{Gear Ratio} \times \text{Column (3)}}{\text{Column (9)}}$

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

THE UNIVERSITY OF NEBRASKA
DEPARTMENT OF AGRICULTURAL ENGINEERING
Log of Official Tractor Drawbar Horse Power Test No. 153f

Date Oct. 29, 1928.

Chart and Reading No. (1)	Time (2)	Stop Watch in 400 ft. minutes (3)	*** Engine Crankshaft R. P. M. (4)	Drive Wheel Slippage								Speed		Average Draft Pounds (15)	Drawbar Horsepower (16)	Temperature Degrees F.		Fuel Used Pounds (19)	Water Used Pounds (20)
				Left Wheel		Right Wheel		Av. Rev. Columns 6 and 8 (9)	** Distance Traveled (Feet) (10)	Distance Measured on Ground (Feet) (11)	** Slippage % Columns 10 and 11 (12)	Feet per Minute (13)	Miles per Hour (14)			* Cooling Fluid (17)	Atmosphere (18)		
				Counter Reading (5)	Rev. in 400 ft. (6)	Counter Reading (7)	Rev. in 400 ft. (8)												
****Observer				5055		5065													
7S	2 ⁰⁰	1.295		5369	31.4	5379	31.4					308.3	3.50	1116	10.43	188	44		
7N	2 ⁰⁵	1.28		5679	31.0	5691	31.2									188	44		
8S	3 ⁰⁰	1.29		5991	31.2	6005	31.4					305.8	3.48	1093	10.13	183	43		
8N	3 ⁰⁵	1.28		6304	31.3	6317	31.2									184	43		
9S	4 ⁰⁰	1.295		6617	31.3	6630	31.3					311.0	3.53	1067	10.06	183	42		
9N	4 ⁰⁵	1.295		6929	31.2	6942	31.2									183	42		
10S	4 ⁴⁸	1.275		7241	31.2	7252	31.0					311.3	3.54	1077	10.16	185	42		
10N	4 ⁵³	1.295		7553	31.2	7565	31.3									184	42		
	5 ¹³	End of test.																	
Total																		140.12	13.36
Avg.		1.278	937		31.29		31.27	31.28	9041	400	1.01	312.1	3.55	1078	10.20	185	42		

NOTE: Record all stops by the word "Stop" and "Start" in column 1, record time and give full data.

* Taken in discharge line from engine.

** The first figure in this column is calculated at the rim of the wheel, and the second figure at point of the lugs.

*** Engine R. P. M. = Gear Ratio x Column (3)

Column (9)

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