

UNIVERSITY OF NEBRASKA—AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Record of Official Tractor Drawbar Test No. 339 Date April 15 to 18, 1940
 Name and model of tractor Ford Ferguson-System 9N
 Manufacturer Ferguson-Sherman Manufacturing Corporation, Dearborn, Michigan
 Serial No. engine 9N12340 Serial No. chassis 9N12340 Chassis type Standard
 Tractor equipment Schebler carburetor; own starter, generator, and distributor
 Tractor operated by Jack Schnitter Dynamometer car operated by C. F. Adams
 Lugs: Style _____ Height, inches _____ Width, inches _____ No. per wheel _____
 Drive wheels, diameter, inches (Tire size) 32 x 8 Face, inches (Air pressure, pounds) 12
 Extension rims, face, inches Firestone Ground-grippers -4-ply-duals Added weight per wheel, pounds 151
 Dynamometer used Galley Load used International loading unit No. 5
 Kind of fuel used Gasoline Octane value 71 Weight per gallon, pounds 6.03
 Kind of oil used in engine Mobiloil S.A.E. viscosity No. 20
 Kind of oil used in transmission Transmission Lubricant S.A.E. viscosity No. _____

TEST	GEAR	WEATHER CONDITIONS	TRACK CONDITIONS	ADV. PER REV., FT.*	FUEL			WATER, GALS. PER HR.	TEMPERATURE, DEG., F.		BARO- METER, IN.
					GALS. PER HR.	H.P. HRS. PER GAL.	LBS. PER H.P.		RAD.	AIR	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
F	2nd	Fair	Fair	11.8212	NOT RECORDED				132	53	28.690
	1st	Cloudy	Fair	11.7705					169	45	28.670
	2nd	Fair	Poor	11.8723					193	67	28.490
	3rd	Fair	Fair	11.8723					187	57	28.740
	4th										
	5th										
	6th										
G					* Or measured length of track. ** Or Fuel Economy run.						
** H	2nd	Fair	Fair	11.7705	1.610	7.95	0.758	0.000	178	60	28.855
Fuel Economy											

We, the undersigned, certify that this sheet and the log sheets attached hereto give a true and correct record of official tractor drawbar test No. 339

Operator Jack Schnitter Observer Charles F. Adams
 Operator _____ Observer _____
 Calculator Harold Mizner Calculator Robert Taylor
 Calculator _____ Calculator Carlton L. Zink
 Engineer-in-charge _____

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Copied C. L. Z.
Calculated C. L. Z. & H. M.

Adv. per rev., ft. 11.8212 Log of Official Tractor Drawbar Horsepower Test No. 339 f -- 100%

Date. April 16, 1940

[illegible]

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

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

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Copied HM
Calculated HM & RT

11.7705 for 1st Gear
11.8723 for 2nd Gear

Log of Official Tractor Drawbar Horsepower Test No. 339 G

Date April 15, 16, 1940

Chart and Reading No.	Time of day	Stop Watch, 500 ft., minutes	Engine Crankshaft R. P. M.*	Drive Wheel Slippage								Speed		Average Draft, Pounds	Drawbar Horsepower	Temperature		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			Radiator, Deg. F.	Atmosphere, Deg. F.		
				Counter Reading	Revolutions 500 ft.	Counter Reading	Revolutions 500 ft.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
			First Gear Ratio		73.3333					500		Barometer 28.670							
				3549		9662				500									
7N	6:38	2.6725	1410	4060	51.1	0179	51.7	51.40		500		187.1	2.13	2229	12.64	170	43		
				4572		0698				500									
9N	6:57	2.7000	1395	5084	51.2	1213	51.5	51.35		500		185.2	2.10	2243	12.59	168	43		
Total		5.3725						102.75		500				4472					
Average		2.6863	1403					51.38	604.8	500	17.33	186.1	2.11	2236	12.61	169	43		
										500									
			Second Gear Ratio		57.0369					500		Barometer 28.490							
				4108		0165				500									
4N	4:15	2.0000	1399	4599	49.1	0655	49.0	49.05		500		250.0	2.84	2107	15.96	198	67		
6N	4:43	2.0000	1409	5092		1149				500		260.0	3.34	2095	15.87	198	66		
				5586	49.4	1643	49.4	49.40		500									
Total		4.0000						98.45		500				4202		396	133		
Average		2.0000	1404					49.23	584.5	500	14.46	250.0	2.84	2101	15.92	198	67		
										500									

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

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Copied C. L. Z.
Calculated C. L. Z. & H. M.

