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Test 1008: Massey-Ferguson MF 165 Gasoline (Also MF 30 IND and MF 165 8-Speed Gasoline)

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NEBRASKA TRACTOR TEST 1008 – MASSEY-FERGUSON MF 165 GASOLINE

(ALSO MASSEY-FERGUSON MF 30 IND GASOLINE)

(ALSO MF 165 8-SPEED GASOLINE)

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption		Temperature Degrees F				
		Gal per hr	Lb per hp-hr	Hp-hr per gal	Cooling medium	Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours								
51.91	2000	4.783	0.559	10.85	188	66	75	28.805
Standard Power Take-off Speed (540 rpm)—One Hour								
48.20	1683	4.358	0.549	11.06	191	67	75	28.810
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
47.17	2140	4.788	0.616	9.85	189	68	77	.....
0.00	2269	2.159	.....	.....	180	66	76	.....
20.92	2206	3.622	1.051	5.78	184	67	76	.....
51.83	2001	4.773	0.559	10.86	190	67	77	.....
12.34	2237	2.925	1.439	4.22	182	68	79	.....
35.79	2164	4.308	0.731	8.31	188	68	79	.....
Av 28.01	2169	3.762	0.816	7.45	186	67	77	28.781

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption			Temp Degrees F			Barom- eter inches of Mercury
					Gal per hr	Lb per hp-hr	Hp-hr per gal	Cool- ing med	Air wet bulb	Air dry bulb	
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—7th Gear											
44.44	3173	5.25	1999	6.04	4.850	0.663	9.16	183	49	54	28.988
75% of Pull at Maximum Power—Ten Hours—7th Gear											
37.99	2479	5.75	2153	4.52	4.601	0.735	8.26	186	50	62	28.872
50% of Pull at Maximum Power—Two Hours—7th Gear											
25.95	1654	5.88	2176	3.24	4.026	0.942	6.45	184	50	63	28.930
MAXIMUM POWER WITH BALLAST											
39.18	6005	2.45	2084	14.55	4th	Gear		190	65	75	28.680
43.69	4680	3.50	2001	8.94	5th	Gear		187	49	55	28.990
44.54	3547	4.71	2002	6.47	6th	Gear		187	50	58	28.990
45.77	3262	5.26	2001	5.98	7th	Gear		188	51	59	28.990
44.26	2375	6.99	2000	4.36	8th	Gear		187	53	62	28.990
44.76	2090	8.03	1997	3.98	9th	Gear		187	51	60	28.990
42.88	1510	10.65	2002	2.95	10th	Gear		186	51	61	28.990

MAXIMUM PULL WITHOUT BALLAST

33.80	5033	2.52	2146	14.90	4th Gear	.....	.....	190	54	71	28.810	
VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—7th Gear												
Pounds pull				3262		3480		3676		3959		3907
Horsepower				45.77		43.72		40.86		37.61		27.15
Crankshaft speed rpm				2001		1800		1599		1403		1004
Miles per hour				5.26		4.71		4.17		3.64		2.61
Slip of drivers, %				5.98		6.35		6.83		7.31		7.19

TIRES, BALLAST and WEIGHT

		With Ballast	Without Ballast
Rear tires	—No, size, ply & psi	Two 16.9-28; 6; 16	Two 16.9-28; 6; 16
Ballast	—Liquid	831 lb each	None
	Cast iron	97 lb each	None
Front tires	—No, size, ply & psi	Two 6.50-16; 6; 24	Two 6.50-16; 6; 24
Ballast	—Liquid	None	None
	Cast iron	38 lb each	None
Height of drawbar		20½ inches	21 inches
Static weight with operator—Rear		5870 lb	4015 lb
	Front	1890 lb	1815 lb
	Total	7760 lb	5830 lb

Department of Agricultural Engineering

Date of Test: April 28 to May 12, 1969

Manufacturer: MASSEY-FERGUSON INC., DETROIT, MICHIGAN

FUEL, OIL and TIME Fuel Regular gasoline Octane No Motor 85.2 Research 92.6 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7294 Weight per gallon 6.072 lb Oil SAE 20-20W API service classification MS, DM To motor 1.981 gal Drained from motor 1.665 gal Transmission and final-drive lubricant Massey-Ferguson oil M-1129A Total time engine was operated 59 hours.

ENGINE Make Perkins gasoline Type 4 cylinder vertical Serial No 212UA 405A Crankshaft mounted lengthwise Rated rpm 2000 Bore and stroke 3⅞" x 4½" Compression ratio 7.0 to 1 Displacement 212 cu in Carburetor size 1½/16" Ignition system battery Cranking system 12 volt electric Lubrication pressure Air cleaner Dry type replaceable pleated paper element Oil filter full flow replaceable paper element Oil cooler Radiator for transmission Fuel filter sediment bowl and screen Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type Standard Serial No 9A67123 Tread width rear 56" to 90" front 48½" to 80½" Wheel base 82" Center of gravity (without operator or ballast with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from centerline of rear wheels 30" Vertical distance above roadway 30.3" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system Constant running except when PTO foot clutch is disengaged Transmission selective gear fixed ratio with partial range operator controlled power shift Advertised speeds mph first 1.36 second 1.79 third 2.05 fourth 2.68 fifth 3.76 sixth 4.91 seventh 5.45 eighth 7.14 ninth 8.18 tenth 10.71 eleventh 15.00 twelfth 19.65 reverse 1.86, 2.43, 7.43, 9.72 Clutch single plate dry disc with PTO clutch operated by single foot pedal combination Brakes double disc operated by two foot pedals which can be locked together Steering Mechanical with power assist Turning radius (on concrete surface with brake applied) right 126" left 126" (on concrete surface without brake) right 140" left 144" Turning space diameter (on concrete surface with brake applied) right 264" left 264" (on concrete surface without brake) right 290" left 300" Belt pulley 1176 rpm at 1975 engine rpm diam 10¼" face 16½" Belt speed 3117 fpm Power take-off 540 rpm at 1700 engine rpm.

REPAIRS and ADJUSTMENTS: During preliminary PTO runs the fixed carburetor jet was replaced with an adjustable jet. During the ten hour run the hydraulic power assist for steering became inoperative. An adjustment on control valve corrected this and test continued.

REMARKS: All test results were determined from observed data obtained in accordance with the SAE and ASAE test code. First, second and third gears were not run as it was necessary to limit the pull in fourth gear because of the stability formula. Eleventh and twelfth gears were not run as both exceeded 15 mph.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1008.

L. F. LARSEN

Engineer-In-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

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