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Test 879: Ford 5000 8-Speed (Diesel)

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NEBRASKA TRACTOR TEST 879 - FORD 5000 8-SPEED DIESEL

POWER TAKE-OFF PERFORMANCE

Hp	Crank-shaft 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								
55.96	2100	3.573	0.441	15.66	197	54	76	29.303
Standard Power Take-off (540)—One Hour								
53.30	1901	3.249	0.421	16.41	197	54	75	29.270
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
50.37	2224	3.310	0.454	15.22	192	54	77	.....
0.00	2285	1.025	.....	.....	169	53	73	.....
25.54	2255	2.085	0.564	12.25	182	53	74	.....
56.28	2099	3.618	0.444	15.56	200	55	77	.....
12.84	2268	1.542	0.829	8.33	175	54	75	.....
38.20	2249	2.649	0.479	14.42	189	55	78	.....
Av 30.54	2230	2.372	0.536	12.88	184	54	75	29.210

DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crank-shaft 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											
47.65	4106	4.35	2096	6.01	3.620	0.525	13.16	191	53	61	28.800
75% of Pull at Maximum Power—Ten Hours—4th Gear											
38.85	3100	4.70	2226	4.38	3.077	0.547	12.63	176	37	40	29.026
50% of Pull at Maximum Power—Two Hours—4th Gear											
27.87	2153	4.85	2269	3.15	2.506	0.621	11.12	170	41	45	29.015

MAXIMUM POWER WITH BALLAST

34.02	6991	1.83	2185	14.07	2nd Gear		182	55	65	28.840
45.84	5533	3.11	2102	8.98	3rd Gear		191	55	65	28.840
48.07	4134	4.36	2103	6.01	4th Gear		195	55	61	28.840
49.33	4244	4.36	2107	6.39	5th Gear		195	55	65	28.805
48.83	2622	6.98	2100	3.77	6th Gear		190	55	65	28.805
43.86	1391	11.83	2087	2.17	7th Gear		193	55	65	28.805

MAXIMUM POWER WITHOUT BALLAST

46.60	4101	4.26	2100	9.21	4th Gear		198	54	61	28.700
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VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—4th Gear

Pounds pull	4134	4273	4509	4580	4620	4537
Horsepower	48.07	46.72	43.93	39.14	34.15	28.61
Crankshaft speed, rpm	2103	1983	1774	1559	1349	1149
Miles per hour	4.36	4.10	3.65	3.20	2.77	2.36
Slip of drivers, %	6.01	6.32	6.82	6.82	7.06	7.06

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	860 lb each	None
	—Cast iron	888 lb each	None
Front tires	—No, size, ply & psi	Two 7.50-16; 4; 24	Two 7.50-16; 4; 24
Ballast	—Liquid	65 lb each	None
	—Cast iron	None	None
Height of drawbar		22 inches	23½ inches
Static weight	—Rear	7090 lb	3600 lb
	—Front	2220 lb	2090 lb
Total weight with operator		9485 lb	5865 lb

Department of Agricultural Engineering

Dates of Test: MARCH 16 TO APRIL 9, 1965

Manufacturer: FORD MOTOR COMPANY, BIRMINGHAM, MICHIGAN

FUEL, OIL and TIME Fuel No 2 Diesel Cetane No 57.0 Specific gravity converted to 60°/60° 0.8295 Weight per gallon 6.907 lb Oil SAE 10W API service classification DS To motor 1.682 gal Drained from motor 1.226 gal Transmission lubricant Ford Oil ESNM2C77-A Final Drive Lubricant Ford Oil ESNM2C53-A Total time engine was operated 44 hours.

ENGINE Make Ford Diesel Type 4 cylinder vertical Serial No RD002356L4 Crankshaft mounted lengthwise Rated rpm 2100 Bore and stroke 4.2" x 4.2" Compression ratio 16.5 to 1 Displacement 233 cu in Cranking system 12 volt electric Lubrication pressure Air cleaner oil washed wire mesh with centrifugal precleaner Oil filter full flow replaceable paper element 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 C100735 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 center line of rear wheels 27.30" Vertical distance above roadway 32.95" Horizontal distance from center of rear wheel tread .02" to the right Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 1.3 second 2.1 third 3.5 fourth 4.7 fifth 4.7 sixth 7.4 seventh 12.4 eighth 16.8 reverse 2.1 and 7.7 Clutch single plate dry disc operated by foot pedal Brakes wet double disc operated by two foot pedals that can be locked Steering mechanical with hydraulic power assist Turning radius (on concrete surface with brake applied) right 111" left 111" (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" Power take-off 540 rpm at 1900 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 because of the stability formula. Eighth gear was not run because it exceeded 15 mph.

A transmission oil leak developed near the gear shift lever during the drawbar runs.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 879.

L. F. LARSEN
Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

J. J. SULEK

D. E. LANE

Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station
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