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## Test 1453: Steiger Panther CP-1325 Diesel 12-Speed

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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NEBRASKA TRACTOR TEST 1453 — STEIGER PANTHER CP-1325 DIESEL  
12 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—1002 rpm)								
299.10 (223.04)	2100	18.071 (68.406)	0.421 (0.256)	16.55 (3.261)	185 (84.9)	67 (19.3)	75 (23.8)	28.890 (97.557)
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
260.94 (194.58)	2156	16.355 (61.910)	0.437 (0.266)	15.95 (3.143)	180 (82.2)	66 (19.2)	75 (23.9)	..... .....
0.00 (0.00)	2252	4.590 (17.375)	..... .....	..... .....	170 (76.9)	66 (18.9)	73 (22.8)	..... .....
134.08 (99.98)	2214	10.526 (39.845)	0.547 (0.333)	12.74 (2.509)	174 (79.2)	66 (19.2)	74 (23.3)	..... .....
299.79 (223.55)	2100	18.127 (68.618)	0.422 (0.257)	16.54 (3.258)	186 (85.3)	68 (19.7)	76 (24.2)	..... .....
67.52 (50.35)	2234	7.713 (29.197)	0.797 (0.485)	8.75 (1.724)	172 (77.8)	68 (19.7)	75 (23.9)	..... .....
199.10 (148.47)	2194	13.413 (50.774)	0.470 (0.286)	14.84 (2.924)	178 (81.4)	68 (19.7)	76 (24.2)	..... .....
Av Av	160.24 (119.49)	2192 (44.619)	0.513 (0.312)	13.59 (2.678)	177 (80.4)	67 (19.4)	75 (23.7)	28.960 (97.794)

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 7th Gear											
261.75 (195.18)	14136 (62.88)	6.94 (11.18)	2099	2.94	17.798 (67.374)	0.474 (0.288)	14.71 (2.897)	184 (84.4)	65 (18.3)	74 (23.1)	28.835 (97.371)
75% of Pull at Maximum Power—Ten Hours 7th Gear											
209.22 (156.01)	10811 (48.09)	7.26 (11.68)	2180	2.26	15.092 (57.129)	0.503 (0.306)	13.86 (2.731)	176 (79.8)	49 (9.7)	53 (11.9)	28.860 (97.456)
50% of Pull at Maximum Power—Two Hours 7th Gear											
142.21 (106.04)	7208 (32.06)	7.40 (11.91)	2203	1.44	11.901 (45.052)	0.584 (0.355)	11.95 (2.354)	180 (82.2)	74 (23.3)	86 (30.0)	28.680 (96.848)
50% of Pull at Reduced Engine Speed—Two Hours 10th Gear											
142.18 (106.02)	7208 (32.06)	7.40 (11.90)	1289	1.48	9.410 (35.621)	0.462 (0.281)	15.11 (2.976)	182 (83.3)	74 (23.1)	86 (29.7)	28.670 (96.814)

MAXIMUM POWER IN SELECTED GEARS

234.03 (174.52)	33802 (150.36)	2.60 (4.18)	2129	14.81	2nd Gear		177 (80.6)	49 (9.4)	53 (11.7)	28.830 (97.355)
256.08 (190.96)	29501 (131.22)	3.26 (5.24)	2099	8.68	3rd Gear		180 (81.9)	52 (11.1)	58 (14.4)	28.820 (97.321)
260.15 (194.00)	24224 (107.75)	4.03 (6.48)	2099	5.98	4th Gear		186 (85.3)	69 (20.6)	80 (26.7)	28.760 (97.118)
264.50 (197.24)	20226 (89.97)	4.90 (7.89)	2097	4.56	5th Gear		186 (85.3)	69 (20.6)	80 (26.7)	28.780 (97.186)
265.31 (197.84)	16949 (75.39)	5.87 (9.45)	2099	3.52	6th Gear		186 (85.3)	68 (20.0)	79 (26.1)	28.790 (97.220)
266.97 (199.08)	14415 (64.12)	6.95 (11.18)	2099	2.78	7th Gear		186 (85.6)	66 (18.9)	77 (25.0)	28.810 (97.287)
264.37 (197.14)	11844 (52.68)	8.37 (13.47)	2099	2.45	8th Gear		186 (85.6)	67 (19.4)	77 (25.0)	28.760 (97.118)

