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## Test 1465: Stieger Panther KP-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 1465 — STEIGER PANTHER KP-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)									
301.21 (224.61)	2100	17.331 (65.608)	0.402 (0.244)	17.38 (3.424)	180 (82.2)	58 (14.2)	75 (24.0)	28.947 (97.749)	
VARYING POWER AND FUEL CONSUMPTION—Two Hours									
264.22 (197.03)	2168	15.944 (60.355)	0.421 (0.256)	16.57 (3.265)	178 (81.1)	58 (14.4)	76 (24.4)	..... .....	
0.00 (0.00)	2292	4.771 (18.060)	..... .....	..... .....	170 (76.9)	57 (13.9)	72 (22.5)	..... .....	
135.54 (101.07)	2223	10.557 (39.963)	0.544 (0.331)	12.84 (2.529)	174 (78.9)	57 (13.9)	74 (23.1)	..... .....	
301.46 (224.80)	2101	17.371 (65.756)	0.402 (0.245)	17.35 (3.419)	182 (83.1)	58 (14.7)	76 (24.4)	..... .....	
68.40 (51.01)	2248	7.535 (28.523)	0.769 (0.468)	9.08 (1.788)	172 (77.5)	58 (14.4)	75 (23.9)	..... .....	
200.81 (149.74)	2198	13.291 (50.312)	0.462 (0.281)	15.11 (2.976)	174 (79.2)	59 (15.0)	76 (24.7)	..... .....	
Av Av	161.74 (120.61)	2205	11.578 (43.828)	0.500 (0.304)	13.97 (2.752)	175 (79.4)	58 (14.4)	75 (23.8)	28.913 (97.636)

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											
264.44 (197.19)	14301 (63.61)	6.93 (11.16)	2099	2.73	16.976 (64.260)	0.450 (0.274)	15.58 (3.069)	173 (78.3)	46 (7.8)	54 (12.2)	28.600 (96.578)
75% of Pull at Maximum Power—Ten Hours 7th Gear											
210.08 (156.65)	10800 (48.04)	7.29 (11.74)	2192	1.96	14.847 (56.201)	0.495 (0.301)	14.15 (2.787)	171 (77.1)	32 (0.1)	36 (2.2)	29.111 (98.303)
50% of Pull at Maximum Power—Two Hours 7th Gear											
143.13 (106.73)	7200 (32.02)	7.46 (12.00)	2229	1.52	12.090 (45.765)	0.592 (0.360)	11.84 (2.332)	170 (76.4)	26 (-3.6)	27 (-2.8)	29.250 (98.773)
50% of Pull at Reduced Engine Speed—Two Hours 10th Gear											
143.48 (106.99)	7201 (32.03)	7.47 (12.03)	1307	1.43	9.504 (35.978)	0.464 (0.282)	15.10 (2.974)	170 (76.7)	30 (-1.4)	30 (-1.1)	29.165 (98.486)

MAXIMUM POWER IN SELECTED GEARS

200.28 (149.35)	34267 (152.42)	2.19 (3.53)	2164	14.80	1st Gear			170 (76.7)	26 (-3.3)	26 (-3.3)	29.190 (98.570)
234.89 (175.16)	33646 (149.66)	2.62 (4.21)	2099	12.65	2nd Gear			171 (76.9)	26 (-3.3)	26 (-3.3)	29.200 (98.604)
258.58 (192.82)	29231 (130.03)	3.32 (5.34)	2100	6.61	3rd Gear			171 (77.2)	39 (3.9)	43 (6.1)	28.760 (97.118)
262.86 (196.02)	24308 (108.13)	4.06 (6.53)	2100	4.98	4th Gear			172 (77.5)	39 (3.9)	43 (6.1)	28.740 (97.051)
265.92 (198.30)	20302 (90.31)	4.91 (7.90)	2099	4.03	5th Gear			172 (77.5)	40 (4.4)	44 (6.7)	28.710 (96.949)
263.94 (196.82)	16862 (75.01)	5.87 (9.45)	2100	3.22	6th Gear			172 (77.5)	42 (5.6)	48 (8.9)	28.680 (96.848)
267.87 (199.75)	14487 (64.44)	6.93 (11.16)	2100	2.81	7th Gear			173 (78.3)	46 (7.8)	54 (12.2)	28.590 (96.544)
264.74 (197.42)	11875 (52.82)	8.36 (13.46)	2101	2.23	8th Gear			172 (77.5)	45 (7.2)	52 (11.1)	28.630 (96.679)

