1-1-1965

Test 896: Massey-Ferguson MF 165 (Diesel) (Also MF 165 8-Speed Diesel)

Tractor Museum
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NEBRASKA TRACTOR TEST 896 - MASSEY-FERGUSON MF 165 DIESEL (ALSO MF 165 8-SPEED DIESEL)

POWER TAKE-OFF PERFORMANCE

Hp	Crank-shaft speed rpm	Fuel Consumption Gal per hr	Fuel Consumption Lb per hp-hr	Hp-hr per gal	Temperature Degrees F Cooling medium	Temperature Degrees F Air wet bulb	Temperature Degrees F Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours								
52.42	1999	3.117	0.411	16.82	172	61	74	29.000
Standard Power Take-off Speed (540 rpm)—One Hour								
47.40	1705	2.772	0.405	17.10	176	59	73	29.020
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
45.56	2045	2.692	0.409	16.92	167	59	73	.....
0.00	2145	0.867	.....	.....	163	60	74	.....
23.48	2106	1.682	0.496	13.96	164	60	73	.....
52.24	2000	3.160	0.419	16.53	174	61	75	.....
11.84	2125	1.257	0.735	9.42	162	60	75	.....
34.72	2077	2.163	0.431	16.05	168	61	75	.....
Av 27.97	**2083**	**1.970**	**0.487**	**14.20**	**166**	**60**	**74**	**29.020**

DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crank-shaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Fuel Consumption Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool-ing med	Temp Degrees F Air wet bulb	Temp Degrees F Air dry bulb	Barom-eter inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—7th Gear (1st Hi-Lo MP)											
44.93	3428	4.91	2000	6.62	3.004	0.463	14.96	178	60	73	29.000
75% of Pull at Maximum Power—Ten Hours—7th Gear (1st Hi-Lo MP)											
37.02	2706	5.13	2049	4.90	2.512	0.470	14.74	169	66	76	28.851
50% of Pull at Maximum Power—Two Hours—7th Gear (1st Hi-Lo MP)											
25.88	1826	5.32	2084	3.11	1.947	0.520	13.29	168	69	84	28.755
MAXIMUM POWER WITH BALLAST											
34.45	5718	2.26	2054	14.92	4th Gear (2nd Lo-Hi MP)			170	56	65	29.090
44.56	5237	3.19	2001	11.79	5th Gear (3rd Lo-Lo MP)			170	56	65	29.090
45.28	3886	4.37	2000	7.69	6th Gear (3rd Lo-Hi MP)			175	56	65	29.080
46.94	3596	4.90	1999	7.13	7th Gear (1st Hi-Lo MP)			175	56	65	29.080
46.35	2663	6.53	1997	4.71	8th Gear (1st Hi-Hi MP)			178	57	70	29.080
46.69	2316	7.56	2004	4.29	9th Gear (2nd Hi-Lo MP)			178	57	70	29.080
45.21	1698	9.99	2000	3.26	10th Gear (2nd Hi-Hi MP)			178	57	70	29.080
43.66	1157	14.15	2000	2.02	11th Gear (3rd Hi-Lo MP)			176	58	70	29.040
MAXIMUM POWER WITHOUT BALLAST											
46.19	3600	4.81	2000	9.52	7th Gear (1st Hi-Lo MP)			180	63	66	28.940

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—7th Gear (1st Hi-Lo MP)

Pounds pull	3596	3770	3821	4015	4069	3977
Horsepower	46.94	43.97	39.76	36.34	31.39	25.66
Crankshaft speed, rpm	1999	1795	1606	1402	1197	1003
Miles per hour	4.90	4.37	3.90	3.39	2.89	2.42
Slip of drivers, %	7.13	7.52	7.75	8.08	8.19	8.19

TIRES, BALLAST and WEIGHT		With Ballast	Without Ballast
Rear tires	—No, size, ply & psi	Two 14.9-28; 6; 14	Two 14.9-28; 6; 14
Ballast	—Liquid	491 lb each	None
	Cast iron	679 lb each	None
Front tires	—No, size, ply & psi	Two 6.00-16; 4; 32	Two 6.00-16; 4; 28
Ballast	—Liquid	None	None
	Cast iron	100 lb each	None
Height of drawbar		20½ inches	22 inches
Static weight	—Rear	5520 lb	3180 lb
	Front	1930 lb	1730 lb
Total weight with operator		7625 lb	5085 lb

Department of Agricultural Engineering

Dates of Test: MAY 13 TO MAY 22, 1965

Manufacturer: MASSEY-FERGUSON INC., DETROIT, MICHIGAN

FUEL, OIL and TIME Fuel No 2 Diesel **Cetane No** 57.0 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60°** 0.8312 **Weight per gallon** 6.920 lb **Oil** SAE 20-20W **API service classification** MS, DS **To motor** 2.045 gal **Drained from motor** 1.818 gal **Transmission and final-drive lubricant** Massey-Ferguson Oil M-1101 **Total time engine was operated** 40½ hours.

ENGINE Make Perkins diesel **Type** 4 cylinder vertical **Serial No** 29 A 5487 **Crankshaft mounted** lengthwise **Rated rpm** 2000 **Bore and stroke** 3.6" x 5" **Compression ratio** 17.5 to 1 **Displacement** 203.5 cu in **Cranking system** 12 volt electric **Lubrication** pressure **Air cleaner** dry type with replaceable pleated paper element **Oil filter** full flow replaceable paper element **Fuel filter** primary and secondary filters with replaceable paper elements and sediment bowl with screen **Muffler** was used **Cooling medium temperature control** thermostat.

CHASSIS Type standard **Serial No** SDW 643000010 **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 center-line 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 shifting **Advertised speeds mph** first 1.28 second 1.68 third 1.93 fourth 2.53 fifth 3.54 sixth 4.64 seventh 5.15 eighth 6.75 ninth 7.72 tenth 10.11 eleventh 14.17 twelfth 18.54 reverse 1.76, 2.29, 7.01, and 9.18 **Clutch** single plate dry disc in combination with PTO clutch operated by single foot pedal **Brakes** double disc operated by two foot pedals which can be locked **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 6½" Belt speed 3117 fpm Power take-off 540 rpm at 1700 engine rpm.

REPAIRS and ADJUSTMENTS No repairs or adjustments.

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 to avoid excessive wheel slippage. Twelfth gear was not run as it exceeded 15 mph.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 896.

L. F. LARSEN
Engineer-in-Charge

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