

January 1951

Test .460: McCormick Farmall MD

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Department of Agricultural Engineering
Dates of test: June 1 to June 16, 1951
Manufacturer: INTERNATIONAL HARVESTER
COMPANY, CHICAGO, ILLINOIS
Manufacturer's rating: Not rated.

McCORMICK FARMALL MD

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	
TESTS B AND C—100% MAXIMUM LOAD—TWO HOURS								
38.21	1451	2.711	14.09	0.488	0.00	205	73	28.850
TEST D—RATED LOAD—ONE HOUR								
34.12	1450	2.417	14.12	0.487	0.00	192	71	28.850
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
34.13	1448	2.423	14.09	0.488	...	191	70
1.42	1501	0.856	1.66	4.141	...	195	70
17.46	1477	1.515	11.52	0.596	...	196	71
37.39	1415	2.610	14.33	0.480	...	201	72
8.86	1495	1.187	7.46	0.921	...	178	71
25.86	1461	1.938	13.34	0.515	...	193	72
20.85	1466	1.755	11.88	0.578	0.00	192	71	28.850

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	
TESTS F AND G—100% MAXIMUM LOAD											
31.00	5051	2.30	1453	14.62	—Not Recorded—			197	85	28.910	
33.40	3791	3.30	1452	7.74	—Not Recorded—			193	82	28.900	
34.38	3133	4.12	1453	6.18	—Not Recorded—			205	80	28.900	
34.14	2535	5.05	1451	4.90	—Not Recorded—			204	82	28.910	
30.03	672	16.76	1459	0.78	—Not Recorded—			200	84	28.910	
TEST H—RATED LOAD—TEN HOURS—3RD GEAR											
27.54	2485	4.16	1449	4.91	2.213	12.44	0.552	0.00	188	78	28.700
TEST J—OPERATING MAXIMUM LOAD—3RD GEAR											
33.58	3151	4.00	1454	9.51	—Not Recorded—			192	74	28.700	
TEST K—OPERATING MAXIMUM LOAD—3RD GEAR											
26.84	2892	3.48	1450	15.67	—Not Recorded—			177	79	28.700	

TIRES, WHEELS and WEIGHT

	Tests F, G, & H	Test J	Test K
Car wheels			
Type	Cast spoke	Cast spoke	Cast spoke
Liquid ballast	662 lb each	None	None
Added cast iron	685 lb each	None	None
Rear tires			
No. and size	Two 12-38	Two 12-38	Two 10-38
Ply	6	6	6
Air pressure	18 lb	12 lb	12 lb
Front wheels			
Type	Cast spoke	Cast spoke	Cast spoke
Liquid ballast	None	None	None
Added cast iron	None	None	None
Front tires			
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
Height of drawbar	20½ inches	21½ inches	18½ inches
Static weight			
Rear end	6502 lb	3808 lb	3684 lb
Front end	1870 lb	1878 lb	1865 lb
Total weight as tested with operator	8547 lb	5861 lb	5725 lb

FUEL, OIL and TIME Diesel Fuel cetane No 47 (rating taken from oil company's typical inspection data); weight per gallon 6.873 lb Oil SAE 20; to motor 2.262 gal; drained from motor 1.835 gal Total time motor was operated 37 hours.

CHASSIS Type tricycle Serial No FDBK261013 Tread width rear 52" to 88" front 8½" 11½" 13¼" and 16¼" Wheel Base 90% Hydraulic control system yes Advertised speeds mph first 2½ second 3½ third 4¼ fourth 5½ fifth 16¼ reverse 3½ Belt pulley diam 11" face 7½" rpm 899 Belt speed 2588 fpm Clutch dry single plate clutch operated by foot pedal Seat pressed steel with canvas covered felt pad Brakes external contracting bands operated by right foot on pedals either independently or interlocked Equalized by springs when pedals are locked together Power take-off standard type.

ENGINE Make International Harvester Type 4 cylinder vertical diesel Serial No FDBKM18321 Crankshaft mounted lengthwise Head I Lubrication pressure Bore and Stroke 3⅞" x 5¼" Rated rpm 1450 Compression ratio 16.8 to 1 Displacement 247.7 cu in Port Diameter Valves inlet 1.500" exhaust 1.316" Governor variable speed centrifugal Carburetor Size ¾" (for starting only) Ignition System magneto (for starting only) Starting System 12 volt Air Cleaner oil washed wire mesh Muffler was used Fuel Filter one cotton auxiliary filter and one final radial fin paper filter Oil Filter partial flow radial fin replaceable element Cooling medium temperature control thermostat and shutters.

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 fuel pumps set to develop approximately 40 corrected 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 the same setting. Oil leaked at gasket between belt pulley housing flange and transmission case.

HORSEPOWER SUMMARY

	Draw-bar	Belt
1. Sea level (calculated)maximum horsepower (based on 60° F and 29.92" Hg)	36.27	40.12
2. Observed maximum horsepower (tests F & B)	34.38	38.21
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)	27.20	34.10

We, the undersigned, certify that this is a true and correct report of official tractor test No. 460.

L. F. LARSEN
Engineer in Charge

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