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January 1980

Test 1355: Steiger Panther III PTA-325 and Panther IV CS-325 Diesel 10-Speed

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1355 STEIGER PANTHER III PTA-325 DIESEL ALSO STEIGER PANTHER IV CS-325 DIESEL 10 SPEED

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 6th (5 L) Gear											
263.70 (196.64)	14573 (64.82)	6.79 (10.92)	2099	3.46	18.497 (70.018)	0.495 (0.301)	14.26 (2.808)	196 (90.8)	70 (21.1)	88 (31.4)	28.835 (97.371)
75% of Pull at Maximum Power—Ten Hours 6th (5 L) Gear											
219.04 (163.34)	11315 (50.33)	7.26 (11.68)	2230	2.67	16.284 (61.643)	0.525 (0.319)	13.45 (2.650)	184 (84.2)	58 (14.3)	66 (18.8)	29.025 (98.013)
50% of Pull at Maximum Power—Two Hours 6th (5 L) Gear											
151.89 (113.26)	7536 (33.52)	7.56 (12.16)	2296	1.56	13.151 (49.783)	0.611 (0.372)	11.55 (2.275)	186 (85.3)	70 (20.8)	88 (30.8)	28.815 (97.304)
50% of Pull at Reduced Engine Speed—Two Hours 8th (3 H) Gear											
151.54 (113.00)	7555 (33.61)	7.52 (12.10)	1574	1.90	10.266 (38.862)	0.478 (0.291)	14.76 (2.908)	180 (82.2)	58 (14.4)	64 (17.5)	29.020 (97.996)

MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Gear	Cool- ing med	Air wet bulb	Air dry bulb	Barom. inch Hg (kPa)
149.29 (111.33)	31876 (141.79)	1.76 (2.83)	2277	14.91	1st (1L) Gear	182 (83.3)	64 (17.8)	65 (18.3)	28.820 (97.321)
251.17 (187.30)	30581 (136.03)	3.08 (4.96)	2099	12.19	2nd (2L) Gear	187 (86.1)	65 (18.3)	66 (18.9)	28.820 (97.321)
259.42 (193.45)	23734 (105.58)	4.10 (6.60)	2100	6.43	3rd (1H) Gear	187 (85.8)	58 (14.4)	61 (16.1)	28.980 (97.861)
266.90 (199.03)	24144 (107.40)	4.15 (6.67)	2100	6.58	4th (3L) Gear	187 (85.8)	58 (14.4)	61 (16.1)	28.960 (97.794)
274.88 (204.98)	19305 (85.87)	5.34 (8.59)	2100	4.81	5th (4L) Gear	186 (85.6)	58 (14.4)	61 (16.1)	28.930 (97.692)
272.55 (203.24)	15089 (67.12)	6.77 (10.90)	2101	3.62	6th (5L) Gear	186 (85.6)	58 (14.4)	60 (15.6)	28.880 (97.523)
273.56 (204.00)	13081 (58.19)	7.84 (12.62)	2102	3.05	7th (2H) Gear	186 (85.6)	58 (14.4)	62 (16.7)	29.010 (97.962)
269.98 (201.32)	10141 (45.11)	9.98 (16.07)	2101	2.39	8th (3H) Gear	187 (86.1)	59 (15.0)	64 (17.8)	29.030 (98.030)

LUGGING ABILITY IN 6th (5 L) GEAR

Crankshaft Speed rpm	2101	1884	1680	
Pull—lbs (kN)	15089 (67.12)	17210 (76.55)	18426 (81.96)	At 1500 RPM the automatic transmission shifted down to 5th (4L) gear and the test was terminated
Increase in Pull %	0	14	22	
Power—Hp (kW)	272.55 (203.24)	276.69 (206.33)	263.03 (196.14)	
Speed—Mph (km/h)	6.77 (10.90)	6.03 (9.70)	5.35 (8.61)	
Slip %	3.62	4.26	4.73	

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
Maximum Available Power—Two Hours	75.5
75% of Pull at Maximum Power—Ten Hours	75.5
50% of Pull at Maximum Power—Two Hours	75.5
50% of Pull at Reduced Engine Speed—Two Hours	75.5
Bystander in 10th (5H) gear	100.0

