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Test 1615: White 120 Diesel and White Workhorse 125 Diesel 18-Speed

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1615—WHITE 120 DIESEL ALSO WHITE WORKHORSE 125 DIESEL 18 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 — 1016 rpm)									
119.13 (88.83)	2200	7.103 (26.887)	0.412 (0.251)	16.77 (3.304)	187 (86.2)	66 (18.8)	74 (23.6)	28.96 (97.78)	
Standard Power Take-off Speed (1000 rpm) — One Hour									
121.94 (90.93)	2166	7.198 (27.248)	0.408 (0.248)	16.94 (3.337)	187 (86.2)	67 (19.3)	78 (25.5)	28.95 (97.76)	
VARYING POWER AND FUEL CONSUMPTION — Two Hours									
103.48 (77.17)	2248	6.438 (24.372)	0.430 (0.262)	16.07 (3.166)	186 (85.6)	67 (19.2)	78 (25.6)	..... .....
0.85 (0.63)	2422	2.492 (9.433)	..... .....	0.34 (0.067)	182 (83.1)	69 (20.3)	79 (25.8)	..... .....
53.38 (39.81)	2319	4.381 (16.582)	0.567 (0.345)	12.19 (2.400)	184 (84.2)	70 (20.8)	79 (25.8)	..... .....
118.82 (88.60)	2200	7.072 (26.772)	0.411 (0.250)	16.80 (3.310)	188 (86.4)	68 (20.0)	80 (26.4)	..... .....
27.10 (20.21)	2354	3.417 (12.934)	0.871 (0.530)	7.93 (1.563)	181 (82.8)	70 (20.8)	80 (26.7)	..... .....
78.81 (58.77)	2282	5.370 (20.329)	0.471 (0.286)	14.68 (2.891)	185 (84.7)	69 (20.6)	79 (26.1)	..... .....
Av Av	63.74 (47.53)	2304	4.862 (18.404)	0.527 (0.321)	13.11 (2.583)	184 (84.4)	69 (20.3)	79 (26.1)	28.94 (97.71)