LUGGING ABILITY IN 7th GEAR

Crankshaft Speed rpm	2099	1888	1687	1470	1254	1048
Pull—lbs (kN)	14415 (64.12)	16663 (74.12)	18086 (80.45)	19160 (85.23)	19669 (87.49)	19164 (85.25)
Increase in Pull %	0	16	25	33	36	33
Power—Hp (kW)	266.97 (199.08)	275.82 (205.68)	266.99 (199.09)	244.91 <sub>s</sub> (182.63)	214.33 (159.83)	174.72 (130.29)
Speed—Mph (km/h)	6.95 (11.18)	6.21 (9.99)	5.54 (8.91)	4.79 (7.71)	4.09 (6.58)	3.42 (5.50)
Slip %	2.78	3.44	3.76	4.25	4.25	4.25

1700 RPM 1900 RPM 2100 RPM

TRACTOR SOUND LEVEL WITH CAB	dB(A)	dB(A)	dB(A)
Maximum Available Power—Two Hours	73.0	73.0	75.5
75% of Pull at Maximum Power—Ten Hours			78.0
50% of Pull at Maximum Power—Two Hours			75.0
50% of Pull at Reduced Engine Speed—Two Hours			74.0
Bystander in 12th gear			92.5

Department of Agricultural Engineering

Dates of Test: September 27 to October 13, 1982

Manufacturer: STEIGER TRACTOR, INC., 406  
Main Avenue, Fargo, North Dakota 58126

FUEL, OIL AND TIME: Fuel No. 2 Diesel  
Cetane No. 46.6 (rating taken from oil company's  
inspection data) Specific gravity converted to 60°/  
60° (15°/15°) 0.8376 Fuel weight 6.974 lbs/gal  
(0.836 kg/l) Oil SAE 15W-40 API service classi-  
fication CD, CC, SF To motor 8.645 gal  
(32.725 l) Drained from motor 6.291 gal  
(23.813 l) Transmission and hydraulic lubricant  
SAE 10 hydraulic transmission fluid Final Drive  
lubricant SAE 85W-90 Total time engine was  
operated 48.0 hours.

ENGINE: Make Caterpillar Diesel Type six  
cylinder vertical with turbocharger Serial No.  
90U18642 Crankshaft lengthwise Rated rpm  
1700 to 2100 Bore and stroke 5.4" × 6.5" (137 mm  
× 165 mm) Compression ratio 14.5 to 1 Dis-  
placement 893 cu in (14636 ml) Starting system  
12 volt Lubrication pressure Air cleaner two  
paper elements with aspirator Oil filter one full  
flow paper cartridge Oil cooler engine coolant  
heat exchanger for crankcase oil, radiator for hy-  
draulic and transmission oil Fuel filter one paper  
cartridge and prestrainer Muffler vertical Cool-  
ing medium temperature control one thermostat.

CHASSIS: Type four wheel drive with duals  
Serial No. P32500511- Tread width rear 79"  
(2007 mm) to 136.4" (3464 mm) front 79" (2007 mm)  
to 136.4" (3464 mm) Wheel base 141.5" (3594 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 75.5"  
(1918 mm) Vertical distance above roadway 45.5"  
(1156 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 full range operator  
controlled powershift Advertised speeds mph  
(km/h) first 2.4 (3.9) second 2.9 (4.7) third 3.4 (5.5)  
fourth 4.1 (6.6) fifth 4.9 (7.9) sixth 5.8 (9.3)  
seventh 6.8 (10.9) eighth 8.2 (13.2) ninth 9.6  
(15.4) tenth 11.6 (18.7) eleventh 14.0 (22.5)  
twelfth 16.5 (26.5) reverse 3.0 (4.8), 5.1 (8.2)  
Clutch multiple wet disc hydraulically power actu-  
ated and operated by foot pedal Brakes dual  
caliper disc hydraulically operated by foot pedal  
and mechanically by hand lever Steering hy-  
drostatic and articulated Turning radius (on con-  
crete surface without brake) right 276" (7.01 m)  
left 276" (7.01 m) Turning space diameter (on  
concrete surface without brake) right 581.5"  
(14.77 m) left 581.5" (14.77 m) Power take-off  
1002 rpm at 2100 engine rpm.