LUGGING ABILITY IN 7th GEAR

Crankshaft Speed rpm	2100	1893	1677	1468	1256	1047
Pull—lbs (kN)	14487 (64.44)	17087 (76.01)	19634 (87.34)	21505 (95.66)	20565 (91.48)	18815 (83.69)
Increase in Pull %	0	18	36	48	42	30
Power—Hp (kW)	267.87 (199.75)	283.09 (211.10)	286.59 (213.71)	273.66 (204.07)	224.17 (167.17)	171.66 (128.00)
Speed—Mph (km/h)	6.93 (11.16)	6.21 (10.00)	5.47 (8.81)	4.77 (7.68)	4.09 (6.58)	3.42 (5.51)
Slip %	2.81	3.14	3.79	4.27	4.11	3.79

TRACTOR SOUND LEVEL WITH CAB

	1700 RPM dB(A)	1900 RPM dB(A)	2100 RPM dB(A)
Maximum Available Power—Two Hours	72.5	73.5	75.5
75% of Pull at Maximum Power—Ten Hours			74.5
50% of Pull at Maximum Power—Two Hours			72.5
50% of Pull at Reduced Engine Speed—Two Hours			71.5
Bystander in 12th gear			94.5

Department of Agricultural Engineering

Dates of Test: November 22 to December 18, 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°) 0.8382 Fuel weight 6.979 lbs/gal (0.836 kg/l) Oil SAE 15W-40 API service classification CA-CD/SB-SE To motor 8.883 gal (33.625 l) Drained from motor 8.361 gal (31.651 l) Transmission and hydraulic lubricant SAE 10 hydraulic-transmission fluid Final drive lubricant SAE 85W90 Total time engine was operated 68.5 hours.

ENGINE: Make Cummins Diesel Type six cylinder vertical with turbocharger and intercooler Serial No. 11059656 Crankshaft lengthwise Rated rpm 1700 to 2100 Bore and stroke 5.5" × 6.0" (139.7 mm × 152.4 mm) Compression ratio 14.1 to 1 Displacement 855 cu in (14011 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements with aspirator Oil filter one full flow cartridge and one bypass cartridge Oil cooler engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil Fuel filter two paper cartridges Muffler vertical Cooling medium temperature control one thermostat.

CHASSIS: Type four wheel drive with duals Serial No. C32500508- 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 45.4" (1153 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 actuated and operated by foot pedal Brakes dual caliper disc hydraulically operated by foot pedal and mechanically by hand lever Steering hydrostatic and articulated Turning radius (on concrete 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)								
317.51 (236.77)	1900	17.194 (65.088)	0.378 (0.230)	18.47 (3.638)	181 (82.7)	57 (14.1)	75 (23.8)	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)			
					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	Barom. inch Hg (kPa)
Maximum Available Power—Two Hours 7th Gear											
280.91 (209.47)	16867 (75.03)	6.25 (10.05)	1900	3.22	17.047 (64.530)	0.425 (0.259)	16.48 (3.246)	173 (78.3)	45 (6.9)	51 (10.3)	28.580 (96.510)

MAXIMUM POWER IN SELECTED GEARS									
231.51 <i>(172.64)</i>	34186 <i>(152.06)</i>	2.54 <i>(4.09)</i>	2085	14.61	2nd Gear	171 <i>(77.2)</i>	25 <i>(-3.9)</i>	25 <i>(-3.9)</i>	29.200 <i>(98.604)</i>
250.70 <i>(186.95)</i>	33505 <i>(149.04)</i>	2.81 <i>(4.52)</i>	1900	12.65	3rd Gear	171 <i>(77.2)</i>	26 <i>(-3.3)</i>	26 <i>(-3.3)</i>	29.190 <i>(98.570)</i>
273.87 <i>(204.22)</i>	28413 <i>(126.39)</i>	3.61 <i>(5.82)</i>	1900	6.46	4th Gear	173 <i>(78.1)</i>	39 <i>(3.9)</i>	43 <i>(6.1)</i>	28.720 <i>(96.983)</i>
278.93 <i>(208.00)</i>	23766 <i>(105.72)</i>	4.40 <i>(7.08)</i>	1898	5.06	5th Gear	173 <i>(78.1)</i>	40 <i>(4.4)</i>	44 <i>(6.7)</i>	28.700 <i>(96.916)</i>
281.38 <i>(209.83)</i>	19994 <i>(88.94)</i>	5.28 <i>(8.49)</i>	1901	3.95	6th Gear	174 <i>(78.6)</i>	42 <i>(5.6)</i>	48 <i>(8.9)</i>	28.670 <i>(96.814)</i>
283.90 <i>(211.70)</i>	17067 <i>(75.92)</i>	6.24 <i>(10.04)</i>	1900	3.30	7th Gear	172 <i>(77.5)</i>	44 <i>(6.7)</i>	51 <i>(10.6)</i>	28.640 <i>(96.713)</i>
282.51 <i>(210.67)</i>	14061 <i>(62.54)</i>	7.53 <i>(12.13)</i>	1902	2.73	8th Gear	173 <i>(78.3)</i>	45 <i>(7.2)</i>	52 <i>(11.1)</i>	28.630 <i>(96.679)</i>
279.99 <i>(208.79)</i>	11709 <i>(52.08)</i>	8.97 <i>(14.43)</i>	1902	2.15	9th Gear	172 <i>(77.5)</i>	45 <i>(7.2)</i>	53 <i>(11.7)</i>	28.620 <i>(96.645)</i>