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)	Cool- ing med	Air wet bulb	Air dry bulb	
Maximum Available Power — Two Hours 11th (4D) Gear											
103.03 (76.83)	5835 (25.95)	6.62 (10.66)	2197	2.50	6.983 (26.432)	0.468 (0.285)	14.76 (2.907)	187 (86.1)	67 (19.2)	74 (23.3)	28.96 (97.79)
75% of Pull at Maximum Power — Ten Hours 11th (4D) Gear											
81.37 (60.68)	4445 (19.77)	6.86 (11.05)	2273	2.27	5.994 (22.691)	0.509 (0.310)	13.57 (2.674)	190 (87.9)	62 (16.8)	65 (18.1)	28.75 (97.09)
50% of Pull at Maximum Power — Two Hours 11th (4D) Gear											
55.72 (41.55)	2963 (13.18)	7.05 (11.35)	2314	1.33	4.848 (18.352)	0.601 (0.366)	11.49 (2.264)	183 (83.6)	70 (20.8)	81 (26.9)	28.90 (97.59)
50% of Pull at Reduced Engine Speed — Two Hours 15th (5O) Gear											
55.70 (41.53)	2963 (13.18)	7.05 (11.34)	1384	1.51	3.828 (14.490)	0.475 (0.289)	14.55 (2.866)	177 (80.3)	56 (13.3)	59 (14.7)	28.88 (97.51)
MAXIMUM POWER IN SELECTED GEARS											
82.14 (61.25)	14286 (63.55)	2.16 (3.47)	2248	13.92	3rd (1O) Gear			184 (84.4)	60 (15.6)	62 (16.7)	28.94 (97.73)
101.04 (75.35)	12598 (56.04)	3.01 (4.84)	2199	6.21	4th (2U) Gear			188 (86.4)	60 (15.6)	63 (17.2)	28.94 (97.73)
104.21 (77.71)	10576 (47.04)	3.70 (5.95)	2200	4.43	5th (2D) Gear			187 (86.1)	61 (16.1)	63 (17.2)	28.95 (97.76)
101.13 (75.41)	9475 (42.14)	4.00 (6.44)	2201	3.77	6th (3U) Gear			185 (85.0)	61 (16.1)	64 (17.8)	28.95 (97.76)
102.65 (76.55)	8604 (38.27)	4.47 (7.20)	2200	3.44	7th (2O) Gear			188 (86.7)	62 (16.7)	65 (18.3)	28.96 (97.79)
104.19 (77.70)	8060 (35.85)	4.85 (7.80)	2198	3.27	8th (3D) Gear			185 (84.7)	62 (16.7)	64 (17.8)	28.95 (97.76)
103.39 (77.10)	7079 (31.49)	5.48 (8.82)	2198	2.76	9th (4U) Gear			185 (84.7)	65 (18.3)	68 (20.0)	28.97 (97.83)
101.22 (75.48)	6488 (28.86)	5.85 (9.42)	2199	2.67	10th (3O) Gear			186 (85.6)	63 (17.2)	65 (18.3)	28.96 (97.79)
104.69 (78.07)	5926 (26.36)	6.62 (10.66)	2198	2.42	11th (4D) Gear			187 (86.1)	65 (18.3)	70 (21.1)	28.98 (97.86)
101.92 (76.00)	4958 (22.05)	7.71 (12.41)	2199	2.16	12th (5U) Gear			185 (85.0)	63 (17.2)	66 (18.9)	28.96 (97.79)
101.96 (76.03)	4792 (21.32)	7.98 (12.84)	2200	2.07	13th (4O) Gear			185 (84.7)	64 (17.8)	66 (18.9)	28.97 (97.83)
102.30 (76.28)	4118 (18.32)	9.32 (14.99)	2201	1.90	14th (5D) Gear			191 (88.1)	64 (17.8)	68 (20.0)	28.97 (97.83)

Department of Agricultural Engineering

Dates of Test: September 21 to October 4, 1988

Manufacturer: WHITE-NEW IDEA FARM EQUIPMENT COMPANY, Division of Allied Products, 123 West Sycamore Street, Coldwater, Ohio 45828

FUEL, OIL AND TIME: Fuel No. 2 Diesel Cetane No. 51.2 (rating taken from oil company's inspection data) **Specific gravity converted to 60/60°F (15/15°C)** 0.8299 Fuel weight 6.910 lbs/gal (0.828 kg/l) Oil SAE 15W-40 API service classification CC, CD/SD, SE, SF To motor 3.968 gal (15.022 l) Drained from motor 3.419 gal (12.942 l) Transmission and final drive lubricant White Farm Equipment Universal Fluid Total time engine was operated 34.0 hours.

ENGINE: Make Consolidated Diesel Corporation-Cummins Diesel Type six cylinder vertical with turbocharger Serial No. 44228160 Crankshaft lengthwise Rated rpm 2200 Bore and stroke 4.02" × 4.72" (102 mm × 120 mm) Compression ratio 18.5 to 1 Displacement 359 cu in (5880 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements and aspirator Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil, separate radiators for transmission and powershift oils Fuel filter one paper cartridge and prestrainer Muffler underhood Exhaust vertical Cooling medium temperature control one thermostat.

ENGINE OPERATING PARAMETERS: Maximum fuel rate 50.71 lb/hr (23.00 kg/hr) High idle 2325-2425 rpm Turbo boost nominal 13.75 psi (95 kPa) as measured 13.0 psi (90 kPa)