Rear Tires	—No., size, ply & psi (kPa)	Four 23.1-34; 8; inner 14 (95) outer 12 (85)	Four 23.1-34; 8; inner 14 (95) outer 12 (85)
Ballast	—Liquid (each) —Cast Iron (each)	None None	None None
Front Tires	—No., size, ply & psi (kPa)	Four 23.1-34; 8; inner 14 (95) outer 12 (85)	Four 23.1-34; 8; inner 14 (95) outer 12 (85)
Ballast	—Liquid (each inner) —Cast Iron (each)	1570 lb (712 kg) None	None None
Height of Drawbar		14.5 in (370 mm)	14.5 in (370 mm)
Static Weight with Operator	—Rear —Front —Total	12960 lb (5879 kg) 21000 lb (9525 kg) 33960 lb (15404 kg)	12960 lb (5879 kg) 17860 lb (8101 kg) 30820 lb (13980 kg)

Department of Agricultural Engineering

Dates of Test: June 16-23, 1980

Manufacturer: STEIGER TRACTOR, INC.,
3101 First Avenue North, Fargo, North Dakota
58102

FUEL, OIL AND TIME: Fuel No. 2 Diesel Cetane No. 47.9 (rating taken from oil company's inspection data) Specific gravity converted to 60°/60° (15°/15°) 0.8482 Fuel weight 7.062 lbs/gal (0.846 kg/l) Oil SAE 30 API service classification SB/SE-CA/CD To motor 7.554 gal (28.592 l) Drained from motor 6.193 gal (23.441 l) Transmission lubricant hydraulic transmission fluid type C-3 (Dexron) Dropbox lubricant 303 or equivalent Hydraulic oil SAE 10 hydraulic fluid, 303 or equivalent Final drive lubricant SAE 80W90 Total time engine was operated 35.5 hours.

ENGINE: Make Caterpillar Diesel Type six cylinder vertical with turbocharger Serial No. 90U11096 Crankshaft lengthwise Rated rpm 2100 Bore and stroke 5.4" × 6.5" (137 mm × 165 mm) Compression ratio 14.5 to 1 Displacement 893 cu in (14634 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 exchangers for crankcase and transmission oil, radiators for hydraulic and dropbox oil Fuel filter one paper cartridge and prestrainer Muffler none Cooling medium temperature control one thermostat.

CHASSIS: Type four wheel drive with duals Serial No. 150-00076 Tread width rear 79" (2007 mm) to 136.4" (3464 mm) front 79.0" (2007 mm) to 136.4" (3464 mm) Wheel base 132.5" (3366 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 76.8" (1950 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 automatic power shift and torque converter lockup Advertised speeds mph (km/h) first 1.8 (2.9) second 3.4 (5.4) third 4.2 (6.7) fourth 4.2 (6.8) fifth 5.4 (8.6) sixth 6.7 (10.8) seventh 7.7 (12.4) eighth 9.8 (15.7) ninth 12.3 (19.8) tenth 15.4 (24.9) reverse 2.3 (3.6), 5.2 (8.4) Clutch none Brakes multiple dry disc hydraulically operated by foot pedal or mechanically by hand lever Steering hydrostatic and articulated Turning radius (on concrete surface without brake) right 257" (6.53 m) left 261.5" (6.64 m) Turning space diameter (on concrete surface without brake) right 537" (13.64 m) left 546" (13.87 m) Power take-off none.

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. Temperature at injection pump was 163°F (72.8°C) Eight gears were chosen between 15% slip and 10 mph (16.1 km/h). During preliminary drawbar tests an air conditioner line developed a leak and freon was lost.

Report reissued. Supplemental sales permit for Steiger Panther IV CS-325, January 18, 1985.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1355.

LOUIS I. LEVITICUS
Engineer-in-Charge

K. VON BARGEN
L. L. BASHFORD
T. L. THOMPSON
Board of Tractor Test Engineers



Steiger PTA-325 Diesel