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January 1970

Test 1052: Ford 3000 Diesel 6-Speed (All Purpose)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1052 – FORD 3000 DIESEL 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—597 rpm)								
40.63	2000	2.604	0.442	15.60	200	59	75	28.800
Standard Power Take-off Speed (540 rpm)—One Hour								
39.07	1810	2.451	0.432	15.94	201	59	75	28.800
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
35.62	2063	2.246	0.435	15.86	185	60	75	.....
0.00	2252	0.731	.....	.....	171	60	75	.....
18.20	2109	1.415	0.536	12.86	176	61	76	.....
40.52	2001	2.603	0.443	15.57	197	61	76	.....
9.48	2196	1.123	0.816	8.44	173	61	77	.....
26.76	2067	1.785	0.460	14.99	180	61	78	.....
Av 21.76	2114	1.651	0.523	13.18	180	61	76	28.807

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											
34.96	3316	3.95	1998	7.30	2.576	0.508	13.57	184	46	55	28.830
75% of Pull at Maximum Power—Ten Hours—3rd Gear											
27.77	2478	4.20	2082	5.43	2.088	0.518	13.30	177	37	38	28.749
50% of Pull at Maximum Power—Two Hours—3rd Gear											
19.87	1701	4.38	2130	3.69	1.709	0.593	11.63	173	40	45	28.850

MAXIMUM POWER WITH BALLAST

32.05	5208	2.31	2061	12.95	2nd Gear	178	46	55	28.795
26.05	3402	3.97	2001	6.89	3rd Gear ..	185	46	55	28.800
35.88	2443	5.51	2001	5.21	4th Gear	184	48	57	28.790
35.88	1827	7.36	2004	3.86	5th Gear	183	48	58	28.790

MAXIMUM PULL WITHOUT BALLAST

33.96	3371	3.78	2041	14.84	3rd Gear	180	39	43	29.250
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VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—3rd Gear

Pounds Pull	3402	3686	3805	3812	3810	3654
Horsepower	36.05	34.91	32.10	28.07	23.93	19.11
Crankshaft Speed rpm	2001	1802	1610	1407	1200	996
Miles Per Hour	3.97	3.55	3.16	2.76	2.36	1.96
Slip of Drivers %	6.89	7.70	7.91	8.01	8.11	7.80

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	515 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	33 lb each	None
	Cast iron	90 lb each	None
Height of drawbar		22 inches	23 inches
Static weight with operator—Rear		5000 lb	2570 lb
	Front	1895 lb	1650 lb
	Total	6895 lb	4220 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 28 to October 14, 1970

Manufacturer: Ford Motor Company, Birmingham, Michigan

FUEL, OIL and TIME Fuel No 2 Diesel Cetane No 53.5 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8276 Weight per gallon 6.891 lb Oil SAE 20-20W API service classification MS, DS To motor 1.670 gal Drained from motor 1.172 gal Transmission and final-drive lubricant Ford oil M-2C53-A Total time engine was operated 49 hours.

ENGINE Make Ford Diesel Type 3 cylinder vertical Serial No C214266 Crankshaft mounted lengthwise Rated rpm 2000 Bore and stroke 1.2" x 4.2" Compression ratio 16.5 to 1 Displacement 175 cu in Cranking system 12 volt electric Lubrication pressure Air cleaner oil washed wire mesh Oil filter full flow replaceable cotton blend cartridge Fuel filter one replaceable paper element and nylon screen in fuel tank Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type Standard Serial No C 279891 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 1.4 second 2.6 third 4.2 fourth 5.8 fifth 7.6 sixth 17.4 reverse 2.4 and 7.0 Clutch single plate dry disc with cerametallic buttons operated by foot pedal Brakes internal expanding shoe operated by two foot 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 1113 rpm at 2000 engine rpm diam 10 1/4" face 6 1/2" Belt Speed 2986 fpm Power take-off 537 rpm at 1800 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. Oil filter seal leaked oil during the test. Sixth gear was not run as it exceeded 15 m.p.h.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1052.

L. F. LARSEN
Engineer-in-Charge

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