

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

Record of Official Tractor Brake Horsepower Test

Load (rated or other) Maximum Date July 16, 1934 Test No. 2241
Name, model and rating of tractor Caterpillar R-5
Serial No. Engine 5E3001 Serial No. Chassis 5E3001
Tractor equipment Wisconsin Magneto Model "GT4" Ensign Carburetor Model "Red"
Manufacturer Caterpillar Tractor Co., Peoria, Illinois
Tractor submitted for test by Caterpillar Tractor Co., Peoria, Illinois
Tractor operated by C. H. Greer Brake operated by C. L. Zink
Brake used, Sprague. Brake arm 21 inches. Brake const. $\left(\frac{2\pi A}{33000}\right) = \frac{1}{3000}$
Description of belt used 3 in. x 4 ply rubber endless
Size of engine pulley (circumference at crown) 3.133 ft.
Size of brake pulley (circumference at crown) 2.630 ft.
Kind of fuel used Gasoline Fuel test No. _____ Wt. per gal., lbs. 6.19
Kind and grade of oil used in engine Mobiloil "AF" S.A.E. 40
Kind and grade of oil used in transmission Transmission oil S.A.E. 100
Humidity _____ per cent. Barometric pressure 23.335 inches mercury
Temperature of atmosphere 103 ° F.
Fuel consumption:
Total for test, gals. 13.233 Gals. per hour 6.616
Lbs. per H. P. hour 0.603 H. P. hours per gal. 9.00
Carburetor adjustments (degrees open) High speed adjustment 1 3/8 turns open;
Low speed adjustment 3 1/4 turns open;
Water consumption:
Total in radiator during test, gals. 0.00
Total in fuel mixture during test, gals. 0.00
Total used during test, gals. 0.00

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 2241

C. H. Greer Operator C. L. Zink Observer
Operator C. L. Zink Observer
Engineer-in-charge

Caterpillar R-5

CHG
CLZ

Log of Official Tractor Brake Horse Power Test No. 2245

July 16, 1934

Reading No.	Time	Engine Crankshaft Speed		Engine Belt Pulley Speed		Brake Speed		Belt Slipage %	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.	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				5377												
1	7:50		953	4724	953				159.5		121.55				185	90
2	8:00		949	3773	949				159.7		114.95	6.70			187	101
3	8:10		953	2322	953				159.4		108.10	6.75			185	100
4	8:20		952	0917	952				159.9		101.30	6.80			185	98
5	8:30		950	2967	950				160.2		94.45	6.85			183	102
6	8:40		951	9016	951				160.0		87.70	6.75			187	101
7	8:50		955	8061	955				160.0		80.83	6.82			189	105
8	9:00		945	7116	945				160.4		74.03	6.85			183	101
9	9:10		943	6173	943				160.4		67.23	6.80			191	105
10	9:20		950	5223	950				160.0		60.43	6.80			190	106
11	9:30		950	4273	950				160.0		53.61	6.82			191	105
12	9:40		952	3321	952				160.0		46.42				192	108
13	9:50		951	2370	951				160.0		69.72	15.70			192	105
Total									2079.3		81.64				2450	1336
Average			950		950	3043	3019	0.95	160.0	59.52			0.00	0.00	183	103

* 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 Sp. Gr. .740 at 62 deg. F.

Fuel:

23.835 at 8:30 A.M.

Gas. 6.17 lb. per gal.

lb.-BHP.-hr. = 0.686

23.940 at 10:30 A.M.

53.52 x 1.030 = 64.23 Corr. HP.

Gal.-hr. = 6.616

Use 23.835 CLZ

64.23 x .95 = 54.64 Rated HP.

CLZ

583 = 1.03209

520 = 1.03269

* Added 29.81 lb. fuel

1.9405 x 1.0376 = 1.030 = Correction

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

Record of Official Tractor Brake Horsepower Test

Load (rated or other) ~~Operating Maximum~~ Date July 16, 1934 Test No. 2240
 Name, model and rating of tractor Caterpillar 2-5
 Serial No. Engine 253001 Serial No. Chassis 253001
 Tractor equipment Eisemann Magneto Model "074" Ensign Carburetor Model "24"
 Manufacturer Caterpillar Tractor Co., Peoria, Illinois
 Tractor submitted for test by Caterpillar Tractor Co., Peoria, Illinois
 Tractor operated by C. H. Greer Brake operated by C. L. Link
 Brake used, Sprague. Brake arm 21 inches. Brake const. $\left(\frac{2nA}{33000}\right) = \frac{1}{3000}$
 Description of belt used 3 in. x 4 ply Rubber endless
 Size of engine pulley (circumference at crown) 5.125 ft.
 Size of brake pulley (circumference at crown) 5.500 ft.
 Kind of fuel used Cashline Fuel test No. Wt. per gal., lbs. 6.17
 Kind and grade of oil used in engine Mobiloil "AF" S. A. E. 40
 Kind and grade of oil used in transmission Transmission Oil S. A. E. 100
 Humidity per cent. Barometric pressure 29.935 inches mercury
 Temperature of atmosphere 111 ° F.
 Fuel consumption:
 Total for test, gals. 6.112 Gals. per hour 6.112
 Lbs. per H. P. hour 0.640 H. P. hours per gal. 0.64
 Carburetor adjustments (degrees open) High speed adjustment 1 1/2 turns open,
Low speed adjustment 2 3/4 turns open.
 Water consumption:
 Total in radiator during test, gals. 0.00
 Total in fuel mixture during test, gals. 0.00
 Total used during test, gals. 0.00

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 2240

Chas. H. Greer Operator Observer
 Operator Observer

C. L. Link
 Engineer-in-charge

Caterpillar R-5

Log of Official Tractor Brake Horse Power Test No. 224

CLZ
CLZ

July 18, 1934

Reading No. (1)	Time (2)	EngineCrankShaftSpeed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % 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 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																		
1	10:40			2370			6431				158.1		128.71				197	110
2	10:50			1417	953		7550	1119			158.6		122.40	6.31			196	108
3	11:00			0468	949		8662	1112			158.1		116.14	6.23			197	110
4	11:10			9516	952		9779	1117			158.5		109.20	6.24			197	109
5	11:20			8565	951		0893	1114			158.3		103.60	6.30			201	114
6	11:30			7616	949		2005	1112			158.7		97.31	6.29			201	113
7	11:40			6668	949		3117	1112			158.7		91.00	6.31			201	112
8				5718	950		4232	1115										
9																		
10																		
11																		
12																		
13																		
Total					6652		7801				1110.0		37.71				1390	776
Average			950		950	3042	1114	3013	1.15	158.6	58.89				0.00	0.00	192	111

* 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

Fuel;

23.840 at 11:10 CLZ

Lb.-bhp. hr. = 0.640

23.830 at 11:40 CLZ

Gal.- hr. = 0.112

Use 23.835 CLZ

H.P.hrs.-gal. = 9.64

Record of Official Tractor Brake Horsepower Test

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No. 3244

Chas. J. Green Operator Observer
..... Operator Observer
Bathory Sink
Engineer-in-charge

Caterpillar R-5

Log of Official Tractor Brake Horse Power Test No. 3244

C12

July 16, 1954

G12

Reading No. (1)	Time (2)	Engine Crank Shaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % 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				4762			5356											
1	12:35			3613	949		6470	1114			147.5		149.22				200	114
2	12:45			2363	950		7586	1116			147.5		143.40	5.82			199	114
3	12:55			1913	950		9702	1116			147.3		137.60	5.80			198	112
4	1:05			0961	952		9820	1118			147.2		131.70	5.80			197	114
5	1:15			0014	947		0932	1112			147.5		125.84	5.86			196	112
6	1:25			9062	952		2050	1118			147.4		119.92	5.92			199	115
7	1:35			8110	952		3167	1117			147.6		114.15	5.77			200	116
8																		
9																		
10																		
11																		
12																		
13																		
Total				6652			7811				1031.8			35.97			1339	797
Average		950		950	3048		1116	3019		0.95	147.4	54.83			0.00	0.00	199	114

* 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

Fuel:

23.820 at 1:10 P.M.

