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Test 844: Ford 2000 Super Dexta Diesel

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NEBRASKA TRACTOR TEST 844 - FORD 2000 SUPER DEXTA DIESEL

The University of Nebraska Agricultural Experiment Station

E. F. Frolik, Dean; H. H. Kramer, Director, Lincoln, Nebraska

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption		Hp-hr per gal	Temperature Degrees F			Barometer inches of Mercurv
		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								
38.83	2250	2.712	0.482	14.32	187	71	76	29.018
Standard Power Take-off Speed (540 rpm)—One Hour								
34.31	1810	2.214	0.445	15.50	185	71	75	29.010
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
34.07	2324	2.351	0.476	14.49	174	71	75	
0.00	2417	0.822			145	70	75	
17.31	2358	1.513	0.603	11.44	158	70	75	
39.14	2250	2.712	0.478	14.43	187	70	75	
8.73	2380	1.143	0.904	7.64	150	70	75	
25.66	2334	1.895	0.510	13.54	173	70	75	
Av 20.82	2344	1.739	0.577	11.97	164	70	75	29.008

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption			Temp Degrees F			Barometer inches of Mercury
					Gal per hr	Lb per hp-hr	Hp-hr per gal	Cool- ing med	Air wet bulb	Air dry bulb	
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—3rd Gear											
32.25	2744	4.41	2254	7.97	2.621	0.561	12.30	209	76	95	28.818
75% of Pull at Maximum Power—Ten Hours—3rd Gear											
26.17	2102	4.67	2320	5.24	2.102	0.554	12.45	190	76	93	28.735
50% of Pull at Maximum Power—Two Hours—3rd Gear											
18.29	1423	4.82	2358	3.69	1.671	0.630	10.95	174	77	98	28.790
MAXIMUM POWER WITH BALLAST											
30.58	4524	2.54	2323	14.85	2nd Gear			182	70	80	28.805
32.89	2821	4.37	2250	8.54	3rd Gear			198	76	90	28.855
33.02	2027	6.11	2249	6.00	4th Gear			195	76	90	28.855
33.03	1515	8.18	2250	4.45	5th Gear			197	76	90	28.855
MAXIMUM POWER WITHOUT BALLAST											
31.72	2848	4.18	2268	14.45	3rd Gear			208	72	90	28.725

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—3rd Gear

Peunds pull	2821	2963	3101	3226	3337	3381	3323
Horsepower	32.89	30.92	28.41	25.95	22.57	19.19	14.97
Crankshaft speed rpm	2250	2023	1791	1575	1338	1119	891
Miles per hour	4.37	3.91	3.44	3.02	2.54	2.13	1.69
Slip of drivers %	8.54	8.93	9.71	9.71	10.76	10.48	10.76

TIRES, BALLAST and WEIGHT

		With Ballast	Without Ballast
Rear tires	—No, size, ply & psi	Two 12.4-28; 4; 14	Two 12.4-28; 4; 12
Ballast	—Liquid	325 lb each	None
	Cast iron	725 lb each	None
Front tires	—No, size, ply & psi	Two 5.50-16; 4; 32	Two 5.50-16; 4; 20
Ballast	—Liquid	32 lb each	None
	Cast iron	178 lb each	None
Height of drawbar		21 inches	22½ inches
Static weight	—Rear	4140 lb	2040 lb
	Front	1715 lb	1295 lb
Total weight with operator		6030 lb	3510 lb

Department of Agricultural Engineering

Dates of Test: June 19 to July 2, 1963

Manufacturer: FORD MOTOR COMPANY LTD., DAGENHAM, ESSEX, ENGLAND

Manufacturer's Power Rating: 39.5 PTO Horsepower (corrected to standard conditions)

FUEL, OIL and TIME Fuel No 2 Diesel Cetane No 56.7 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8289 Weight per gallon 6.902 lb Oil SAE 20-20W API service classification DS To motor 1.699 gal Drained from motor 1.401 gal Transmission and final-drive lubricant FORD hydraulic oil M-4864-B Total time engine was operated 44 hours.

ENGINE Make Ford Motor Company Ltd. Diesel Type 3 cylinder vertical Serial No 1624180 Crankshaft mounted lengthwise Rated rpm 2250 Bore and stroke 3.6" x 5.0" Compression ratio 17.4 to 1 Displacement 152.7 cu in Cranking system 12 volt electric (two 6 volt batteries) Lubrication pressure Air cleaner oil washed wire gauze Oil filter treated paper element in replaceable cartridge Fuel filter one replaceable paper element Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No 09B718283 Tread width rear 48" to 76" front 52" to 76" Wheel base 72.8" 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 29" Vertical distance above roadway 25" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system operating only while clutch is engaged Transmission selective gear fixed ratio Advertised speeds mph first 1.61 second 2.91 third 4.80 fourth 6.55 fifth 8.62 sixth 19.53 reverse 7.85 and 2.63 Clutch dry disc operated by single foot pedal Brakes internal expanding shoe operated by two foot pedals Steering no power steering Turning radius (on concrete surface with brake applied) right 106" left 106" (on concrete surface without brake) right 120" left 120" Turning space diameter (on concrete surface with brake applied) right 221" left 221" (on concrete surface without brake) right 249" left 249" Belt pulley 1115 rpm at 2000 engine rpm diam 10.25" face 6.5" Belt speed 3000 fpm Power take-off 540 rpm at 1810 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 gear was not run as it was necessary to limit the pull in second gear to avoid excessive wheel slippage. 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 844.

L. F. LARSEN

Engineer-in-Charge

L. W. HURLBUT, Chairman

G. W. STEINBRUEGGE

J. J. SULEK

Board of Tractor Test Engineers