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Test 401: Masey-Harris Pony

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
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Copy of Report of Official Tractor Test No. 401

Dates of test: September 14 to September 22, 1948
 Name and model of tractor: MASSEY-HARRIS PONY
 Manufacturer: MASSEY-HARRIS COMPANY, LTD., Toronto, Ontario, Canada
 Manufacturer's rating: No rating

HORSEPOWER SUMMARY

	DRAWBAR	BELT
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	11.08	12.16
2. Observed maximum horsepower (tests F & B)	10.43	11.62
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	8.31	10.34

REMARKS

No repairs or adjustments.

FUEL, OIL, and TIME

Fuel Gasoline Octane 74* Weight per gallon 6.208 pounds
Oil SAE 20-20W To Motor 1.061 gal. Drained from motor 0.976 gal.
Total time motor was operated 46.5 hours

* Octane rating taken from oil company's typical inspection data.

We, the undersigned, certify that this is a true and correct report of official tractor test no. 401.

L. F. Larsen
 Engineer in Charge

C. W. Smith

F. D. Yung

L. W. Hurlbut
 BOARD OF TRACTOR TEST ENGINEERS

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All results shown on pages 2 and 3 were determined from observed data and without allowances, additions or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, H, and J were made with an operating setting of the carburetor (selected by the manufacturer) of 2.3% of maximum belt horsepower.

B E L T H O R S E P O W E R T E S T S

Horse- power	Crank shaft speed rpm	Fuel Consumption			Water used gal per hr	Temperature		Barometer Inches of Mercury
		gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med °F	Air °F	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

11.62	1801	1.164	9.98	0.622	0.00	201	74	28.972
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

10.71	1798	1.037	10.33	0.601	0.00	199	76	28.995
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*TEST D - ONE HOUR

10.38	1799	1.031	10.07	0.617	0.00	201	83	29.035
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; lastline average)

10.36	1796	1.029	10.07	0.617	- - -	201	83	- - - -
1.57	1986	0.604	2.60	2.389	- - -	195	85	- - - -
5.51	1895	0.749	7.36	0.844	- - -	198	86	- - - -
10.49	1774	1.024	10.24	0.606	- - -	205	86	- - - -
2.78	1910	0.633	4.39	1.414	- - -	199	86	- - - -
8.22	1904	0.995	8.26	0.752	- - -	199	86	- - - -
6.49	1877	0.839	7.74	0.803	0.00	199	85	29.050

* Formerly called RATED LOAD, see HORSEPOWER SUMMARY 3, page 1

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D R A W B A R H O R S E P O W E R T E S T S

Horse- power	Draw bar pull lb	Speed mph	Crank shaft speed rpm	Slip on drive wheels %	Fuel Consumption			Water used gal per hr	Temperature Cool- ing mod of °F	Air °F	Barometer Inches of Mercury
					gal per hr	hp-hr per gal	lb per hp-hr				

Rear wheels, tires and added weight used in Tests F, G, and H: Pressed steel wheels; 8-24, 4 ply tires and 316 lb added weight per wheel.

TEST F - 100% MAXIMUM LOAD - 2nd GEAR

10.43	1124	3.48	1804	6.30	-----Not Recorded-----			202	88	28.905
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TEST G - OPERATING MAXIMUM LOAD

9.80	1132	2.57	1802	8.88	-----Not Recorded-----			202	92	28.895
9.86	1057	3.50	1807	5.99	-----" "-----			200	88	28.905
9.23	1091	7.00	1797	2.69	-----" "-----			199	89	28.905

*TEST H - TEN HOURS - 2nd GEAR

8.36	891	3.52	1799	4.96	0.927	9.62	10.689	0.00	193	79	28.831
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TEST J - OPERATING MAXIMUM LOAD - 2nd GEAR

9.26	1002	3.46	1804	7.46	-----Not Recorded-----			191	67	28.820
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~~Formerly~~ called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

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TIRES, WHEELS, AND WEIGHT

		Tests F, G, & H.	Test J
Rear Wheel; Type (each)		Pressed Steel	Pressed Steel
	Liquid Ballast	116 lb	None
	Added Cast Iron	200 lb	None
Rear Tires: No. Size & Ply		2 8-24 4 ply	2 8-24 4 ply
	Type of Tread	Champion Ground Grip	Champion Ground Grip
	Make	Firestone	Firestone
	Air Pressure	12 lb	12 lb
Front Wheel; Type (each)		Pressed Steel	Pressed Steel
	Liquid Ballast	None	None
	Added Cast Iron	None	None
Front Tires: No. Size & Ply		2 4.00-15 4 ply	2 4.00-15 4 ply
	Type of Tread	Triple rib	Triple rib
	Make	Goodyear	Goodyear
	Air Pressure	28 lb	28 lb
Height of Drawbar		20 1/2 inches	21 1/2 inches
Static Weight: Rear End		1708 lb	1076 Lb
	Front End	644 lb	644 lb
Total Weight as Tested (With Operator)		2547 lb	1890 lb

SPECIFICATIONS

Type Standard Serial No. PGS-3461 Drive Enclosed gear
Tread width: Rear 41 in to 72 in Front 45 in
Advertised speeds, miles per hour: First 2.74 Second 3.59 Third 7.00
Reverse 3.22
Belt pulley: Diam. 6 in Face 5 1/4 in RPM 1990 Belt speed 3130 fpm
Clutch: Make Rockford Type Single disc Operated by Foot pedal
Seat Pressed steel
Brakes: Make Massey-Harris Type Contracting band
Location Bull pinion and differential shaft
Gear reduction (brake drum to rear wheel) 7.08
Operated by Foot pedal
Locked by Latch
Equalization None
Engine: Make Continental Serial No. N624863 Type 4 cylinder vertical
Head L Mounting Lengthwise Lubrication Pressure
Bore and stroke 2 3/8 in x 3 1/2 in Rated rpm 1800
Port diameter valves; Inlet 3/4 in Exhaust 3/4 in
Generator; Make Auto-Lite
Distributor & Coil; Make Auto-Lite Battery Exide
Starter; Make Auto-Lite
Carburetor; Make Marvel-Schebler Model TSV-24 Size 5/8 in
Governor; Make Continental Type Weight Actuated
Air Cleaner; Make Donaldson Type Oil washed wire mesh
Oil Filter; Make Purolator Type Replaceable element
Cooling medium temperature control; Thermosiphon