SUPPLEMENTARY TESTS  
 POWER AND FUEL CONSUMPTION AT 1900 RPM  
 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—One Hour (PTO Speed—907 rpm)								
308.35 (229.94)	1900	17.736 (67.138)	0.401 (0.244)	17.39 (3.425)	186 (85.7)	66 (19.1)	75 (23.8)	28.930 (97.692)

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 7th Gear											
272.04 (202.86)	16349 (72.72)	6.24 (10.04)	1900	3.60	17.727 (67.102)	0.454 (0.276)	15.35 (3.023)	184 (84.4)	66 (18.6)	71 (21.4)	28.740 (97.051)

MAXIMUM POWER IN SELECTED GEARS

250.87 (187.08)	33742 (150.09)	2.79 (4.49)	1927	14.68			3rd Gear	179 (81.7)	50 (10.0)	55 (12.8)	28.830 (97.355)
260.27 (194.08)	27287 (121.38)	3.58 (5.76)	1899	7.72			4th Gear	187 (85.8)	67 (19.4)	78 (25.6)	28.760 (97.118)
268.60 (200.30)	22913 (101.92)	4.40 (7.07)	1899	5.51			5th Gear	189 (86.9)	69 (20.6)	80 (26.7)	28.770 (97.152)
272.78 (203.41)	19390 (86.25)	5.28 (8.49)	1899	4.25			6th Gear	188 (86.7)	68 (20.0)	79 (26.1)	28.790 (97.220)
275.74 (205.62)	16559 (73.66)	6.24 (10.05)	1898	3.35			7th Gear	186 (85.6)	67 (19.4)	78 (25.6)	28.800 (97.253)
274.21 (204.48)	13634 (60.65)	7.54 (12.14)	1900	2.94			8th Gear	188 (86.7)	67 (19.4)	77 (25.0)	28.770 (97.152)
272.91 (203.31)	11403 (50.72)	8.98 (14.44)	1898	2.28			9th Gear	186 (85.6)	67 (19.4)	76 (24.4)	28.770 (97.152)

POWER AND FUEL CONSUMPTION AT 1700 RPM  
 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—One Hour (PTO Speed—811 rpm)								
298.89 (222.88)	1700	16.781 (63.523)	0.392 (0.238)	17.81 (3.509)	187 (86.1)	66 (19.1)	74 (23.6)	28.940 (97.726)

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 7th Gear											
262.29 (195.39)	17656 (78.54)	5.57 (8.97)	1701	3.84	16.848 (63.778)	0.448 (0.272)	15.57 (3.067)	189 (86.9)	71 (21.7)	82 (27.5)	28.720 (96.983)

MAXIMUM POWER IN SELECTED GEARS

248.78 (185.52)	33679 (149.81)	2.77 (4.46)	1921	15.00			3rd Gear	180 (82.2)	51 (10.6)	57 (13.9)	28.830 (97.355)
245.57 (183.12)	29262 (130.16)	3.15 (5.06)	1701	9.40			4th Gear	188 (86.4)	67 (19.4)	78 (25.6)	28.760 (97.118)
258.01 (192.40)	24771 (110.18)	3.91 (6.29)	1700	6.29			5th Gear	190 (87.5)	69 (20.6)	80 (26.7)	28.770 (97.152)
261.89 (195.29)	20930 (93.10)	4.69 (7.55)	1699	4.72			6th Gear	190 (87.8)	69 (20.6)	80 (26.7)	28.780 (97.186)
266.20 (198.51)	17894 (79.59)	5.58 (8.98)	1702	3.84			7th Gear	189 (87.2)	68 (20.0)	79 (26.1)	28.800 (97.253)
266.14 (198.46)	14832 (65.98)	6.73 (10.83)	1700	3.11			8th Gear	189 (86.9)	67 (19.4)	76 (24.4)	28.770 (97.152)
266.54 (198.76)	12472 (55.48)	8.01 (12.90)	1699	2.61			9th Gear	188 (86.7)	67 (19.4)	76 (24.4)	28.770 (97.152)

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi (kPa)	Four 23.1-34; 8; inner 16 (110) outer 14 (95)	Four 23.1-34; 8; inner 16 (110) outer 14 (95)
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	None	None
Front Tires	—No., size, ply & psi (kPa)	Four 23.1-34; 8; inner 16 (110) outer 14 (95)	Four 23.1-34; 8; inner 16 (110) outer 14 (95)
Ballast	—Liquid (each inner)	205 lb (93 kg)	None
	—Cast Iron (each)	None	None
Height of Drawbar		13.5 in (345 mm)	13.5 in (345 mm)
Static Weight with Operator—Rear		16560 lb (7512 kg)	16560 lb (7512 kg)
Front		19310 lb (8759 kg)	18900 lb (8573 kg)
Total		35870 lb (16271 kg)	35460 lb (16085 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 or official Nebraska test procedure. For the maximum power tests, the fuel temperature at the injection pump return was maintained at 153°F (67.5°C). Seven gears were chosen between 15% slip and 10 mph (16.1 km/h).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1453.

LOUIS I. LEVITICUS  
 Engineer-in-Charge

K. VON BARGEN  
 W. E. SPLINTER  
 L. L. BASHFORD  
 Board of Tractor Test Engineers



Steiger Panther CP-1325 Diesel

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