Lb.-BHP hr. = 0.640

C12

Gal. - hr. = 5.694

H.P.hrs.-gal. = 9.65

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

Record of Official Tractor Brake Horsepower Test

Load (rated or other).....Varying..... Date.....July 16, 1934..... Test No.....224a.....
Name, model and rating of tractor.....Caterpillar R-5.....
.....Serial No. Engine.....525001..... Serial No. Chassis.....525001.....
Tractor equipment.....Eisemann Magneto Mod. "C" 74" Insign Carburetor Mod. "Red".....
ManufacturerCaterpillar Tractor Co. Peoria, Illinois.....
Tractor submitted for test by.....Caterpillar Tractor Co. Peoria, Illinois.....
Tractor operated by.....C. H. Greer..... Brake operated by.....C. J. Zink.....
Brake used, Sprague. Brake arm 21 inches. Brake const. ($\frac{2nA}{33000}$) = $\frac{1}{3000}$
Description of belt used.....3 in., 4 ply Rubber endless.....
Size of engine pulley (circumference at crown)3.133..... ft.
Size of brake pulley (circumference at crown)2.630..... ft.
Kind of fuel used.....Gasoline..... Fuel test No..... Wt. per gal., lbs.....6.17.....
Kind and grade of oil used in engine.....Mobiloil "AF" S.A.E. 40.....
Kind and grade of oil used in transmission.....Transmission oil S.A.E. 100.....
Humidity..... per cent. Barometric pressure.....29.800..... inches mercury
Temperature of atmosphere.....115..... ° F.
Fuel consumption:
Total for test, gals.....3.590..... Gals. per hour4.200.....
Lbs. per H. P. hour.....0.504..... H. P. hours per gal.....7.68.....
Carburetor adjustments (degrees open).....High speed adjustment 1 1/8 turns open,
.....Low speed adjustment 2 3/4 turns open......
.....
Water consumption:
Total in radiator during test, gals.....0.000.....
Total in fuel mixture during test, gals.....0.000.....
Total used during test, gals.....0.000.....

We, the undersigned, certify that this sheet and the log sheet attached hereto give a true and correct record of official tractor test No.....224a.....

.....Chas H. Greer..... Operator Observer
..... Operator Observer

.....C. J. Zink.....
Engineer-in-charge

Caterpillar R-5

Log of Official Tractor Brake Horse Power Test No. 2249

July 16, 1934

CLZ
CHG

Reading No. (1)	Time (2)	Engine Crankshaft Speed		Engine Belt Pulley Speed			Brake Speed			Belt Slippage % 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	1:15			0014	3.208		0932	2.705					125.84					
1	1:25			9062	953		2050	1113			147.4		119.92	5.92			199	115
Rated	1:35			8110	952		3167	1117			147.6		114.15	5.77	35.07	5.634	200	116
2														11.39				
3			952		952	3054		1118	3024	0.98	147.5	54.97			0.638	9.67	200	116
4																		
5	1:45			7108	1002		4353	1186			1.6		111.88	2.27			170	115
No	1:55			6116	992		5527	1174			1.6		109.56	2.30	13.71	2.222	162	115
6								2360						4.57				
7			997		997	3198		1180	3192	0.19	1.6	0.63			21.762	0.23	166	115
8	2:05			5138	973		6679	1152			73.2		105.49	4.09			176	116
9	2:15			4161	977		7829	1150			73.6		101.54	3.95	24.12	3.909	181	117
10														8.04			357	
11			978		978	3137		1151	3113	0.77	73.4	23.16			0.857	7.20	179	117
12																		
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

23.810 at 1:55 CLZ

Log of Official Tractor Brake Horse Power Test No.

July 16, 1934

Reading No. (1)	Time (2)	Engine Crankshaft 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)	Lb.-hr. In Radiator Pounds (16)	Gal.-hr. In Mixture Pounds (17)	*Cooling Fluid Deg. F. (18)	Atmosphere Deg. F. (19)
**Observer				4161		7828					158.6		95.22	6.32			200	116
Gov. 1	2:25			3225	936		8926	1097			158.0		88.97	6.25	37.71	6.112	201	115
Max. 2	2:35			2291	934		0020	1094										
3													12.37				401	
4			935		935	2999		1096	2965	1.15	158.5	57.83			0.652	9.46	201	116
5	2:45			1505	938		1185	1145			37.5		85.82	3.03			181	114
1/4 6	2:55			0813	990		2552	1167			36.5		82.22	3.07	18.45	2.990	171	113
7														6.15				
8			939		939	3173		1166	3154	0.80	37.0	14.38			1.283	4.81	176	114
9	3:05			9334	970		3492	1146			108.0		77.83	4.99			182	114
3/4 10	3:15			8357	977		4646	1148			110.0		72.90	4.93	29.76	4.823	189	116
11														9.92				
12			978		978	3137		1147	3103	1.06	109.0	41.67			0.714	8.64	186	115
13																		
Total				11657	11657			15714			1053.6	197.64		52.94		water	2212	1392
Average			971		971	3115		1145	3092	0.74	87.80	32.94			0.00	0.00	184	115

* 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 **Friction H.P.** **Fuel:** **29.790 at 2:55 CLZ**

43.5 lb. at approx. 1120 R.P.M. **Lb.-bhp. hr. = 0.804** **Use 28.800 CLZ**

= 16.24 H.P. **Gal.-hr. = 4.290**

Compression Pressure **Hp.hrs.-gal. = 7.68**

1 - 86 lb. 168 deg. F. **Lb.-hr. = 26.47**

2 - 87.5

3 - 85 160 deg. F.

