

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 1968

Test 998: Ford 5000 Gasoline 8-Speed (Also Ford 5000 Gasoline 8-Speed Row Crop and Ford 6600 Gasoline 8-Speed)

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

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



Part of the [Applied Mechanics Commons](#)

Museum, Tractor, "Test 998: Ford 5000 Gasoline 8-Speed (Also Ford 5000 Gasoline 8-Speed Row Crop and Ford 6600 Gasoline 8-Speed)" (1968). *Nebraska Tractor Tests*. 1349.

<http://digitalcommons.unl.edu/tractormuseumlit/1349>

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.

**NEBRASKA TRACTOR TEST 998 – FORD 5000 GASOLINE 8-SPEED
(ALSO FORD 5000 GASOLINE 8-SPEED ROW CROP)
(ALSO FORD 6600 GASOLINE 8 SPEED)**

POWER TAKE-OFF PERFORMANCE

Hp	Crankshaft speed rpm	Fuel Consumption		Hp-hr per gal	Temperature Degrees F			Barometer inches of Mercury
		Gal per hr	Lb per hp-hr		Cooling medium	Air wet bulb	Air dry bulb	
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours								
67.31	2100	5.811	0.526	11.58	206	56	75	29.037
Standard Power Take-off Speed (540 rpm)—One Hour								
63.73	1901	5.425	0.519	11.75	207	56	75	29.050
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
59.50	2182	5.519	0.565	10.78	202	55	74	.....
0.00	2368	1.861	.....	.....	192	55	74	.....
30.67	2250	3.648	0.725	8.41	200	54	72	.....
67.92	2100	5.799	0.520	11.71	204	54	73	.....
15.70	2303	2.796	1.085	5.62	196	55	74	.....
45.45	2224	4.426	0.593	10.27	202	55	75	.....
Av 36.54	2238	4.008	0.668	9.12	199	54	74	29.050

DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crankshaft speed rpm	Slip of drivers %	Fuel Consumption		Hp-hr per gal	Temp Degrees F			Barometer inches of Mercury
					Gal per hr	Lb per hp-hr		Cooling med	Air wet bulb	Air dry bulb	
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—4th Gear											
57.87	5125	4.23	2101	8.10	5.967	0.628	9.70	203	40	47	28.960
75% of Pull at Maximum Power—Ten Hours—4th Gear											
47.10	3854	4.58	2224	6.06	4.968	0.643	9.48	202	41	45	28.871
50% of Pull at Maximum Power—Two Hours—4th Gear											
32.54	2565	4.76	2257	3.88	4.146	0.776	7.85	202	41	42	28.930

MAXIMUM POWER WITH BALLAST

34.39	7247	1.78	2262	14.30	2nd Gear		199	46	56	28.960
54.65	6971	2.94	2102	13.20	3rd Gear		201	44	51	28.950
56.97	5063	4.22	2100	8.46	4th Gear		203	45	53	28.940
57.86	4227	5.13	2098	6.90	5th Gear		202	45	52	28.930
57.22	3295	6.51	2100	5.42	6th Gear		202	46	55	28.920
53.40	1711	11.70	2099	3.03	7th Gear		202	46	55	28.900

MAXIMUM PULL WITHOUT BALLAST

40.30	4870	3.10	2220	14.66	3rd Gear		197	40	42	28.700
-------	------	------	------	-------	----------------	--	-----	----	----	--------

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—4th Gear

Pounds pull	5063	5306	5490	5528	5436	5375
Horsepower	56.97	53.35	48.89	42.95	36.27	29.79
Crankshaft speed rpm	2100	1889	1678	1467	1256	1044
Miles per hour	4.22	3.77	3.34	2.91	2.50	2.08
Slip of drivers, %	8.46	9.10	9.33	9.45	9.22	9.33

TIRES, BALLAST and WEIGHT

		With Ballast	Without Ballast
Rear tires	—No, size, ply & psi	Two 16.9-30; 6; 16	Two 16.9-30; 6; 16
Ballast	—Liquid	795 lb each	None
	Cast iron	1008 lb each	None
Front tires	—No, size, ply & psi	Two 7.50-16; 4; 24	Two 7.50-16; 4; 24
Ballast	—Liquid	94 lb each	None
	Cast iron	84 lb each	None
Height of drawbar		22½ inches	24 inches
Static weight with operator	Rear	7345 lb	3740 lb
	Front	2345 lb	1990 lb
	Total	9690 lb	5730 lb

Department of Agricultural Engineering

Date of Test: November 7 to November 25, 1968

Manufacturer: FORD MOTOR COMPANY, FORD TRACTOR OPERATIONS, BIRMINGHAM, MICHIGAN

FUEL, OIL and TIME Fuel regular gasoline Octane No Motor 84.8 Research 93.2 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7320 Weight per gallon 6.094 lb Oil SAE 10W-30 API service classification MS DG DM To motor 1.718 gal Drained from motor 1.502 gal Transmission lubricant Ford oil ESN-M2C77-A or M-4864-A Final-drive lubricant Ford oil ESN-M2C53-A or M2C53-B Total time engine was operated 51 hours.

ENGINE Make Ford gasoline Type 4 cylinder vertical Serial No E008621 Crankshaft mounted lengthwise Rated rpm 2100 Bore and stroke 4.4" x 4.2" Compression ratio 7.75 to 1 Displacement 256 cu in Carburetor size 1½/16" Ignition system battery Cranking system 12 volt electric Lubrication pressure Air cleaner oil washed wire mesh Oil filter full flow replaceable cotton blend element Fuel filter edge type filter in sediment bowl Muffler was used Cooling medium temperature control Thermostat.

CHASSIS Type standard Serial No C209901 Tread width rear 52" to 80" front 52" to 80" Wheel base 87.5" 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 27.30" Vertical distance above roadway 32.95" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 1.5 second 2.0 third 3.5 fourth 4.7 fifth 5.6 sixth 7.0 seventh 12.4 eighth 16.8 reverse 2.3 and 8.1 Clutch single plate dry disc operated by foot pedal Brakes oil cooled multiple disc mechanically operated by two foot pedals which can be locked Steering mechanical with power assist Turning radius (on concrete surface with brake applied) right 117" left 117" (on concrete surface without brake) right 141" left 141" Turning space diameter (on concrete surface with brake applied) right 249" left 249" (on concrete surface without brake) right 294" left 294" Belt pulley 1072 rpm at 2050 engine rpm diam 11" face 6.5" Belt speed 3087 fpm Power take-off 540 rpm at 1900 engine rpm.

REPAIRS AND ADJUSTMENTS: During preliminary pto runs cylinder head was removed and combustion chambers cleaned. This was done twice. New spark plugs were installed.

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

We, the undersigned, certify that this is a true and correct report of official Tractor Test 998.

L. F. LARSEN
Engineer-In-Charge

G. W. STEINBRUEGGE, Chairman
W. E. SPLINTER
D. E. LANE
Board of Tractor Test Engineers