CHASSIS: Type standard with duals Serial No. *401214-120T* Tread width rear 64" (1625 mm) to 123" (3125 mm) front 61" (1550 mm) to 85" (2160 mm) Wheel base 111.5" (2830 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 25.6" (654 mm) Vertical distance above roadway 42.0" (1075 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 with partial (3) range operator controlled powershift Advertised speeds mph (km/h) first 1.7 (2.7) second 2.0 (3.2) third 2.4 (3.9) fourth 3.2 (5.1) fifth 3.8 (6.1) sixth 4.1 (6.6) seventh 4.6 (7.3) eighth 4.9 (7.9) ninth 5.5 (8.9) tenth 5.9 (9.5) eleventh 6.7 (10.8) twelfth 7.7 (12.5) thirteenth 8.0 (12.9) fourteenth 9.3 (15.0) fifteenth 11.1 (17.9) sixteenth 13.6 (21.9) seventeenth 16.4 (26.4) eighteenth 19.6 (31.5) reverse 2.0 (3.2), 2.4 (3.9), 2.9 (4.7), 4.9 (7.9), 6.0 (9.6), 7.1 (11.5) Clutch single dry disc operated by foot pedal Brakes single wet disc hydraulically power actuated by two foot pedals which can be locked together Steering hydrostatic Turning ra-

LUGGING ABILITY IN 11th (4D) GEAR

Crankshaft Speed rpm	2198	1980	1758	1540	1311	1077
Pull—lbs (kN)	5926 (26.36)	6755 (30.05)	7318 (32.55)	8177 (36.37)	8276 (36.81)	7461 (33.19)
Increase in Pull %	0	14	23	38	40	26
Power—Hp (kW)	104.69 (78.07)	107.15 (79.91)	102.85 (76.70)	100.35 (74.83)	86.36 (64.40)	64.19 (47.87)
Speed—Mph (km/h)	6.62 (10.66)	5.95 (9.57)	5.27 (8.48)	4.60 (7.41)	3.91 (6.30)	3.23 (5.19)
Slip %	2.42	2.59	2.93	3.27	3.44	3.10

TRACTOR SOUND LEVEL WITH CAB

dB(A)

Maximum Available Power—Two Hours	77.0
75% of Pull at Maximum Power—Ten Hours	77.0
50% of Pull at Maximum Power—Two Hours	76.0
50% of Pull at Reduced Engine Speed—Two Hours	74.5
Bystander in 18th (6O) gear	86.5

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires	Four 20.8R38; *; 12 (85)	Four 20.8R38; *; 12 (85)
Ballast	None	None
	56 lb (25 kg)	None
Front Tires	Two 11.00-16; 8; 40 (275)	Two 11.00-16; 8; 40 (275)
Ballast	None	None
	312 lb (142 kg)	None
Height of Drawbar	23.5 in (595 mm)	23.5 in (595 mm)
Static Weight with Operator —Rear	11510 lb (5221 kg)	11285 lb (5119 kg)
—Front	3805 lb (1726 kg)	3180 lb (1442 kg)
—Total	15315 lb (6947 kg)	14465 lb (6561 kg)

THREE POINT HITCH PERFORMANCE (With external lift cylinder)

Observed Maximum Pressure psi (kPa)	2275 (15690)
Location	remote outlet
Hydraulic oil temperature °F (°C)	171 (77)
Location	pump inlet
Maximum Lift Capacity	
QUICK ATTACH CATEGORY	no III
LOAD lbs (kg)	*7335 (3327)
TIME sec	7.53
HITCH POINT MOVEMENT in (mm)	
Lowest position	14.0 (356)
Top of timed range	40.0 (1016)
Highest position	40.1 (1019)
LOAD CG MOVEMENT in (mm)	
Lowest position	13.3 (338)
Top of timed range	44.0 (1118)
Highest position	44.3 (1125)

*Manufacturers claim was 8000 lb (3628 kg)

dius (on concrete surface with brake applied) right 146" (3.72 m) left 146" (3.72 m) (on concrete surface without brake) right 190" (4.84 m) left 191" (4.86 m) **Turning space diameter** (on concrete surface with brake applied) right 305" (7.75 m) left 305" (7.75 m) (on concrete surface without brake) right 393" (9.98 m) left 395" (10.03 m) **Power take-off** 540 rpm at 2191 engine rpm and 1000 rpm at 2167 engine rpm **Unladen tractor mass** 12865 lb (5835 kg).

