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January 1975

Test 1182: White Field Boss 2-150 Diesel 18-Speed

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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NEBRASKA TRACTOR TEST 1182 – WHITE FIELD BOSS 2-150 DIESEL 18 SPEED

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 (PTO Speed—1007 rpm)								
147.49	2200	10.199	0.479	14.46	199	71	76	28.890
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
131.06	2300	9.165	0.484	14.30	195	71	75	.....
0.00	2355	3.142	.....	.....	170	68	71	.....
66.37	2333	5.789	0.604	11.46	193	69	74	.....
146.13	2201	10.240	0.485	14.27	200	70	74	.....
33.47	2345	4.359	0.902	7.68	187	70	75	.....
98.79	2313	7.289	0.511	13.55	196	71	76	.....
Av 79.30	2308	6.664	0.582	11.90	190	70	74	28.895

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 Cool- ing med	Degrees F		Barometer inches of Mercury
					Gal per hr	Lb per hp-hr			Air wet bulb	Air dry bulb	
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITHOUT BALLAST											
Maximum Available Power—Two Hours—9th Gear (4 UD)											
121.35	9865	4.61	2200	6.12	10.057	0.574	12.07	203	73	81	29.030
75% of Pull at Maximum Power—Ten Hours—9th Gear (4 UD)											
99.49	7643	4.88	2286	4.45	8.197	0.570	12.14	197	77	90	29.058
50% of Pull at Maximum Power—Two Hours—9th Gear (4 UD)											
68.11	5092	5.02	2319	3.14	6.410	0.652	10.63	195	67	68	29.035
50% of Pull at Reduced Engine Speed—Two Hours—11th Gear (4 DD)											
67.68	5066	5.01	1918	2.99	5.525	0.565	12.25	194	70	73	29.030

MAXIMUM POWER WITHOUT BALLAST

99.49	15059	2.48	2285	14.68	4th Gear (2-UD)			198	69	75	29.030
122.54	11367	4.04	2201	7.49	8th Gear (3-DD)			202	72	76	29.040
124.92	10174	4.60	2200	6.31	9th Gear (4-UD)			200	72	75	29.040
127.49	8494	5.63	2200	4.93	11th Gear (4-DD)			201	72	77	29.040
123.55	6781	6.83	2199	3.80	13th Gear (4-OD)			202	72	78	29.030
121.36	4706	9.67	2201	2.47	15th Gear (5-OD)			201	72	78	29.030

VARYING DRAWBAR PULL AND TRAVEL SPEED WITHOUT BALLAST— 9th Gear (4 UD)

Pounds Pull	10174	10765	11211	11512	11639	11333
Horsepower	124.92	117.68	109.52	97.39	84.06	68.35
Crankshaft Speed rpm	2200	1970	1770	1540	1317	1093
Miles Per Hour	4.60	4.10	3.66	3.17	2.71	2.26
Slip of Drivers %	6.34	6.77	7.35	7.91	8.05	7.77

TRACTOR SOUND LEVEL (with cab)

	dB(A)
Maximum Available Power 2 Hours	91.0
75% of Pull at Max. Power 10 Hours	90.0
50% of Pull at Max. Power 2 Hours	90.5
50% of Pull at Reduced Engine Speed 2 Hours	90.5
Bystander 18th Gear (6-OD)	89.0

TIRES, BALLAST AND WEIGHT

		Tested Without Ballast
Rear Tires	—No., size, ply & psi	Four 18.4-38; 8; 14
Ballast	—Liquid	None
	—Cast iron	None
Front Tires	—No., size, ply & psi	Two 11.00-16; 8; 32
Ballast	—Liquid	None
	—Cast iron	None
Height of drawbar		20 inches
Static weight with operator—rear		12630 lb
	front	4310 lb
	total	16940 lb

Department of Agricultural Engineering

Dates of Test: June 16 to June 30, 1975

Manufacturer: WHITE FARM EQUIPMENT
COMPANY, 2625 Butterfield Road, Oakbrook,
Illinois 60521

FUEL, OIL AND TIME Fuel No 2 Diesel
Cetane No 51.7 (rating taken from oil company's
typical inspection data) Specific gravity con-
verted to 60°/60° 0.8315 Weight per gallon
6.923 lb Oil SAE 30 API service classification
SB/SE-CA/CD To motor 7.287 gal Drained
from motor 5.779 gal Transmission and final
drive lubricant SAE 80-90 Total time engine
was operated 50.5 hours.

ENGINE Make White Farm Equipment
Diesel Type six cylinder vertical Serial No
45204165 Crankshaft lengthwise Rated rpm
2200 Bore and stroke 4.75" x 5.5" Compression
ratio 15.3 to 1 Displacement 585 cu in Crank-
ing system 12 volt Lubrication pressure Air
cleaner two stage dry paper elements with aspir-
ated pre-cleaner Oil filter replaceable pleated
paper element Oil cooler engine coolant heat
exchanger for crankcase oil, radiator for hydrau-
lic oil Fuel filter replaceable paper cartridge
Muffler vertical Cooling medium temperature
control thermostat.

CHASSIS Type standard with duals Serial
No 2596593410 Tread width rear 61" to 128"
front 61" to 85" Wheel base 111.15" Center of
gravity (without operator or ballast, with mini-
mum tread, with fuel tank filled and tractor
serviced for operation) Horizontal distance for-
ward from center-line of rear wheels 27.8" Ver-
tical distance above roadway 38.7" Horizontal
distance from center of rear wheel tread 0" to
the right/left Hydraulic control system direct
engine drive Transmission selective gear fixed-
ratio with partial (3) range operator controlled
power shift Advertised speeds mph first 1.5 sec-
ond 1.8 third 2.2 fourth 2.8 fifth 3.4 sixth 3.8
seventh 4.1 eighth 4.5 ninth 5.0 tenth 5.4 elev-
enth 6.0 twelfth 7.0 thirteenth 7.2 fourteenth 8.4
fifteenth 10.1 sixteenth 12.3 seventeenth 14.8
eighteenth 17.7 reverse 1.9, 2.2, 2.7, 4.5, 5.5, 6.6
Clutch dry disc operated by foot pedal Brakes
triple disc hydraulically power actuated by two
foot pedals which can be locked together Steer-
ing hydrostatic Turning radius (on concrete
surface with brake applied) right 146" left 146"
(on concrete surface without brake) right 176.5"
left 176.5" Turning space diameter (on concrete
surface with brake applied) right 304" left 304"
(on concrete surface without brake) right 365"
left 365" Power take-off 542, 1007 and 2200 rpm
at 2200 engine rpm.

REPAIRS AND ADJUSTMENTS: Oil seal
on left rear axle leaked and was replaced. Num-
ber 6 piston seized and scored cylinder wall. 10
hour test was rerun after replacement of piston
and rear cylinder block.

REMARKS: All test results were determined
from observed data obtained in accordance with
SAE and ASAE test code or official Nebraska test
procedure.

Six gears were selected within the limits of
15% slip and 10 mph.

Fuel temperature at injection pump return
was 149 degrees F.

We, the undersigned, certify that this is a true
and correct report of official Tractor Test 1182.

LOUIS I. LEVITICUS

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

The Agricultural Experiment Station
Institute of Agriculture and Natural Resources
University of Nebraska—Lincoln
H. W. Ottoson, Director