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## Test 1232: White 2-60 Field Boss Diesel 8-Speed

Nebraska Tractor Test Lab

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# NEBRASKA TRACTOR TEST 1232—WHITE 2-60 FIELD BOSS DIESEL 8 SPEED

## POWER TAKE-OFF PERFORMANCE

Power Hp (kW)	Crank shaft speed rpm	Fuel Consumption			Temperature °F (°C)			Barometer inch Hg (kPa)
		gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cooling medium	Air wet bulb	Air dry bulb	
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—659 rpm)								
63.22 (47.14)	2400	3.705 (14.024)	0.409 (0.249)	17.06 (3.362)	194 (90.3)	54 (12.2)	75 (23.8)	28.983 (97.872)
Standard Power Take-off Speed (540 rpm)—One Hour								
54.35 (40.53)	1966	3.082 (11.668)	0.396 (0.241)	17.63 (3.473)	192 (89.1)	54 (12.2)	75 (24.0)	28.970 (97.827)
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
56.26 (41.95)	2516	3.432 (12.993)	0.426 (0.259)	16.39 (3.229)	185 (85.0)	54 (12.2)	76 (24.2)	.....
0.00 (0.00)	2618	1.140 (4.315)	..... .....	..... .....	143 (61.7)	54 (12.2)	76 (24.2)	..... .....
28.82 (21.49)	2576	2.198 (8.320)	0.532 (0.324)	13.11 (2.583)	158 (70.0)	54 (12.2)	75 (23.9)	..... .....
63.57 (47.40)	2400	3.733 (14.132)	0.410 (0.249)	17.03 (3.354)	190 (88.1)	54 (12.2)	75 (23.9)	..... .....
14.50 (10.81)	2595	1.600 (6.057)	0.770 (0.468)	9.06 (1.785)	151 (66.1)	54 (12.2)	75 (23.9)	..... .....
42.79 (31.91)	2548	2.796 (10.583)	0.456 (0.277)	15.31 (3.015)	170 (76.9)	54 (12.2)	75 (23.9)	..... .....
Av Av	34.32 (25.60)	2.542 (9.400)	0.505 (0.307)	13.82 (2.723)	166 (74.6)	54 (12.2)	75 (24.0)	28.973 (97.839)

## DRAWBAR PERFORMANCE

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption			Temp. °F (°C)			Barom. inch Hg (kPa)
					gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cooling med	Air wet bulb	Air dry bulb	
Maximum Available Power—Two Hours 5th (H-1) Gear											
53.16 (39.64)	3928 (17.48)	5.07 (8.17)	2399	6.14	3.692 (13.975)	0.484 (0.295)	14.40 (2.836)	183	52 (10.8)	67 (19.4)	28.680 (96.848)
75% of Pull at Maximum Power—Ten Hours 5th (H-1) Gear											
44.18 (32.95)	3041 (13.53)	5.45 (8.77)	2535	4.66	3.186 (12.062)	0.503 (0.306)	13.87 (2.731)	165 (73.8)	59 (15.1)	64 (18.0)	28.632 (96.686)
50% of Pull at Maximum Power—Two Hours 5th (H-1) Gear											
30.57 (22.80)	2040 (9.07)	5.62 (9.04)	2571	3.13	2.563 (9.701)	0.585 (0.356)	11.93 (2.350)	134 (56.4)	46 (7.5)	50 (10.0)	28.740 (97.051)
50% of Pull at Reduced Engine Speed—Two Hours 6th (H-2) Gear											
30.20 (22.52)	2030 (9.03)	5.58 (8.98)	1701	3.26	2.043 (7.734)	0.472 (0.287)	14.78 (2.912)	149 (65.0)	53 (11.7)	60 (15.3)	28.675 (96.831)
MAXIMUM POWER IN SELECTED GEARS											
40.90 (30.50)	7352 (32.70)	2.09 (3.36)	2546	12.94	2nd (L-2) Gear			132 (55.3)	51 (10.6)	57 (13.9)	28.690 (96.882)
51.39 (38.32)	6600 (29.36)	2.92 (4.70)	2398	11.75	3rd (L-3) Gear			186 (85.6)	53 (11.7)	70 (21.1)	28.690 (96.882)
52.79 (39.36)	5027 (22.36)	3.94 (6.34)	2402	8.03	4th (L-4) Gear			186 (85.6)	53 (11.7)	70 (21.1)	28.700 (96.916)
54.78 (40.85)	4049 (18.01)	5.07 (8.16)	2402	6.20	5th (H-1) Gear			189 (86.9)	53 (11.7)	69 (20.6)	28.720 (96.983)
54.35 (40.53)	2608 (11.60)	7.82 (12.58)	2398	3.91	6th (H-2) Gear			184 (84.2)	53 (11.7)	70 (21.1)	28.680 (96.848)
53.12 (39.61)	1707 (7.60)	11.67 (18.78)	2402	2.19	7th (H-3) Gear			183 (83.9)	53 (11.7)	70 (21.1)	28.670 (96.814)
LUGGING ABILITY IN 5th (H-1) GEAR											
Crankshaft Speed rpm			2402	2167	1917	1684	1443	1208	960		
Pull—lbs (kN)			4049 (18.01)	4222 (18.78)	4291 (19.09)	4298 (19.12)	4407 (19.60)	4517 (20.09)	4438 (19.74)		
Increase in Pull %			0	4	6	6	9	12	10		
Power—Hp (kW)			54.78 (40.85)	51.51 (38.41)	46.28 (34.51)	40.65 (30.31)	35.63 (26.57)	30.52 (22.76)	23.86 (17.80)		
Speed—Mph (km/h)			5.07 (8.16)	4.57 (7.36)	4.04 (6.51)	3.55 (5.71)	3.03 (4.88)	2.53 (4.08)	2.02 (3.24)		
Slip %			6.20	6.45	6.57	6.57	6.82	7.06	6.94		

