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January 1966

Test 932: Ford 5000 8-Speed (Gasoline)

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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NEBRASKA TRACTOR TEST 932 – FORD 5000 8-SPEED GASOLINE

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								
60.37	2101	5.116	0.517	11.80	194	56	75	29.183
Standard Power Take-off Speed (540 rpm)—One Hour								
56.94	1903	4.788	0.513	11.89	194	56	75	29.147
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
52.78	2160	4.708	0.544	11.21	193	57	75	.....
0.00	2314	1.815	.....	.....	185	57	75	.....
27.39	2243	3.350	0.746	8.18	190	57	75	.....
59.88	2102	5.018	0.511	11.93	195	57	75	.....
13.78	2257	2.607	1.154	5.29	187	57	75	.....
39.96	2182	3.941	0.601	10.14	193	56	74	.....
Av 32.30	2209	3.573	0.675	9.04	191	57	75	29.115

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											
50.85	4352	4.38	2105	5.93	4.985	0.598	10.20	188	52	64	28.843
75% of Pull at Maximum Power—Ten Hours—4th Gear											
41.51	3361	4.63	2200	4.87	4.474	0.657	9.28	195	38	38	28.516
50% of Pull at Maximum Power—Two Hours—4th Gear											
28.78	2269	4.76	2222	3.22	3.694	0.783	7.79	183	55	70	28.780
MAXIMUM POWER WITH BALLAST											
33.62	7084	1.78	2213	12.74	2nd Gear			182	55	75	28.990
50.78	6114	3.11	2099	8.61	3rd Gear			188	46	54	28.910
52.27	4483	4.37	2101	5.93	4th Gear			186	46	54	28.910
53.09	3767	5.29	2099	4.98	5th Gear			188	48	56	28.900
52.41	2944	6.68	2103	3.95	6th Gear			186	48	56	28.900
48.36	1516	11.96	2099	1.60	7th Gear			188	55	70	28.750
MAXIMUM POWER WITHOUT BALLAST											
49.36	4437	4.17	2099	11.03	4th Gear			190	46	54	29.180

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—4th Gear

Pounds pull	4483	4721	4867	4898	4784	4670
Horsepower	52.27	49.13	45.04	39.66	33.21	27.03
Crankshaft speed, rpm	2101	1882	1677	1469	1258	1045
Miles per hour	4.37	3.90	3.47	3.04	2.60	2.17
Slip of drivers, %	5.93	6.18	6.43	6.68	6.43	6.18

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	885 lb each	None
	Cast iron	880 lb each	None
Front tires	—No, size, ply & psi	Two 7.50-16; 4; 24	Two 7.50-16; 4; 20
Ballast	—Liquid	55 lb each	None
	Cast iron	90 lb each	None
Height of drawbar		22½ inches	23½ inches
Static weight with operator—Rear		7350 lb	3820 lb
	Front	2300 lb	2010 lb
	Total	9650 lb	5830 lb

Department of Agricultural Engineering

Dates of Test: APRIL 13 TO APRIL 21, 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 1.690 gal Drained from motor 1.436 gal Transmission lubricant Ford oil ESNM2C77-A Final drive lubricant Ford Oil ESNM2C53-A Total time engine was operated 44½ hours.

ENGINE Make Ford gasoline Type 4 cylinder vertical Serial No RG108939M95 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 Fuel filter edge type filter in sediment bowl Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No C124306 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 selective gear fixed ratio Advertised speeds mph first 1.5 second 2.0 third 3.5 fourth 4.7 fifth 5.6 sixth 7.0 seventh 12.4 eighth 16.8 reverse 2.3 and 8.1 Clutch single plate dry disc operated by foot pedal Brakes wet multiple disc operated by two foot pedals which 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) 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 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.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 932.

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