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Test 1237: Stieger Wildcat III ST-210 and RC-210 Diesel

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1237 —

STEIGER WILDCAT III ST-210 & RC-210 DIESEL

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 5th Gear											
163.78 (122.13)	10505 (46.73)	5.85 (9.41)	2799	4.01	12.889 (48.791)	0.543 (0.330)	12.71 (2.503)	177 (80.6)	51 (10.3)	57 (13.6)	29.030 (98.030)
75% of Pull at Maximum Power—Ten Hours 5th Gear											
135.23 (100.84)	8256 (36.73)	6.14 (9.88)	2909	2.95	10.749 (40.691)	0.549 (0.334)	12.58 (2.478)	175 (79.2)	51 (10.3)	59 (15.2)	29.137 (98.391)
50% of Pull at Maximum Power—Two Hours 5th Gear											
91.48 (68.22)	5441 (24.20)	6.30 (10.15)	2958	2.07	8.454 (32.002)	0.638 (0.388)	10.82 (2.132)	174 (78.6)	60 (15.3)	62 (16.4)	28.705 (96.932)
50% of Pull at Reduced Engine Speed—Two Hours 7th Gear											
91.40 (68.15)	5438 (24.19)	6.30 (10.14)	1790	2.15	6.318 (23.916)	0.477 (0.290)	14.47 (2.850)	174 (78.6)	62 (16.7)	65 (18.1)	28.685 (96.865)

MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Gear	Temp. °F (°C)	Barom. inch Hg (kPa)
144.30 (107.60)	21052 (93.64)	2.57 (4.14)	2891	14.91	2nd Gear	174 (78.9)	29.170 (98.503)
162.34 (121.05)	17571 (78.16)	3.46 (5.58)	2799	8.19	3rd Gear	178 (80.8)	29.010 (97.962)
165.61 (123.50)	13683 (60.86)	4.54 (7.30)	2799	5.52	4th Gear	178 (81.1)	29.020 (97.996)
171.44 (127.84)	11000 (48.93)	5.84 (9.41)	2799	4.05	5th Gear	177 (80.6)	29.030 (98.030)
167.25 (124.72)	8343 (37.11)	7.52 (12.10)	2801	3.07	6th Gear	177 (80.3)	29.000 (97.929)
167.54 (124.93)	6375 (28.36)	9.86 (15.86)	2800	2.15	7th Gear	177 (80.6)	29.000 (97.929)

LUGGING ABILITY IN RATED GEAR (5th)

Crankshaft Speed rpm	2799	2513	2241	1955	1684	1397	1118	838
Pull—lbs (kN)	11000 (48.93)	11712 (52.10)	12786 (56.88)	13324 (59.27)	13992 (62.24)	14400 (64.06)	14461 (64.33)	13547 (60.26)
Increase in Pull %	0	6	16	21	27	31	31	23
Power—Hp (kW)	171.44 (127.84)	163.10 (121.62)	158.00 (117.82)	143.12 (106.72)	128.86 (96.10)	109.65 (81.77)	88.14 (65.73)	62.18 (46.37)
Speed—Mph (km/h)	5.84 (9.41)	5.22 (8.40)	4.63 (7.46)	4.03 (6.48)	3.45 (5.56)	2.86 (4.60)	2.29 (3.68)	1.72 (2.77)
Slip %	4.05	4.57	5.01	5.45	5.74	6.02	6.02	5.74

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
Maximum Available Power—Two Hours	84.0
75% of Pull at Maximum Power—Ten Hours	86.0
50% of Pull at Maximum Power—Two Hours	85.0
50% of Pull at Reduced Engine Speed—Two Hours	81.0
Bystander in 10th gear	92.0

TIRES, BALLAST AND WEIGHT

Rear Tires		Without Ballast	
Ballast	—No., size, ply & psi (kPa) —Liquid (each) —Cast Iron (each)	Four 23.1-30; 8; inner 14 (100), outer 12 (80) None None	
Front Tires		With Ballast	
Ballast	—No., size, ply & psi (kPa) —Liquid (each) —Cast Iron (each)	Four 23.1-30; 8; inner 14 (100), outer 12 (80) None None	
Height of drawbar		17 in (430 mm)	
Static weight with operator—rear		10100 lb (4581 kg)	
		12160 lb (5516 kg)	
		22260 lb (10097 kg)	

Department of Agricultural Engineering

Dates of Test: April 13 to 25, 1977

Manufacturer: Steiger Tractor Inc., 3101 First Ave. North, Fargo, North Dakota 58102

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°)** 0.8293 Fuel weight 6.905 lbs/gal (0.829 kg/l) Oil SAE 30 API service classification SB/SE-CA/CD To motor 3.323 gal (12.579 l) Drained from motor 2.398 gal (9.077 l) Transmission and final drive lubricant IH Hi-tran or equivalent Total time engine was operated 43.5 hours

ENGINE Make Caterpillar Diesel Type V-8 Serial No. 90N 24997 Crankshaft lengthwise Rated rpm 2800 Bore and stroke 4.5" × 5.0" (114.3 mm × 127.0 mm) Compression ratio 16.5 to 1 Displacement 636 cu in (10425 ml) Cranking system 12 volt Lubrication pressure Air cleaner dry paper primary and safety elements with centrifugal precleaner and aspirator Oil filter two spin-on cartridges Oil cooler engine coolant heat exchanger for crankcase oil, radiator for transmission oil Fuel filter spin-on cartridge Muffler vertical Cooling medium temperature control two thermostats

CHASSIS: Type four wheel drive with duals Serial No. 100-00159 Tread width rear 71.8" (1824 mm) to 131.6" (3343 mm) front 71.8" (1824 mm) to 131.6" (3343 mm) Wheel base 118" (2997 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 64.3" (1632 mm) Vertical distance above roadway 43.4" (1102 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 2.2 (3.6) second 2.8 (4.5) third 3.6 (5.8) fourth 4.6 (7.4) fifth 5.8 (9.3) sixth 7.4 (12.0) seventh 9.6 (15.5) eighth 12.3 (19.8) ninth 15.4 (24.8) tenth 19.6 (31.5) reverse 2.2 (3.6), 2.8 (4.5) Clutch two dry cerametallic plates hydraulically operated by foot pedal Brakes dual caliper disc hydraulically operated by foot pedal Steering hydrostatic and articulated Turning radius (on concrete surface without brake) right 248" (6.30 m) left 247.5" (6.29 m) Turning space diameter (on concrete surface without brake) right 520" (13.21 m) left 519" (13.18 m).

REPAIRS and ADJUSTMENTS: No repairs or adjustments.

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 (67.8°C). Six gears were chosen between 15% slip and 15 mph (24.1 km/h). During the 2 hour Maximum Power Drawbar test an air-conditioner line developed a leak and freon was lost.

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1237**.

LOUIS I. LEVITICUS

Engineer-in Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

K. VON BARGEN

Board of Tractor Test Engineers



Steiger Wildcat III ST-210 & RC-210 Diesel