Department of Agricultural Engineering

Dates of Test: March 15 to 28, 1977

Manufacturer: FIAT TRATTORI S.p.A., Via Pico della Mirandola, 72-41100, Modena, Italy.

**FUEL, OIL AND TIME:** Fuel No. 2 Diesel Cetane No. 51.8 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° (15°/15°) 0.8377 Fuel weight 6.975 lbs/gal (0.836) kg/l Oil SAE 30 API service classification SB/SE-CA/CD To motor 2.663 gal (10.081 l) Drained from motor 2.457 gal (9.301 l) Transmission and final drive lubricant Universal Tractor Hydraulic-Transmission fluid Total time engine was operated 44.0 hours

**ENGINE:** Make Fiat Disel Type 4 cylinder vertical Serial No. 307-576554 Crankshaft lengthwise Rated rpm 2400 Bore and stroke 3.94" × 4.33" (100.0 mm × 110.0 mm) Compression ratio 17 to 1 Displacement 211 cu in (3456 ml) Cranking system 12 volt Lubrication pressure Air cleaner oil bath with centrifugal pre-cleaner and dust evacuator Oil filter one paper spin-on cartridge Fuel filter two paper elements Muffler vertical Cooling medium temperature control thermostat

**CHASSIS:** Type standard Serial No. 780928 Tread width rear 56" (1422 mm) to 80" (2032 mm) front 53" (1346 mm) to 77" (1956 mm) Wheel base 81.5" (2070 mm) 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 28.0" (711 mm) Vertical distance above roadway 30.8" (782 mm) Horizontal distance from center of rear wheel tread 0" (0 mm) to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph (km/h) first 1.5 (2.4) second 2.3 (3.7) third 3.4 (5.5) fourth 4.3 (6.9) fifth 5.5 (8.8) sixth 8.3 (13.4) seventh 12.1 (19.5) eighth 15.5 (24.9) reverse 2.2 (3.5) and 7.9 (12.7) Clutch single plate dry disc operated by foot pedal Brakes dry contracting band operated by two foot pedals which can be locked together Steering power assist Turning radius (on concrete surface with brake applied) right 134" (3.40 m) left 134" (3.40 m) (on concrete surface without brake) right 145" (3.68 m) left 145" (3.68 m) Turning space Diameter (on concrete surface with brake applied) right 275" (6.98 m) left 275" (6.98 m) (on concrete surface without brake) right 297" (7.54 m) left 297" (7.54 m) Power take-off 540 rpm at 1966 engine rpm.

**REPAIRS and ADJUSTMENT:** No repairs or adjustments.

**TRACTOR SOUND LEVEL WITHOUT CAB**

	dB(A)
Maximum Available Power—Two Hours	98.5
75% of Pull at Maximum Power—Ten Hours	96.0
50% of Pull at Maximum Power—Two Hours	96.0
50% of Pull at Reduced Engine Speed—Two Hours	92.5
Bystander in 8th (H-4) gear	86.0

**TIRES, BALLAST AND WEIGHT**

		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi (kPa)	Two 16.9-30; 6; 18 (120)	Two 16.9-30; 6; 18 (120)
Ballast	—Liquid (each)	800 lb (363 kg)	None
	—Cast Iron (each)	780 lb (354 kg)	None
Front Tires	—No., size, ply & psi (kPa)	Two 7.50-16; 4; 32 (220)	Two 7.50-16; 4; 32 (220)
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	335 lb (152 kg)	None
Height of drawbar		20 in (510 mm)	20 in (510 mm)
Static weight with operator—rear		6550 lb (2971 kg)	3390 lb (1538 kg)
front		2440 lb (1107 kg)	1770 lb (803 kg)
total		8990 lb (4078 kg)	5160 lb (2341 kg)

**REMARKS:** All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. Temperature at injection pump was 154°F (68°C). Six gears were chosen between tangential pull limit of drive tires and 15 mph (24.1 km/h).

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1232**.

LOUIS I. LEVITICUS  
Engineer-in Charge

G. W. STEINBRUEGGE, Chairman  
W. E. SPLINTER  
K. VON BARGEN

Board of Tractor Test Engineers



**White 2-60 Field Boss Diesel**