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test codes and the technically equivalent ISO test codes or official Nebraska test procedure. For the maximum power tests, the fuel temperature at the injection pump return was maintained at 152 °F (66.7°C). Twelve gears were chosen between 15% slip and 10 mph (16.1 km/h).

We, the undersigned, certify that this is as true and correct report of official Tractor Test No. **1615**, February 2, 1989.

Note: report reissued. Supplemental sales permit for White Workhorse 125 Diesel, November, 1991.

LOUIS I. LEVITICUS

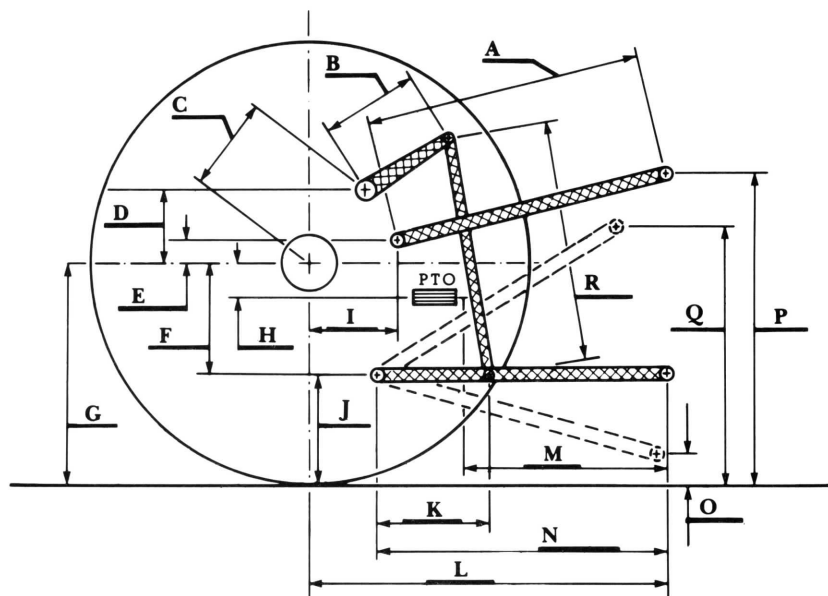
Engineer-in-Charge

K. VON BARGEN

R. D. GRISSO

L. L. BASHFORD

Board of Tractor Test Engineers



Hitch Dimensions as Tested — No Load

	inch	mm
A	25.5	648
B	16.0	406
C	20.1	511
D	18.6	472
E	10.4	263
F	10.2	260
G	33.2	844
H	1.9	48
I	19.9	506
J	23.0	584
K	22.3	566
L	45.3	1151
M	22.4	568
N	34.8	884
O	7.1	181
P	45.0	1143
Q	36.1	918
R	40.4	1026

WHITE WORKHORSE 125
THREE POINT HITCH PERFORMANCE
 (From Nebraska Tractor Test 1633)
DEUTZ ALLIS 9150 DIESEL

Observed Maximum Pressure psi. (kPa)	2275 (15690)
Location	remote outlet
Hydraulic oil temperature °F (°C)	147 (64)
Location	hydraulic suction line

Maximum Lift Capacity
with boost cylinder

	No	No
QUICK ATTACH	III	III
CATEGORY	III	III
LOAD lbs (kg)	7212 (3271)	8544 (3875)
TIME sec	6.36	4.92
HITCH POINT MOVEMENT in (mm)		
Lowest position	13.8 (351)	13.6 (345)
Top of timed range	40.0 (1016)	40.0 (1016)
Highest position	40.2 (1021)	40.1 (1019)
LOAD CG MOVEMENT in (mm)		
Lowest position	14.4 (366)	14.2 (361)
Top of timed range	42.1 (1069)	42.1 (1069)
Highest position	42.3 (1074)	42.2 (1072)



White 120 Diesel

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 Darrell Nelson, Dean and Director