4 - 82 155 deg. F

Finished at 3:45 PM CLZ

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

Record of Official Tractor Drawbar Horsepower Test

Rated or maximum load.....A.S.A.E. Maximum.....Date.....July 19, 1934.....Test No. 224f
Name, model and rating of tractor.....Caterpillar R-5.....
Serial No. Engine.....5E3001.....Serial No. Chassis.....5E3001
Manufacturer.....Caterpillar Tractor Co. Peoria, Illinois.
Tractor submitted for test by.....Caterpillar Tractor Co. Peoria, Illinois.
Tractor equipment.....Hessmann Magneto Mod. "C" "Engelign Carburetor Mod. "Ked"
Style and dimension of lugs.....Cleats integral with shoe 18 in. wide
Circumference of drive wheels, at face.....Measured length of track 19.199.....Point of lugs.....
Tractor operated by.....C.H. Greer.....Dynamometer car operated by.....O.L. Zink
Dynamometer used.....Galley.....Load used.....Loading unit, old tractors
Kind of fuel.....Gasoline.....Test No.W.t per gal.....6.17.....lbs.
Kind and grade of oil used in engine.....Mobiloil "AF" S.A.E. 40
Kind and grade of oil used in transmission.....Transmission oil S.A.E. 100
Humidity.....per cent. Barometric pressure.....28.660.....inches.
Temperature of atmosphere.....91.....Temperature of engine.....190
Weather conditions.....Hot, fair.
Condition of track.....Hard, dusty.

Fuel Consumption:

Total for test, gal.....Not Recorded.....Gals. per hour.....Not Recorded
Pounds per H. P. hour.....".....H. P. hours per gal....."....."

Water Consumption:

Total used in test, gal.....0.000.....Gal. per hour.....0.000

We, the undersigned, certify that this and attached sheets hereto give a true and correct record of the official tractor test No. 224f

Chas. H. Greer.....Operator.....Observer.
.....Operator.....Observer.

O.L. Zink
Engineer-in-charge

Caterpillar R-5
Date July 19, 1934

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.
 ** Engine R. P. M. = $\frac{\text{Gear Ratio} \times \text{Column (a)}}{\text{Column (3)}}$
 *** 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.....Operating Maximum.....Date.....July 19, 1934.....Test No. 224g
Name, model and rating of tractor.....Caterpillar R-5.....
Serial No. Engine.....5E3001.....Serial No. Chassis.....5E3001
Manufacturer.....Caterpillar Tractor Co. Peoria, Illinois.
Tractor submitted for test by.....Caterpillar Tractor Co. Peoria, Illinois.
Tractor equipment.....Eisemann "GT4" magneto; Ensign "Ked" Carburetor
Style and dimension of lugs.....Cleats integral with shoe 18" long 1 7/8" high
Circumference of drive wheels, at face.....Measured length of track 19.155 feet
Tractor operated by.....Adams- Greer.....Dynamometer car operated by.....Zink
Dynamometer used.....Gulley.....Load used.....McDeering loading unit- old tractor
Kind of fuel.....Gasoline.....Test No.W.t per gal.....6.17 lbs.
Kind and grade of oil used in engine.....Mobiloil "AF" S.A.E. 40
Kind and grade of oil used in transmission.....Transmission oil S.A.E. 160
Humidity.....1st- 96 per cent. Barometric pressure.....30.12 inches.....1st- 178
Temperature of atmosphere.....2nd- 96.....Temperature of engine.....3rd- 191
Weather conditions.....4th- 106.....Hot, dry, fair.....4th- 186
Condition of track.....Hard, dusty

Fuel Consumption:

Total for test, gal.....Not Recorded.....Gals. per hour

Pounds per H. P. hour.....H. P. hours per gal.....

Water Consumption:

Total used in test, gal.....Not Recorded.....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. 224g

Charles Adams.....Operator.....Observer.

Chas. Greer.....Operator.....Observer.

Barton Zink
Engineer-in-charge

Log of Official Tractor Drawbar Horse Power Test No. 224 3

Date... **July 19, 1934**...