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)								
318.98 (237.86)	1700	16.855 (63.802)	0.369 (0.224)	18.93 (3.728)	183 (83.8)	58 (14.2)	74 (23.6)	28.920 (97.659)

DRAWBAR PERFORMANCE										
Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption			Temp. °F (°C)		
					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										
283.76 (211.60)	19122 (85.06)	5.56 (8.96)	1701	3.71	16.690 (63.180)	0.412 (0.251)	17.00 (3.349)	173 (78.3)	44 (6.4)	49 (9.2) 28.600 (96.578)

MAXIMUM POWER IN SELECTED GEARS										
247.69 <i>(184.70)</i>	34160 <i>(151.95)</i>	2.72 <i>(4.38)</i>	1880	14.48	3rd Gear	170 <i>(76.7)</i>	26 <i>(−3.3)</i>	26 <i>(−3.3)</i>	29.190 <i>(98.570)</i>	
264.43 <i>(197.18)</i>	31706 <i>(141.03)</i>	3.13 <i>(5.03)</i>	1701	9.55	4th Gear	171 <i>(76.9)</i>	26 <i>(−3.3)</i>	26 <i>(−3.3)</i>	29.180 <i>(98.536)</i>	
278.09 <i>(207.37)</i>	26728 <i>(118.89)</i>	3.90 <i>(6.28)</i>	1700	5.92	5th Gear	173 <i>(78.3)</i>	41 <i>(5.0)</i>	46 <i>(7.8)</i>	28.690 <i>(96.882)</i>	
285.16 <i>(212.65)</i>	22811 <i>(101.47)</i>	4.69 <i>(7.54)</i>	1701	4.67	6th Gear	174 <i>(78.9)</i>	42 <i>(5.6)</i>	48 <i>(8.9)</i>	28.660 <i>(96.781)</i>	
286.38 <i>(213.55)</i>	19302 <i>(85.86)</i>	5.56 <i>(8.95)</i>	1702	3.71	7th Gear	174 <i>(78.6)</i>	44 <i>(6.7)</i>	51 <i>(10.6)</i>	28.640 <i>(96.713)</i>	
286.70 <i>(213.79)</i>	15995 <i>(71.15)</i>	6.72 <i>(10.82)</i>	1702	3.14	8th Gear	174 <i>(78.6)</i>	45 <i>(7.2)</i>	52 <i>(11.1)</i>	28.620 <i>(96.645)</i>	
285.93 <i>(213.22)</i>	13381 <i>(59.52)</i>	8.01 <i>(12.90)</i>	1704	2.48	9th Gear	173 <i>(78.3)</i>	45 <i>(7.2)</i>	53 <i>(11.7)</i>	28.620 <i>(96.645)</i>	

TIRES, BALLAST AND WEIGHT			With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi (kPa)	—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)
	—Liquid (each)	—Liquid (each)	None	None
	—Cast Iron (each)	—Cast Iron (each)	None	None
Front Tires	—No., size, ply & psi (kPa)	—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)
	—Liquid (each inner)	—Liquid (each inner)	302 lb (137 kg)	None
	—Cast Iron (each)	—Cast Iron (each)	None	None
Height of Drawbar			13.5 in (345 mm)	13.5 in (345 mm)
Static Weight with Operator—			16710 lb (7580 kg)	16710 lb (7580 kg)
			19105 lb (8666 kg)	18500 lb (8391 kg)
			35815 lb (16246 kg)	35210 lb (15971 kg)

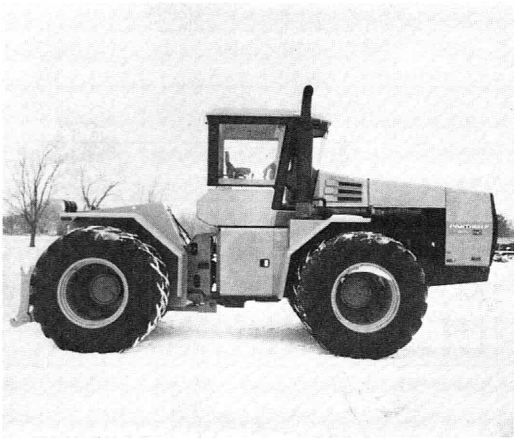
REPAIRS and ADJUSTMENTS: No repairs or adjustments.

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 was maintained at 119°F (48.3°C). Eight 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. 1465.

LOUIS I. LEVITICUS  
Engineer-in-Charge

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



Steiger Panther KP-1325 Diesel