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January 1966

Test 933: Ford 5000 Select-O-Speed (Gasoline)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 933 – FORD 5000 SELECT-O-SPEED GASOLINE

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption		Temperature Degrees F					Barometer inches of Mercury
		Gal per hr	Lb per hp-hr	Hp-hr per gal	Cooling medium	Air wet bulb	Air dry bulb		
MAXIMUM POWER AND FUEL CONSUMPTION									
Rated Engine Speed—Two Hours									
58.49	2100	5.001	0.521	11.70	195	55	75	29.040	
Standard Power Take-off Speed (540 rpm)—One Hour									
55.33	1901	4.684	0.516	11.81	195	54	75	29.010	
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS									
50.79	2144	4.595	0.552	11.05	195	54	75	.....
0.00	2313	1.830	.....	.....	187	54	75	.....
26.52	2228	3.262	0.750	8.13	193	54	75	.....
57.16	2100	4.964	0.530	11.51	196	54	75	.....
13.38	2260	2.543	1.159	5.26	192	54	74	.....
38.80	2186	3.891	0.612	9.97	194	54	75	.....
Av	31.11	2205	3.514	0.689	8.85	193	54	75	28.990

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption			Temp Degrees F				Barom- eter 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—6th Gear												
49.51	4310	4.31	2101	5.38	5.036	0.620	9.83	194	41	42	28.645	
75% of Pull at Maximum Power—Ten Hours—6th Gear												
39.98	3312	4.53	2178	4.06	4.396	0.670	9.09	195	31	33	28.964	
50% of Pull at Maximum Power—Two Hours—6th Gear												
29.05	2351	4.63	2206	3.05	3.786	0.795	7.67	194	40	41	28.610	
MAXIMUM POWER WITH BALLAST												
38.79	7073	2.06	2171	10.25	4th Gear		184	40	40	28.700		
50.37	5756	3.28	2103	7.44	5th Gear		186	40	40	28.700		
50.47	4400	4.30	2099	5.47	6th Gear		190	40	40	28.700		
49.76	3733	5.00	2102	4.58	7th Gear		195	39	39	28.690		
48.57	2803	6.50	2097	3.35	8th Gear		197	39	40	28.600		
45.38	1592	10.69	2100	1.88	9th Gear		194	39	40	28.600		
MAXIMUM POWER WITHOUT BALLAST												
48.38	4396	4.13	2102	11.04	6th Gear		193	52	60	29.150		

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—6th Gear

Pounds pull	4400	4611	4804	4814	4707	4662
Horsepower	50.47	47.34	44.08	38.41	32.35	26.46
Crankshaft speed, rpm	2099	1885	1689	1471	1263	1045
Miles per hour	4.30	3.85	3.44	2.99	2.58	2.13
Slip of drivers, %	5.47	5.85	5.85	6.09	5.85	5.97

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	865 lb each	None
	Cast iron	975 lb each	None
Front tires	—No, size, ply & psi	Two 7.50-16; 4; 24	Two 7.50-16; 4; 20
Ballast	—Liquid	103 lb each	None
	Cast iron	90 lb each	None
Height of drawbar		23½ inches	25 inches
Static weight with operator—Rear		7390 lb	3710 lb
	Front	2395 lb	2010 lb
	Total	9785 lb	5720 lb

Department of Agricultural Engineering

Dates of Test: APRIL 13 TO APRIL 22, 1966

Manufacturer: FORD MOTOR COMPANY, BIRMINGHAM, MICHIGAN

FUEL, OIL and TIME Fuel regular gasoline Octane No Motor 84.5 Research 92.6 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7325 Weight per gallon 6.098 lb Oil SAE 10W API service classification MS, DM To motor 1.716 gal Drained from motor 1.459 gal Transmission lubricant Ford Oil ESNM2C41-A Final drive lubricant Ford Oil ESNM2C53-A Total time engine was operated 44 hours.

ENGINE Make Ford gasoline Type 4 cylinder vertical Serial No RG106288M25 Crankshaft mounted lengthwise Rated rpm 2100 Bore and stroke 4.2" x 4.2" Compression ratio 8.0 to 1 Displacement 233 cu in Carburetor size 1½" Ignition system battery Cranking system 12 volt electric Lubrication pressure Air cleaner oil washed wire mesh Oil filter full flow replaceable paper element Oil cooler heat exchanger in lower radiator tank for transmission oil Fuel filter edge type filter in sediment bowl Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No C1243075 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 0.02" to the right Hydraulic control system direct engine drive Transmission fixed ratio operator controlled full range power shifting Advertised speeds mph first 1.0 second 1.5 third 1.7 fourth 2.3 fifth 3.6 sixth 4.6 seventh 5.3 eighth 6.9 ninth 11.1 tenth 16.4 reverse 3.1 and 4.6 Clutch multiple disc wet clutches within transmission hydraulically operated Brakes wet double disc operated by two foot pedals that can be locked Steering mechanical with 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" Belt speed 3087 fpm 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, second, and third gears were not run as it was necessary to limit the pull in fourth gear because of the stability formula. Tenth 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 933.

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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