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January 1970

Test 1051: Ford 3000 Gasoline 6-Speed (All Purpose)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1051 – FORD 3000 GASOLINE 6-SPEED (ALL-PURPOSE)

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temperature Degrees F Cooling medium	Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—626 rpm)								
38.33	2100	3.549	0.570	10.80	203	60	75	28.980
Standard Power Take-off Speed (540 rpm)—One Hour								
34.34	1810	3.057	0.548	11.23	201	62	75	28.985
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
33.85	2180	3.159	0.574	10.72	194	63	77	.....
0.00	2349	1.267	.....	.....	177	63	77	.....
17.58	2266	2.291	0.802	7.67	187	63	77	.....
37.86	2100	3.554	0.578	10.65	202	64	78	.....
8.94	2308	1.789	1.232	5.00	181	65	79	.....
25.62	2202	2.676	0.643	9.57	191	65	80	.....
Av 20.64	2234	2.456	0.732	8.40	189	64	78	28.970

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool- ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
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VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST

Maximum Available Power—Two Hours—3rd Gear											
31.15	2799	4.17	2101	6.61	3.364	0.665	9.260	195	67	84	28.770
75% of Pull at Maximum Power—Ten Hours—3rd Gear											
26.12	2207	4.44	2191	4.76	2.902	0.684	9.00	181	57	72	28.789
50% of Pull at Maximum Power—Two Hours—3rd Gear											
18.44	1519	4.55	2212	3.24	2.535	0.846	7.27	186	70	90	28.710

MAXIMUM POWER WITH BALLAST

18.02	5109	1.32	2171	14.82	1st Gear	.....	172	61	69	28.800
30.14	4840	2.34	2094	13.03	2nd Gear	.....	179	62	69	28.800
32.25	2902	4.17	2098	6.63	3rd Gear	.....	182	63	71	28.780
32.40	2082	5.84	2114	4.68	4th Gear	.....	182	65	78	28.780
32.10	1554	7.75	2108	3.48	5th Gear	.....	184	67	80	28.780

MAXIMUM PULL WITHOUT BALLAST

21.47	3291	2.45	2190	14.89	2nd Gear	182	67	76	28.580
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VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—3rd Gear

Pounds Pull	2902	3025	3061	3132	3154	3147	2949
Horsepower	32.25	30.15	27.12	24.17	20.77	17.29	13.16
Crankshaft Speed rpm	2098	1891	1682	1469	1254	1047	846
Miles Per Hour	4.17	3.74	3.32	2.89	2.47	2.06	1.67
Slip of Drivers %	6.63	7.09	7.09	7.30	7.40	7.50	6.99

TIRES, BALLAST and WEIGHT

		With Ballast	Without Ballast
Rear tires	—No. size, ply & psi	Two 14.9-24; 4; 14	Two 14.9-24; 4; 14
Ballast	—Liquid	530 lb each	None
	—Cast iron	700 lb each	None
Front tires	—No. size, ply & psi	Two 6.00-16; 4; 32	Two 6.00-16; 4; 32
Ballast	—Liquid	55 lb each	None
	—Cast iron	90 lb each	None
Height of drawbar		22 inches	23 inches
Static weight with operator—Rear		5000 lb	2540 lb
	Front	1890 lb	1600 lb
	Total	6890 lb	4140 lb

The University of Nebraska Agricultural Experiment Station
E. F. Frolik, Dean; H. W. Ottoson, Director; Lincoln, Nebraska

Department of Agricultural Engineering

Dates of Test: September 29 to October 5, 1970

Manufacturer: Ford Motor Company, Birmingham, Michigan

FUEL, OIL and TIME Fuel regular gasoline Octane No Motor 84.3 Research 93.0 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7392 Weight per gallon 6.154 lb Oil SAE 10W-30 API service classification MS, DG, DM To motor 1.479 gal Drained from motor 1.376 gal Transmission and final-drive lubricant Ford Oil M-2C53-A Total time engine was operated 47 hours.

ENGINE Make Ford gasoline Type 3 cylinder vertical Serial No C 219405 Crankshaft mounted lengthwise Rated rpm 2100 Bore and stroke 4.2" x 3.8" Compression ratio 7.75 to 1 Displacement 158 cu in Carburetor size 1¼" Ignition system battery Cranking system 12 volt Lubrication pressure Air cleaner dry type with pleated paper element Oil filter full flow replaceable cotton blend cartridge Fuel filter edge type filter in sediment bowl and nylon screen in fuel tank Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No C279892 Tread width rear 52" to 76" front 52" to 80" Wheel base 75.8" 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 32.8" Vertical distance above roadway 25.2" 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 2.7 third 4.4 fourth 6.1 fifth 8.0 sixth 18.2 reverse 2.5 and 7.4 Clutch single plate dry disc with cerametallic buttons operated by foot pedal Brakes internal expanding shoe operated by two pedals that can be locked together Steering mechanical with power assist Turning radius (on concrete surface with brake applied) right 117" left 117" (on concrete surface without brake) right 129" left 129" Turning space diameter (on concrete surface with brake applied) right 240" left 240" (on concrete surface without brake) right 267" left 267" Belt pulley 1141 rpm at 2050 engine rpm diam 10¼" face 6½" Belt Speed 3061 fpm Power take-off 537 rpm at 1800 engine rpm.

REPAIRS and ADJUSTMENTS: During final inspection all exhaust valves were found to be pitted or burned. No. 2 and No. 3 exhaust valves were replaced and all exhaust valves were lapped to the seats before reassembly.

REMARKS: All test results were determined from observed data obtained in accordance with the SAE and ASAE test code. Sixth 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 1051.

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers