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## Test 883: Ford 3000 4-Speed (Diesel)

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# NEBRASKA TRACTOR TEST 883 FORD 3000 4-SPEED DIESEL

## 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	
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>								
<b>Rated Engine Speed—Two Hours</b>								
39.46	2000	2.531	0.443	15.59	193	59	75	29.027
<b>Standard Power Take-off Speed (540 rpm)—One Hour</b>								
31.81	1484	1.936	0.420	16.43	192	59	75	29.015
<b>VARYING POWER AND FUEL CONSUMPTION—TWO HOURS</b>								
34.94	2084	2.293	0.453	15.24	188	60	76	.....
0.00	2197	0.773	.....	.....	176	59	74	.....
17.90	2135	1.494	0.577	11.98	182	59	73	.....
39.89	2000	2.545	0.441	15.67	194	59	75	.....
9.16	2185	1.134	0.855	8.08	178	59	74	.....
26.75	2129	1.907	0.492	14.03	186	59	73	.....
Av 21.44	2122	1.691	0.545	12.68	184	59	74	29.013

## DRAWBAR PERFORMANCE

Hp	Drawbar 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	
<b>VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST</b>											
<b>Maximum Available Power—Two Hours—5th Gear (2nd direct)</b>											
35.43	2876	4.62	1999	5.62	2.606	0.508	13.60	192	45	45	28.865
<b>75% of Pull at Maximum Power—Ten Hours—5th Gear (2nd direct)</b>											
28.97	2188	4.97	2113	4.03	2.246	0.536	12.90	191	42	44	28.940
<b>50% of Pull at Maximum Power—Two Hours—5th Gear (2nd direct)</b>											
20.48	1502	5.11	2151	2.92	1.856	0.626	11.03	185	41	41	28.815
<b>MAXIMUM POWER WITH BALLAST</b>											
30.86	4629	2.50	2106	10.81	1st Gear (1st under)		188	43	46	28.750	
34.61	4439	2.92	2002	9.70	2nd Gear (2nd under)		190	47	48	28.820	
36.36	3622	3.76	2005	6.86	3rd Gear (1st direct)		192	47	48	28.820	
35.67	3009	4.45	1998	5.54	4th Gear (3rd under)		191	47	48	28.820	
36.29	2937	4.63	1999	5.27	5th Gear (2nd direct)		191	47	48	28.820	
35.26	2292	5.77	2000	4.18	6th Gear (1st over)		184	46	46	28.785	
35.12	1919	6.86	1994	3.57	7th Gear (3rd direct)		185	46	46	28.785	
34.70	1840	7.07	2001	3.23	8th Gear (2nd over)		186	46	46	28.785	
34.27	1340	9.59	1997	2.20	9th Gear (4th under)		185	47	48	28.800	
33.49	1199	10.47	2004	1.86	10th Gear (3rd over)		187	47	48	28.800	
31.99	816	14.70	1990	0.51	11th Gear (4th direct)		185	47	48	28.800	
<b>MAXIMUM POWER WITHOUT BALLAST</b>											
34.63	2938	4.42	1998	10.81	5th Gear (2nd direct)		190	51	57	28.840	

## VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—5th Gear (2nd direct)

Pounds pull	2937	3116	3139	3194	3246	3282	3086
Horsepower	35.29	34.26	30.71	27.19	23.90	19.87	15.18
Crankshaft speed, rpm	1999	1787	1593	1387	1202	992	803
Miles per hour	4.63	4.12	3.67	3.19	2.76	2.27	1.84
Slip of drivers, %	5.27	5.81	6.02	6.02	6.23	6.66	6.23

TIRES, BALLAST and WEIGHT	With Ballast		Without Ballast	
	Rear tires	—No, size, ply & psi	Two 14.9-24; 4; 12	Two 14.9-24; 4; 12
Ballast	—Liquid	614 lb each	None	
	—Cast iron	420 lb each	None	
Front tires	—No, size, ply & psi	Two 6.00-16; 4; 28	Two 6.00-16; 4; 28	
Ballast	—Liquid	None	None	
	—Cast iron	None	None	
Height of drawbar		21 inches	22 inches	
Static weight	—Rear	4453 lb	2385 lb	
	—Front	1610 lb	1630 lb	
Total weight with operator		6238 lb	4190 lb	

## Department of Agricultural Engineering

Dates of Test: MARCH 27 TO APRIL 7, 1965

Manufacturer: FORD MOTOR COMPANY, BIRMINGHAM, 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°** 0.8295 **Weight per gallon** 6.907 lb **Oil** SAE 10W API service classification DS **To motor** 1.474 gal **Drained from motor** 1.172 gal **Transmission and final-drive lubricant** SAE 80 EP **Total time engine was operated** 44 hours.

**ENGINE Make** Ford Diesel **Type** 3 cylinder vertical **Serial No** ND000768K4 **Crankshaft mounted lengthwise** **Rated rpm** 2000 **Bore and stroke** 4.2" 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 paper cartridge **Fuel filter** one filter with replaceable nylon gauze element and one filter with replaceable paper element **Muffler** was used **Cooling medium temperature control** thermostat.

**CHASSIS Type** standard **Serial No** C100605 **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 centerline 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 4.0 second 4.8 third 7.0 fourth 14.8 reverse 4.2 **Clutch** single plate dry disc operated by foot pedal **Brakes** internal expanding shoe 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 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** 1323 rpm at 1950 engine rpm diam 9.00" face 6.5" **Belt speed** 3117 fpm **Power take-off** 546 rpm at 1500 engine rpm.

**REPAIRS and ADJUSTMENTS** A nut was lost from the starter solenoid during the drawbar runs causing the tractor to fail to start. This was replaced and test continued.

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

It was necessary to limit the pull in first gear because of the stability formula. This tractor was equipped with the standard 4-speed transmission plus an optional auxiliary overdrive-underdrive transmission. Standard PTO speed can be obtained with only the four direct drive gears.

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 883.

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

J. J. SULEK

D. E. LANE

Board of Tractor Test Engineers

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