Adv. per rev., ft. 11.8723 Log of Official Tractor Drawbar Horsepower Test No. 339 G Date April 16, 1940
Operating Maximum

Chart and Reading No.	Time of day	Stop Watch, 500 ft., minutes	Engine Crankshaft R. P. M.*	Drive Wheel Slippage								Speed		Average Draft, Pounds	Drawbar Horsepower	Temperature		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			Radiator, Deg. F.	Atmosphere, Deg. F.		
				Counter Reading	Revolutions 500 ft.	Counter Reading	Revolutions 500 ft.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
				Third Gear Ratio 24.6353						500		Barometer 28.740							
				2271		8326				500									
7N	1:12	0.7800		2711	44.0	8767	44.1	44.05		500		641.0	7.28	874	16.98	187	57		
8N	1:15	0.7750		3152	44.1	9207	44.0	44.05		500		645.2	7.33	869	16.99	188	57		
9N	1:19	0.7725		3593	44.1	9647	44.0	44.05		500		647.2	7.35	869	17.04	187	57		
				4033		0087				500									
11N	1:25	0.7775		4475	44.2	0528	44.1	44.15		500		643.1	7.31	874	17.03	187	57		
										500									
Total		3.1050						176.30		500				3486		749	228		
Ave.		0.7763	1399					44.08	523.3	500	4.45	644.1	7.32	872	17.02	187	57		
										500									
										500									
										500									
										500									
										500									
										500									

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Page 1

Copied H. M.
Calculated H. M.

Log of Official Tractor Drawbar Horsepower Test No. 339 h

Adv. per rev., ft. 11.7705

Rated Load

Date April 18, 1940

Chart and Reading No.	Time of day	Stop Watch, 500 ft., minutes	Engine Crankshaft R. P. M.*	Drive Wheel Slippage								Speed		Average Draft, Pounds	Drawbar Horsepower	Temperature		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			Radiator, Deg. F.	Atmosphere, Deg. F.		
				Counter Reading	Revolutions 500 ft.	Counter Reading	Revolutions 500 ft.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
				Second Gear Ratio 37.0369						500		Barometer 28.855							
	9:49	Start Test		0800		6915				500									
1S	10:30	1.8600		1251	45.7	7372	45.7	45.70		500						174	55		
1N	10:35	1.8350		1712	45.5	7826	45.4	45.45		500		270.6	3.08	1517	12.44	173	56		
2S	11:34	1.8850		2169	45.7	8292	45.6	45.65		500						176	66		
2N	11:39	1.8400		2623	45.4	8735	45.3	45.35		500		268.5	3.05	1540	12.53	176	66		
3S	12:30	1.8700		3080	45.7	9192	45.7	45.70		500						178	60		
3N	12:35	1.8500		3535	45.5	9647	45.5	45.50		500		268.8	3.05	1569	12.78	177	60		
4S	1:27	1.8600		3993	45.8	0105	45.8	45.80		500						180	58		
4N	1:33	1.8500		4448	45.5	0560	45.5	45.50		500		268.1	3.05	1585	12.88	179	58		
5S	2:30	1.8900		4907	45.9	1018	45.8	45.85		500						180	60		
5N	2:35	1.8500		5363	45.6	1474	45.6	45.60		500		267.4	3.04	1618	13.11	180	60		
6S	3:35	1.8350		5822	45.9	1933	45.9	45.90		500						185	62		
6N	3:40	1.8725		6279	45.7	2389	45.6	45.65		500		266.1	3.02	1656	13.35	180	60		
										500									

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

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Page 2

Copied H. M.
Calculated H. M.

Log of Official Tractor Drawbar Horsepower Test No. 339 h

Adv. per rev., ft. 11.7705

Rated Load

Date April 18, 1940

Chart and Reading No.	Time of day	Stop Watch, 500 ft., minutes	Engine Crankshaft R. P. M.*	Drive Wheel Slippage								Speed		Average Draft, Pounds	Drawbar Horsepower	Temperature		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			Radiator, Deg. F.	Atmosphere, Deg. F.			
				Counter Reading	Revolutions 500 ft.	Counter Reading	Revolutions 500 ft.													
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
				6279		2389				500										
7S	4:24	1.8400		6735	45.6	2845	45.6	45.60		500						180	62			
7N	4:29	1.8400		7190	45.5	3300	45.5	45.50		500		271.7	3.09	1574	12.96	178	60			
8S	5:35	1.8500		7644	45.4	3754	45.4	45.40		500						180	60			
8N	5:40	1.8400		8097	45.3	4207	45.3	45.30		500		271.0	3.08	1535	12.61	180	60			
9S	6:31	1.8500		8550	45.3	4661	45.4	45.35		500						176	58			
9N	6:36	1.8325		9002	45.2	5113	45.2	45.20		500		271.5	3.09	1528	12.57	176	58			
10S	7:27	1.8575		9456	45.4	5567	45.4	45.40		500						173	56			
10N	7:33	1.8425		9908	45.2	6018	45.1	45.15		500		270.3	3.07	1559	12.77	173	56			
Stop	7:49	88/100		Pulled rated load 10 hours and 88/100 minutes																
Total		37.1200						910.55		500				15681		3554	1191			
Ave.		1.8560	1399					45.53	535.9	500	6.70	269.4	3.06	1568	12.80	178	60	97.22	0.00	
										500										
										500										
										500										
										500										

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

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