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.

Column (3)

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

Date.....July 19, 1954.....

[illegible]

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.

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

*** 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 July 20, 1934.....Test No. 224 h
Name, model and rating of tractor.....Caterpillar R-5
Serial No. Engine.....SE 3001.....Serial No. Chassis.....SE 3001
Manufacturer.....Caterpillar Tractor Co. Peoria, Illinois
Tractor submitted for test by.....Caterpillar Tractor Co. Peoria, Illinois
Tractor equipment.....Bisemann "GT4" magneto; Ensign "Kod" carburetor
Style and dimension of lugs.....Gleats integral with shoe 18" wide x 1 7/8" high
Circumference of drive wheels, at face.....Measured length of track 19.199 ft.
Tractor operated by.....Adams - Greer.....Dynamometer car operated by.....Zing
Dynamometer used.....Gulley.....Load used.....McCormick-Deering Loading unit
Kind of fuel.....Gasoline.....Test No.....-.....W.t per gal.....6.17.....lbs.
Kind and grade of oil used in engine.....Mobiloil "AF", S.A.E. #40
Kind and grade of oil used in transmission.....Transmission Oil S.A.E. #160
Humidity.....-.....per cent. Barometric pressure.....29.540.....inches.
Temperature of atmosphere.....103.....Temperature of engine.....187
Weather conditions.....Hot, Dry, Fair
Condition of track.....Hard, dusty

Fuel Consumption:

Total for test, gal.....55.112.....Gals. per hour.....5.511
Pounds per H. P. hour.....0.824.....H. P. hours per gal.....7.49

Water Consumption:

Total used in test, gal.....0.000.....Gal. per hour.....0.000

We, the undersigned, certify that this and attached sheets hereto give a true and correct record of the official tractor test No. 224 h

Charles Adams.....Operator.....Observer.
Chas. Greer.....Operator.....Observer.

Golden Fitch
Engineer-in-charge

THE UNIVERSITY OF NEBRASKA

Page 2

DEPARTMENT OF AGRICULTURAL ENGINEERING

Log of Official Tractor Drawbar Horse Power Test No. 224 h

Date July 30, 1934

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.												
***Observer				0791															
6 S	11:30	2.0875		1672	881											186	107		
6 N	11:36	2.0850		2352	890							239.7	2.72	5443	39.54	186	107		
7 S	12:27	2.095		5433	881											188	110		
7 N	12:33	2.0925		6313	880							239.4	2.72	5,612	40.71	188	110		
8 S	1:21	2.0500		5193	880											192	111		
8 N	1:27	2.0575		6073	880							243.5	2.77	5,820	42.94	192	111		
9 S	2:35	2.0800		6956	883											192	113		
9 N	2:41	2.0700		7838	882							241.0	2.74	5,841	42.66	192	113		
10 S	3:31	2.0750		8719	881											192	113		
10 N	3:37	2.0825		9600	881							240.5	2.73	5,849	42.63	192	112		
	3:55.3	End of test																	
Stop	3:58.5	(Fuel used in 3.2 minutes pulling average load subtracted to give total																	
Totals	10hrs			17611										56485		3736	2050		
Average		207525	950	880.55					506.6	600	1.30	241.2	2.74	5,649	41.29	187	103	340.04	0.00

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.

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

*** 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. 224 h

Date July 20, 1934

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																			
	5:37	Start test																	
1 S	6:15	2.0500		1989 2369	379											178	84		
1 N	6:21	2.0625		3749	831							243.2	2.76	5,373	43.32	178	84		
2 S	7:11	2.0650		4629	890											180	87		
2 N	7:17	2.0775		5510	941							241.4	2.75	5,534	40.85	180	87		
3 S	8:16	2.0675		6390	890											186	96		
3 N	8:22	2.0700		7271	891							241.7	2.75	5,440	39.84	186	96		
4 S	9:11	2.0700		8151	890											184	101		
4 N	9:17	2.0700		9030	879							241.5	2.74	5,574	40.79	184	101		
5 S	10:07	2.0800		9911	831											190	104		
5 N	10:13	2.0875		0791	890							240.0	2.73	5,444	39.59	190	104		
Stop	10:23	Clutch on old steamer dragging (Motor running slow idle 4.8 minutes)																	
Start	10:27.8																		
Stop	10:37	Remove clutch blocks from old steamer. Put gasoline in tractor (Motor stopped)																	
Start	10:50																		

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.

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

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