

January 1952

## Test 484: McCormick Farmall Super M LPG

Follow this and additional works at: <http://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

---

"Test 484: McCormick Farmall Super M LPG" (1952). *Nebraska Tractor Tests*. 601.  
<http://digitalcommons.unl.edu/tractormuseumlit/601>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Department of Agricultural Engineering  
Dates of test: October 1 to October 10, 1952.  
Manufacturer: INTERNATIONAL HARVESTER  
COMPANY, CHICAGO, ILLINOIS  
Manufacturer's rating: 42.0 drawbar hp, 47.5 belt  
hp (Maximum hp corrected to standard con-  
ditions)

MCCORMICK FARMALL SUPER M LPG

BELT HORSEPOWER TESTS

Hp	Crank shaft speed rpm	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer inches of mercury
		Gal per hour	Hp-hr per gal	Lb per hp-hour		Cooling med	Air	
TEST B—100% MAXIMUM LOAD—TWO HOURS								
47.07	1451	5.472	8.60	0.485	0.00	176	64	28.935
TEST C—OPERATING MAXIMUM LOAD—ONE HOUR								
45.66	1450	5.211	8.76	0.476	0.00	174	58	28.970
TEST D—RATED LOAD—ONE HOUR								
41.54	1450	4.825	8.61	0.484	0.00	173	57	28.970
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
41.63	1452	4.878	8.53	0.489	...	173	56	.....
1.26	1565	1.691	0.75	5.595	...	169	54	.....
21.49	1493	3.259	6.59	0.632	...	173	52	.....
43.43	1377	4.885	8.89	0.469	...	170	54	.....
11.09	1521	2.353	4.71	0.885	...	170	49	.....
31.59	1466	4.036	7.83	0.533	...	170	51	.....
25.08	1479	3.517	7.13	0.585	0.00	171	53	28.970

TORQUE (at dynamometer)

RPM	1454	1378	1307	1225	1147	1066	994	920	850	775
Lb-ft	346.0	346.0	344.4	345.3	349.8	357.7	365.1	371.2	370.1	359.5

DRAWBAR HORSEPOWER TESTS

Hp	Draw bar pull lb	Speed miles per hr	Crank shaft speed rpm	Slip of drive wheels %	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer inches of mercury
					Gal per hour	Hp-hr per gal	Lb per hp-hr		Cooling med	Air	
TEST F—100% MAXIMUM LOAD—3rd Gear											
44.23	3355	4.94	1450	5.40	.....	Not Recorded	.....	.....	175	53	29.165
TEST G—OPERATING MAXIMUM LOAD											
39.54	6115	2.43	1449	13.64	.....	Not Recorded	.....	.....	176	57	29.165
42.81	4314	3.72	1449	7.00	.....	Not Recorded	.....	.....	184	52	29.160
43.31	3279	4.95	1450	5.12	.....	Not Recorded	.....	.....	184	54	29.160
42.46	2301	6.92	1448	3.46	.....	Not Recorded	.....	.....	181	52	29.160
37.04	792	17.54	1451	0.27	.....	Not Recorded	.....	.....	177	63	29.160
TEST H—RATED LOAD—TEN HOURS—3rd Gear											
33.95	2541	5.01	1448	3.66	4.337	7.83	0.533	0.00	184	51	29.203
TEST J—OPERATING MAXIMUM LOAD—3rd Gear											
41.30	3254	4.76	1449	10.09	.....	Not Recorded	.....	.....	190	73	28.950
TEST K—OPERATING MAXIMUM LOAD—3rd Gear											
37.66	3354	4.21	1450	13.74	.....	Not Recorded	.....	.....	194	70	28.950

TIRES, WHEELS and WEIGHT

	Tests F, G & H	Test J	Test K
<b>Rear wheels</b>			
Type	Cast spoke	Cast spoke	Cast spoke
Liquid ballast	948 lb each	None	None
Added cast iron	700 lb each	None	None
<b>Rear tires</b>			
No. and size	Two 13-38	Two 13-38	Two 11-38
Ply	6	6	4
Air pressure	16 lb	12 lb	12 lb
<b>Front wheels</b>			
Type	Cast spoke	Cast spoke	Cast spoke
Liquid ballast	None	None	None
Added cast iron	None	None	None
<b>Front tires</b>			
No. and size	Two 6.00-16	Two 6.00-16	Two 6.00-16
Ply	4	4	4
Air pressure	28 lb	28 lb	28 lb
<b>Height of drawbar</b>	20½ inches	21½ inches	18 inches
<b>Static weight</b>			
Rear end	7200 lb	3904 lb	3697 lb
Front end	1748 lb	1740 lb	1720 lb
<b>Total weight as tested with operator</b>	9123 lb	5819 lb	5592 lb

**FUEL, OIL and TIME** Commercial propane octane No 100 (rating taken from oil company's typical inspection data); weight per gallon 4.170 lb Oil SAE 20 to motor 2.269 gal; drained from motor 2.055 gal Total time motor was operated 42½ hours.

**CHASSIS** Type tricycle Serial No F1164CJ Tread width rear 52" to 88" front 8¾" to 17½" Wheel Base 89¼" Hydraulic control system driven by clutch Advertised speeds mph first 2¾ second 3¾ third 5 fourth 6¼ fifth 16¼ reverse 3¾ Belt pulley diam 11" face 7½" rpm 899 Belt speed 2588 fpm Clutch single plate dry disc operated by foot pedal Seat upholstered seat on conical spring with shock absorber Brakes double disc brakes operated by two foot pedals Equalized by locking two brake pedals together Power take-off standard type.

**ENGINE** Make International Harvester Type 4 cylinder vertical Serial No 14647C Crankshaft mounted lengthwise Head I Lubrication pressure Bore and Stroke 4" x 5¼" Rated rpm 1450 Compression ratio 6.75 to 1 Displacement 264 cu in Port Diameter Valves inlet 1 19/32" exhaust 1 7/16" Governor variable speed centrifugal Carburetor Size 1¼" Ignition System battery Starting System 6 volt battery Air Cleaner oil washed wire mesh Muffler was used Oil Filter replaceable treated paper element Cooling medium temperature control thermostat and radiator shutter.

**REPAIRS AND ADJUSTMENTS** No repairs or adjustments.

**REMARKS** All test results 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, J and K were made with an operating setting of the carburetor (selected by the manufacturer) of 96.4% of maximum belt horsepower.

HORSEPOWER SUMMARY

	Draw-bar	Belt
1. Sea level (calculated) maximum horsepower (based on 60° F and 29.92" Hg)	45.07	48.85
2. Observed maximum horsepower (tests F & B)	44.23	47.07
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)	33.80	41.52

We, the undersigned, certify that this is a true and correct report of official tractor test No. 484.

L. F. LARSEN  
Engineer in Charge

C. W. SMITH  
F. D. YUNG  
L. W. HURLBUT  
Board of Tractor  
Test Engineers